



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 89 TO FACILITY OPERATING LICENSE NO. NPF-42

WOLF CREEK NUCLEAR OPERATING CORPORATION

WOLF CREEK GENERATING STATION

DOCKET NO. 50-482

1.0 INTRODUCTION

By application dated May 24, 1994, as supplemented by letter dated April 6, 1995, Wolf Creek Nuclear Operating Corporation (the licensee) requested changes to the Technical Specifications (Appendix A to Facility Operating License NPF-42) for the Wolf Creek Generating Station. The amendment request proposed to revise the technical specifications (TS) to implement the NRC's final policy statement on technical specification improvements for nuclear power reactors published in the Federal Register on July 22, 1993 (58 FR 39132). These criteria were subsequently incorporated into the regulations by an amendment to 10 CFR 50.36, 60 CFR 36953 (July 19, 1995). These improvements involve focusing the technical specifications on those requirements that are of controlling importance to operational safety by screening each TS in Section 3/4.1 through 3/4.11 using the criteria provided in the policy statement which are the same as those incorporated into the regulations. The purpose of the proposed amendment request is to relocate the specifications that do not meet any of the four criteria or regulatory requirements related to inclusion in technical specifications. The relocated specifications will be moved to Chapter 16 of the Updated Safety Analysis Report (UFSAR).

Based on the screening, all or part of various technical specifications were identified as not meeting any of the criteria and, therefore, were candidates for relocation. The licensee has categorized the TS changes as (1) specifications relocated intact to USAR Chapter 16, (2) specifications relocated with portions retained in TS, (3) specifications relocated with programmatic requirements referenced in Section 6 of TS, (4) modifications to retained specifications to accommodate relocation of other specifications, and (5) new specification requirements incorporated into the TS. The last category is used to effect the retention of portions of relocated specifications and accommodate the policy statement recommendation to incorporate industry experience in the determination of TS content.

The licensee's letter dated April 6, 1995 included minor changes to several of the proposed TS revisions and effectively withdrew the proposed relocation of TS 3/4.4.5, Steam Generators. The minor changes and restoration of existing

TS 3/4.4.5 did not affect the staff's proposed no significant hazards consideration determination or expand the scope of the original Federal Register notice.

## 2.0 BACKGROUND

Section 182a of the Atomic Energy Act (the "Act") requires applicants for nuclear power plant operating licenses to include TS as part of the license. The Commission's regulatory requirements related to the content of TS are set forth in 10 CFR 50.36. That regulation requires that the TS include items in five specific categories, including (1) safety limits, limiting safety system settings and limiting control settings; (2) limiting conditions for operation; (3) surveillance requirements; (4) design features; and (5) administrative controls. However, the regulation does not specify the particular requirements to be included in a plant's TS.

The Commission has provided guidance for the contents of TS in its "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" ("Final Policy Statement"), 58 FR 39132 (July 22, 1993), in which the Commission indicated that compliance with the Final Policy Statement satisfies Section 182a of the Act. In particular, the Commission indicated that certain items could be relocated from the TS to licensee-controlled documents, consistent with the standard enunciated in *Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-531, 9 NRC 263, 273 (1979). In that case, the Atomic Safety and Licensing Appeal Board indicated that "technical specifications are to be reserved for those matters as to which the imposition of rigid conditions or limitations upon reactor operation is deemed necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety."

Consistent with this approach, the Final Policy Statement identified four criteria to be used in determining whether a particular matter is required to be included in the TS. These criteria were subsequently incorporated into the regulations by an amendment to 10 CFR 50.36, 60 CFR 36953 (July 19, 1995). The criteria incorporated into the rule are as follows:

- (1) Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary;
- (2) a process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident or Transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier;
- (3) a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a Design Basis Accident or Transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier; and

- (4) a structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety.

As a result, existing TS requirements which fall within or satisfy any of the criteria must be retained in the TS, while those TS requirements which do not fall within or satisfy these criteria may be relocated to other, licensee-controlled documents.

### 3.0 EVALUATION

The evaluation of the proposed changes will be presented by providing a description and evaluation for the proposed disposition for each of the affected individual requirements contained in the existing specifications.

#### 1.0 DEFINITIONS

1.7 - The licensee has proposed editorial changes to the definition of Containment Integrity. The changes involve changing the order of the parts of the definition related to containment leakage and penetration sealing mechanisms and revising the reference related to the location of the containment leakage rate limits. The staff finds the proposed changes acceptable in light of the major changes to the containment integrity and containment leakage specifications. The significant changes related to the containment TS are addressed later in this evaluation.

#### 3/4.1 REACTIVITY

##### 3/4.1.1 SHUTDOWN MARGIN

3.1.1.1 - The proposed change deletes applicability in Modes 1 and 2 and revises the ACTION statement from "... immediately initiate and continue boration..." to "...within 15 minutes initiate and continue boration..." The requirements related to shutdown margin (SDM) in Modes 1 and 2 are relocated to other Limiting Conditions for Operation (LCOs) and surveillance requirements such that the change does not introduce significant changes to the conditions or actions required by TS. The change from taking action immediately to within 15 minutes is an adoption of the wording of NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." As discussed in the Bases of NUREG-1431, the staff has determined that the 15-minute requirement is adequate for an operator to correctly align and start the required systems and components. In addition, an improvement is achieved by replacing the possibly ambiguous term "immediately" with a defined time interval. The staff finds the change acceptable.

4.1.1.1.1(b) - The proposed change deletes this surveillance requirement (SR) because it is repetitious of current SR 4.1.3.6 that the licensee proposes to retain as 4.1.3.6.1. Since the requirement to perform a periodic verification that control rod bank positions are consistent with the limits in the Core Operating Limits Report is retained, the proposed change does not result in any net change in TS requirements. The verification of control bank

withdrawal in the renumbered SR 4.1.3.6.1 is adequate to ensure the required SDM is maintained during power operation. The movement of the SR to another LCO changes the associated required action in the event of the failure to meet the surveillance criteria. In this case, the result of the movement is to revise the verification of SDM from immediately (or within 15 minutes following the revised action requirement discussed above) to within one hour. As discussed in NUREG-1431, the staff has found the verification of SDM within one hour and restoration of rod position within two hours to be adequate because it introduces an acceptably low probability of occurrence of a design basis accident during the short time in which power distributions or SDM might not satisfy design criteria due to rod mispositioning. The staff finds the proposed change acceptable.

4.1.1.1.1(c) - The proposed change moves the verification of critical rod position prior to criticality to SR 4.1.3.6.2. As described above for the relocation of 4.1.1.1.1(b), the SR is maintained and the only change is a resultant minor change in the required action statement as a result of changing the affiliated LCO. The verification of critical rod position prior to criticality combined with the actions required if insertion limit specifications cannot be satisfied (discussed above) provides an acceptable level of safety. The staff finds the proposed change acceptable.

4.1.1.1.1(d) - The proposed change moves the verification of SDM prior to exceeding 5 percent rated thermal power (RTP) to SR 4.1.1.5.2. The SR is maintained and the only change is a resultant minor change in the required action statement as a result of changing the affiliated LCO. Movement of the surveillance to the core reactivity LCO, 3.1.1.5, results in an action statement to reevaluate core design and safety analysis and establish appropriate administrative operating restrictions and SRs within 72 hours or shutdown. This action statement is consistent with NUREG-1431. The staff has determined that the required completion time of 72 hours is adequate for preparing whatever operating restrictions or surveillances may be required to allow continued operation. This is based on the low probability of a design basis accident (DBA) occurring during this period and allows sufficient time to assess the physical condition of the reactor and complete the evaluation of core design and safety analysis. The staff finds the proposed change to be acceptable.

4.1.1.1.1(e) - The proposed change renumbers this section as 4.1.1.1.1(b) and deletes "When in MODE 3, 4, or 5" from the SR associated with the verification of shutdown margin considering various factors. This change is editorial given the change in applicability to only Modes 3, 4, and 5 for this LCO. The staff finds the proposed change acceptable.

