nuclear materials. The Committee will undertake studies and activities related to nuclear materials and waste management such as transportation, waste determinations, reprocessing, storage and disposal facilities, in situ leaching mining, mill tailings, enrichment facilities, health effects, decommissioning, materials safety, application of risk-informed, performance-based regulations, and evaluation of licensing documents, rules and regulatory guidance. The Committee will interact with representatives of the public, NRC, Advisory Committee on Reactor Safeguards, other Federal agencies, State and local agencies, Indian Tribes, and private, international, and other organizations as appropriate to fulfill its responsibilities.

FOR FURTHER INFORMATION CONTACT: John T. Larkins, Executive Director of the Committee, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 415–7360.

Dated: July 14, 2006.

Andrew L. Bates,

Federal Advisory Committee, Management Officer.

[FR Doc. E6–11514 Filed 7–19–06; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

Technical Specification Improvement for Combustion Engineering Plants to Risk-Inform Requirements Regarding Conditions Leading to Exigent Plant Shutdown 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 changes in Combustion Engineering (CE) plant conditions leading to exigent plant shutdown in technical specifications (TS). The NRC staff has also prepared a model no-significant-hazards-consideration (NSHC) determination relating to this matter and a model license amendment request (LAR). The purpose of these models is to permit the NRC to efficiently process amendments that propose to adopt technical specifications changes, designated as TSTF–426, related to Topical Report WCAP–16125–NP, Revision 0 (Rev 0), September 2003 (previously CE NPSD–1208, Rev. 0), ''Justification for the Risk Informed Modifications to Selected Technical Specifications for Conditions Leading to Exigent Plant Shutdown,'' which was approved by an NRC SE dated July 9, 2004. Licensees of CE 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 August 21, 2006. Comments received after this date will be considered if it is practical to do so, but the Commission is able to ensure consideration only for comments received on or before this date.

ADDRESSES: Comments may be submitted either electronically or via U.S. mail. Submit written comments to Chief, Rules and Directives Branch, Division of Administrative Services, Office of Administration, Mail Stop: T–6 D59, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001. Hand deliver comments to: 11545 Rockville Pike, Rockville, Maryland, between 7:45 a.m. and 4:15 p.m. on Federal workdays. 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: T.R. Tjader, Mail Stop: O–12H2, Division of Inspection & Regional Support, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, telephone 301–415–1187.

SUPPLEMENTARY INFORMATION:

Background

Regulatory Issue Summary 2000–06, ''Consolidated Line Item Improvement Process for Adopting Standard Technical Specifications 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 allows changes in CE plant conditions leading to exigent plant shutdown in technical specifications (TS), if risk is assessed and managed. 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 NRC rules and procedures.

This notice involves the changes in CE plant conditions leading to exigent plant shutdown in TS, if risk is assessed and managed. The change was proposed in Topical Report WCAP–16125–NP Rev 0, September 2003 (previously CE NPSD–1208, Rev 0), ''Justification for the Risk Informed Modifications to Selected Technical Specifications for Conditions Leading to Exigent Plant Shutdown,'' which was approved by an NRC SE dated July 9, 2004. This change was proposed for incorporation into the STS by the owners groups participants in the Technical Specification Task Force (TSTF) and is designated TSTF–426, Rev 0. TSTF–426, Rev 0, can be viewed on the NRC's web page at *http://www.nrc.gov/reactors/operating/licensing/techspecs.html*.

Applicability

This proposal to modify TS requirements by the adoption of TSTF–426, Rev 0, is applicable to all licensees of CE plants who commit to WCAP–16446–NP, Rev 0, ''Actions to Preclude Entry into LCO 3.0.3 Implementation Guidance (PA–RMCS–0196),'' June 2005.

To efficiently process the incoming license amendment applications, the staff requests that each licensee applying for the changes proposed in TSTF–426 include Bases for the proposed TS consistent with the Bases proposed in TSTF–426. The CLIIP does not prevent licensees from requesting an alternative approach or proposing the changes without the requested 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. Significant variations from the approach, or

inclusion of additional changes to the license, will result in staff rejection of the submittal. Instead, licensees desiring significant variations and/or additional changes should submit a LAR that does not claim to adopt TSTF–426.

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 NSHC 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 NSHC determination, and a notice of opportunity for a hearing. The staff will also publish a notice of issuance of an amendment to operating license to announce the modifications of conditions leading to exigent plant shutdown in selected technical specifications.

Dated at Rockville, Maryland, this 13th day of July 2006.

For the Nuclear Regulatory Commission.

Carl S. Schulten,

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

Attachment—Proposed Safety Evaluation, United States Nuclear Regulatory Commission; Office of Nuclear Reactor Regulation; Consolidated Line Item Improvement Technical Specification Task Force (TSTF) Change TSTF–426 Risk Informed Modifications to Selected Technical Specifications for Conditions Leading to Exigent Plant Shutdown

1.0 Introduction

On August 30, 2004, the Owners Group (OG) Technical Specifications Task Force (TSTF) submitted a proposed change, TSTF–426, Revision 0 (Rev 0), to the Combustion Engineering (CE) standard technical specifications (STS) (NUREG–1432) on behalf of the industry. TSTF–426, Rev 0, is a proposal to incorporate WCAP–16125–NP Rev 0, (previously CE NPSD–1208, Rev 0), of September 2003, ''Justification for the Risk Informed Modifications to Selected Technical Specifications for Conditions Leading to Exigent Plant Shutdown,'' which was approved by an NRC safety evaluation (SE) dated July 9, 2004 into the CE STS. This proposal is part of Nuclear Energy Institute (NEI) Risk Informed Technical Specifications Task Force (RITSTF) Initiative 6, one of the industry's initiatives being developed under the Risk Management Technical Specifications (RMTS) program. These initiatives are intended to maintain or improve safety through the incorporation of risk assessment and management techniques in technical specifications (TS), while reducing unnecessary burden and making technical specification requirements consistent with the Commission's other risk-informed regulatory requirements.

The Code of Federal Regulations, 10 CFR 50.36(c)(2)(I), ''Technical Specifications; Limiting Conditions for Operation,'' states: ''When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met.'' TS provide a completion time (CT) limit for following any remedial action permitted by the TS until the limiting condition for operation (LCO) can be met. If the LCO or the remedial action cannot be met on the specified CT, then the reactor is required to be shutdown.

The Required Action for Conditions that imply a loss of function, related to a system or component included within the scope of the plant TS, is entry into LCO 3.0.3. Currently, upon entering LCO 3.0.3, one hour is allowed to prepare for an orderly shutdown before initiating a change in plant operation. This includes time to permit the operator to coordinate the reduction in electrical generation with the load dispatcher to ensure the stability and availability of the electrical grid. The OG is proposing to define and/or modify various TS Conditions to accommodate extension of the currently required time of one hour to initiate plant shutdown for members with Combustion Engineering (CE) Nuclear Steam Supply Systems (NSSS) designs. The proposed extension, related to specific systems or components, is based on the system's risk significance and varies from 4 hours to 72 hours.

The proposed changes are typically associated with plant conditions where both trains of a two-train redundant system are declared inoperable and at the same time there is either no specified action in the TS for the condition (requiring a default LCO 3.0.3 entry) or conditions exist where the defined action includes an explicit LCO 3.0.3 entry. The intent of the proposed TS changes is to provide a risk-informed alternative to the current LCO 3.0.3 requirements such that the plant staff has adequate time to fully evaluate the situation or restore loss of function while the plant remains operating at power, thus avoiding unnecessary unscheduled plant shutdowns and minimizing transition and realignment risks.

WCAP–16125–NP also provides system-specific integrated justifications (i.e., risk and defense-in-depth arguments) for several proposed TS Required Action statement changes to allow a MODE 4 (hot shutdown) end state, for repair purposes of two-train redundant systems that do not have explicit LCO 3.0.3 entry requirements, when the proposed extended time cannot be met.

The intent of the proposed TS changes is to provide needed flexibility in the performance of corrective maintenance during power operation and at the same time enhance overall plant safety by:

- Avoiding unnecessary unscheduled plant shutdowns,
- Minimizing plant transitions and associated transition and realignment risks,
- Providing increased flexibility in scheduling and performing maintenance and surveillance activities, and
- Providing explicit guidance in areas that currently does not exist.

It should be noted that many of the proposed TS changes affect the existing plant shutdown requirements for plant conditions where the plant operation is not in explicit compliance with the plant design basis. The proposed actions provide a risk-informed process for establishing shutdown priorities aiming at reducing overall plant risk and increasing public health and safety protection.

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(c)(1)–(5), 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. The rule does not specify the particular requirements to be included in a plant's TS. As stated in 10 CFR 50.36(c)(2)(i), the ''Limiting conditions for operation

are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications * * *.'' Topical Report WCAP–16125, ''Justification for Risk-Informed Modifications to Selected Technical Specifications for Conditions Leading to Exigent plant Shutdown'' (Reference 1), justifies modifications to various TS Action Statements for conditions that result in a loss of safety function related to a system or component included within the scope of the plant TS. It revises the current Required Actions from either a default or explicit LCO 3.0.3 entry to a risk-informed action based on the system's risk significance with an associated completion time (CT). In most instances, a CT of 24 hours is justified.

3.0 Technical Evaluation

The changes proposed in TSTF–426, Rev 0, are consistent with the changes proposed and justified in Topical Report WCAP–16125–NP Rev 0, and approved by the associated NRC SE of July 9, 2004 (Reference 2). The evaluation included in Reference 2, as appropriate and applicable to the changes of TSTF–426, Rev 0, (Reference 3), is not reiterated here, except where differences from the SE are justified and in discussing the TSTF–426 changes with respect to the individual specifications. In its application the licensee commits to PA–RMSC–0196, ''Actions to Preclude Entry into LCO 3.0.3, Implementation Guidance'' (Reference 4) for implementing TSTF–426, Rev 0, which addresses a variety of issues such as considerations and compensatory actions for risk-significant plant configurations. An overview of the generic evaluation and associated risk assessment is provided below, along with a summary of the associated TS changes justified by Reference 1.

The proposed TS changes, including end state changes (i.e., approved TSTF–422 end state changes), are summarized in Table 1 of this safety evaluation report (SER). Such changes cover a diverse range of systems and components with essentially four separate impacts on plant risk. They are:

- TS changes related to systems or components contributing to accident prevention. The removal of these systems/components has the potential to increase the plant risk through the increased potential for plant upsets (i.e., potential for increased initiated event frequencies). A typical example in this category are the pressurizer heaters whose unavailability could complicate plant pressure control and lead to a plant trip.
- TS changes related to systems or components contributing to accident mitigation. These systems are in standby during normal plant operation and are intended to function during accidents to prevent core damage. Typical examples in this category are the Emergency Core Cooling System (ECCS) and the pressurizer Power Operated Relief Valves (PORVs).
- TS changes related to systems or components contributing to large early release prevention. The primary role of these systems is to function during a core damage accident to prevent large releases of radioactive materials. A typical example in this category is the containment (the only component in this category for which a TS change is proposed).
- TS changes related to systems/components contributing to control of delayed radiation releases to the environment. The primary role of these systems is to prevent radiation releases above TS limits and meet design basis requirements. Thus, the unavailability of these systems has no impact on the surrogate risk metrics associated with core damage and large early releases. Typical examples in this category are the ECCS room ventilation system and the containment iodine cleanup system.

