

NUCLEAR REGULATORY COMMISSION

Notice of Opportunity To Comment on Model Safety Evaluation on
Technical Specification Improvement To Revise Containment Isolation Valve
Completion Times (TSTF-498, Revision 1) 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 Nuclear Regulatory Commission (NRC) has prepared a model safety evaluation (SE) relating to the modification of technical specification (TS) 3.6.3, Containment Isolation Valves associated with implementation of BAW-2461-A, "Risk-Informed Justification for Containment Isolation Valve Allowed Outage Time Change." The NRC staff has also prepared a model license amendment request and a model no significant hazards consideration (NSHC) determination relating to this matter. The purpose of these models are to permit the NRC to efficiently process amendments that propose to modify TS Containment Isolation Valve Completion Times. Licensees of nuclear power reactors to which the models apply could then request amendments, confirming the applicability of the SE and NSHC determination to their reactors. The NRC staff is requesting comment on the model SE and model NSHC determination prior to announcing their availability for referencing in license amendment applications.

DATES: The comment period expires [insert date 30 days from date of publication in the *Federal Register*]. 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, Rulemaking, Directives, and Editing 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. Copies of comments received may be examined at the NRC's Public Document Room, 11555 Rockville Pike (Room O-1F21), Rockville, Maryland. Comments may be submitted by electronic mail to CLIIP@nrc.gov.

FOR FURTHER INFORMATION CONTACT: Timothy Kobetz, Mail Stop: O-12H2, Technical Specifications Branch, Division of Inspection & Regional Support, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone 301-415-1932.

SUPPLEMENTARY INFORMATION:

Background

Regulatory Issue Summary 2000-06, "Consolidated Line Item Improvement Process for Adopting Standard Technical Specification Changes for Power Reactors," was issued on March 20, 2000. The consolidated line item improvement process (CLIIP) is intended to improve the efficiency of NRC licensing processes, by processing proposed changes to the standard technical specifications (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 after a preliminary assessment by the NRC staff and finding that the change will likely be offered for adoption by licensees. This notice solicits comment on a proposed change to the STS that modifies TS Containment Isolation Valve Completion Times. 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 announce the availability of the change for

adoption by licensees. Licensees opting to apply for this TS change are responsible for reviewing the staff's evaluation, referencing the applicable technical justifications, and providing any necessary plant-specific information. Each amendment application made in response to the notice of availability will be processed and noticed in accordance with applicable rules and NRC procedures.

This notice involves the modification of TS Containment Isolation Valve Completion Times. This change was proposed for incorporation into the standard technical specifications by the Owners Groups participants in the Technical Specification Task Force (TSTF) and is designated TSTF-498. TSTF-498 can be viewed on the NRC's web page at <http://www.nrc.gov/reactors/operating/licensing/techspecs.html>.

Applicability

To efficiently process the incoming license amendment applications, the staff requests that each licensee applying for the changes proposed in TSTF-498 include TS Bases for the proposed TS consistent with the TS Bases proposed in TSTF-498. The staff is requesting that the TS Bases be included with the proposed license amendments in this case because the changes to the TS and the changes to the associated TS Bases form an integral change to a plant's licensing basis. To ensure that the overall change, including the TS Bases (which becomes part of the plant licensing basis), includes appropriate regulatory controls, the staff plans to condition the issuance of each license amendment on the licensee's incorporation of the changes into the TS Bases document and that the licensee control changes to the TS Bases in accordance with the licensees TS Bases Control Program. The CLIIP does not prevent licensees from requesting an alternative approach or proposing the changes without the requested TS Bases. However, deviations 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. Additionally, the staff is requesting that the methodology for assessing large early release frequency (LERF) and incremental conditional large early release probability (ICLERP) are to be documented in the plant-specific application as a regulatory commitment (i.e., included in the licensee's commitment tracking system in accordance with NEI 99-04, Revision 0, "Guidelines for Managing NRC Commitment Changes") (Reference 5) in the licensees' plant-specific applications referencing TR BAW-2461-A. The staff is requesting this regulatory commitment because a licensee's implementation of Regulatory Guide (RG) 1.177 Tier 3 guidelines generally implies the assessment of risk with respect to core damage frequency (CDF). However, the proposed containment isolation valve (CIV) completion time (CT) impacts containment isolation and consequently LERF and ICLERP, as well as CDF. Because the extended CIV CTs are also based on the LERF and ICLERP metrics, the management of risk in accordance with 10 CFR 50.65(a)(4) for these extended CIV CTs must also assess LERF and ICLERP.

Public Notices

This notice requests comments from interested members of the public within 30 days of the date of publication in the *Federal Register*. After evaluating the comments received as a result of this notice, the staff will either reconsider the proposed change or announce the availability of the change in a subsequent notice (perhaps with some changes to the safety evaluation or the proposed no significant hazards consideration determination as a result of public comments). If the staff announces the availability of the change, licensees wishing to adopt the change must submit an application in accordance with applicable rules and other regulatory requirements. For each application the staff will publish a notice of consideration of issuance of amendment to facility operating licenses, a proposed no significant hazards consideration determination, and a notice of opportunity for a hearing. The staff will also publish a notice of issuance of an

amendment to the operating license to announce the modification of Containment Isolation Valve (CIV) Completion Times for each plant that receives the requested change.