4.1.1.1.2 - The proposed change moves this periodic surveillance of overall core reactivity balance to LCO 3.1.1.5, Core Reactivity, as SR 4.1.1.5.1. The SR is moved intact and therefore the only change is the change in the action statement of the affiliated LCO. As discussed above for the relocation of 4.1.1.1.1(d), the staff has determined that the proposed action and completion time are adequate to respond to a discovery of an anomaly related to core

reactivity. This determination also applies to this surveillance and is consistent with NUREG-1431. The staff finds the proposed change acceptable.

#### 3/4.1.1.5 CORE REACTIVITY

The proposed changes include the addition of LCO 3.1.1.5, Core Reactivity, an Applicability of Modes 1 and 2, an associated Action consistent with NUREG-1431, and two surveillances which are relocated from 3/4.1.1.1, Shutdown Margin. The relocation of the surveillances and adequacy of the proposed associated LCO and Actions were discussed as part of the disposition of the previous changes. The staff finds the proposed change acceptable.

#### 3/4.1.2 BORATION SYSTEMS

3/4.1.2.1 - The licensee has classified TS 3/4.1.2.1, Boration Flow Paths - Shutdown, in the first category (relocation to the UFSAR) of proposed changes. As stated in the Bases of the existing TS, the boration systems ensure that negative reactivity control is available during each mode of facility operation. The boration capability of the required flow paths are sufficient to provide or restore the shutdown margin required by TS 3/4.1.1, Shutdown Margin. The boration flow paths do not involve installed instrumentation used to detect a degradation of the reactor coolant pressure boundary. Whereas SDM does constitute a process variable that is an important initial condition and is retained, the possible boration flow paths used to achieve or restore SDM do not warrant inclusion as an initial condition in accordance with the second criteria. The boration systems do not provide a primary success path to mitigate an event presenting a challenge to a fission product barrier. For events involving the loss of SDM during Modes 3, 4, or 5, the accident is mitigated by the isolation of the dilution flow path. The subsequent alignment of equipment to restore SDM may be required to comply with other TSs, but is not considered part of the primary success path. The licensee's review of the plant-specific probabilistic risk assessment (PRA) also concluded that the boration flow paths were not significant to public health and safety.

Accordingly, the staff has concluded that the requirements for Boration Flow Paths - Shutdown do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.1.2.1, Boration Flow Paths - Shutdown, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

3/4.1.2.2 - The licensee has classified TS 3/4.1.2.2, Boration Flow Paths - Operating, in the first category (relocation to the UFSAR) of proposed changes. As stated in the Bases of the existing TS, the boration systems ensure that negative reactivity control is available during each mode of facility operation. The boration capability of the required flow paths are sufficient to provide or restore the shutdown margin required by TS 3/4.1.1, Shutdown Margin. The boration flow paths do not involve installed instrumentation used to detect a degradation of the reactor coolant pressure boundary. Whereas SDM does constitute a process variable that is an important initial condition and is retained, the possible boration flow paths used to

achieve or restore SDM do not warrant inclusion as an initial condition in accordance with the second criteria. The boration systems do not provide a primary success path to mitigate an event presenting a challenge to a fission product barrier. For events involving the loss of SDM during Mode 3, the accident is mitigated by the isolation of the dilution flow path. The subsequent alignment of equipment to restore SDM may be required to comply with other Tss, but is not considered part of the primary success path. Those portions of boration flow paths which are also considered part of the emergency core cooling system (ECCS) may be part of the success path for some accidents during power operation. However, these requirements are adequately addressed in the ECCS sections of the TS (3/4.5). The licensee's review of the plant-specific PRA also concluded that the boration flow paths were not significant to public health and safety.

Accordingly, the staff has concluded that the requirements for Boration Flow Paths - Operating do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.1.2.2, Boration Flow Paths - Operating, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

3/4.1.2.3 - LCO 3.1.2.3 requires one centrifugal charging pump (CCP) to be operable in order to perform core alterations or positive reactivity changes. The licensee has classified most of TS 3/4.1.2.3, Charging Pump - Shutdown, in the first category (relocation to the UFSAR) of proposed changes. This existing LCO is largely repetitious of 3/4.1.2.1 which also requires one CCP to be operable as part of a boration flow path during shutdown conditions. The above arguments related to the boration flow path have been found to be applicable to the Charging Pump - Shutdown LCO, Action and SR 4.1.2.3.1. Therefore, the relocation of these requirements to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59 is acceptable.

SR 4.1.2.3.2 requires that all CCPs, except one, be demonstrated inoperable during Modes 4, 5, and 6. This requirement has been relocated to TS 3/4.5.4 for Modes 5 and 6 and 4.5.3.2 for Mode 4. This requirement is retained because it is necessary to avert cold overpressure transients which might present a challenge to the reactor coolant pressure boundary. The staff finds the relocation of this SR within the TS to be appropriate. Additional staff evaluation of the relocated requirements is included in the review of the revised ECCS requirements.

3/4.1.2.4 - LCO 3.1.2.4 requires two CCPs to be operable during Modes 1, 2, and 3. The licensee has classified TS 3/4.1.2.4, Charging Pump - Operating, in the first category (relocation to the UFSAR) of proposed changes. This existing LCO is largely repetitious of TS 3.1.2.2 which also requires two CCPs to be operable as part of a boration flowpath during operating conditions. The above arguments related to the boration flow path have been found to be applicable to the Charging Pump - Operating LCO, Actions and Srs. The existing requirements of this LCO are also repetitious of TS 3/4.5.2, ECCS Subsystems -  $T_{avg} \geq 350^{\circ}\text{F}$ . As discussed in the disposition of TS 3/4.1.2.2, the ECCS TS address the appropriate requirements for the CCPs in their role as part of the ECCS and primary success path to mitigate accidents or transients

during power operation. Therefore, the relocation of these requirements to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59 is acceptable.

3/4.1.2.5 - TS 3/4.1.2.5 requires the operability of at least one of two possible sources of borated water to perform core alterations or positive reactivity changes during shutdown conditions, Modes 5 and 6. The licensee has classified TS 3/4.1.2.5 in the first category (relocation to the UFSAR) of proposed changes. This existing LCO is largely repetitious of TS 3.1.2.1 which also requires one of two sources of borated water to be operable. The specific Borated Water Source - Shutdown TS simply adds specific requirements related to the volumes, boron concentrations, temperatures, and SRs. The justifications for the relocation of TS 3/4.1.2.1 are applicable to the relocation of the borated water source requirements. Therefore, the staff finds the proposed change acceptable.

3/4.1.2.6 - TS 3/4.1.2.6 defines the requirements for borated water sources during operating conditions (Modes 1, 2, 3, and 4). As discussed above, the borated water source TS adds more specific requirements for the boric acid storage system and refueling water storage tank, RWST, but is generally repetitious of TS 3/4.1.2.2, Boration Flow Paths - Operating. The justifications for the relocation of TS 3/4.1.2.2 are applicable to the relocation of the borated water source requirements. The RWST's role in mitigating design basis accidents are adequately addressed by the requirements that are retained in the ECCS section of TS. Therefore, the staff finds the proposed change acceptable.

### 3/4.1.3 MOVABLE CONTROL ASSEMBLIES

3/4.1.3 - The licensee proposes to change Action 1 for LCO 3.1.3.1, Movable Control Assemblies - Group Height, to reflect revisions to the referenced TS, 3.1.1.1, Shutdown Margin. The proposed change is an editorial change resulting from other changes and does not actually change TS requirements. The staff concludes that this is an appropriate editorial change. A similar change is proposed for Action 3 and has been found to be acceptable to the staff. The licensee has proposed to delete item (b) of Action 3 on the basis that the surveillance, determination of SDM once per 12 hours, is redundant to current SR 4.1.3.6. This surveillance is retained although renumbered to 4.1.3.6.1 in the licensee's proposal. The SR involves verification that control rod insertions satisfy the limits specified in the core operating limits report (COLR). The staff agrees that the Action statement requirement is addressed by the control rod insertion limits SR. Therefore, the licensee's proposed change does not constitute any actual change in TS requirements. The staff finds the proposed change acceptable.