Although the improved standard technical specification (STS) numbering system (NUREG–1432, Reference 5) is used for convenience in Table 1, the analyses provided in WCAP–16125–NP support these changes for all CE designed NSSS plants.

TABLE 1.—SUMMARY OF PROPOSED MODIFICATIONS TO TECHNICAL SPECIFICATIONS

STS #	System	Inoperability condition	Current action and associated completion time (CT)	Proposed changes: completion time (CT) and end state
LCO 3.4.9	Pressurizer Heaters	Both groups of class 1E heaters inoperable.	No condition defined. Default LCO 3.0.3 entry.	24 hrs CT for restoring one group.
LCO 3.4.11 ..	Pressurizer Power Operated Relief Valves (PORVs) and Associated Block Valves (BVs).	*STS LCO 3.4.11 CONDITION E (or equivalent):* Two PORVs inoperable and not capable of being manually cycled. *STS LCO 3.4.11 CONDITION F (or equivalent):* Two BVs inoperable.	Varies with plant. *STS LCO 3.4.11 CONDITION E (or equivalent)*: Close associated block valve in 1 hour AND remove power from associated block valve in one hour, AND be in MODE 3 in 6 hours AND MODE 4 in [12] hours. *STS LCO 3.4.11 CONDITION F (or equivalent):* Restore one block valve to operable in 2 hours. STS Condition G requires MODE 3 in 6 hours and MODE 4 in [12] hours if Condition F not met.	*STS LCO 3.4.11 CONDITION E (or equivalent):* Allow 8 hours CT to restore one PORV, for conditions where a PORV is unable to reclose once challenged but may be isolated. *STS LCO 3.4.11 CONDITION F (or equivalent):* Allow 8 hours to restore one BV.
LCO 3.5.1	Safety Injection Tanks (SITs)	Two or more SITs inoperable (STS CONDITION D).	Explicit 3.0.3 entry	Revise STS Condition D to allow 24 hours CT for restoring one SIT.
LCO 3.5.2	Low Pressure Safety Injection (LPSI).	Two LPSI subsystems inoperable.	Default 3.0.3 entry	24 hours for restoring one LPSI subsystem (STS Condition D would be deleted).
LCO 3.5.2	High Pressure Safety Injection (HPSI).	Two HPSI subsystems inoperable (STS Condition D).	Explicit 3.0.3 entry	4 hours CT for restoring one HPSI subsystem.

TABLE 1.—SUMMARY OF PROPOSED MODIFICATIONS TO TECHNICAL SPECIFICATIONS—Continued

STS #	System	Inoperability condition	Current action and associated completion time (CT)	Proposed changes: completion time (CT) and end state
LCO 3.6.1	Containment (CTMT)	Inoperable	Defined 1 hour shutdown (MODE 5 in 36 hours).	8 hours CT restoring containment operability. Allow MODE 4 end state.
LCO 3.6.6A&B.	Containment Spray System (CS).	Two CS trains inoperable OR any combination of three or more trains inoperable (i.e., containment air coolers (CAC*)) (STS Condition F).	Explicit 3.0.3 entry	12 hrs CT for restoring one CS train if CAC is not available. 72 hours CT for restoring one CS if one train of CAC is available.
LCO 3.6.10 ..	Iodine Cleanup System (ICS)	Two ICS trains inoperable	No condition defined. Default 3.0.3 entry.	24 hours CT for restoring one train. Allow MODE 4 end state.
LCO 3.6.13 ..	Shield Building Exhaust Air Cleanup System (SBEACS).	Two trains inoperable	No condition defined. Default 3.0.3 entry.	24 hours CT for restoring one train. Allow MODE 4 end state.
LCO 3.7.11 ..	Control Room Emergency Air Cleanup System (CREACS).	Two trains inoperable	No condition defined. Default 3.0.3 entry.	24 hours CT for restoring one train (or the time to reach 5 REM, which may be less than 24 hours). Proposed change applies to radiation protection function only. Allow MODE 4 end state.
LCO 3.7.12 ..	Control Room Emergency Air Temperature Control System (CREATCS).	Two trains inoperable (STS Condition E).	Explicit 3.0.3	24 hours CT for restoring one train. Allow MODE 4 end state.
LCO 3.7.13 ..	Emergency Core Cooling System (ECCS), Pump Room Exhaust Air Cleanup System (ECCS PREACS).	Two trains inoperable	No condition defined. Default 3.0.3 entry.	24 hours CT for restoring one train. Allow MODE 4 end state.
LCO 3.7.15 ..	Penetration Room, Exhaust Air Cleanup System (PREACS).	Two trains inoperable	No condition defined. Default 3.0.3 entry.	24 hours CT for restoring one train. Allow MODE 4 end state.

*Also known as containment air recirculation coolers (CARC)

WCAP–16125–NP documents a risk-informed analysis of the proposed TS changes. Probabilistic Risk Assessment (PRA) results and insights are used, in combination with results of deterministic assessments, to identify and justify the proposed TS changes for all CE NSSS design plants. This is in accordance with guidance provided in Regulatory Guides (RGs) 1.174 and 1.177 (References 6 and 7, respectively).

The approach used to assess the risk impact of the proposed changes is discussed and evaluated in Section 3.0. Section 3.1 evaluates the results of the risk assessment. Section 3.2 provides integrated justifications (i.e., both probabilistic and deterministic arguments) for each of the proposed system-specific TS changes. Finally, Section 3.3 summarizes the staff's conclusions from the review of the proposed TS changes.

3.1 Risk Assessment

The objective of the OG's risk assessment was to show that the implementation of the proposed TS changes are not expected to lead to any significant risk increases. In performing the risk-informed assessments and interpreting the results, the following two assumptions are tacitly made:

- A condition resulting in the inoperability of a system or component which currently results in the need for an immediate shutdown is an infrequent event. This is evidenced by the fact that plant shutdowns due to entries into LCO 3.0.3 conditions are rare. Furthermore, when such a condition does arise, the actual cause of the inoperability is often due to an incomplete ''paper trail'' or a partial system failure rather than a deleterious common-cause failure of critical components leading to a functional failure of an entire system.
- The risk incurred by increasing the required shutdown action time is controlled to acceptable levels using a risk informed approach that considers the component risk worth and offsetting benefits of avoiding plant transitions.

The risk impact of the proposed TS changes was assessed following the three-tiered approach recommended in RG 1.177 for evaluating proposed extensions in currently allowed Completion Times (CTs):

- The first tier involves the assessment of the change in plant risk due to the proposed TS change. Such risk change is expressed (1) by the change in the average yearly core damage frequency (ΔCDF) and the average yearly large early release frequency (ΔLERF) and (2) by the incremental conditional core damage probability (ICCDP) and the incremental conditional large early release probability (ICLERP). The assessed ΔCDF and ΔLERF values are compared to acceptance guidelines, consistent with the Commission's Safety Goal Policy Statement as documented in RG 1.174, so that the plant's average baseline risk is maintained within a minimal range. The assessed ICCDP and ICLERP values are compared to acceptance guidelines provided in RG 1.177 which aim at ensuring that the plant risk does not increase unacceptably during the period the equipment is taken out of service.
- The second tier involves the identification of potentially high-risk configurations that could exist if equipment in addition to that associated with the change were to be taken out of service simultaneously, or other risk-significant operational factors such as concurrent equipment testing were also involved. The objective is to ensure that appropriate restrictions are in place to avoid any potential high-risk configurations.

• The third tier involves the establishment of an overall configuration risk management program (CRMP) to ensure that potentially risk-significant configurations resulting from maintenance and other operational activities are identified. The objective of the CRMP is to manage configuration-specific risk by appropriate scheduling of plant activities and/or appropriate compensatory measures.

The approach used in implementing the three-tiered approach of RG 1.177 to support the proposed TS changes is fully evaluated in the SE (Reference 2) to WCAP–16125–NP Rev 0. The staff found that the risk assessment results support the proposed changes. The risk increases associated with the proposed TS changes, if any, will be insignificant based on guidance provided in RGs 1.174 and 1.177. Furthermore, the sensitivity studies and the many conservative assumptions used in the analyses provide adequate assurance about the robustness of the results used to support the proposed TS changes.

3.2 Assessment of Technical Specification Changes

There are two categories of proposed system-specific TS changes. The first category includes changes associated with plant conditions requiring entry into LCO 3.0.3 to extend the time for restoring the system's or component's loss of function, thus avoiding unnecessary unscheduled plant shutdowns and minimizing transition and realignment risks. The second category includes changes to TS Required Action statements to allow a MODE 4 (hot shutdown) end state, for repair purposes of two-train redundant systems that do not have implicit LCO 3.0.3 entry requirements, when the proposed extended time cannot be met. The generic risk assessment for the proposed end state changes is documented in topical report CE–NPSD–1186 (Reference 8) which has been reviewed and approved by the staff. While all proposed system-specific TS changes include changes to extend the time for restoring the system's or component's loss of function (first category changes), some proposed system-specific TS changes include changes to modify the end state (second category changes). Therefore, the integrated justifications, discussed in this section, include insights from the generic risk assessments documented in both topical reports WCAP–16125–NP (Reference 1) and CE–NPSD–1186 (Reference 8).

Due to the nature of the plant conditions associated with the proposed TS changes (i.e., loss of a system's or component's function), the redundancy and diversity typically associated with ensuring the deterministic aspect of defense-in-depth position is not always strictly possible. In these cases, defense-in-depth is considered by (1) controlling the outage time for related equipment, (2) restricting activities which may challenge the unavailable systems or functions, (3) allowing only small time intervals for plant operation at power with a system or function unavailable, (4) using, whenever possible, contingency actions to limit concurrent unavailabilities appropriately, and (5) evaluating repair activities and alternatives. Defense-in-depth is evaluated in conjunction with the generic risk assessment results which conclude that the proposed system-specific TS changes would lead to insignificant risk increases and in most cases to net risk reductions. This conclusion is a consequence of the low expected challenge frequency of the systems or functions associated with the proposed TS changes, the very short proposed exposure times to the specified plant conditions and the offsetting benefits of avoiding plant transitions.

The proposed change in shutdown mode end states will result in plants remaining within the applicability of the specific LCOs for the length of time it takes to restore the LCO conditions. Since corrective maintenance will be necessary, the 10 CFR 50.65(a)(4) requirement to assess and manage risk will apply, and should confirm that remaining in the shutdown mode that is within the applicability of the LCO is acceptable for the plant specific configuration. NRC Regulatory Guide 1.182 (Reference 9) endorses NUMARC 93–01 Section 11 guidance for implementation of 10 CFR 50.65(a)(4), and shall be followed; including the conduct of an (a)(4) reevaluation for emergent conditions.

3.2.1 Pressurizer Heaters (STS LCO 3.4.9)

The pressurizer provides a point in the RCS where the liquid and vapor water phases are maintained in equilibrium under saturated conditions for pressure control purposes to prevent bulk boiling in the remainder of the RCS. The pressure control components addressed by this LCO include the pressurizer, the required groups of heaters and their controls and the Class 1E power supplies. The liquid to vapor interface permits RCS pressure control by using the sprays and heaters during normal operation and in response to anticipated design basis accidents. The unavailability of Class 1E pressurizer heaters covered by the TS may complicate steady state plant pressure control and, thus, increase the potential for an unplanned reactor trip.