Proposed Safety Evaluation

U.S. Nuclear Regulatory Commission

Office of Nuclear Reactor Regulation

Consolidated Line Item Improvement

Technical Specification Task Force (TSTF) Change TSTF-498

Modification of Technical Specification Containment Isolation Valve

Completion Times

1.0 INTRODUCTION

By letter dated December 20, 2006, (Reference 1) the Technical Specifications Task Force (TSTF), a joint owners group activity, submitted TSTF-498, "Risk-Informed Containment Isolation Valve Completion Times (BAW-2461)," Revision 0, for NRC review. By letter dated October 10, 2007, (Reference 2) the TSTF submitted Revision 1 to TSTF-498 based on responses to Requests for Additional Information (RAI) that resulted in not adopting certain provisions provided by BAW-2461-A, "Risk-Informed Justification for Containment Isolation Valve Allowed Outage Time Change," (Reference 3). TSTF-498 is proposing to change NUREG 1430, "Standard Technical Specifications Babcock and Wilcox Plants," (BAW STS) Revision 3.0 (Reference 4), to generically implement containment isolation valve completion time (CT) changes associated with implementation of BAW-2461-A.

BAW-2461-A and TSTF-498 support extending CTs for CIVs in a penetration flow path with two [or more] containment isolation valves from 4 hours to 168 hours. The proposed change revises the TS for B&W Plants, NUREG-1430, Revision 3, Limiting Condition for Operation

(LCO), Section 3.6.3, "Containment Isolation Valves," Condition A from 4 hours to 7 days. Additionally, a new Required Action is added (Required Action A.1) which requires verification that the Operable containment isolation valve in the penetration is not inoperable due to common cause failure and also results in Required Actions A.1 and A.2 being relabeled as A.2 and A.3. No change is proposed by the Pressurized Water Reactor Owners Group (PWROG) for Condition B (relabeled Condition D)(i.e., a penetration flow path with two inoperable CIVs). A new Condition, Condition B, is added which is similar to the existing Condition A. It contains a 4 hour Completion Time to isolate the affected flow path and is only applicable to the containment isolation valves excluded from Condition A (e.g., containment isolation valves in the main steam lines or (as described in a Reviewer's Note) those identified by plant-specific analysis as having high risk significance for interfacing systems loss of coolant accidents (ISLOCAs). A new Condition, Condition C, is added which is applicable when two or more penetrations have one inoperable containment isolation valve. This Condition requires isolating all but one of the affected penetrations within 4 hours (the existing Completion Time for Condition A). This condition limits the 7 day Completion Time in Condition A to a single penetration. The extended Completion Time is not applicable to containment isolation valves in the main steam lines or those identified by plant-specific analysis as having high risk significance for ISLOCAs and the existing 4 hour Completion Time applies. BAW-2461-A is only applicable to Davis Besse, Oconee Nuclear Station Units 1, 2, and 3, and Crystal River Unit 3. Other licensees of B&W designed PWRs requesting to use the Topical Report (TR) methodology must provide the same level of information provided by these demonstration plants to ensure that TR BAW-2461-A is applicable to their plant. TSTF-498 will provide standardized wording in the B&W STS for plants implementing the changes specified in BAW-2461-A related to extending AOTs for applicable inoperable CIVs from 4 hours to 168 hours.

2.0 REGULATORY EVALUATION

In 10 CFR 50.36, the Commission 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) limiting conditions for operation (LCOs); (3) surveillance requirements (SRs); (4) design features; and (5) administrative controls. However, the regulation does not specify the particular TSs to be included in a plant's license. TSTF-498 is proposing changes to the TSs that involve category 2 above. 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 shut down the reactor, or follow any remedial actions permitted by the TS until the condition can be met.

Furthermore, the CTs specified in the TSs must be based on reasonable protection of the public health and safety. Therefore, the NRC staff must be able to conclude that there is reasonable assurance that the safety functions affected by the proposed TS CT changes will be performed in accordance with the design basis accidents (DBAs) identified in Chapter 15 of the licensee's final safety analysis report (FSAR). As set forth in 10 CFR 50.36, a licensee's TS must establish the LCOs that contain certain information. This requirement includes CTs for structures, systems, and components (SSCs) that are required for safe operation of the facility, such as CIVs.

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 of Regulatory Guide (RG) 1.174, Section 2.3, and RG 1.177, Section 3, 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 CIV CT extension, requires the assessment and management of the increase in risk that may result from the proposed maintenance activity.

Appendix A of 10 CFR Part 50, GDC-54, "Piping systems penetrating containment," requires 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.

Appendix A of 10 CFR Part 50, GDC-55, "Reactor coolant pressure boundary penetrating containment," requires that each line that is part of the reactor coolant pressure boundary and that penetrates the primary containment shall be provided with CIVs.

Appendix A of 10 CFR Part 50, GDC-56, "Primary containment isolation," requires that each line that connects directly to the containment atmosphere and penetrates the primary reactor containment shall be provided with CIVs.

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.

2.1 Proposed Change

TSTF-498 would make the following changes to the B&W STS contained in NUREG-1430 associated with TS 3.6.3 Containment Isolation Valves (CIVs):

- The proposed change adds a Reviewer's Note prior to Condition A which states "The Condition A Note should list the specific penetrations (if any) identified by the plant specific

risk analysis as having high risk significance for an interfacing systems loss of coolant accident (ISLOCA).”