4.1.3.1.3 - The licensee has proposed to add a SR 4.1.3.1.3 related to verification of rod drop times. The SR is the same as the current 4.1.3.4 which is the surveillance associated with LCO 4.1.3.4, Rod Drop Time. The deletion of the Rod Drop Time LCO and movement of the surveillance to the Group Height section is consistent with the arrangement of requirements in NUREG-1431. The proposed surveillance does not change the existing testing

requirements, plant conditions, required surveillance frequency, or acceptance criteria. The proposed relocation of requirements within the technical specifications does not change any actual TS requirements. The staff finds the proposed change acceptable.

3/4.1.3.3 - The current TS requires one digital rod position indicator to be operable during Modes 3, 4, and 5 if the reactor trip breakers are closed unless the requirement is suspended by Special Test Exception TS 3.10.5. The licensee has classified 3/4.1.3.3, Position Indication System - Shutdown, in the first category (relocation to the UFSAR) of proposed changes. The rod position indicators are not related to the detection of degradation of the reactor coolant pressure boundary. During shutdown conditions, the rod position indicators are not a design feature or operating restriction that is an initial condition to accidents or transients that challenge a fission product barrier. The rod position indicators are not part of the primary success path to mitigate accidents or transients during shutdown conditions. Although the indicators may be used during control rod withdrawal events from shutdown conditions, the reactor protection system is the primary mitigating system to maintain the integrity of fission product barriers. Although this system was not modelled in the Wolf Creek PRA, the licensee reviewed a study performed for a similar plant and determined that the rod position indicators were not risk significant. The staff finds this acceptable.

Accordingly, the staff has concluded that the requirements for Position Indication System - Shutdown do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.1.3.3, Position Indication System - Shutdown, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

3.1.3.4 - As discussed above for the licensee's addition of SR 4.1.3.1.3 related to measuring control rod drop time, the relevant information from the LCO and surveillance in the existing TS 3/4.3.1.3.4 has been retained as a TS requirement. The addition of the surveillance to the Group Height LCO ensures that the surveillance will be performed prior to criticality for the specified circumstances. The rod drop surveillance is thereby added to the conditions defining control rod operability and the required actions and protections associated with that LCO. The requirements of Action (a) of the existing TS are retained by the relocation of the SR and the requirements of TS 3.0.4 related to required conditions for performing mode changes. Existing Action (b) provides a required action for a test variation, rod drop testing with only three of four reactor coolant pumps operating, that is not permitted and therefore does not need to be retained. Given that the licensee's proposed relocation of the requirements of existing TS 3/4.1.3.4 to a new SR 4.1.3.1.3 does not constitute any actual change to the TS requirements, the staff finds the changes acceptable.

3/4.1.3.6 - The licensee has proposed to add an Action requirement related to verification of SDM and a SR to verify critical rod position is within insertion limits prior to criticality. The Action statement addresses the requirements previously included in the SDM LCO which were affected by the



change in the applicability statement. The requirement to take action within 1 hour is consistent with other LCOs related to control rod operability and positioning and is also consistent with NUREG-1431. The added SR 4.1.3.6.2 is relocated with only minor editorial changes from the SDM requirements discussed previously. The staff concludes that the relocation of requirements within the TS and the minor changes proposed along with the relocations are acceptable.

#### 3/4.2 POWER DISTRIBUTION

The licensee has proposed no changes within the power distribution section of TS.

#### 3/4.3 INSTRUMENTATION

3/4.3.3.2 - The licensee has classified TS 3/4.3.3.2, Movable Incore Detectors, in the first category (relocation to the UFSAR) of proposed changes. Incore instrumentation is used periodically to calculate power peaking factors in order to verify nuclear design predictions, ensure operation within established fuel performance limits, and to calibrate other nuclear instrumentation. The measurements are used in a confirmatory manner and do not provide direct input to reactor protection system or engineered safety features actuation system functions.

Although the core power distributions measured by the incore detectors constitute an important initial condition to design basis accidents and therefore need be addressed by TS, the detectors themselves are not an active design feature needed to preclude or mitigate analyzed accidents or transients. These instruments are neither used for, nor capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary prior to a design basis accident nor do they function as a primary success path to mitigate events which assume the failure of or challenge the integrity of fission product barriers.

Accordingly, the staff has concluded that the requirements for Movable Incore Detectors do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.1.3.3, Movable Incore Detectors, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

3/4.3.3.3 - The seismic instrument section was issued separately. See Amendment No. 75, dated August 11, 1994.

3/4.3.3.4 - The licensee has classified TS 3/4.3.3.4, Meteorological Instrumentation, in the first category (relocation to the UFSAR) of proposed changes. In 10 CFR 50.47, "Emergency Plans," and 10 CFR Part 50, Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," the Commission requires power plant licensees to provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. Timely access to accurate local meteorological data is important for estimating potential radiation doses to

the public and for determining appropriate protective measures. In 10 CFR 50.36a(a)(2), the Commission requires nuclear power plant licensees to submit annual reports specifying the quantity of each of the principal radionuclides released to unrestricted areas in liquid and airborne effluents and such other information as may be required by the NRC to estimate maximum potential annual radiation doses to the public. A knowledge of meteorological conditions in the vicinity of the reactor is important in providing a basis for estimating annual radiation doses resulting from radioactive materials released in airborne effluents. Accordingly, the meteorological monitoring instrumentation serves a useful function in estimating radiation doses to the public from either routine or accidental releases of radioactive materials to the atmosphere.

The meteorological monitoring instrumentation does not serve such a primary protective function as to warrant inclusion in the TSs in accordance with the criteria. The instrumentation does not serve to ensure that the plant is operated within the bounds of initial conditions assumed in design basis accident and transient analyses or that the plant will be operated to preclude transients or accidents. Likewise, the meteorological instrumentation does not serve as part of the primary success path of a safety sequence analysis used to demonstrate that the consequences of these events are within the appropriate acceptance criteria.

Accordingly, the staff has concluded that the requirements for Meteorological Instrumentation do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.3.3.4, Meteorological Instrumentation, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

3/4.3.3.6 - The licensee has proposed to revise TS 3/4.3.3.6, Accident Monitoring Instrumentation, in terms of the required instrumentation, associated action statements and surveillance requirements. The primary purpose of the accident monitoring instrumentation is to display plant variables that provide information required by the control room operators during accident situations. This information provides the necessary support for the operator to take the manual actions for which no automatic control is provided and that are required for safety systems to accomplish their safety functions for design-basis events. The instruments that monitor these variables are identified by the licensee in accordance with guidance contained in Regulatory Guide (RG) 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident." RG 1.97 defines five types of variables (Types A, B, C, D, and E) to be monitored by the control room operator during the course of an accident and during the long-term stable shutdown phase following an accident. The RG also provided design and qualification criteria for this instrumentation, separated into three categories, which provided a graded approach to requirements depending on the importance to safety of the measurement of a specific variable.

The staff has stated in NUREG-1431 that accident monitoring instrumentation identified as Type A or Category I during plant specific implementation of

RG 1.97 should be included in this LCO in accordance with the third criterion. Type A variables provide the primary information required for the control room operator to take specific manual action for which no automatic control is provided, and that are required for safety systems to accomplish their safety functions for design basis accidents. Category I variables are the key variables deemed risk significant because they (1) determine if systems important to safety are performing their intended functions, (2) provide information related to the likelihood of a gross breach of fission product barriers, or (3) provide information regarding the release of radioactive materials and possible need to initiate actions necessary to protect the public.

A comparison of the licensee's current TS requirements and the list of instruments categorized as Type A or Category 1 in UFSAR Table 7A-2, identifies that all Type A instruments are currently included in TS Table 3.3-10 and the licensee has proposed to retain the requirements for that instrumentation.