Another function of the Class 1E pressurizer heaters is to maintain plant subcooling during post accident cooldown by natural circulation. Although the unavailability of pressurizer heaters during natural circulation cooldown will extend the time to reach the shutdown cooling system entry conditions, heat removal will be adequately established via steam generator cooling.

Plant Applicability: All OG member plants with CE NSSS designs except St Lucie-2.

Limiting Condition for Operation (LCO): Two groups of pressurizer heaters, [capable of being powered from an emergency power supply], must be operable in MODES 1, 2 and 3.

Condition Requiring Entry into Shutdown Required Action: Two safety-related pressurizer heater groups inoperable (default entry into LCO 3.0.3 is required).

Proposed Modification to Shutdown Required Actions: Increase the time available to take action to restore one group of safety-related heaters before entry into STS LCO 3.4.9 Condition C to 24 hours.

Assessment: The risk assessment results (in Reference 2) indicate that the proposed 24-hour completion time for restoring one group of safety-related pressurizer heaters before entering STS LCO 3.4.9 Condition C will not lead to a significant increase in risk and may actually decrease risk. The risk impact of the proposed completion time extension was assessed to be well within the acceptance criteria reported in Regulatory Guides 1.174 and 1.177. Specifically, the proposed completion time extension would lead to the following risk increases: (1) The probability of core damage when the safety-related pressurizer heaters are inoperable will increase by about 3E–7 (the acceptance guideline for ICCDP is 5E–7); (2) the CDF will increase by about 6E–8/year (the acceptance guideline for ΔCDF is 1E–6/year); (3) the large early release probability when the safety-related pressurizer heaters are inoperable will increase by less than 1E–8 (the acceptance guideline for ICLERP is 5E–8); and (4) the LERF will increase by about 2E–9/year (the acceptance guideline for ΔLERF is 1E–7/year). Furthermore, the proposed time extension may actually be risk neutral or result in a decrease in risk if credit for avoiding the transition to shutdown risk is taken.

The risk impact argument is consistent with the following observations. TS include requirements for both groups of safety-related pressurizer heaters to have minimum heating power [and emergency power supply capability]. The safety-related pressurizer heaters have two primary functions. One function is to keep the reactor coolant in a subcooled condition with natural circulation following a loss of offsite power (LOOP) event during which the normally available station powered non-safety related heaters become unavailable. Although no credit is taken in design basis accident analyses for the pressurizer heaters, they have been included in the TS because they are needed to maintain long term subcooling during a LOOP event. However, pressurizer heaters are not required to achieve a post-trip plant cooldown since successful cooldown can be achieved, with minimal impact on plant risk, due to the availability of reactor vessel and pressurizer vents. Consequently, the pressurizer heaters do not have a significant role in the mitigation of core damage events. A second function of the safety-related pressurizer heaters is to back up the station powered non-safety related heaters which are normally available to control reactor coolant pressure during steady state operation. The unavailability of these heaters would reduce the plant's ability to control the normal operating parameters and consequently will increase the potential of plant trip.

The presence of both safety-related and non-safety-related heaters provides considerable defense-in-depth for many transient events, except following a LOOP event. For LOOP events and without the safety-related pressurizer heaters, a natural circulation cooldown may be required. Such cooldowns can be conducted via use of reactor vessel and pressurizer vents or SG venting via the atmospheric dump valves (ADVs).

The intent of the proposed completion time extension is to extend plant operation at power when the ability to control normal plant operation is not significantly degraded. Therefore, the proposed completion time extension should not be utilized when there is reason to believe that plant pressure and level cannot be controlled within operating bounds, as is the case when both the safety and non-safety pressurizer heaters are unavailable. This restriction should be reflected in the TS bases.

Finding: The requested change to increase the time available to take action to restore one pressurizer heater group to 24 hours for cases when both groups are inoperable is acceptable.

Tier 2 Restrictions: None.

3.2.2 Pressurizer PORVs and Associated Block Valves (STS LCO 3.4.11)

PORVs are automatically opened at a specific set pressure when the pressurizer pressure increases and automatically closed on decreasing pressure. The PORVs may be manually operated using controls installed in the control room. An electric, normally open, block valve (BV) is installed between the pressurizer and the PORV. The function of the BV is to ensure RCS integrity by isolating a leaking or stuck-open PORV to permit continued power operation. Most importantly, the BV is used to isolate a stuck open PORV and terminate the RCS depressurization and coolant inventory loss.

Plant Applicability: Calvert Cliffs 1 & 2, St Lucie 1 & 2 (block valves), Millstone 2, Palisades, and Fort Calhoun Station.

Limiting Condition for Operation (LCO): Each PORV and associated block valve shall be operable in MODES 1, 2 and 3.

Condition Requiring Entry into Shutdown Required Action: Two PORVs inoperable and not capable of being manually cycled (STS LCO 3.4.11 Condition E or equivalent) or two BVs inoperable (STS LCO 3.4.11 Condition F or equivalent). There is a variability in LCO entry requirements among OG member plants with CE NSSS designs for conditions with both PORVs inoperable or both BVs inoperable. Typically, a plant shutdown is required if the PORVs are not isolated and one PORV is not restored within one hour (STS LCO 3.4.11 Condition E or equivalent) or when the PORVs are not placed in manual control within one hour and one BV is not recovered within two hours (STS LCO 3.4.11 Condition F or equivalent).

Proposed Modification to Shutdown Required Actions: Revise STS LCO 3.4.11 Condition E (or equivalent to allow an 8-hour completion time (CT) to restore one PORV for conditions where a PORV is unable to re-close once challenged, but may be isolated). This extension would not apply to PORVs that are leaking, and that cannot be isolated by block valves, or to PORVs that are not expected to be isolable following a demand.

Revise STS LCO 3.4.11 Required Action F.2 to allow 8 hours to restore one BV, for conditions where the associated PORV is unable to reclose.

Assessment: The risk assessment results (in Reference 2) indicate that the proposed 8-hour completion time for the actions required by TS (i.e., actions associated with STS LCO 3.4.11 Conditions E and F or equivalent) will not lead to a significant increase in risk and, actually, may decrease risk by avoiding the risk associated with the transition to shutdown. The risk impact of the proposed completion time extension, without credit for avoiding the transition to shutdown risk, was assessed to be within the acceptance criteria reported in Regulatory Guides 1.174 and 1.177. Specifically, the proposed time extension would lead to the following risk increases: (1) The probability of core damage will increase by about 8E–7, which is close to the numerical guideline of 5E–7 for ICCDP used in RG 1.177; (2) the CDF will increase by about 2E–7/year, which is significantly less than the acceptance guideline of 1E–6/year for ΔCDF; (3) the large early release probability will increase by less than 7E–8, which is close to the numerical guideline of 5E–8 for ICLERP and in agreement with guidance provided in RG 1.177; and (4) the LERF will increase by about 1E–8/year, which is significantly less than the acceptance guideline of 1E–7/year for ΔLERF. Furthermore, the proposed time extension may actually be risk neutral or result in a decrease in risk if credit for avoiding the transition to shutdown risk is taken.

The risk impact argument is consistent with the following defense-in-depth argument where the impact of STS LCO 3.4.11 Conditions E and F on defense-in-depth is discussed. The primary purpose of this LCO is to ensure that the PORVs and the BVs are operable so the potential for a small break LOCA through the PORV pathway is minimized, or if a small LOCA were to occur through a failed open PORV, the block valve could be manually operated to isolate the path. In addition, one of the functions of the PORVs is to limit the number of pressure transients that may challenge the primary safety valves (PSVs) since the PSVs, unlike the PORVs, cannot be isolated.

When both PORVs are found inoperable (i.e., STS LCO 3.4.11 Condition E or equivalent), the associated BVs are manually closed, within one hour, to isolate both PORV paths. With none of the PORVs available to open, the PSVs could be challenged to provide overpressure protection. However, a challenge to the PSVs during the proposed completion time extension to restore one PORV is extremely unlikely and the PSVs are available and highly reliable (i.e., even if they are challenged, they would close properly when the pressure is reduced

below their setpoint). It should be noted that overpressure protection is provided by the PSVs in the design basis analyses, without any credit for PORV opening for accident mitigation (in fact there are some plants built without PORVs). For these reasons, there is defense-in-depth against LOCA accidents through the PORV and the PSV paths as well as against overpressure accidents during the very short time interval when STS LCO 3.4.11 Condition E is proposed to be allowed with the plant operating at power.

When both BVs are found inoperable (i.e., STS LCO 3.4.11 Condition F or equivalent), the PORVs are placed in manual control, within one hour, to ensure that they do not open automatically in the unlikely event they are challenged. Therefore, there is defense-in-depth against small LOCA accidents through the PORV paths. However, in the unlikely event of a pressure transient during the proposed completion time extension, the PSVs could be challenged to provide overpressure protection. This is the same scenario discussed above for STS LCO 3.4.11 Condition E. For these reasons, there is defense-in-depth against LOCA accidents through the PORV and the PSV paths as well as against overpressure accidents during the very short time interval when STS LCO 3.4.11 Condition F is proposed to be allowed with the plant operating at power.

The PORV paths provide an alternative means of core cooling by feed and bleed (once-through core cooling) in the case of multiple equipment failure events that are not within the design basis, such as a total loss of feedwater. The unavailability of feed and bleed for core cooling, the dominant contributor to risk associated with the proposed changes to LCO 3.4.11. As discussed above, such risk is very small.

Finding: The requested changes to allow 8 hours for completing the actions required by TS (i.e., actions associated with STS LCO 3.4.11 Conditions E and F or equivalent) are acceptable.

Tier 2 Restrictions: None.

3.2.3 Safety Injection Tanks (STS LCO 3.5.1)

The Safety Injection Tanks (SITs) are pressurized passive injection devices whose primary safety function is to inject large quantities of borated water into the reactor vessel during the blowdown phase of a large LOCA and to provide inventory to help accomplish the refill phase that follows the blowdown phase.

Plant Applicability: Applicable to all OG member plants with CE NSSS designs.

Limiting Condition for Operation (LCO): All SITs shall be operable during MODES 1 and 2 as well as during MODE 3 when the pressurizer pressure is above [700] psia.

Condition Requiring Entry into Shutdown Required Action: When two or more SITs are inoperable (STS LCO 3.5.1 Condition D), immediate entry into LCO 3.0.3 is required.

Proposed Modification to Shutdown Required Actions: Increase the time available to restore one SIT before entry into LCO 3.0.3 to 24 hours.