- The proposed change revises the Condition A NOTE to add “except containment isolation valves in the main steam lines and [].”
- The proposed change adds the new Required Action A.1, “Determine the OPERABLE containment isolation valve in the affected penetration is not inoperable due to common cause failure” with a Completion Time of 4 hours. This new Required Action is connected by an AND statement to the other applicable Required Actions.
- The proposed change revises the previous Required Action A.1 to be A.2 with the completion time changed from 4 hours to 7 days.
- The proposed change revises the previous Required Action A.2 to be A.3.
- The proposed change adds a new Condition B for one or more penetration flow paths with one containment isolation valve inoperable [for reasons other than purge valve leakage not within limit] with a NOTE stating “Only applicable to penetration flow paths with two [or more] containment isolation valves in the main steam lines and [].” There is also a Reviewers NOTE similar to Condition A.
- The proposed change provides new Required Action B.1 to isolate the affected penetration flow path with a completion time of 4 hours AND Required Action B.2 to verify the affected penetration flow path is isolated once per 31 days for isolation devices outside containment and Prior to entering Mode 4 from Mode 5 if not performed within the previous 92 days for isolation devices inside containment. Furthermore, new Required Action B.2 has two notes which state 1) Isolation devices in high radiation areas may be verified by use of administrative means and 2) Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means.

- The proposed change adds a new Condition C for two or more penetration flow paths with one containment isolation valve inoperable [for reasons other than Condition[s] [E and F]] with a NOTE stating “Only applicable to penetration flow paths with two [or more] containment isolation valves.
- The proposed change provides new Required Action C.1 to isolate all but one of the affected penetration flow paths by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange with a completion time of 4 hours.
- The proposed change revises the previous Condition B and Required Action B.1 to be new Condition D and Required Action D.1.
- The proposed change revises the previous Condition C and Required Action C.1 and C.2 to be new Condition E and Required Action E.1 and E.2.
- The proposed change revises the previous Condition D and Required Action D.1, D.2 and D.3 to be new Condition F and Required Action F.1, F.2 and F.3.
- The proposed change revises the previous reference to Required Action D.1 for performance of SR 3.6.3.6 within Required Action D.3 to Required Action F.1.
- The proposed change revises the previous Condition E and Required Action E.1 and E.2 to be new Condition G and Required Action G.1 and G.2.

TSTF-498 includes changes to the B&W STS Bases B 3.6.3 contained in NUREG-1430.

- Condition A has been modified by a Note indicating this Condition is only applicable to those penetration flow paths with two [or more] containment isolation valves. The Note also states that the Condition is not applicable to containment isolation valves in the main steam lines and [any specific penetrations identified by the plant-specific risk analysis as having high risk significance for an ISLOCA. The previous discussion about the Note has been deleted. Additionally, a new Required Action A.1 has been added to determine that the OPERABLE containment isolation valve in the affected penetration is not inoperable due to a common

cause failure with a completion time of 4 hours. The other Condition A Required Actions have been re-numbered and Required Action A.2 Completion Time has been changed from 4 hours to 7 days.

- The bases has been revised to update Required Action A.2 from 4 hours to 7 days based on an analysis of plant risk and the discussion on considering the time required to isolate the penetration and the relative importance of supporting containment OPERABILITY has been deleted.
- A new Condition B has been added with a Note indicating this Condition is only applicable to those penetration flow paths with two [or more] containment isolation valves that are containment isolation valves in the main steam lines or are [any specific penetrations identified by the plant-specific risk analysis as having high risk significance for an interfacing systems loss of coolant accident (ISLOCA)]. Condition B is entered if one containment isolation valve in one or more penetration flow paths is inoperable, [except for purge valve leakage not within limit.] The Bases describes Required Actions B.1 and B.2 Completion Times and Notes as specified in the TS section.
- A new Condition C as been added with a Note indicating this Condition is only applicable to penetration flow paths with two [or more] containment isolation valves. Condition C is entered if two or more penetration flow paths with one containment isolation valve inoperable [for reasons other than Condition[s] E [and F]]. The Bases describes the Required Action C.1 Completion Time to isolate all but one of the affected containment isolation valves within 4 hours.
- The bases discussion for Required Action D.1 has been updated to account for new Conditions B and C and have been added where applicable.
- Condition B and Required Action B.1 has been re-numbered to Condition D and Required Action D.1.

- Condition C and Required Action C.1 and C.2 have been re-numbered to Condition E and Required Action E.1 and E.2.
- Reference to BAW-2461-A has been added as Reference 6. Previous references 6, 7, and 8 have been re-numbered to references 7, 8 and 9. Applicable changes have been made throughout the Bases.
- Condition D and Required Action D.1, D.2 and D.3 have been re-numbered to Condition F and Required Action F.1, F.2 and F.3.
- Condition E and Required Action E.1 and E.2 have been re-numbered to Condition G and Required Action G.1 and G.2.