The non-Type A Category 1 instrumentation and other current TS requirements that are neither Type A or Category 1 are summarized below:

| RG 1.97<br>Non-Type A<br><u>Category 1</u>  | Current<br><u>TS</u> | Proposed<br><u>Disposition</u> |
|---|----------------------|--------------------------------|
| Neutron Flux                                | No                   | Added to Table 3.3-10          |
| Core Exit Temperature                       | Yes                  | Retained                       |
| Reactor Vessel Level                        | No                   | Added to Table 3.3-10          |
| Steam Generator Level<br>- Wide Range       | Yes                  | Retained                       |
| Condensate Storage<br>Tank Level (Pressure) | No                   | No Change                      |
| Containment Pressure<br>- Extended Range    | Yes                  | Relocated to UFSAR             |
| Containment RHR<br>Sump Level               | No                   | No Change                      |
| Containment Isolation<br>Valve Position     | No                   | No Change                      |
| Containment Hydrogen<br>Concentration       | Yes                  | Retained                       |
| Radiation level in RCS                      | No                   | No Change                      |
| Auxiliary Feedwater<br>Flow Rate            | Yes                  | Retained                       |
| PORV Position<br>Indicator                  | Yes                  | Relocated to UFSAR             |
| Safety Valve Position<br>Indicator          | Yes                  | Relocated to UFSAR             |
| Unit Vent - High Range<br>Noble Gas Monitor | Yes                  | Relocated to UFSAR             |

The addition of the neutron flux and reactor vessel level instrumentation as well the retention of existing TS is acceptable.

The licensee has not added the condensate storage tank (CST) level instrumentation to TS Table 3.3-10 because the essential service water (ESW) system is considered the assured suction source for auxiliary feedwater (AFW). The AFW pump suction lines automatically transfer to the ESW system on low suction pressure in the pump suction lines. As such, the transfer to ESW would occur on a loss of CST level without reliance on the CST level instrumentation.

The relocation of the requirements for Containment Pressure - Extended Range is based upon the reliance on the normal range instruments which are retained in TS. The licensee has stated that emergency operating procedures do not base any decisions or actions on the extended range instrumentation.

The licensee has not added containment RHR sump level instrumentation to TS Table 3.3-10 because the normal sump level indications are retained and the RHR sump level instruments do not serve such an important role as to warrant inclusion in TS. The RHR sump level instrumentation is not required to identify leakage from the RCS and would not be flooded immediately following an event due to the installation of a curb surrounding the sump. The switchover from the refueling water storage tank to the sump as the primary source of water for ECCS equipment is automatic and verification of RHR sump level is not required nor part of a preplanned manual safety function.

The licensee has not added containment isolation valve position to TS Table 3.3-10 because, although the valve position indicators are utilized following design basis accidents, the loss of the isolation safety function would require the failure of two indicators and is therefore considered to be beyond the design basis requirements. In addition, Type A indications retained in the TS provide the control room operator with sufficient information to verify the status of the containment integrity critical safety function.

The licensee has not added radiation level in the RCS (sampling system) instrumentation to the TS Table 3.3-10 because the emergency operating procedures do not base any actions or decisions on this variable. The variable is not required to assure the integrity of any fission product barrier.

Except for the auxiliary feedwater flow rate indication, the requirements for instrumentation that are currently in TS Table 3.3-10, but that are neither Type A or Category 1, are proposed to be relocated to the UFSAR. This relocation affects the power operated relief valve (PORV) and PORV block valve position indicators, the safety valve position indicators, and unit vent - high range noble gas monitor. The relocated requirements were verified to not satisfy the criteria for inclusion in the accident monitoring instrumentation TS. The auxiliary feedwater flow rate instrumentation was retained based upon its inclusion in NUREG-1431 and its retention in several other TS which were not affected by this request.

The staff's review has determined that the proposed instrumentation for inclusion in TS 3/4.3.3.6, Accident Monitoring Instrumentation, is acceptable. Those items retained and the added instrumentation are consistent with NUREG-1431 and are appropriate for inclusion given their importance in the mitigation of design basis accidents. For those items that are not currently in TS but which satisfy the general guidance for inclusion, Type A or Category 1, the licensee has provided a reasonable rationale for not adding requirements to TS 3/4.3.3.6. Although the staff's preference would be for inclusion of these items, the continued control of this instrumentation in accordance with the licensee's procedures and programs, 10 CFR 50.59, and other formal mechanisms is considered adequate. For those requirements relocated from the existing TS 3/4.3.3.6 to the UFSAR, the staff has determined that the items do not satisfy the revised criteria of 10 CFR 50.36 for inclusion in the TS. The relocated instrumentation requirements (Containment Pressure - Extended Range, PORV and PORV Block Valve Position Indicators, Safety Valve Position Indicator, and Unit Vent - High Range Noble Gas Monitor) are not required to detect degradation of the reactor coolant pressure boundary and are not design features that are initial conditions or part of primary success paths to mitigate a design basis accident. For those items which were relocated or which were not added in accordance with the guidance of NUREG-1431, the licensee has stated that the instrumentation has not been shown to be significant to public health and safety by either operational experience or probabilistic safety assessments. The staff finds this to be acceptable.

In addition to revising the specific instrumentation included in TS 3/4.3.3.6, the licensee has proposed to revise the required actions. Each action is addressed below:

Action a. - The existing action statement for the number of operable channels for an instrument function being less than the total number of channels shown in TS Table 3.3-10 is to restore the operable channel within 7 days or shutdown to Hot Standby within the following 6 hours and to Hot Shutdown within the following 6 hours. The proposed action requires restoration of the inoperable channel within 30 days or submit a special report to the Commission within the following 14 days. The staff has found that the 30-day period is acceptable based upon operating experience, the remaining operable channel, other instrumentation available to monitor critical functions, the passive nature of the instrument (no critical automatic action is actuated by these instruments), and the low probability of an event during this interval. The 30-day period and submittal of a special report are consistent with NUREG-1431. The staff finds the proposed action acceptable.

Action b. - The existing action statement for the number of operable channels for most of the instrument functions being less than the minimum level specified in TS Table 3.3-10 is to restore the inoperable channel(s) within 48 hours or commence a plant shutdown. The proposed action applies to instrumentation

except for containment hydrogen, containment radiation, and reactor vessel level, and requires restoration of one channel within 7 days or commence a plant shutdown. The staff has found that the 7-day period is acceptable based upon the relatively low probability of an event requiring accident monitoring instrumentation and the availability of alternate, although perhaps not fully qualified, means of obtaining the required information. The 7-day period and subsequent shutdown requirements are consistent with NUREG-1431. The staff finds the proposed action acceptable.

Action c. - The existing action statement addresses the containment radiation and unit vent (relocated) instrumentation having the number of operable channels less than the required minimum number of channels specified in TS Table 3.3-10. The action statement requires initiation of a preplanned alternate method of monitoring the appropriate parameter(s) within 72 hours and either restoration of inoperable channel(s) within 7 days or submittal of a special report to the Commission. The proposed action statement retains this option for the containment radiation monitor and also applies it to the added instrumentation for reactor vessel level. The initiation of a preplanned alternate method ensures that the safety function is restored. Submittal of a special report if the alternate method is relied upon for longer than 7 days ensures that the Commission is aware of the circumstances and can ensure that the licensee has taken appropriate actions. This action is generally consistent with NUREG-1431. The staff finds the change acceptable.

Action d. - This action has been added to address conditions in which the number of operable hydrogen analyzers is less than the minimum number of channels in TS Table 3.3-10. This condition was previously addressed by the general action statement b and also by TS 3/4.6.4, Hydrogen Analyzers. The action requires restoration of a channel within 72 hours or initiation of a plant shutdown. This 72-hour period is consistent with the existing TS 3/4.6.4 and also with NUREG-1431. The staff finds the change acceptable.

Action e. - Existing Action d. is relabelled as Action e. and states that the provisions of TS 3.0.4, related to mode changes, are not applicable. The staff agrees that it is appropriate to retain the statement.

Surveillance requirements for the various instrumentation include channel checks on a monthly basis and calibrations at a refueling outage interval (18 months). These intervals are consistent with the existing TS and also with NUREG-1431. The staff finds the changes to TS Table 4.3-7 acceptable.