Assessment: The risk assessment results (in Reference 2) indicate that the proposed 24-hour completion time for restoring one SIT before entering LCO 3.0.3 will not lead to a significant increase in risk and may actually decrease risk. The risk impact of the proposed 23-hour extension, without credit for avoiding the transition to shutdown risk, was assessed to be well within the acceptance criteria reported in Regulatory Guides 1.174 and 1.177. Specifically, the proposed time extension would lead to the following risk increases: (1) The probability of core damage will increase by about 1E–8, which is less than the numerical guideline of 5E–7 for ICCDP; (2) the CDF will increase by about 3E–9/year, which is significantly less than the acceptance guideline of 1E–6/year for DCDF; (3) the large early release probability will increase by about 4E–11, which is much less than the numerical guideline of 5E–8 for ICLERP; and (4) the LERF will increase by about 9E–12/year, which is much less than the acceptance guideline of 1E–7/year for ΔLERF. Furthermore, the proposed time extension would, most likely, result in a risk reduction if credit for avoiding the transition to shutdown risk is taken.

The risk impact argument is also supported by the following defense-in-depth discussion. The SITs are needed primarily to mitigate large LOCAs. The unavailability of two or more SITs will compromise the ability of the plant to respond to a large LOCA. However, as discussed above, even if it is conservatively assumed that all large LOCAs proceed to core damage, the risk impact is negligible (much less than the risk estimated to incur during plant transition to shutdown). On the other hand, the unavailability of two or more SITs may alter the progression of some smaller break size LOCAs and the extent of core damage. However, their impact on the core damage potential is negligible. In addition, long term core cooling, provided via the plant's LPSI and HPSI systems, partially offsets the impact of SIT unavailability.

Finding: The requested change to increase the time available to take action to restore all SITs (from one to 24 hours) for cases when two or more SITs are inoperable is acceptable.

Tier 2 Restrictions: None.

3.2.4 Low Pressure Safety Injection (STS LCO 3.5.2)

The low pressure safety injection (LPSI) system is part of the emergency core cooling system (ECCS). The function of the ECCS is to provide core cooling and negative reactivity to ensure that the reactor core is protected following certain accidents, such as LOCAs, SGTRs and loss of feedwater. There are two phases of ECCS operation: injection and recirculation. In the injection phase, borated water is injected into the RCS via the cold legs. After the blowdown stage of the LOCA stabilizes, injection flow is split equally between the hot and cold legs. After the RWST is depleted, the ECCS recirculation phase is entered as the ECCS suction is automatically transferred to the containment sump. TS require that in MODES 1, 2 and 3, with pressurizer pressure greater than or equal to [1700] psia, both redundant (100% capacity) ECCS trains must be operable. Each ECCS train consists of a high pressure safety injection (HPSI) subsystem, a low pressure safety injection (LPSI) subsystem and a charging subsystem.

Plant Applicability: Applicable to all OG member plants with CE NSSS designs.

Limiting Condition for Operation (LCO): Two redundant, 100% capacity LPSI trains must be operable in MODES 1 and 2 as well as in MODE 3 when the pressurizer pressure is greater than or equal to [1700] psia.

Condition Requiring Entry into Shutdown Required Action: When both LPSI trains are inoperable, the design basis assumptions for the large break LOCA analyses are not met and a default entry into LCO 3.0.3 is required.

Proposed Modification to Shutdown Required Actions: Add separate condition for both LPSI trains inoperable to restore at least one LPSI train to operable in 24 hours. In addition, with the proposed condition taken with the proposed changes to HPSI discussed below, the existing condition (STS LCO 3.5.2 Condition D) of ''Less than 100% of the ECCS flow equivalent to a single OPERABLE train available'' will no longer be required since that condition will be addressed by the conditions for two HPSI

subsystems inoperable or two LPSI subsystems inoperable.

Assessment: The risk assessment results (in Reference 2) indicate that the proposed 24-hour completion time for restoring one LPSI train will not lead to a significant increase in risk and may actually decrease risk. The risk impact of the proposed completion time extension, without credit for avoiding the transition to shutdown risk, was assessed to be well within the acceptance criteria reported in Regulatory Guides 1.174 and 1.177. Specifically, the proposed completion time extension would lead to the following risk increases: (1) The probability of core damage will increase by about 1E–7, which is less than the numerical guideline of 5E–7 for ICCDP; (2) the CDF will increase by about 2E–8/year, which is significantly less than the acceptance guideline of 1E–6/year for ΔCDF; (3) the large early release probability will increase by about 4E–10, which is much less than the numerical guideline of 5E–8 for ICLERP; and (4) the LERF will increase by about 8E–11/year, which is much less than the acceptance guideline of 1E–7/year for ΔLERF. Furthermore, the proposed completion time extension would, most likely, result in a risk reduction if credit for avoiding the transition to shutdown risk is taken.

The risk impact argument is also supported by the following defense-in-depth discussion. The primary impact of the unavailability of the LPSI system will be the reduction in the capability of the plant to provide RCS inventory makeup to mitigate a large LOCA. However, the unavailability of the LPSI system will impair the ability of the plant to maneuver to shutdown cooling. Therefore, the proposed 24-hour completion time to repair one LPSI train is reasonable due to the very small incremental risk associated with the continued plant operation at power and the inadvisability of a plant shutdown without the LPSI pumps which are needed for shutdown cooling.

STS LCO 3.5.2 Condition D requires that for a condition where the ECCS flow is less than 100% of the ECCS flow assumed in the LOCA analysis. WCAP–16125–NP proposed to delete this condition because it would no longer be necessary, based on the new conditions for two HPSI trains or two LPSI trains inoperable. The NRC staff has concluded that an adequate basis has not been provided to justify the deletion of STS LCO 3.5.2 Condition D. Specifically, licensees should discuss the functions of the HPSI and LPSI systems in terms of reactivity control, RCS inventory control, RCS pressure control, and core heat removal for system operations such as safety injection and recirculation, hot leg injection and once through core cooling to mitigate the consequences of LOCAs, SLB, and SGTR events. The licensees should also discuss the safety and nonsafety related accident mitigation systems, and show that, for a condition when the ECCS flow is less than 100% of the ECCS flow equivalent to a single OPERABLE train, alternative flow injection systems and backup accident management strategies are available and effective. Licensees should also list specific compensatory measures (including a description of pertinent operating procedures, maintenance process and training programs) and contingency plans with acceptable justification for the proposed deletion of STS LCO 3.5.2 Condition D.

Finding: The requested change to increase the time available to restore an LPSI train to operable is acceptable. The proposed change to delete STS LCO 3.5.2 Condition D needs to be adequately justified on a plant-specific basis.

Tier 2 Restrictions: None.

3.2.5 High Pressure Safety Injection (STS LCO 3.5.2)

The high pressure safety injection system is part of the ECCS. The function of the ECCS is to provide core cooling and negative reactivity to ensure that the reactor core is protected following certain accidents, such as LOCAs, SGTRs and loss of feedwater. There are two phases of ECCS operation: injection and recirculation. In the injection phase, borated water is injected into the RCS via the cold legs. After the blowdown stage of the LOCA stabilizes injection flow is split equally between the hot and cold legs. After the RWST is depleted, the ECCS recirculation phase is entered as the ECCS suction is automatically transferred to the containment sump. TS require that in MODES 1, 2 and 3, with pressurizer pressure greater than or equal to [1700] psia, both redundant (100% capacity) ECCS trains must be operable. Each ECCS train consists of a high pressure safety injection subsystem, a low pressure safety injection subsystem and a charging subsystem.

Plant Applicability: Applicable to all OG member plants with CE NSSS designs.

Limiting Condition for Operation (LCO): In MODES 1 and 2 as well as in MODE 3 when the pressurizer pressure is greater than or equal to [1700] psia, both trains of HPSI must be operable.

Condition Requiring Entry into Shutdown Required Action: When both HPSI trains are inoperable, a default entry into LCO 3.0.3 is required.

Proposed Modification to Shutdown Required Actions: Increase the time for restoring one HPSI pump or subsystem, before initiating shutdown per LCO 3.0.3, to four hours.

Assessment: The risk assessment results (in Reference 2) indicate that the proposed 4-hour completion time for the actions required by TS before entering LCO 3.0.3 will not lead to a significant increase in risk and, actually, may decrease risk by avoiding the risk associated with the transition to shutdown. The risk impact of the proposed completion time extension, without credit for avoiding the transition to shutdown risk, was assessed to be in agreement with the acceptance guidelines reported in Regulatory Guides 1.174 and 1.177. Specifically, the proposed completion time extension would lead to the following risk increases: (1) An ICCDP of 1.7E–6 for plants with PORVs and 1.1E–6 for plants without PORVs, which are close to the numerical guideline of 5E–7 for ICCDP used in RG 1.177; (2) a ΔCDF of 3.5E–7/year for plants with PORVs and 2.1E–7 for plants without PORVs, which are significantly less than the acceptance guideline of 1E–6/year for ΔCDF; (3) an ICLERP of about 4E–8 for plants with PORVs and less than 3E–8 for plants without PORVs, which are less than the numerical guideline of 5E–8 for ICLERP; and (4) a ΔLERF of about 8E–9/year for plants with PORVs and about 5E–9 for plants without PORVs, which are much less than the acceptance guideline of 1E–7/year for ΔLERF. Furthermore, the proposed time extension may actually be risk neutral or result in a decrease in risk if credit for avoiding the transition to shutdown risk is taken.

The risk impact argument is also supported by the following defense-in-depth discussion. The subject LCO requires the operability of a number of independent subsystems. In many instances due to the redundancy of trains and the diversity of subsystems, the inoperability of one component in a train does not necessarily render the HPSI incapable of performing its function. Neither does the inoperability of two different components, each in a different train, necessarily result in a loss of function for the ECCS. Examples of typical inoperabilities would include the unavailability of a single header injection valve or degradation of HPSI delivery curves below minimum design basis levels. The proposed completion time extension allows for potential resolution of minor HPSI system inoperabilities and provides time to

prepare for a controlled plant shutdown without increasing the plant's risk significantly.

Finding: The requested change to allow four hours to resolve the inoperability and restore one pump or subsystem of HPSI capability before required to commence a plant shutdown per LCO 3.0.3, is acceptable.

Tier 2 Restrictions: None.

3.2.6 Containment (STS LCO 3.6.1)

The requirements stated in this LCO define the performance of the containment as a fission barrier. Specifically, LCO 3.6.1 requires that the containment maximum leakage rate be limited in accordance with 10 CFR part 50 Appendix J. Other LCOs place additional restrictions on containment air locks and containment isolation valves. The integrated effect of these TSs is to ensure that the containment leakage is well controlled within limits which assure that the post accident whole body and thyroid dose limits of 10 CFR 100.11 or 10 CFR 50.67, as applicable, are satisfied following a Maximum Hypothetical Accident (MHA) initiated from full power. Inability to meet this leakage limit renders the containment inoperable.

Plant Applicability: Applicable to all OG member plants with CE NSSS designs.

Limiting Condition for Operation (LCO): Containment shall be operable in MODES 1, 2, 3 and 4.

Condition Requiring Entry into Shutdown Required Action: Containment is declared to be inoperable due to excessive leakage, including leakage from air locks and isolation valves, for a time period greater than one hour. If the containment is not restored to operable status within one hour, a plant shutdown is required.

Proposed Modification to Shutdown Required Actions: Define a specific action to allow 8 hours to restore an inoperable containment to operable. Allow MODE 4 to become a designated end state for correcting containment impairments for conditions where the containment leakage is excessive due to reasons other than the inoperability of two or more containment isolation valves (CIVs) in the same flow paths.