3.0 TECHNICAL EVALUATION

As stated previously, BAW-2461-A describes a method to revise the Completion Time for specific Conditions per Technical Specification 3.6.3, Containment Isolation Valves. The NRC approved BAW-2461 on August 29, 2007, for referencing in license applications to the extent specified and under the limitations and conditions stated in the topical report and Section 4.1 of the staff's safety evaluation (Reference 6). TSTF-498 is proposing changes to the B&W STS, NUREG 1430, which are in accordance with Topical Report BAW-2461-A and subject to the Limitations, Conditions and Regulatory Commitments specified in the staff Safety Evaluation. Any differences between TR BAW-2461-A Technical Specification examples and TSTF-498 proposed Technical Specifications have been evaluated and determined to be acceptable. BAW-2461-A, Table 2-1, Condition A note states "Only applicable to penetration flow paths with two [or more] containment isolation valves with the exception of containment isolation valves in the main steam lines [and list of specific penetrations (if any) identified by the plant-specific risk-informed process to have high risk significance for ISLOCA.]" To be consistent with the ITS format and content rules, the Condition A Note was written as "Only applicable to penetration flow paths with two [or more] containment isolation valves except containment isolation valves

in the main steam lines and []." The Condition is modified by a Reviewer's Note which states, "The Condition A Note should list the specific penetrations (if any) identified by the plant-specific risk analysis as having high risk significance for an interfacing systems loss of coolant accident (ISLOCA)." This change is editorial and does not affect the application of the TS. The change in wording meets the requirements specified in BAW-2461-A and is therefore acceptable.

The July 5, 2006 Request for Additional Information (RAI) response to NRC Question 1 stated that the following action would be added as Required Action A.1 with a 4 hour Completion Time, "Verify that the redundant CIV on the same penetration is operable [applicable only if the redundant CIV has an operator and/or body type that is not diverse from the inoperable CIV depending on which parts are inoperable.]" In TSTF-498, Required Action A.1 has a 4 hour Completion Time and states, "Determine the OPERABLE containment isolation valve in the affected penetration is not inoperable due to common cause failure." The wording was chosen to be consistent with LCO 3.8.1, Required Action B.3.1, regarding inoperable diesel generators. The discussion of what is required to be evaluated, "applicable only if the redundant CIV has an operator and/or body type that is not diverse from the inoperable CIV depending on which parts are inoperable," is placed in the Required Action A.1 Bases. Placing the detailed description of what is meant by common cause failure in the Bases is consistent with the ITS format and content rules. This change has been evaluated as a Revision to BAW-2461-A. TSTF-498 wording is equivalent to the proposed wording submitted as RAI response #1 and is consistent with NRC's Safety Evaluation for BAW-2461-A and is therefore acceptable.

B&W STS Required Action A.1 and A.2 are being revised to re-number these actions to A.2 and A.3. This is necessary to incorporate the new Required Action A.1 as described above. Additionally, the completion time for the new Required Action A.2 which states "isolate the

affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured” is being revised from 4 hours to 7 days. This change has been evaluated by the staff and is consistent with NRC’s Safety Evaluation for BAW-2461-A and is therefore acceptable.

B&W STS is adding a new Condition B for one or more penetration flow paths with one containment isolation valve inoperable [for reasons other than purge valve leakage not within limit] with a Note specifying “Only applicable to penetration flow paths with two [or more] containment isolation valves in the main steam lines and []. There is also a Reviewer’s Note that states “The condition B Note should list the specific penetrations (if any) identified by the plant-specific risk analysis as having high risk significance for an interfacing systems loss of coolant accident (ISLOCA). This wording is consistent with the change made to Condition A and is consistent with the format and content rules in ITS. Additionally, the Required Actions and associated Completion Times are consistent with Condition A and the change evaluated by the staff in the NRC’s Safety Evaluation for BAW-2461-A. This new Condition was required since main steam line isolation valves were explicitly excluded from the CT extension as stated in the NRC’s Safety Evaluation for BAW-2461-A and is therefore acceptable.

B&W STS Condition B and Required Action B.1 are being revised to be Condition D and Required Action D.1. With the addition of new Conditions B and C the remaining Conditions and Required Actions need to be re-numbered. This change is editorial and results in no technical change and is therefore acceptable.

B&W STS is adding a new Condition C which is applicable when two or more penetrations have one inoperable containment isolation valve. 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 Condition A is still applicable then this essentially limits the 7 day Completion Time in Condition A to a single penetration. This change

addresses Condition and Limitation 6 in the NRC's Safety Evaluation for BAW-2461-A and is therefore acceptable.

B&W STS Condition C and Required Actions C.1 and C.2 are being revised to be Condition E and Required Action E.1 and E.2. With the addition of new Conditions B and C the remaining Conditions and Required Actions need to be re-numbered. This change is editorial and results in no technical change and is therefore acceptable.

B&W STS Condition D and Required Action D.1, D.2 and D.3 are being revised to be Condition F and Required Action F.1, F.2 and F.3. With the addition of new Conditions B and C the remaining Conditions and Required Actions need to be re-numbered. This change is editorial and results in no technical change and is therefore acceptable.

B&W STS Condition E and Required Action E.1 and E.2 are being revised to be Condition G and Required Action G.1 and G.2. With the addition of new Conditions B and C the remaining Conditions and Required Actions need to be re-numbered. This change is editorial and results in no technical change and is therefore acceptable.