3/4.3.3.9 - The licensee has classified TS 3/4.3.3.9, Loose-Part Detection System, in the first category (relocation to the UFSAR) of proposed changes. The loose-part detection system ensures that sufficient capability is available to detect loose metallic parts in the reactor coolant system. Early detection can provide operators time to take corrective actions and avoid or mitigate damage to or malfunctions of primary system components. However, as discussed in the revised 10 CFR 50.36, the loose-part detection system does not function to detect significant abnormal degradation of the reactor coolant pressure boundary (RCPB). The loose-part detection system does not serve as an active design feature for establishing initial conditions or mitigation of design basis accidents or transients.

Accordingly, the staff has concluded that the requirements for Loose-Part Detection System do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.3.3.9, Loose Part Detection System, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

3/4.3.3.11 - The licensee has proposed to relocate the existing TS 3/4.3.3.11, Explosive Gas Monitoring Instrumentation, to the UFSAR and add a program description to the Administrative Controls Section of TS. The TS requirements for the program are added as TS 6.8.5.a, Explosive Gas and Storage Tank Radioactivity Monitoring Program.

The relocation of most of the instrumentation related to radioactive gaseous effluent monitoring was addressed in Generic Letter 89-01, "Implementation of Programmatic Controls for Radiological Effluent Technical Specifications [RETS] in the Administrative Controls Section of the Technical Specifications and the Relocation of Procedural Details of RETS to the Offsite Dose Calculation Manual or the Process Control Program." Relocation of the requirements for explosive gas monitoring instrumentation was not addressed in the guidance provided by Generic Letter 89-01. The staff positions regarding the monitoring of explosive gases within the radioactive waste management systems are outlined in SRP Section 11.3 and Branch Technical Position ETSB-11-5, "Postulated Radioactive Releases Due to a Waste Gas System Leak or Failure." The licensee has proposed to relocate these provisions to the UFSAR such that future changes to the operation and surveillance of the explosive gas monitoring instrumentation could be changed under 10 CFR 50.59.

The explosive gas monitoring instrumentation monitors the concentrations of potentially explosive gas mixtures in the waste gas holdup system. The explosive gas monitoring instrumentation requirements address detection of possible precursors to the failure of a waste gas system but do not prevent or mitigate design basis accidents or transients which assume a failure of or present a challenge to a fission product barrier. Limitations related to concentrations of explosive gases are actually controlled in accordance with the licensee's proposed addition of TS 6.8.5.a, Explosive Gas and Storage Tank Radioactivity Monitoring Program. This addition of the administrative controls TS and relocation of the specific explosive gas instrumentation LCO is consistent with NUREG-1431.

Accordingly, the staff has concluded that the requirements for Explosive Gas Monitoring Instrumentation do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.3.3.11, Explosive Gas Monitoring Instrumentation, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

3/4.3.4 - The licensee has classified TS 3/4.3.4, Turbine Overspeed Protection, in the first category (relocation to the UFSAR) of proposed changes. The purpose of the turbine overspeed protection system is to trip the turbine on sensing turbine overspeed so that destructive overspeed conditions are not reached. General Design Criterion 4 of Appendix A to 10 CFR Part 50 requires that structures, systems, and components important to safety be appropriately protected from the effects of missiles that may result from equipment failures. Application of the design criteria to turbine missiles is described in SRP Section 10.2 and in subsequent safety evaluations related to probabilities of turbine failures, turbine orientations, and SRs for turbine overspeed protection systems. In NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements," the staff discusses the benefits, resultant costs, and the safety impact of performing turbine overspeed protection surveillances.

Although the design basis accidents and transients include a variety of system failures and conditions which might result from turbine overspeed events and potential missiles striking various plant systems and equipment, the system failures and plant conditions are much more likely to be caused by events other than turbine failures. In view of the low likelihood of turbine missiles, this scenario does not constitute a part of the primary success path to prevent or mitigate such design basis accidents and transients. The turbine overspeed protection system is not relied upon in the design basis accident or transient analyses to establish initial conditions or to serve as a primary success path which functions or actuates to mitigate such events.

Accordingly, the staff has concluded that the requirements for Turbine Overspeed Protection do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.3.4, Turbine Overspeed Protection, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

#### 3/4.4 REACTOR COOLANT SYSTEM

3/4.4.2.1 - The licensee has classified TS 3/4.4.2.1, Safety Valves - Shutdown, in the first category (relocation to the UFSAR) of proposed changes. The existing requirements in TS 3/4.4.2.1 specify LCOs and SRs for reactor coolant system (RCS) safety valves in Modes 4 and 5. During plant operation, the safety valves, together with the reactor protection system, protect the RCS from being pressurized above its safety limit of 2735 psig. During shutdown conditions, the cold overpressure mitigation system (COMS) provides protection from possible events that challenge criteria provided in Appendix G of 10 CFR 50. The LCOs and SRs for COMS are defined in TS 3/4.4.9.3. The applicability of the COMS TS is whenever the plant is in Mode 3 with RCS temperature below the specified limit; Modes 4 and 5, and Mode 6 when the head



is on the reactor vessel. The COMS system is the primary success path against RCS overpressurization at low temperature. In addition to the mitigation system discussed above, other TS restrict the systems that may provide an inadvertent source of mass and heat input to the RCS.

The proposed changes to the TS establish operability and SRs for the safety valves which are consistent with the RCS overpressure design basis. The existing TS requirements for the safety valves in Modes 4 and 5 do not constitute initial conditions that challenge the RCS or a primary success path to mitigate a design basis accident or transient. Therefore, these requirements do not satisfy the criteria for inclusion in TS and the licensee has proposed to relocate these provisions to the UFSAR. Future changes to these requirements would be subject to 10 CFR 50.59.

Accordingly, the staff has concluded that the requirements for Safety Valves - Shutdown do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.4.2.1, Safety Valves - Shutdown, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

3/4.4.7 - The licensee has classified TS 3/4.4.7, Reactor Coolant System Chemistry, in the first category (relocation to the UFSAR) of proposed changes. The reactor coolant chemistry program provides limits on particular chemical properties of the primary coolant, and surveillance practices to monitor those properties, to ensure that degradation of the reactor coolant pressure boundary is not exacerbated by poor chemistry conditions. However, degradation of the reactor coolant pressure boundary is a long-term process, and there are other, direct means to monitor and correct the degradation of the reactor coolant pressure boundary which are controlled by regulations and TS; for example, in-service inspection and primary coolant leakage limits. Therefore, requirements related to the chemistry program do not constitute initial conditions that are assumed in any design basis accident or transient related to the RCS integrity, nor does the reactor coolant chemistry program constitute a primary success path or risk-significant safety function warranting TS requirements under the criteria in the final policy statement.

The licensee states that the reactor coolant chemistry requirements will be maintained in the UFSAR. Any changes to these chemistry requirements would be evaluated in accordance with 10 CFR 50.59 and if any changes are determined to involve an unreviewed safety question, the licensee must submit a license amendment to obtain prior NRC review and approval.

Accordingly, the staff has concluded that the requirements for Reactor Coolant System Chemistry do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.4.7, Reactor Coolant System Chemistry, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

3/4.4.9.2 - The licensee has classified TS 3/4.4.9.2, Pressure/Temperature Limits - Pressurizer, in the first category (relocation to the UFSAR) of proposed changes. Pressure and temperature limits are placed on the

pressurizer to be consistent with the requirements of the American Society of Mechanical Engineers (ASME) Code. As described in the Bases for the existing TS requirements, the pressurizer operates in temperature ranges above those for which there is reason for concern of non-ductile failure, and operational limits are provided to assure compatibility of operation with the fatigue analysis performed in accordance with the ASME Code requirements. Pressurizer integrity is a design capability maintained by ASME Code design and component cyclic/transient limit requirements under 10 CFR 50.55a. Further, these limits are associated with long-term effects on the material properties of the pressurizer; therefore, these operational limits are not necessary to ensure immediate protection of the public health and safety.