Assessment: The risk assessment results (in Reference 2) indicate that the proposed 8-hour completion time for restoring an inoperable containment to operable status will not lead to a significant increase in risk and may actually decrease risk. The risk impact of the proposed completion time extension was assessed to be well within the acceptance criteria reported in Regulatory Guides 1.174 and 1.177. Specifically, the proposed time extension would lead to the following conservatively assessed risk increases: (1) The large early release probability will increase by about 9E–8, which is close to the numerical guideline of 5E–8 for ICLERP; and (2) the LERF will increase by about 2E–8/year, which is significantly less than the acceptance guideline of 1E–7/year for ΔLERF. Furthermore, the proposed completion time extension may actually be risk neutral or result in a decrease in risk if credit for avoiding the transition to shutdown risk is taken.

The proposed changes apply to containment conditions where containment integrity is essentially maintained and adequate ECCS net positive suction head (NPSH) is expected following an event. Containment ''leakage'' at or near design basis levels is not explicitly modeled in PRAs. The PRA implicitly requires that containment ''gross'' integrity must be available to ensure adequate NPSH for ECCS pumps. Even though the PRA models do not consider that containment ''leakage'' contributes to a large early release, the assessed risk impact of the proposed completion time extension is based on the assumption that all core damage events will proceed to a large early release.

The requirement for an immediate (within one hour) shutdown is based on the philosophy that inoperability of the containment is a violation of the plant design basis and, therefore, a plant shutdown must be initiated as soon as possible. The selection of one hour was based on the requirement for ''immediate shutdown'' and the assumption that one hour is adequate time for operators to effect shutdown plans. The goal was to place the plant in a condition where the health and safety of the public could be better assured. No specific risk assessments were performed. In fact, it is more appropriate from the health and safety objective viewpoint to consider the risk of continued plant operation as well as that introduced by the shutdown. In consideration of the total plant risk, it is more risk beneficial to allow a small increase in risk at power to resolve a TS inoperability rather than to undertake an immediate (within one hour) shutdown.

In addition to the completion time extension, it is also proposed that MODE 4 be allowed as the end state to repair the containment. This is supported by the following arguments. If accidents were to occur in MODE 4, resulting containment pressures would be significantly less than the design basis accident (DBA) conditions. Hence, leakage would be further reduced. While in MODE 4, the probability of LOCA or MSLB is significantly reduced from MODE 1 levels. The implied licensing basis assumption that MODE 5 is inherently of lower operational risk than MODE 4 is not supported by risk evaluations (Reference 8). MODE 5 risks are either about equal to or likely greater than equivalent risks in MODE 4, and therefore produce radiation releases to containment on par with those of MODE 4. Thus, remaining in MODE 4, while the containment excess leakage condition is being corrected, is an appropriate action.

The STS LCO 3.6.1 requirement that the plant be brought to MODE 5 end state is not based on consideration of risks. Accidents initiated from MODE 4 are far less challenging to the containment than those initiated from MODE 1. The lower energy content in MODE 4 results in containment pressures and potential leakage approximately one half of that associated with MODE 1 releases. Furthermore, by having the plant in a shutdown condition in advance, fission product releases are significantly reduced. Thus, while leakage restrictions should be maintained, MODE 4 leakage in excess of that allowed in MODE 1 can be safely allowed for a limited time sufficient to resolve the inoperability and return the plant to power operation.

From a deterministic perspective, MODE 4 with SG heat removal would maintain more mitigating systems available, as compared to MODE 5, to respond to loss of RCS inventory or decay heat removal events and therefore reduce the overall public risk. In MODE 4, the Safety Injection Actuation Signal (SIAS) and the Containment Isolation Actuation Signal (CIAS) will be available to aid the operators in responding to events that threaten the reactor or containment integrity. Therefore, the proposed TS end state change does not adversely affect the plant defense-in-depth.

Finding: The requested changes to (1) increase the time available to take action to restore the containment to 8 hours and (2) allow MODE 4 as the repair end state, are acceptable.

Tier 2 Restrictions: None.

3.2.7 Containment Spray System (STS LCO 3.6.6 A)

The containment spray (CS) and containment cooling (CC) systems provide containment atmosphere cooling to limit post accident pressure and temperature in containment to less than the design values. For most CE

NSSS design plants the containment sprays represent a portion of a diverse and redundant heat removal system. In addition to containment heat removal, CSs enhance post-accident fission product removal.

Plant Applicability: Applicable to all OG member plants with CE NSSS designs.

Limiting Condition for Operation (LCO): Two containment spray trains and two containment cooling (CAC or CARC) trains shall be operable in MODES 1, 2, 3 and [4].

Condition Requiring Entry into Shutdown Required Action: Inoperability of both CS trains or any combination of three or more trains inoperable (STS LCO 3.6.6.A Condition F), immediate entry into LCO 3.0.3 is required.

Proposed Modification to Shutdown Required Actions: (1) Increase the time available for restoring one CS train to 72 hours when at least one CARC train is available for containment heat removal; (2) increase the time available for restoring one CS train to 12 hours when two trains of the CARC system is unavailable for containment heat removal. Based on Table 5.2.3–2 of WCAP–16125–NP, STS LCO 3.6.6.A would be revised to allow shutdown modes of MODE 3 in 6 hours and MODE 5 in 36 hours versus the current requirement of immediate entry into LCO 3.0.3 if the Required Action and associated Completion Time not met.

Assessment: The risk assessment results (in Reference 2) indicate that the proposed 12-hour completion time for restoring one CS train when two trains of the CARC system is unavailable for containment heat removal before entering LCO 3.0.3 will not lead to a significant increase in risk and may actually decrease risk. The risk impact of the proposed completion time extension was assessed to be well within the acceptance criteria reported in Regulatory Guides 1.174 and 1.177. Specifically, the proposed completion time extension would lead to the following risk increases: (1) The probability of core damage will increase by less than 7E–7 which is close to the numerical guideline of 5E–7 for ICCDP used in RG 1.177; (2) the CDF will increase by about 1.4E–7/year (acceptance criteria for ΔCDF about 1E–6/year); (3) the large early release probability during the condition will increase by about 1E–8 (acceptance criteria for ICLERP is 5E–8); and (4) the LERF will increase by about 2.5E–9/year (acceptance criteria for ΔLERF is 1E–7/year). Furthermore, the proposed completion time extension may actually be risk neutral or result in a decrease in risk if credit for avoiding the transition to shutdown risk is taken.

When at least one CARC train is available for containment heat removal, the risk impact in terms of CDF and LERF is insignificant. However, credit is taken for post accident fission product removal by the CS system. The radiation release ''non-LER'' risk impact associated with the proposed increase of the time available for restoring one CS train to 72 hours was conservatively assessed. Specifically, the proposed completion time extension would lead to the following ''non-LER'' risk increases: (1) The probability of a ''non-LER'' release during the completion time extension would increase by about 8E–7; and (2) the ''non-LER'' frequency would increase by 1.6E–7/year. These increases in ''non-LER'' risk are slightly above the values used in the criteria discussed in Section 3.1 of this report. However, such increases in ''non-LER'' risk are still comparable in magnitude to what is considered acceptable for increases in the much higher consequence risks associated with core damage and large early release. Furthermore, the proposed completion time extension is definitely risk beneficial when the averted core damage and large early release risks associated with avoiding plant shutdown are taken into consideration.

In addition to the risk argument, the proposed 72-hour completion time is selected for compatibility with improved standard technical specification (STS) LCO 3.6.6B. STS LCO 3.6.6B calls for a Completion Time of 72 hours when two CS trains are inoperable (Condition C) and is applicable to conditions where the sprays are not credited for fission product removal. Inoperability of the CS or CARC will degrade the capability of the plant to respond to a containment threat. However, provided the other system is available the plant remains capable of controlling pressure. The loss of sprays will expose some plant equipment to beyond environmental qualification temperature limits should a MSLB occur. However, the probability of such an event during the proposed completion time extension is very small (about 1E–3/year or less than 1E–5 per 71 hours). Furthermore, the ability of the plant to cope with a MSLB event is not compromised.

Finding: The requested changes to (1) increase the time available for restoring one CS train to 72 hours when at least one CARC train is available for containment heat removal; and (2) increase the time available for restoring one CS train to 12 hours when two trains of the CARC system is unavailable for containment heat removal, are acceptable. The requested change described in Table 5.2.3–2 of WCAP–16125–NP, that is, STS LCO 3.6.6.A would be revised to allow shutdown modes of MODE 3 in 6 hours and MODE 5 in 36 hours versus the current requirement of immediate entry into LCO 3.0.3 if the Required Action and associated Completion Time is not met, was not justified in the topical report. Therefore, the proposed change is not acceptable without further justification.

Tier 2 Restrictions: None.

3.2.8 Iodine Cleanup System (ICS) (STS LCO 3.6.10)

The purpose of the ICS is to remove elemental iodine from the post-accident containment atmosphere. These systems were initially incorporated into plants in the belief that radiological iodine releases would be predominantly in elemental form. However, extensive research has indicated that most iodine will be released in the form of Cesium Iodine (CsI) particulates. Consequently, the actual impact of system functionality on actual public doses is negligible. ICS consists of two 100% capacity trains.

Plant Applicability: Calvert Cliffs 1 & 2, St Lucie 1 & 2.

Limiting Condition for Operation (LCO): Two ICS trains shall be operable in MODES 1, 2, 3 & 4.

Condition Requiring Entry into LCO 3.0.3: Both ICS trains inoperable. Currently a default entry into LCO 3.0.3 is required.

Proposed Modification to Shutdown Required Actions: Add a condition to (1) allow 24 hours to restore one train to operable status, and (2) allow MODE 4 as the final end state for repairing the inoperable system.

Assessment: The risk assessment results (in Reference 2) indicate that the proposed 24-hour completion time for restoring one train of ICS will not lead to a significant increase in risk and may actually decrease risk. The proposed completion time extension will not contribute to any risk increases, in terms of core damage and large early release. The radiation release ''non-LER'' risk impact associated with the proposed time increase was conservatively assessed. Specifically, the proposed completion time extension would lead to the following ''non-LER'' risk increases: (1) The probability of a ''non-LER'' release during the completion time extension would increase by about 2.6E–7; and (2) the ''non-LER'' frequency would increase by about 5.0E–8/year. These increases in ''non-LER'' risk, which are comparable in magnitude to what is considered

acceptable for core damage and large early release risk increases, are very small. Furthermore, the proposed completion time extension is risk beneficial when the averted core damage and large early release risks associated with avoiding plant shutdown are taken into consideration.

The proposed change to allow MODE 4 as the final end state for repairing the inoperable system is supported by risk assessments (Reference 8) which indicated that, in general, there is less risk associated with staying in MODE 4 to repair the inoperable system than proceeding to MODE 5. This is due to the fact that there are more systems available in MODE 4 than in MODE 5 to mitigate accidents initiated at shutdown and the risk of transition between MODES 4 and 5 is avoided.