B&W STS Bases for B 3.6.3 Actions A.1, A.2 and A.3 are being revised to describe the Note that is being added indicating the Condition is only applicable to those penetration flow paths with two [or more] containment isolation valves and that the isolation valves in the main steam line are not applicable along with any specific penetrations identified by the plant-specific risk analysis. This is necessary to ensure the correct Required Actions are taken based on the applicable penetration. This is consistent with all other Bases descriptions in the B&W STS and is therefore acceptable.

B&W STS Bases for B 3.6.3 Required Action A.2 Completion Time is being revised from 4 hours to 7 days and indicates that this is based on an analysis of plant risk. The change is revising wording associated with the 4 hour completion time to a 7 day completion time. The 7 day completion time is now based upon a plant risk evaluation instead of a reasonable time to

isolate the penetration. This is consistent with BAW-2461-A which the staff found acceptable in the Safety Evaluation for BAW-2461-A and is therefore acceptable.

B&W STS Bases for B 3.6.3 is adding support information for new Condition B and Required Actions B.1 and B.2 which is applicable for one or more penetration flow paths with one containment isolation valve inoperable [for reasons other than purge valve leakage not within limit]. Condition B is also only applicable to penetration flow paths with two [or more] containment isolation valves in the main steam lines and []. The associated Required Actions and Completion Times for new Condition B are consistent with Actions and Completion Times for Condition A which the staff found acceptable in the NRC's Safety Evaluation for BAW-2461-A and is therefore acceptable.

B&W STS Bases for B 3.6.3 is adding support information for new Condition C and Required Action C.1 which is applicable for two or more penetration flow paths with one containment isolation valve inoperable [for reasons other than Condition[s] E [and F]]. Condition C is only applicable to penetration flow paths with two [or more] containment isolation valves. The Required Action to isolate all but one of the affected penetration flow paths by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange within 4 hours ensures that simultaneous LCO entry of an inoperable CIV in separate penetration flow paths such that the proposed 7 day Completion Time in Condition A is limited to no more than once CIV at any given time. This change addresses Limitation and Condition 6 as specified in the NRC's Safety Evaluation for BAW-2461-A and is therefore acceptable.

B&W STS Bases for B 3.6.3 are being revised such that each Condition and Required Action subsequent to the addition of new Conditions B and C need to be re-numbered. Additionally, a new reference has been added (Reference 6) which requires subsequent references to be re-numbered. These changes are considered editorial and do not affect any technical aspect of the Bases and are therefore acceptable.

3.1 Summary

TSTF-498 would provide standardized wording in the B&W STS for plants implementing BAW-2461-A, "Risk-Informed Justification for Containment Isolation Valve Allowed Outage Time Change." The changes to NUREG-1430 proposed by TSTF-498 have been reviewed for consistency with the current NUREG-1430 and BAW-2461-A. The proposed changes have been found to be consistent with NUREG-1430 and BAW-2461-A, therefore the proposed changes are acceptable.

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 amendments change 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 and change surveillance requirements. [For licensees adding a TS Bases Control Program: The amendment also changes record keeping, reporting, or administrative procedures or requirements.] The NRC staff has determined that the amendments involve 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 amendments involve no significant hazards considerations, and there has been no public comment on the finding [FR]. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) [and (c)(10)]. 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.

6.0 CONCLUSION

The Commission 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.

7.0 REFERENCES

1. Letter from the Technical Specifications Task Force (TSTF), a joint owners group activity, re: "TSTF-498, Revision 0 "Risk-Informed Containment Isolation Valve Completion Times (BAW-2461)," " dated December 20, 2006. (ADAMS ML063560402)
2. Letter from the TSTF re: Response to NRC Request for Additional Information Regarding TSTF-498, Revision 0, "Risk-Informed Containment Isolation Valve Completion Times (BAW-2461)," dated October 10, 2007. (ADAMS ML072840444)
3. BAW-2461-A, "Risk-Informed Justification for Containment Isolation Valve Allowed Outage Time Change," Revision 0, dated October 2007,(ADAMS ML072980529)
4. NUREG 1430, "Standard Technical Specifications Babcock and Wilcox Plants," Revision 3.0. (ADAMS ML041830589 and ML041800598)
5. Nuclear Energy Institute 99-04, Revision 0, "Guidelines for Managing NRC Commitment Changes," July 1999.

6. Final Safety Evaluation for Pressurized Water Reactors Owners Group, Topical Report, BAW-2461, Revision 0, Risk-Informed Justification for Containment Isolation Valve Allowed Outage Time Change (TAC No. MD5722), (ADAMS ML072330227)

THE FOLLOWING EXAMPLE OF AN APPLICATION WAS PREPARED BY THE NRC STAFF TO FACILITATE USE OF THE CONSOLIDATED LINE ITEM IMPROVEMENT PROCESS (CLIIP). THE MODEL PROVIDES THE EXPECTED LEVEL OF DETAIL AND CONTENT FOR AN APPLICATION TO REVISE TECHNICAL SPECIFICATIONS REGARDING RISK-INFORMED JUSTIFICATION FOR CONTAINMENT ISOLATION VALVE ALLOWED OUTAGE TIME CHANGE USING CLIIP. LICENSEES REMAIN RESPONSIBLE FOR ENSURING THAT THEIR ACTUAL APPLICATION FULFILLS THEIR ADMINISTRATIVE REQUIREMENTS AS WELL AS NUCLEAR REGULATORY COMMISSION REGULATIONS.