Accordingly, the staff has concluded that the requirements for Pressure/Temperature Limits - Pressurizer do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.4.9.2, Pressure/Temperature Limits - Pressurizer, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.55a, "Codes and standards," and 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

3/4.4.10 - The licensee has classified TS 3/4.4.10, Structural Integrity, in the first category (relocation to the UFSAR) of proposed changes. This specification provides inspection requirements for the ASME Code Class 1, 2, and 3 components to ensure that the structural integrity and operational capability of these components will be maintained at an acceptable level throughout the life of the plant. To the extent applicable, the inspection program for these components is in compliance with Section XI of the ASME Boiler and Pressure Vessel Code, in accordance with 10 CFR 50.55a. As part of the relocation of TS 3/4.4.10, TS 6.8.5.b is added to include the reactor coolant pump (RCP) flywheel inspection program. The RCP flywheel inspection program is retained because it is not covered under 10 CFR 50.55a. This treatment is consistent with the Westinghouse Standard TS (NUREG-1431).

The inspection program associated with the existing TS requirements is performed on systems required to function to mitigate a design basis accident. However, the TS include separate operability and SRs for these systems. The requirements in TS 3/4.4.10 relate to long-term maintenance of the structural design margins which are not relied on to avert an immediate threat to public health and safety. Structural integrity is a design capability maintained by ASME Code under 10 CFR 50.55a. These limits and SRs are associated with long-term effects on the material properties; therefore, these operational limits are not necessary to ensure immediate protection of the public health and safety.

Accordingly, the staff has concluded that the requirements for Structural Integrity do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.4.10, Structural Integrity, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.55a, "Codes and standards," 10 CFR 50.59, "Changes, tests and experiments," and the addition of an administrative control section for the RCP flywheel to be acceptable.

3/4.4.11 - The licensee has classified TS 3/4.4.11, Reactor Coolant System Vents, in the first category (relocation to the UFSAR) of proposed changes. The RCS vents are provided to exhaust noncondensable gases and/or steam from the RCS that could inhibit natural circulation core cooling following any event involving a loss of offsite power and requiring long-term cooling, such as a loss-of-coolant accident. The valve redundancy of the RCS vent paths serves to minimize the probability of inadvertent or irreversible actuation while ensuring that a single failure of the vent valve power supply or control system does not prevent isolation of the vent path. Their function, capabilities, and testing requirements are consistent with the severe core damage assumptions of item II.B.1 of NUREG-0737, "Clarification of Three Mile Island Action Plan Requirements" (November 1980). This capability is not part of a primary success path to mitigate a design basis accident or transient, nor is it relied on to avert an immediate threat to public health and safety. Therefore, the reactor vessel head vents do not satisfy any of the criteria which would necessitate that they be included in the TS.

Accordingly, the staff has concluded that the requirements for Reactor Coolant System Vents do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.4.11, Reactor Coolant System Vents, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

#### 3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3/4.5.4 - The proposed changes to 3/4.5.4, ECCS Subsystems,  $T_{avg} \leq 200^{\circ}\text{F}$ , are related to relocation of existing TS 4.2.1.3.2. The SR previously contained in TS 4.2.1.3.2 required that, with the exception of the required operable charging pump, charging pumps should be demonstrated inoperable by verification of open motor circuit breakers. This restriction is intended to prevent cold overpressurization events by limiting the sources for the inadvertent addition of water to the RCS. The licensee has proposed to relocate these restrictions to TS 3/4.5.4 for Modes 5 and Mode 6 with the reactor vessel head on. The existing TS 3/4.1.2.3 does not specifically provide a required action or allowable time if more than one charging pump is operable during Modes 4, 5 or 6. The proposed relocation to 3/4.5.4 includes an action and allowable time consistent with undesired operability of safety injection pumps. This proposed requirement is to restore one charging pump to an inoperable status within 4 hours. Existing exceptions to these requirements related to safety injection pumps being allowed to be operable if reactor vessel level is below the flange and allowed use of an inoperable charging pump for testing or filling accumulators are retained as footnotes to TS 3/4.5.4. The existing SRs to verify the inoperable charging pump is isolated from AC power at least once per 31 days is retained. The staff concludes that the revision of TS 3/4.5.4 to address the restrictions on charging pumps in Modes 5 and 6 is acceptable.

The existing requirements of TS 3/4.1.2.3 are applicable in Modes 4, 5 and 6. The above discussion determined that those requirements were adequately addressed for Modes 5 and 6 by the relocation of requirements to 3/4.5.4. The restrictions for charging pump operability in Mode 4 are addressed by

TS 3/4.5.3, ECCS Subsystems -  $T_{avg} < 350^{\circ}F$ . The requirements contained in the Action and SRs of the relocated TS 3/4.1.2.3 are adequately addressed by TS 3/4.5.3. The staff finds the proposed changes acceptable.

### 3/4.6 CONTAINMENT

3/4.6.1.1 - The licensee has proposed to add several SRs to 3/4.6.1.1, Containment Integrity, in order to support the relocation or deletion of other requirements. SR 4.6.1.1.d is added requiring performance of containment leakage rate testing, except for containment air lock testing, in accordance with 10 CFR 50, Appendix J, as modified by approved exemptions. SR 4.6.1.1.e is added to require verification of containment structural integrity in accordance with the containment tendon surveillance program of Specification 6.8.5.c (added as part of this amendment package). The structure of this specification is consistent with NUREG-1431. The associated relocations and deletions are addressed in the following sections.

3/4.6.1.2 - The licensee has classified TS 3/4.6.1.2, Containment Leakage, in the first category (relocation to the UFSAR) of proposed changes. The existing TS 3/4.6 contains details that are also found in Appendix J to 10 CFR Part 50. The regulations require licensee compliance and cannot be revised by the licensee. The proposed changes include the statement "... in accordance with 10 CFR 50, Appendix J, as modified by approved exemptions." Therefore, direct reference to Appendix J eliminates the need for repetitious and unnecessary details within the TS. This is consistent with previous staff positions expressed in safety evaluations and NUREG-1431 and is considered to be administrative in nature. Therefore, detailed discussions or rationale will not be provided for those items removed from the TS based on the existence of similar requirements in Appendix J to 10 CFR Part 50.

LCO 3.6.1.2, Primary Containment Leakage, defines limiting leakage rates for: (a) overall containment leakage ( $L_o$ ) for test pressure of 48 psig ( $P_o$ ), (b) overall containment leakage ( $L_t$ ) for a test pressure of 24 psig ( $P_t$ ), (c) combined leakage for penetrations and valves subject to Type B and C tests. The licensee proposes to restructure the TS such that the current LCO regarding overall containment leakage is addressed by the revised 4.6.1.1 which addresses testing in accordance with Appendix J. The maximum allowable leakage rate ( $L_o$ ) and the calculated peak containment pressure ( $P_o$ ) are retained in TS by the proposed changes to the definition of containment integrity (Definition 1.7) and related changes to the TS Bases. The criteria related to Type B and C tests are also included in the revised TS Bases. The staff finds that the current requirements in LCO 3.6.1.2 are adequately addressed by the relocation of requirements within the TS as proposed by the licensee or are repetitious of the requirements explicitly provided in Appendix J. This change is acceptable.

The existing Actions associated with various components of LCO 3.6.1.2 are to restore conditions to within the LCO requirements or shutdown the plant. This action is consistent with the containment integrity TS, 3/4.6.1, and TS 3.0.4

regarding entry into operational modes. Therefore, no requirements are lost in the deletion of the action statement and the staff finds the change acceptable.

SR 4.6.1.2.a dictates the normal Type A test interval of  $40 \pm 10$  months with the third test of each set being conducted during the shutdown for the 10-year plant inservice inspections. This requirement is generally repetitious of the requirements of Section III.D.1(a) which requires three Type A tests, at approximately equal intervals, during each 10-year service period with the third test of each set performed during the 10-year plant inservice inspections. The only detail that the existing TS provides beyond repeating the Appendix J requirements is that the approximately equal interval is defined as  $40 \pm 10$  months. This interval, along with other relocated TS requirements, will be placed in the UFSAR and controlled in accordance with 10 CFR 50.59. This detail is not considered to be a significant refinement of the requirements given in Appendix J and is supported by the numerous licensing amendments issued to extend the Type A test interval beyond 50 months. The staff finds that the Type A testing interval is adequately controlled by the wording contained in Appendix J, the inclusion of the  $40 \pm 10$  month interval in the UFSAR and control of any changes to that stated interval band in accordance with 10 CFR 50.59.