The ICS functions together with the containment spray and the containment cooling systems following a design basis accident (DBA) that causes failure of the fuel cladding, and release of radioactive material (principally iodine) to the containment. The ICS is specifically designed to respond to the maximum hypothetical accident with a large assumed contribution due to elemental iodine. The DBAs that result in a release of radioactive iodine within containment are LOCA and MSLB or a control element assembly (CEA) ejection accident. In the analysis for each of these accidents, it is assumed that adequate containment leak tightness is present at event initiation to limit potential leakage to the environment. Additionally, it is assumed that the amount of radioactive iodine release is limited by reducing the iodine concentration in the containment atmosphere via use of containment sprays. The unavailability of the ICS will have no significant impact on anticipated radiological releases to the public or the control room. This is due to the fact that: (1) Iodine releases are predominantly particulate and removal via sprays and precipitation is effective, (2) availability of elemental iodine is low so that ICS has limited utility, and (3) containment leak tightness significantly limits potential releases. Significant release events that contribute to large early release, such as containment bypass and SGTR with loss of secondary isolation events, will bypass these filters regardless of their availability.

Finding: The requested changes to (1) increase the time available to restore one ICS train to 24 hours and (2) allow MODE 4 as the final end state, for cases when both ICS trains are inoperable, are acceptable.

Tier 2 Restrictions: None.

3.2.9 Shield Building Exhaust Air Cleanup System (STS LCO 3.6.13)

The shield building exhaust air cleanup system (SBEACS) provides radionuclide removal capability for fission products leaked into the shield building. The SBEACS consists of two separate and redundant trains. Each train includes a heater, cooling coils, a prefilter, a moisture separator, a high efficiency particulate air (HEPA) filter, an activated charcoal absorber section for removal of radionuclides and a fan. Ductwork, valves and/or dampers and instrumentation also form part of the system.

Plant Applicability: St Lucie 1 & 2, Waterford 3 and Millstone 2.

Limiting Condition for Operation (LCO): Two SBEACS trains shall be operable in MODES 1, 2, 3 and 4.

*Condition Requiring Entry into Shutdown Required Action:*Both SBEACS trains inoperable. Currently a default entry into LCO 3.0.3 is required.

Proposed Modification to Shutdown Required Actions: Add a condition to (1) allow 24 hours to take action for both SBEACS trains unavailable, and (2) allow MODE 4 as the final end state for repairing the inoperable system.

Assessment: The risk assessment results (in Reference 2) indicate that the proposed 24-hour completion time for restoring one train of SBEACS will not lead to a significant increase in risk and may actually decrease risk. The proposed completion time extension will not contribute to any risk increases, in terms of core damage and large early release. The radiation release ''non-LER'' risk impact associated with the proposed time increase was conservatively assessed. Specifically, the proposed completion time extension would lead to the following ''non-LER'' risk increases: (1) The probability of a ''non-LER'' release during the completion time extension would increase by about 2.6E–7; and (2) the ''non-LER'' frequency would increase by about 5.0E–8/year. These increases in ''non-LER'' risk, which are comparable in magnitude to what is considered acceptable for core damage and large early release risk increases, are very small. Furthermore, the proposed completion time extension is definitely risk beneficial when the averted core damage and large early release risks associated with avoiding plant shutdown are taken into consideration.

The proposed change to allow MODE 4 as the final end state for repairing the inoperable system is supported by risk assessments (Reference 8) which indicated that, in general, there is less risk associated with staying in MODE 4 to repair the inoperable system than proceeding to MODE 5. This is due to the fact that there are more systems available in MODE 4 than in MODE 5 to mitigate accidents initiated at shutdown and the risk of transition between MODES 4 and 5 is avoided.

The proposed changes are also supported by the following qualitative discussion. The SBEACS is required to ensure that the radioactive material leaking from the primary containment of a dual containment into the Shield Building (secondary containment) following a DBA are filtered and absorbed prior to exhausting to the environment. Loss of the SBEACS could cause site boundary doses, in the event of a DBA, to exceed the values given in the licensing basis. However, containment ''leakage'' at or near design basis levels is not explicitly modeled in PRAs. PRAs implicitly require that containment ''gross'' integrity must be available to ensure NPSH for ECCS pumps. In the PRA Level 2 models, containment ''leakage'' is not considered to contribute to large early release. If accidents were to occur in MODE 4, resulting containment pressures would be significantly less than the DBA conditions. Hence, leakage would be further reduced. In addition, while in MODE 4, the probability of LOCA and MSLB is significantly reduced from MODE 1 levels. By keeping the plant in MODE 4, operator actions required for entry into shutdown cooling and which introduce potential containment bypass risks are avoided.

Finding: The requested changes to (1) increase the time available to restore one SBEACS train to 24 hours and (2) allow MODE 4 as the final end state, for cases when both SBEACS trains are inoperable, are acceptable.

Tier 2 Restrictions: None.

3.2.10 Control Room Emergency Air Cleanup System (STS LCO 3.7.11)

The control room emergency air cleanup system (CREACS) provides a protected environment from which operators can control the plant following an uncontrolled release of radioactivity, chemicals or toxic gas. Alternate designations of this system include the acronyms CREACUS, CREACS, CREVAS, CREVS, or CREAFS. The current TS require operability of CREACS from MODE 1 through MODE 4 to support operator response to a DBA. The system's operability in MODES 5 and 6 may also be required at some plants for chemical and toxic gas concerns. The CREACS is needed to protect the control room (CR) in a wide variety of circumstances.

Plant Applicability: Applicable to all OG member plants with CE NSSS designs.

Limiting Condition for Operation (LCO): Two CREACS trains shall be operable in MODES 1, 2, 3 and 4 and during movement of [recently] irradiated fuel assemblies in MODES [5 and 6].

Condition Requiring Entry into Shutdown Required Action: Both trains inoperable for conditions other than inoperable control room boundary in MODES 1, 2, 3, and 4. Explicit entry into LCO 3.0.3 required (STS LCO 3.7.11 Condition F).

Proposed Modification to Shutdown Required Actions: (1) Increase the time available to take action to 24 hours (or the time to reach 5 REM, which may be less than 24 hours, from the radiation field associated with main steam safety valves lifting concurrent with a SGTR) for the cases in which both CREACS trains are unavailable, and (2) allow MODE 4 as the final end state for repairing the inoperable system. This modification applies to the radiation protection function only. Site specific validation is necessary to support extension to toxic gas and chemical protection functions.

Assessment: The risk assessment results (in Reference 2) indicate that the proposed 24-hour completion time for restoring one train of CREACS before entering LCO 3.0.3 will not lead to a significant increase in risk and may actually decrease risk. The proposed completion time extension will not contribute to any risk increases, in terms of core damage and large early release. The radiation release ''non-LER'' risk impact associated with the proposed time increase was conservatively assessed. Specifically, the proposed completion time extension would lead to the following ''non-LER'' risk increases: (1) The probability of a ''non-LER'' release during the completion time extension would increase by about 2.6E–7; and (2) the ''non-LER'' frequency would increase by about 5.0E–8/year. These increases in ''non-LER'' risk, which are comparable in magnitude to what is considered acceptable for core damage and large early release risk increases, are very small. Furthermore, the proposed completion time extension is definitely risk beneficial when the averted core damage and large early release risks associated with avoiding plant shutdown are taken into consideration.

The proposed change to allow MODE 4 as the final end state for repairing the inoperable system is not justified. STS LCO 3.7.11 Condition F has an explicit LCO 3.0.3 entry. WCAP–16125–NP does not provide justification for modifying Condition F Required Action from ''Enter LCO 3.0.3'' to an end state of MODE 4.

Finding: The requested change to increase the time available to take action to restore one CREACS train to 24 hours for the radiation protection function only is acceptable. The requested change to allow MODE 4 as the final end state, for cases when both CREACS trains are inoperable, is not justified in WCAP–16125–NP and is not acceptable.

Tier 2 Restrictions: None.

3.2.11 Control Room Emergency Air Temperature Control System (STS LCO 3.7.12)

The control room emergency air temperature control system (CREATCS) provides temperature control for the CR following isolation of the CR. The CREATCS consists of two independent, redundant trains that provide cooling and heating of recirculated CR air. Each train consists of heating coils, cooling coils, instrumentation and controls to provide for CR temperature control.

Plant Applicability: Applicable to Calvert Cliffs 1 & 2, Fort Calhoun, Palisades, PVNGS 1, 2, & 3, Waterford 3 and ANO 2. It is noted that cooling for the St Lucie units are included in the air cleanup system discussed in TS 3.7.11 but the cooling system arguments contained in this section apply to St Lucie Units 1 & 2.

Limiting Condition for Operation (LCO): Two CREATCS trains shall be operable in MODES 1, 2, 3 and 4 and during movement of [recently] irradiated fuel assemblies in MODES [5 and 6].

Condition Requiring Entry into Shutdown Required Action: Both trains inoperable in MODES 1, 2, 3, and 4 requires an explicit LCO 3.0.3 entry (STS LCO 3.7.12 Condition E).

Proposed Modification to Shutdown Required Actions: Modify STS LCO 3.7.12 Condition E to (1) increase the time available to take action under LCO 3.0.3 to 24 hours for the cases in which both CREATCS trains are unavailable, and (2) allow MODE 4 as the final end state for repairing the inoperable system.

Assessment: The risk assessment results (in Reference 2) indicate that the proposed 24-hour completion time for restoring one train of CREATCS before entering LCO 3.0.3 will not lead to a significant increase in risk and may actually decrease risk. The proposed completion time extension will not contribute to any risk increases, in terms of core damage and large early release. The radiation release ''non-LER'' risk impact associated with the proposed completion time increase was conservatively assessed. Specifically, the proposed completion time extension would lead to the following ''non-LER'' risk increases: (1) The probability of a ''non-LER'' release during the completion time extension would increase by about 2.6E–7; and (2) the ''non-LER'' frequency would increase by about 5.0E–8/year. These increases in ''non-LER'' risk, which are comparable in magnitude to what is considered acceptable for core damage and large early release risk increases, are very small. Furthermore, the proposed completion time extension is definitely risk beneficial when the averted core damage and large early release risks associated with avoiding plant shutdown are taken into consideration.

The proposed change to allow MODE 4 as the final end state for repairing the inoperable system is not justified. STS LCO 3.7.12 Condition E has an explicit LCO 3.0.3 entry. WCAP–16125–NP does not provide justification for modifying Condition E Required Action from ''Enter LCO 3.0.3'' to an end state of MODE 4.

Several short term actions associated with cooling the CR may be implemented to mitigate risk consequences further. These actions include use of portable fans and propping open doors. Several plants have such actions in procedures.

Finding: The requested change to increase the time available to take action to restore one CREATCS train to 24 hours is acceptable. The requested change to allow MODE 4 as the final end state, for cases when both trains are inoperable, is not justified in WCAP–16125–NP and is not acceptable.

Tier 2 Restrictions: None.

3.2.12 Emergency Core Cooling System (ECCS) Pump Room Exhaust Air Cleanup System (PREACS) (STS LCO 3.7.13)

The ECCS pump room exhaust air cleanup system (ECCS PREACS) is an emergency system that filters air from the area of the active Engineered Safety Features (ESF) components during the recirculation phase of a LOCA. The ECCS PREACS consists of two independent, redundant trains of equipment that provide filtering of air in the ECCS pump rooms during post-LOCA recirculation cooling.