U. S. Nuclear Regular 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
ALLOWED OUTAGE TIME CHANGE USING THE CONSOLIDATED LINE ITEM
IMPROVEMENT PROCESS

Gentlemen:

In accordance with the provisions of 10 CFR 50.90 [LICENSEE] is submitting a request for an amendment to the technical specifications (TS) for [PLANT NAME, UNIT NOS.].

The proposed amendment would modify TS requirements for containment isolation valve (CIV) allowed outage time changes with implementation of BAW-2461-A, "Risk-Informed Justification for Containment Isolation Valve Allowed Outage Time Change."

Attachment 1 provides a description of the proposed change, the requested confirmation of applicability, and plant-specific verifications. Attachment 2 provides the existing TS pages marked up to show the proposed change. Attachment 3 provides revised (clean) TS pages. Attachment 4 provides a summary of the regulatory commitments made in this submittal. Attachment 5 provides the proposed TS Bases changes.

[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 attachments, 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 [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

cc: NRC Project Manager
NRC Regional Office
NRC Resident Inspector
State Contact

ATTACHMENT 1 – Description and Assessment

1.0 DESCRIPTION

The proposed amendment would modify TS requirements for containment isolation valve allowed outage times associated with implementation of BAW-2461-A, “Risk-Informed Justification for Containment Isolation Valve Allowed Outage Time Change.”

The changes are consistent with Nuclear Regulatory Commission (NRC) approved Industry/Technical Specification Task Force (TSTF) STS change TSTF-498, Revision 1. The *Federal Register* notice published on [DATE] announced the availability of this TS improvement through the consolidated line item improvement process (CLIIP).

2.0 ASSESSMENT

2.1 Applicability of Published Safety Evaluation

[LICENSEE] has reviewed the safety evaluation dated [DATE] as part of the CLIIP. This review included a review of the NRC staff’s evaluation, as well as the supporting information provided to support TSTF-498, Revision 1. [LICENSEE] has concluded that the justifications presented in the TSTF proposal and the safety evaluation 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.

2.2 Optional Changes and Variations

[LICENSEE] is not proposing any variations or deviations from the TS changes described in TSTF-498, Revision 1, and the NRC staff’s model safety evaluation dated [DATE].

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration Determination

[LICENSEE] has reviewed the proposed no significant hazards consideration determination (NSHCD) published in the *Federal Register* as part of the CLIIP. [LICENSEE] has concluded that the proposed NSHCD presented in the Federal Register notice is applicable to [PLANT] and has found it acceptable for incorporation into the amendment request which satisfies the requirements of 10 CFR 50.91(a).

3.2 Verification and Commitments

As discussed in the notice of availability published in the *Federal Register* on [DATE] for this TS improvement, [LICENSEE] verifies the applicability of TSTF-498, Revision 1, to [PLANT], and commits to adopting the requirements specified in BAW-2461-A which includes the following Limitations and Conditions specified in Section 4.1, Staff Findings and Conditions and Limitations, of the NRC's Safety Evaluation for BAW-2461 (ML072330227):

1. Based on TR BAW-2461, the CIV methodology, PRA parameters, configurations, and data used to evaluate an extended CIV CT to 168 hours is limited to the following plants.
 - Davis-Besse
 - Oconee Units 1, 2, and 3
 - Crystal River 3

Other licensees of B&W designed PWRs requesting to use the TR methodology must provide the same level of information provided by these demonstration plants to ensure that TR BAW-2461 is applicable to their plant.

2. Because not all penetrations have the same impact on Δ CDF, Δ LERF, ICCDP, or ICLERP, verify the applicability of TR BAW-2461 to the specific plant, including verification that: (a) the CIV configurations for the specific plant match the configurations in TR BAW-2461, and (b) the risk-parameter values used in TR BAW-2461, including the sensitivity studies contained in the RAIs, are representative or bounding for the specific plant. Any additional CIV configurations, CT extensions, or non-bounding risk parameter values not evaluated by TR BAW-2461 should be addressed in the plant-specific analyses. [Note that CIV configurations and extended CTs not specifically evaluated by TR BAW-2461, or non-bounding risk parameter values outside the scope of the TR, will require NRC staff review and licensee development of the specific penetrations and related justifications for the proposed CTs].

3. Each licensee adopting TR BAW-2461 will need to confirm that the plant-specific risk assessment including both internal and external events is within the assumptions of TR BAW-2461 and the acceptance guidelines of RG 1.174 and 1.177. The licensee's application verifies that external event risk, including seismic, fires, floods, and high winds, either through quantitative or qualitative evaluation, is shown to not have an adverse impact on the conclusions of the plant-specific analysis for extending the CIV CTs. Specifically: (1) the risk from external events cannot make the total baseline risk exceed 1E-4/yr CDF, or 1E-5/yr LERF, without justification, (2) the risk from external events (i.e., high winds, floods and other) should be specifically evaluated with respect to the extended CIV CT, and (3) fire risk should be specifically addressed. The

evaluation should include fire-induced spurious actuation (including containment performance) with respect to the proposed 168-hour CIV CT. Additionally, each licensee will need to confirm that the seismic CDF referenced for TR BAW-2461 is bounding for its plant, or incorporate a plant-specific seismic CDF estimate. Furthermore, the seismic initiating event frequency will need to be defined and justified for each licensee implementing TR BAW-2461. See Section 3.4.1.4 of the staff's SE.