SR 4.6.1.2.b provides requirements for additional testing in the event of one or consecutive failures of Type A tests. The wording contained in the TS is repetitious of the requirements of Sections III.A.6(a) and (b) of Appendix J. This requirement is captured by the revised TS 4.6.1.1.b which states that testing shall be performed in accordance with and at the frequency specified by Appendix J, as modified by approved exemptions. The staff finds that the revised TS 4.6.1.1.b, with references to Appendix J and approved exemptions, adequately defines the requirements for additional testing following Type A test failures.

SR 4.6.1.2.c requires the verification of the accuracy of each Type A test by the performance of a supplemental test. The requirement and criteria are repetitious of Section III.A.3(b) of Appendix J. Therefore, removal of the TS requirement is considered to be administrative or editorial in nature. The revised SR 4.6.1.1.b requiring testing in accordance with Appendix J, as modified by approved exemptions and the specific requirements of Appendix J Section III.A.3(b), adequately control the accuracy provisions of the deleted TS.

SR 4.6.1.2.d requires Type B and C testing at intervals of no greater than 24 months. This existing TS requirement is repetitious of Section III.D.2(a) of Appendix J and the proposed deletion is, therefore, considered to be administrative in nature.

SR 4.6.1.2.e specifies that, "Air locks shall be tested and demonstrated OPERABLE per SR 4.6.1.3." The specific requirements for the primary containment air lock for each unit are currently, and will remain, as Specification 3/4.6.1.3, Primary Containment Air Locks. Also, the definition of primary containment integrity refers to Specification 3.6.1.3. Therefore,

the air lock testing and operability requirements are retained in TSs and are not affected by this proposed amendment. The staff finds the proposed change acceptable.

SR 4.6.1.2.f specifies that, "Purge supply and exhaust isolation valves with resilient material seals shall be tested and demonstrated OPERABLE by the requirements of Specifications 4.6.1.7.2 and 4.6.1.7.4, as applicable. These specifications are retained intact with only minor editorial changes required to have references reflect changes in other TS. Therefore, the requirements for the purge supply and exhaust isolation valves with resilient seals are retained in TSs and are not affected by this proposed amendment. The staff finds the proposed change acceptable.

SR 4.6.1.2.g concerning special testing requirements to be met for leakage from isolation valves that are sealed with fluid from a seal system, is consistent with Appendix J section III.C.3. Therefore, since proposed SR 4.6.1.1.b requires testing and test frequency in accordance with 10 CFR 50, Appendix J, and approved exemptions, the requirements are maintained and the changes are considered administrative or editorial in nature. The staff finds the changes acceptable.

SR 4.6.1.2.h states that the provisions of TS 4.0.2 are not applicable. TS 4.0.2 provides a maximum extension of 25 percent to TS surveillance intervals. The existing item (h) simply specified that the extension was not applicable for containment surveillances since the required intervals were defined in 10 CFR 50 Appendix J. The deletion of the item is acceptable because the restructured TS specifically reference Appendix J for most surveillance requirements.

3/4.6.1.6 - The licensee has proposed to relocate requirements related to containment vessel structural integrity (tendons) to the UFSAR and TS Administrative Controls Section 6.8.5.c, "Containment Tendon Surveillance Program." The removal of the LCO and SRs and creation of an administrative control for the containment tendon surveillance program is consistent with the treatment of these requirements in NUREG-1431. Experience has shown that structural degradation of the containment is a predictable process that can be monitored by a comprehensive containment tendon monitoring program. Therefore, requirements related to the containment tendon surveillance program are not required to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety. The remaining TS requirements related to containment integrity and the containment tendon surveillance program ensure that the containment will serve its function as a fission product barrier. The adequacy of the licensee's proposed program description in TS 6.8.5.c is addressed later in this evaluation.

Accordingly, the staff has concluded that the requirements for Containment Vessel Structural Integrity do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.6.1.6, Containment Vessel Structural Integrity, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," and the

addition of an administrative control section for the tendon surveillance program to be acceptable.

4.6.1.7.2 - As discussed in the evaluation of changes to TS 4.6.1.2.d, the licensee proposes to revise the reference in this TS to reflect the relocation of TS 4.6.1.2.d. The staff finds the editorial change necessitated by other changes to be appropriate.

3.6.3 - The licensee proposes to delete a footnote from the containment isolation valves LCO which refers to TS 3.6.1.2 for those valves with excessive leakage. The deletion of the footnote is deemed appropriate since TS 3.6.1.2 was removed based upon its redundancy to Appendix J or retained TS requirements.

The licensee has proposed an additional reference to a footnote associated with TS Table 3.6-1, Containment Isolation Valves. The change consists of adding TS 3/4.7.1.7, Main Feedwater System, as the applicable reference for the isolation time of the main feedwater isolation valves. TS 3/4.7.1.7 is a requirement the licensee has proposed to add to the TS and is addressed later in this evaluation. The staff finds that the addition of the reference is appropriate given the addition of the new LCO and surveillance requirements for the main feedwater system.

3/4.6.4 - The licensee has proposed to consolidate requirements for Combustible Gas Control - Hydrogen Analyzers to TS 3/4.3.3.6, Accident Monitoring Instrumentation. The LCO, Actions, and surveillance requirement currently included in TS 3/4.6.4 are addressed in the revised TS 3/4.3.3.6. The allowed outage times and calibration intervals are revised from the current requirements. These changes were addressed in the evaluation of proposed changes to TS 3/4.3.3.6. Other than those changes previously evaluated, the staff concludes that the relocation of TS 3/4.6.4, Hydrogen Analyzers, to TS 3/4.3.3.6, Accident Monitoring Instrumentation, does not change the requirements included in the TS. The staff finds the change acceptable.

### 3/4.7 PLANT SYSTEMS

3.7.1.7 - The licensee has proposed to add an LCO and SRs for the main feedwater system isolation valves (MFIVs). The licensee proposed the addition of the MFIV requirements in the TS in accordance with the final policy statement recommendation to utilize industry experience embodied in NUREG-1431.

The MFIVs isolate main feedwater flow to the secondary side of the steam generators. The isolation valves: (1) provide a pressure boundary for the addition of auxiliary feedwater in the event of a main steamline or feedwater line break; (2) limit the RCS cooldown and mass and energy releases associated with secondary line breaks inside containment, and (3) mitigate steam generator overfill events, such as those caused by a feedwater system malfunction, when actuated by a steam generator high-high level signal.

The addition of TS requirements related to the MFIVs is generally consistent with NUREG-1431. The STS contain requirements for the isolation function of the feedwater regulation valves (FRVs) that the licensee has not included. The licensee considered the MFIVs to provide the primary protection function for design basis accidents and transients. The FRVs' closure on an isolation signal provides a redundant and secondary isolation function. The argument regarding the primacy of the MFIVs in providing the isolation function, the required testing of the FRVs in accordance with the inservice testing program, and the consistency of the proposed MFIV TS with the existing main steamline isolation valve (MSIV) TS provides a reasonable justification for the deviation from the STS. The staff finds the addition of the MFIV TS to be acceptable.

3/4.7.2 - The licensee has classified TS 3/4.7.2, Steam Generator Pressure/Temperature Limitation, in the first category (relocation to the UFSAR) of proposed changes. Pressure and temperature (P/T) limits are placed on the steam generators to prevent a nonductile failure of either the reactor coolant pressure boundary or the secondary side pressure boundary. The specification places limits on the steam generator P/T to ensure that the pressure-induced stresses are within the maximum allowable fracture toughness stress limits.