Plant Applicability: Calvert Cliffs 1 & 2, St Lucie 1 & 2, Waterford 3. It is noted that at Waterford 3 the functions of the ECCS PREACS and Penetration Room Exhaust Air Cleanup System (PREACS), which is discussed below under LCO 3.7.15, are combined within the

Controlled Ventilation Area System (CVAS) TS.

Limiting Condition for Operation (LCO): Two ECCS PREACS trains shall be operable in MODES 1, 2, 3 and 4.

Condition Requiring Entry into Shutdown Required Action: Both trains inoperable, default entry into LCO 3.0.3.

Proposed Modification to Shutdown Required Actions: (1) Increase the time available to restore one train to 24 hours, and (2) allow MODE 4 as the final end state for repairing the inoperable system.

Assessment: The risk assessment results (in Reference 2) indicate that the proposed 24-hour completion time for restoring one train of ECCS PREACS will not lead to a significant increase in risk and may actually decrease risk. The proposed completion time extension will not contribute to any risk increases, in terms of core damage and large early release. The radiation release ''non-LER'' risk impact associated with the proposed completion time increase was conservatively assessed. Specifically, the proposed completion time extension would lead to the following ''non-LER'' risk increases: (1) The probability of a ''non-LER'' release during the completion time extension would increase by about 1.1E–7; and (2) the ''non-LER'' frequency would increase by about 2.0E–8/year. These increases in ''non-LER'' risk, which are comparable in magnitude to what is considered acceptable for core damage and large early release risk increases, are very small. Furthermore, the proposed completion time extension is definitely risk beneficial when the averted core damage and large early release risks associated with avoiding plant shutdown are taken into consideration.

The proposed change to allow MODE 4 as the final end state for repairing the inoperable system is supported by risk assessments (Reference 8) which indicated that, in general, there is less risk associated with staying in MODE 4 to repair the inoperable system than proceeding to MODE 5. This is due to the fact that there are more systems available in MODE 4 than in MODE 5 to mitigate accidents initiated at shutdown and the risk of transition between MODES 4 and 5 is avoided.

The unavailability of the ECCS PREACS only impacts radiation releases to the public when the ECCS recirculation is in progress during a LOCA. Since successful recirculation also implies successful event mitigation, the releases this system is designed to mitigate are relatively low.

Finding: The requested changes to (1) increase the time available to take action to restore one ECCS–PREACS train to 24 hours and (2) allow MODE 4 as the final end state, for cases when both trains are inoperable, are acceptable.

Tier 2 Restrictions: None.

3.2.13 Penetration Room Exhaust Air Cleanup System (PREACS) (STS LCO 3.7.15)

The Penetration Room Exhaust Air Cleanup System (PREACS) filters air from the penetration area between the containment and the auxiliary building. The PREACS consists of two independent, redundant trains. Each train consists of a heater, demister or prefilter, HEPA filter, activated charcoal absorber and a fan.

Plant Applicability: Calvert Cliffs 1 & 2, and Waterford 3. It is noted that at Waterford 3 the functions of the PREACS and ECCS PREACS, which is discussed above under LCO 3.7.13, are combined within the Controlled Ventilation Area System (CVAS) TS.

Limiting Condition for Operation (LCO): Two PREACS trains shall be operable in MODES 1, 2, 3 and 4.

Condition Requiring Entry into Shutdown Required Action: Both trains inoperable for reasons other than an inoperable penetration room boundary, default entry into LCO 3.0.3 is required.

Proposed Modification to Shutdown Required Actions: (1) Increase the time available to restore one train to 24 hours, and (2) allow MODE 4 as the final end state for repairing the inoperable system.

Assessment: The risk assessment results (in Reference 2) indicate that the proposed 24-hour completion time for restoring one train of PREACS will not lead to a significant increase in risk and may actually decrease risk. The proposed completion time extension will not contribute to any risk increases, in terms of core damage and large early release. The radiation release ''non-LER'' risk impact associated with the proposed completion time increase was conservatively assessed. Specifically, the proposed completion time extension would lead to the following ''non-LER'' risk increases: (1) The probability of a ''non-LER'' release during the completion time extension would increase by about 2.6E–7; and (2) the ''non-LER'' frequency would increase by about 5.0E–8/year. These increases in ''non-LER'' risk, which are comparable in magnitude to what is considered acceptable for core damage and large early release risk increases, are very small. Furthermore, the proposed completion time extension is definitely risk beneficial when the averted core damage and large early release risks associated with avoiding plant shutdown are taken into consideration.

The proposed change to allow MODE 4 as the final end state for repairing the inoperable system is supported by risk assessments (Reference 8) which indicated that, in general, there is less risk associated with staying in MODE 4 to repair the inoperable system than proceeding to MODE 5. This is due to the fact that there are more systems available in MODE 4 than in MODE 5 to mitigate accidents initiated at shutdown and the risk of transition between MODES 4 and 5 is avoided.

Finding: The requested changes to (1) increase the time available to take action to restore one PREACS train to 24 hours and (2) allow MODE 4 as the final end state, for cases when both trains are inoperable, are acceptable.

Tier 2 Restrictions: None.

3.3 Summary and Conclusions

The above requested changes are found acceptable by the staff. The staff approval applies only to operation as described and acceptably justified in References 2 and 8. To be consistent with the staff's approval, any licensee requesting to operate in accordance with TSTF–426, as approved in this safety evaluation, should commit to operate in accordance with WCAP–16446–NP, Rev 0, ''Actions to Preclude Entry into LCO 3.0.3 Implementation Guidance (PA–RMCS–0196),'' June 2005, which includes a requirement for the licensee to commit to adhere to the guidance of the revised Section 11 of NUMARC–93–01, Revision 3. The implementation guidance includes alternative systems that must be operable and compensating measures for the systems included in TSTF–426. The licensees shall update relevant operating procedures, maintenance procedures, and training programs to reflect this change.

The required action for conditions that imply a loss of function, is entry into LCO 3.0.3. Currently, upon entering LCO 3.0.3, one hour is allowed to prepare for an orderly shutdown before initiating a change in plant operation. The OG is proposing to define or modify various TS Conditions to accommodate extension of the currently required time of one hour to initiate plant shutdown for member plants with CE NSSS designs. The proposed extension, related to specific systems or components, is based on the system's risk significance. In addition, WCAP–16125–NP provides a proposal to modify several Required Action statements, related to specific systems or components, to allow for a MODE 4 (hot shutdown) end state for repair purposes of two-train redundant systems that do not have explicit LCO 3.0.3 entry requirements, when the time

requirements of the action statement for staying at power cannot be met.

The intent of the proposed TS changes is to provide needed flexibility in the performance of corrective maintenance during power operation to fully evaluate the situation or restore loss of function and at the same time enhance overall plant safety by:

- Avoiding unnecessary unscheduled plant shutdowns,
- Minimizing plant transitions and associated transition and realignment risks,
- Providing increased flexibility in scheduling and performing maintenance and surveillance activities, and
- Providing explicit guidance in areas that currently does not exist.

It should be noted that many of the proposed TS changes affect the existing plant shutdown requirements for plant conditions where the plant operation is not in explicit compliance with the plant design basis. The proposed actions provide a risk-informed process for establishing shutdown priorities aiming at reducing overall plant risk and increasing public health and safety protection. In performing the risk-informed assessments and interpreting the results, the following assumptions were made:

- A condition resulting in the inoperability of a system or component which currently results in the need for an immediate shutdown is a low frequency event.
- The frequency of events leading to LCO 3.0.3 is not expected to increase significantly following the proposed change because such events may be reportable and may require a licensee event report. In addition, events leading to LCO 3.0.3 are used in performance indicators and the reactor oversight program. Therefore, licensees will have no incentive to allow the current low frequency of these events to increase after the proposed extensions are granted.
- The risk incurred by increasing the required shutdown action time is controlled to acceptable levels using a risk informed approach that considers the component risk worth and offsetting benefits of avoiding plant transitions.

The risk impact of the proposed TS changes was assessed following the three-tiered approach recommended in RG 1.177 for evaluating proposed extensions in currently allowed Completion Times (CTs):

- The first tier involves the assessment of the change in plant risk due to the proposed TS change;
- The second tier involves the identification of potentially high-risk configurations that could exist if equipment in addition to that associated with the change were to be taken out of service simultaneously;
- The third tier involves the implementation of the proposed changes in conjunction with a configuration risk management program (CRMP).

The impact of each proposed system-specific TS change on defense-in-depth was evaluated in conjunction with the risk assessment results. Due to the nature of the plant conditions associated with the proposed TS changes (i.e., loss of a system's or component's function), the redundancy and diversity typically associated with ensuring the deterministic aspect of defense-in-depth position is not always strictly possible. In these cases defense-in-depth was considered by identifying specific restrictions to the implementation of the proposed changes. Such restrictions aim at (1) controlling the outage time for related equipment, (2) restricting activities which may challenge the unavailable systems or functions, (3) allowing only small time intervals for plant operation at power with a system or function unavailable, (4) using, whenever possible, contingency actions to limit concurrent outages, and (5) evaluating repair activities and alternatives.

Based on this integrated evaluation, the staff concludes that the proposed system-specific TS changes would at most lead to acceptably small risk increases. In addition, defense-in-depth is taken into consideration. This conclusion is a consequence of the low expected challenge frequency of the systems or functions associated with the proposed TS changes, the very short proposed exposure times to the specified plant conditions, the offsetting benefits of avoiding plant transitions, and the identification of specific restrictions to the implementation of the proposed changes.

4.0 Verifications and Commitments

In order to efficiently process incoming license amendment applications and ensure consistent implementation of the change by the various licensees, the NRC staff requested each licensee requesting the changes addressed by TSTF–426, Rev 0, using the CLIIP to address the following plant-specific regulatory commitments.

4.1 Each licensee should make a regulatory commitment to follow the implementation guidance of WCAP–16446–NP, Rev 0, ''Actions to Preclude Entry into LCO 3.0.3 Implementation Guidance (PA–RMCS–0196),'' June 2005.

4.2 Each licensee should make a regulatory commitment to follow Section 11 of NUMARC–93–01, Revision 3.

The licensee has made a regulatory commitment to follow the implementation guidance of WCAP–16446–NP and Section 11 of NUMARC–93–01, Revision 3.

The NRC staff finds that reasonable controls for the implementation and for subsequent evaluation of proposed changes pertaining to the above regulatory commitment(s) can be provided by the licensee's administrative processes, including its commitment management program. The NRC staff has agreed that NEI 99–04, Revision 0, ''Guidelines for Managing NRC Commitment Changes,'' provides reasonable guidance for the control of regulatory commitments made to the NRC staff (see Regulatory Issue Summary 2000–17, ''Managing Regulatory Commitments Made by Power Reactor Licensees to the NRC Staff,'' dated September 21, 2000). The NRC staff notes that NEI 99–04 establishes a voluntary reporting system for the operating data that is similar to the system established for the ROP PI program. Should the licensee choose to incorporate a regulatory commitment into the final safety analysis report or other document with established regulatory controls, the associated regulations would define the appropriate change-control and reporting requirements.

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 staff].

6.0 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. 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). 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 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.

8.0 References

1. WCAP–16125–NP, Revision 0, ''Justification for Risk-Informed Modifications to Selected Technical Specifications for Conditions Leading to Exigent Plant Shutdown,'' October 3, 2003.