4. For licensees adopting TR BAW-2461, confirmation should be provided that the Tier 2 and Tier 3 conclusions of the TR are applicable to the licensee's plant and that plant-specific Tier 2 evaluations including CCF and risk-significant configurations including interfacing-system LOCA have been evaluated and included under Tier 2 and Tier 3 including the CRMP as applicable.

- The proposed 168-hour CIV CT will not be applied to CIVs in penetrations connected to the RCS that have two NC CIVs if there are no other valves between the RCS and the environment (i.e., low pressure piping, or opening) that may be used for backup isolation and cannot be confirmed closed. In that case, the operable CIV will be verified closed within the original 4-hour CT, thus satisfying the TS Required Action. See Section 3.3.4 of the staff's SE. The specific penetrations where this is applicable or where interfacing-system LOCA is shown to be risk-significant (as determined by the plant-specific risk-informed process including plant-specific LOCA analysis) will be identified on a plant-specific basis prior to implementation of the proposed TS change. They will be listed explicitly in the proposed TS revision and the current CT will be retained.

TR BAW-2461 stated that an interfacing-system LOCA is assumed to lead to core damage and large early release, the effectiveness of mitigation systems besides containment isolation is not considered significant. All failed open penetration flow paths with an RCS connection were assumed to have CDF and LERF contributions in TR BAW-2461. Licensees incorporating TR BAW-2461 will need to confirm the above assumption for their plant specific implementation of BAW-2461.

- The specific penetrations with CCF potential will be identified by the licensee on a plant-specific basis. Upon entry into TS LCO 3.6.3, Condition A, the utility will confirm that the redundant similarly-designed CIV has not been affected by the same failure mode as the inoperable CIV. This verification will be performed before entering into the extended portion of the CT (i.e., within 4 hours). The specific penetrations with CCF potential will be identified on a plant-specific basis and listed in a plant-specific TS document or other administrative source. See Section 3.4.1.2 of the staff's SE.
- No action or maintenance activity is performed that will remove equipment that is functionally redundant to the inoperable CIV, including the redundant CIV(s) on the same penetration and support systems for the redundant CIV. See Section 3.3 of TR BAW-2461.

- No action or maintenance activity is performed that will significantly increase the likelihood of challenge to the CIVs. Challenges to the CIVs include DBAs that result in a release of radioactive material within containment (LOCA, main steam line break, and rod ejection accident). Also included is the removal of equipment from service that may cause a significant increase in the likelihood of core damage while in the proposed CT, which may increase the large early release via the inoperable CIV. See Section 3.4 of TR BAW-2461.
- No action or maintenance activity is performed that will remove equipment that supports success paths credited in the CT risk evaluation. This includes the other series valves, if any, credited in the risk assessment for RCS penetrations that otherwise would be risk-significant (i.e., interfacing-system LOCA). See Section 3.4 of TR BAW-2461.

5. TR BAW-2461 was based on generic-plant characteristics. Each licensee adopting TR BAW-2461 must confirm plant-specific Tier 3 information in their individual submittals. The licensee must discuss conformance to the requirements of the maintenance rule (10 CFR 50.65(a)(4)), 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 licensee's maintenance rule program, with respect to CIVs, includes a LERF/ICLERP assessment (i.e., CRMP). See Section 3.4.3 of the staff's SE.

6. TS LCO 3.6.3, Note 2, allows separate condition entry for each penetration flow path. Therefore, each licensee adopting TR BAW-2461 will address the simultaneous LCO entry of an inoperable CIV in separate penetration flow paths such that the proposed 168-hour CIV CT LCO will be limited to no more than one CIV at any given time. In addition, the licensee must confirm that its Tier 3 CRMP addresses simultaneous inoperable CIV LCOs (i.e., separate condition entry) such that the cumulative CIV risk, including LERF, are maintained consistent with the assumptions and conclusions of TR BAW-2461. See Section 3.4.1.2 of the staff's SE.

7. The licensee shall verify that the plant-specific PRA quality is acceptable with respect to its use for Tier 3 for this application in accordance with the guidelines given in RG 1.174 and as discussed in Section 3.4.1.1 of the staff's SE.

8. With respect to past plant-specific license amendments or additional plant-specific applications for a TS change under NRC review that have not been incorporated into the baseline PRA used to evaluate the proposed change, the cumulative risk must be evaluated on a plant-specific basis consistent with the guidance given in RG 1.174, Section 2.2.6 and 3.3.2, and addressed in a licensee's plant-specific application. See Section 3.4.1.5 of the staff's SE.

9. Closed systems inside and outside containment, which are considered to be containment isolation barriers, must meet the provisions outlined in NUREG-0800, Section 6.2.4, "Containment Isolation System." See Section 2.2 of the staff's SE.

10. With an extended CIV CT, the possibility exists that the CIV unavailability will be impacted. Depending on the penetration risk significance and the frequency and length of time of the CIV CT, the unavailability of the containment isolation function may also

be impacted. Therefore, licensee's adopting TR BAW-2461 will need to establish an implementation and monitoring program for CIVs, including performance criteria, on a plant-specific basis. See Sections 3.4.1.2 and 3.4.4 of the staff's SE.