2. Beckner, William D., ''Safety Evaluation of WCAP–16125–NP, Rev 0, ''Justification for Risk-Informed Modifications to Selected Technical Specifications for Conditions Leading to Exigent Plant Shutdown,'' Letter to Gordon Bischoff, Westinghouse

3. TSTF–426, Revision 0, ''Revise or Add Actions to Preclude Entry into LCO 3.0.3,'' August 2004.

4. WCAP–16446–NP, Revision 0, ''Actions to Preclude Entry into LCO 3.0.3, Implementation Guidance,'' June 2005.

5. NUREG–1432, ''Standard Technical Specifications, Combustion Engineering Plants,'' Revision 2, USNRC, June 2001.

6. Regulatory Guide 1.174, ''An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decision Making on Plant Specific Changes to the Licensing Basis,'' USNRC, August 1998.

7. Regulatory Guide 1.177, ''An Approach for Plant Specific Risk-Informed Decision Making: Technical Specifications,'' USNRC, August 1998.

8. CE–NPSD–1186, ''Technical Justification for the Risk-Informed Modification to Selected Required Action End States for CEOG PWRs,'' CE Owner's Group, April 2000.

9. Regulatory Guide 1.182, ''Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants,'' May 2000.

Attachment—For Inclusion on the Technical Specification Web Page

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 adopt TSTF–426, Revision 0, ''Risk-Informed modifications to selected technical specifications for conditions leading to exigent plant shutdowns,'' for CE plants 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 TSTF–426, Risk Informed Modification to Selected Technical Specifications for Conditions Leading to Exigent Plant Shutdowns Using the Consolidated Line Item Improvement Process

Gentleman: 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 to risk-inform requirements regarding selected technical specifications for conditions leading to exigent plant shutdowns.

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 existing TS Bases pages marked up to show the proposed change (*for information only*).)

[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 and the attachment are 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 technical specifications to risk-inform requirements regarding selected technical specifications for conditions leading to exigent plant shutdowns.

The changes are consistent with Nuclear Regulatory Commission (NRC) approved Industry/Technical Specification Task Force (TSTF) TSTF–426, Revision 0. The availability of this Technical Specification (TS) improvement was published in the **Federal Register** on [DATE] as part of the consolidated line item improvement process (CLIIP).

2.0 Assessment

2.1 Applicability of Topical Report, TSTF–426, and Published Safety Evaluation

[LICENSEE] has reviewed GE topical report (Reference 1), TSTF–426 (Reference 2), and the NRC model safety evaluation (Reference 3) as part of the CLIIP. [LICENSEE] has concluded that the information in the GE topical report and TSTF–426, as well as 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. [NOTE: Only those changes proposed in TSTF–426 are addressed in the model SE. The model SE and associated topical report address the entire fleet of CE plants, and the plants adopting TSTF–426 must confirm the applicability of the changes to their plant.]

2.2 Optional Changes and Variations

[LICENSEE] is not proposing any variations or deviations from the GE

topical report and the TS changes described in the TSTF–426, Revision 0 or the NRC staff's model safety evaluation dated [DATE]. [NOTE: The CLIIP does not prevent licensees from requesting an alternate approach or proposing changes without the requested Bases or Bases control program. 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. Significant variations from the approach, or inclusion of additional changes to the license, will result in staff rejection of the submittal. Instead, licensees desiring significant variations and/or additional changes should submit a LAR that does not claim to adopt TSTF–426.]

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 is hereby incorporated by reference to satisfy 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, plant-specific verifications were performed as follows:

[LICENSEE] commits to the regulatory commitments in Attachment 4. In addition, [LICENSEE] has proposed TS Bases consistent with the Westinghouse topical report and TSTF–426, which provide guidance and details on how to implement the new requirements. Implementation of TSTF–426 requires that risk be managed and assessed, and the licensee's configuration risk management program is adequate to satisfy this requirement. The risk assessment need not be quantified, but may be a qualitative assessment of the vulnerability of systems and components when one or more systems are not able to perform their associated function.

4.0 Environmental Evaluation

The amendment changes requirements with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR part 20. The NRC staff has determined that the amendment adopting TSTF–426, Rev. 0, 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 TSTF–426, Rev. 0, involves no significant hazards considerations, and there has been no public comment on the finding in **Federal Register** Notice [# and [DATE]]. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 References

1. WCAP–16125–NP, Revision 0, ''Justification for Risk-Informed Modifications to Selected Technical Specifications for Conditions Leading to Exigent Plant Shutdown,'' October 3, 2003.

2. TSTF–426, Revision 0, ''Revise or Add Actions to Preclude Entry into LCO 3.0.3,'' August 2004.

3. **Federal Register**, Vol. XX, No. XX, p. XXXXX, ''Notice of Availability of Model Application Concerning Technical Specification Improvement for Combustion Engineering Plants To Risk-Inform Requirements Regarding Conditions Leading to Exigent Plant Shutdown Using the Consolidated Line Item Improvement Process,'' [DATE].

Attachment 2—Proposed Technical Specification Changes (Mark-Up)

Attachment 3—Proposed Technical Specification Pages

[Clean copies of Licensee specific Technical Specification (TS) pages, corresponding to the TS pages changed by TSTF–426, Rev. 0, are to be included in Attachment 3]

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 follow the guidance established in Section 11 of NUMARC 93–01, ''Industry Guidance for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants,'' Nuclear Management and Resource Council, Revision 3, July 2000.	[Ongoing, or implement with amendment].
[LICENSEE] will follow the guidance established in WCAP–16446–NP, Revision [No.] ''Actions to Preclude Entry into LCO 3.0.3, Implementation Guidance,'' [DATE].	[Implement with amendment, when TS Required Action End State remains within the APPLICABILITY of TS].

Attachment 5—Proposed Changes to Technical Specification Bases Pages

Proposed No Significant Hazards Consideration Determination

Description of Amendment Request: On August 30, 2004, the Owners Group (OG) Technical Specifications Task Force (TSTF) submitted a proposed change, TSTF–426, Revision 0 (Rev. 0), to the Combustion Engineering (CE) standard technical specifications (STS) (NUREG–1432) on behalf of the industry. TSTF–426, Rev. 0, is a proposal to incorporate WCAP–16125–NP, Rev. 0, of September 2003, ''Justification for the Risk Informed Modifications to Selected Technical Specifications for Conditions Leading to Exigent Plant Shutdown,'' which was approved by an NRC safety evaluation (SE) dated July 9, 2004 into the CE STS. This proposal is part of Nuclear Energy Institute (NEI) Risk Informed Technical Specifications Task Force (RITSTF) Initiative 6, one of the industry's initiatives being developed under the Risk Management Technical Specifications (RMTS) program.

WCAP–16125–NP, Rev. 0 provides technical justification for the modification of various TS to define and/or modify Actions to extend the time required to initiate a plant shutdown from 1 hour in accordance with LCO 3.0.3 to a risk-informed time

varying from 4 hours to 72 hours. The intent of the proposed modifications to the plant TS is to enhance overall plant safety by:

a. Avoiding unnecessary plant shutdowns.

b. Minimizing plant transitions and associated transition and realignment risks.

c. Providing for increased flexibility in scheduling and performing maintenance and surveillance activities.

d. Providing explicit guidance where none currently exists.

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 change provides a short Completion Time to restore an inoperable system for conditions under which the existing Technical Specifications require a plant shutdown to begin within one hour in accordance with Limiting Condition for Operation (LCO) 3.0.3. Entering into Technical Specification Actions is not an initiator of any accident previously evaluated. As a result, the probability of an accident previously evaluated is not significantly increased. The consequences of any accident previously evaluated that may occur during the proposed Completion Times are no different from the consequences of the same accident during the existing one hour allowance. As a result, the consequences of any accident previously evaluated are not significantly increased. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

No new or different accidents result from utilizing the proposed change. 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. The changes do not alter assumptions made in the safety analysis. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

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

The proposed change increases the time the plant may operate without the ability to perform an assumed safety function. The analyses in WCAP–16125–NP, Rev. 0, ''Justification for Risk-Informed Modifications to Selected Technical Specifications for Conditions Leading to Exigent Plant Shutdown,'' Revision 0, September 2003, demonstrated that there is an acceptably small increase in risk due to a limited period of continued operation in these conditions and that this risk is balanced by avoiding the risks associated with a plant shutdown. As a result, the change to the margin of safety provided by requiring a plant shutdown within one hour is not significant. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

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

Dated at Rockville, Maryland, this 13th day of July 2006.

For the Nuclear Regulatory Commission.

Carl S. Schutlen,

Chief, Technical Specifications Branch, Division of Inspection & Regional Support, Office of Nuclear Reactor Regulation.

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SECURITIES AND EXCHANGE COMMISSION

Proposed Collection; Comment Request

Upon Written Request, Copies Available From: Securities and Exchange Commission, Office of Filings and Information Services, Washington, DC 20549.

Extension:

Rules 17h–1T and 17h–2T, SEC File No. 270–359, OMB Control No. 3235–0410.

Notice is hereby given that pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*) the Securities and Exchange Commission (''Commission'') has submitted to the Office of Management and Budget requests for extension of the previously approved collections of information discussed below. The Code of Federal Regulation citations to this collection of information are the following rules: 17 CFR 240.17h–1T and 17 CFR 240.17h–2T under the Securities Exchange Act of 1934 (17 U.S.C. 78a *et seq.*) (the ''Act'').

Rule 17h–1T requires a broker-dealer to maintain and preserve records and other information concerning certain entities that are associated with the broker-dealer. This requirement extends to the financial and securities activities of the holding company, affiliates and subsidiaries of the broker-dealer that are reasonably likely to have a material impact on the financial or operational condition of the broker-dealer. Rule 17h–2T requires a broker-dealer to file with the Commission quarterly reports and a cumulative year-end report concerning the information required to be maintained and preserved under Rule 17h–1T.

The collection of information required by Rules 17h–1T and 17h–2T is necessary to enable the Commission to monitor the activities of a broker-dealer affiliate whose business activities is reasonably likely to have a material impact on the financial and operational condition of the broker-dealer. Without this information, the Commission would be unable to assess the potentially damaging impact of the affiliate's activities on the broker-dealer.

There are currently 200 respondents that must comply with Rules 17h–1T and 17h–2T. Each of these 200 respondents require approximately 10 hours per year, or 2.5 hours per quarter, to maintain the records required under Rule 17h–1T, for an aggregate annual burden of 2,000 hours (200 respondents $\times$ 10 hours). In addition, each of these 200 respondents must make five annual responses under Rule 17h–2T. These five responses require approximately 14 hours per respondent per year, or 3.5 hours per quarter, for an aggregate annual burden of 2,800 hours (200 respondents $\times$ 14 hours). In addition, there are approximately five new respondents per year that must draft an organizational chart required under Rule 17h–1T and establish a system for complying with the Rules. The staff estimates that drafting the required organizational chart requires one hour and establishing a system for complying with the Rules requires three hours, thus requiring an aggregate of 20 hours (5 new respondents $\times$ 4 hours). Thus, the total compliance burden per year is approximately 4,820 burden hours (2,000 + 2,800 + 20).

Written comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of the burden of the collection of information; (c) ways to enhance the quality, utility, and clarity of the