11. The PWROG did not specifically address Δ CDF and Δ LERF in TR BAW-2461 regarding the acceptance guidelines of RG 1.174. The PWROG stated that it is not expecting that on line CIV preventive maintenance will increase with the proposed 168-hour CIV. To address this, licensee's adopting TR BAW-2461 will need to assess, on a plant-specific basis, the Δ CDF and Δ LERF acceptance guidance of RG 1.174 including the expected frequency of entering the proposed CT and the expected mean CT for CIV maintenance. See Section 3.4.1.2 of the staff's SE.

4.0 ENVIRONMENTAL EVALUATION

[LICENSEE] has reviewed the environmental evaluation included in the model safety evaluation dated [DATE] as part of the CLIP. [LICENSEE] has concluded that the staff's findings presented in that evaluation are applicable and acceptable to [PLANT] and the evaluation is submitted as an attachment to this application.

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/EVENT
[LICENSEE] will....	[Complete, implemented with amendment OR within X days of implementation of amendment]

ATTACHMENT 5 — PROPOSED CHANGES TO TECHNICAL SPECIFICATION BASES PAGES

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 Babcock and Wilcox (B&W) Plants (NUREG-1430) and plant specific technical specifications (TS), to allow modification of containment isolation valve completion times associated with implementation of BAW-2461-A, "Risk-Informed Justification for Containment Isolation Valve Allowed Outage Time Change," dated October 2007. The changes are consistent with NRC approved Industry/Technical Specification Task Force (TSTF) STS Traveler, TSTF-498, Revision 1, "Risk-Informed Containment Isolation Valve Completion Times (BAW-2461)." The proposed change extends the Completion Times for containment penetration flow paths with one containment isolation valve inoperable from 4 hours to 7 days for Babcock & Wilcox (B&W) NSSS plants. This change is applicable to containment penetrations with two [or more] containment isolation valves in which one containment isolation valve is inoperable [for reasons other than purge valve leakage not within limit]. The extended Completion Time is not applicable to containment isolation valves in the main steam lines or those identified by plant-specific analysis as having high risk significance for interfacing systems loss of coolant accidents (ISLOCAs) and the existing 4 hour Completion Time applies.

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 revise the Completion Times for restoring an inoperable containment isolation valve (or isolating the affected penetration) within the scope of Topical Report BAW-2461-A, "Risk-Informed Justification for Containment Isolation Valve Allowed

Outage Time Change." The Completion Times are extended from 4 hours to 7 days. Containment isolation valves are not accident initiators in any accident previously evaluated. Consequently, the probability of an accident previously evaluated is not significantly increased. Containment isolation valves control the extent of leakage from the containment following an accident. As such, containment isolation valves are instrumental in controlling the consequences of an accident. However, the consequences of any accident previously evaluated are no different during the proposed extended Completion Times than during the existing Completion Times. As a result, the consequences of any accident previously evaluated are not significantly increased. Therefore, the proposed changes do 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 changes revise the Completion Times for restoring an inoperable containment isolation valve (or isolating the affected penetration) within the scope of Topical Report BAW-2461-A, "Risk-Informed Justification for Containment Isolation Valve Allowed Outage Time Change." The proposed changes do not change the design, configuration, or method of operation of the plant. The proposed changes do not involve a physical alteration of the plant (no new or different kind of equipment will be installed). Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

The proposed changes revise the Completion Times for restoring an inoperable containment isolation valve (or isolating the affected penetration) within the scope of Topical Report BAW-2461-A, "Risk-Informed Justification for Containment Isolation Valve Allowed

Outage Time Change.” In order to evaluate the proposed Completion Time extensions, a probabilistic risk evaluation was performed as documented in Topical Report BAW-2461-A. The risk evaluation concluded that the proposed increase in the Completion Times does not result in an unacceptable incremental conditional core damage probability or incremental conditional large early release probability according to the guidelines of Regulatory Guide 1.177. Therefore, the proposed changes do 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 as set forth in 10 CFR 50.92(c).

Dated at Rockville, Maryland, this 28th day of January, 2008.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Gerald Waig, Acting Chief
Technical Specifications Branch
Division of Inspection & Regional Support
Office of Nuclear Reactor Regulation

Outage Time Change.” In order to evaluate the proposed Completion Time extensions, a probabilistic risk evaluation was performed as documented in Topical Report BAW-2461-A. The risk evaluation concluded that the proposed increase in the Completion Times does not result in an unacceptable incremental conditional core damage probability or incremental conditional large early release probability according to the guidelines of Regulatory Guide 1.177. Therefore, the proposed changes do 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 as set forth in 10 CFR 50.92(c).

Dated at Rockville, Maryland, this 28th day of January, 2008.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Gerald Waig, Acting Chief
 Technical Specifications Branch
 Division of Inspection & Regional Support
 Office of Nuclear Reactor Regulation

Accession Number:ML073400702

ADAMS Template: ADM-0-12

OFFICE	ITSB:DIRS	ADES:DRA	SC:ADES:DRA	AC:ITSB:DIRS	OGC
NAME	TCKolb	CKDoutt	MPRubin	Gwaig <small>TKobetz on12/13/07</small>	NLO
DATE	12/10/2007	12/11/2007	12/12/2007	1/28/2008	1/16/2008

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