Requirements related to the steam generator P/T limits are not used to detect a significant degradation of the reactor coolant pressure boundary, are not an operating restriction that is an initial condition for a design basis accident or transient that either assumes the failure of or presents a challenge to a fission product barrier, and are not part of the primary success path for design basis accidents or transients. Therefore, requirements related to the steam generator P/T limitations do not satisfy any of the criteria which would necessitate that they be included in the technical specifications. In addition, the proposed amendment does not involve a change in the manner in which the plant will be operated, maintained, or tested. The requirements described in the affected TS will be maintained, and any subsequent changes to the plant procedures or the updated final safety analysis report (UFSAR) related to these limits will be made in accordance with 10 CFR 50.59.

Accordingly, the staff has concluded that the requirements for Steam Generator Pressure/Temperature Limitation do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.7.2, Steam Generator Pressure/Temperature Limitation, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

3/4.7.8 - The licensee has classified TS 3/4.7.8, Snubbers, in the first category (relocation to the UFSAR) of proposed changes. The snubbers ensure that the structural integrity of the reactor coolant system (RCS) and all other safety-related systems is maintained during and following a seismic or other event initiating dynamic loads. The restraining action of the snubbers ensures that the initiating event failure does not propagate to other parts of



the failed system or to other safety systems. Snubbers also allow normal thermal expansion of piping and nozzles to eliminate excessive thermal stresses during heatup or cooldown.

The existing TS action statement only requires that an inoperable snubber be replaced or repaired within 72 hours. The SRs for snubbers is that they be periodically examined under the inservice inspection program. The requirements of existing TS 3/4.7.8 do not identify a significant abnormal degradation of the reactor coolant pressure boundary, do not restrict a parameter or design feature that are directly treated as an initial condition assumption for a design basis accident or transient, and do not form part of the primary success path which functions or actuates to mitigate a design basis accident or transient. Therefore, requirements related to the snubbers do not satisfy any of the criteria which would necessitate that they be included in the TS. The proposed amendment does not involve a change in the manner in which the plant will be operated, maintained, or tested. The requirements described in the affected TS will be maintained, and any subsequent changes to the plant procedures or the UFSAR related to these limits will be made in accordance with 10 CFR 50.59.

Accordingly, the staff has concluded that the requirements for Snubbers do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.7.8, Snubbers, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

3/4.7.9 - The licensee has classified TS 3/4.7.9, Sealed Source Contamination, in the first category (relocation to the UFSAR) of proposed changes. The existing TS limitation states that sealed sources containing radioactive material above the stated thresholds shall be free of greater than or equal to 0.005 microcurie of removable contamination. This ensures that leakage from byproduct, source, and special nuclear material sources will not exceed allowable intake values. The requirements related to sealed source contamination are not related to the detection of abnormal degradation of the reactor coolant pressure boundary, are not an operating restriction related to initial conditions for design basis accidents or transients, and are not part of a primary success path which functions to mitigate a design basis accident or transient. Therefore, requirements related to sealed source contamination do not satisfy any of the criteria which would necessitate that they be included in the TS. The requirements described in the affected TS will be maintained, and any subsequent changes to the plant procedures or the UFSAR related to these limits will be made in accordance with 10 CFR 50.59.

Accordingly, the staff has concluded that the requirements for Sealed Source Contamination do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.7.9, Sealed Source Contamination, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

3/4.7.12 - The licensee has classified TS 3/4.7.12, Area Temperature Monitoring, in the first category (relocation to the UFSAR) of proposed changes. This specification places a limit on the temperature of the areas of the plant which contain safety-related equipment. This is required to ensure that the temperature of the equipment does not exceed its environmental qualification temperature during normal operation. Exposure to excessively high temperatures may degrade the equipment and cause a loss of its operability. However, the area temperature monitoring instrumentation is not used to detect degradation of the reactor coolant pressure boundary, is not a process variable or operating restriction which is an initial condition for design basis accidents or transients that assume the failure of or present a challenge to fission product barriers, and is not part of a primary success path for such design basis accidents or transients. Requirements related to area temperature monitoring do not satisfy any of the criteria which would necessitate that they be included in the TS. The requirements described in the affected TS will be maintained, and any subsequent changes to the plant procedures or the UFSAR related to these limits will be made in accordance with 10 CFR 50.59.

Accordingly, the staff has concluded that the requirements for Area Temperature Monitoring do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.7.12, Area Temperature Monitoring, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

#### 3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.4 - The licensee has classified TS 3/4.8.4, Electrical Equipment Protective Devices, Containment Penetration Conductor Overcurrent Protective Devices, in the first category (relocation to the UFSAR) of proposed changes. The containment penetration conductor overcurrent protective devices are installed to minimize the potential for a fault in a component inside containment or in cabling which penetrates the containment. This prevents an electrical penetration from being damaged in such a way that the containment structure is breached. The containment penetration conductor overcurrent protective devices are not related to the detection of degradation of the reactor coolant pressure boundary. The need to maintain containment integrity continues to be addressed by TS 3/4.6. Although the overcurrent protective devices protect containment penetrations from electrical faults, the devices are not a design feature included as an initial condition or primary success path in the analyses of design basis accidents or transients that assume the failure of or present a challenge to a fission product barrier.

Accordingly, the staff has concluded that the requirements for Electrical Equipment Protective Devices, Containment Penetration Conductor Overcurrent Protective Devices do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.8.4, Electrical Equipment Protective Devices, Containment Penetration Conductor Overcurrent Protective Devices, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

### 3/4.9 REFUELING OPERATIONS

3/4.9.5 - The licensee has classified TS 3/4.9.5, Refueling Operations - Communications, in the first category (relocation to the UFSAR) of proposed changes. The current TS requires direct communications be maintained between the control room and personnel at the refueling station. This requirement ensures that refueling station personnel can be promptly informed of significant changes in the facility status or core reactivity conditions during core alterations. The communications requirements are not installed instrumentation used to detect degradation of the reactor coolant pressure boundary. The communications link is not a design feature or operating restriction that is an initial condition of a design basis accident or transient that assumes the failure of or presents a challenge to the integrity of a fission product barrier. Analyzed accidents that occur during refueling conditions do not assume the communications link serves as a primary success path to mitigate such events.

Accordingly, the staff has concluded that the requirements for Refueling Operations - Communications do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.9.5, Refueling Operations - Communications, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

3/4.9.6 - The licensee has classified TS 3/4.9.6, Refueling Operations - Refueling Machine, in the first category (relocation to the UFSAR) of proposed changes. The current TS specifies minimum lift capacities and overload setpoints for the refueling machine used to move fuel assemblies and control rod assemblies. The TS requirements for the refueling machine are not related to the detection of degradation of the reactor coolant pressure boundary. Likewise, the refueling machine TS requirements are not associated with initial conditions or primary success paths for the analyzed design basis accidents or transients that assume the failure of or present a challenge to a fission product barrier.

Accordingly, the staff has concluded that the requirements for Refueling Operations - Refueling Machine do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.9.6, Refueling Operations - Refueling Machine, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

3/4.9.7 - The licensee has classified TS 3/4.9.7, Refueling Operations: Crane Travel - Spent Fuel Storage Facility, in the first category (relocation to the UFSAR) of proposed changes. The current TS prohibits the movement of loads in excess of 2250 pounds over fuel assemblies in the spent fuel storage facility. The requirement is not related to the detection of degradation of the reactor coolant pressure boundary. The drop of heavy loads onto spent fuel is not a design basis accident and therefore the current TS are not design features which are initial conditions or primary success paths for design basis accidents or transients. The requirement does ensure that the drop of a heavy load into the spent fuel pool remains bounded by the design basis fuel

handling accident. The licensee will continue to control such loads in accordance with administrative controls and will evaluate changes to the requirements in accordance with 10 CFR 50.59.

Accordingly, the staff has concluded that the requirements for Refueling Operations: Crane Travel - Spent Fuel Storage Facility do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.9.7, Refueling Operations: Crane Travel - Spent Fuel Storage Facility, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

3/4.9.10.2 - The licensee has classified TS 3/4.9.10.2, Refueling Operations: Water Level - Reactor Vessel, in the first category (relocation to the UFSAR) of proposed changes. The current TS requires at least 23 feet of water over the top of irradiated fuel assemblies within the reactor pressure vessel during the movement of control rods. This specification does not relate to detection of degradation of the reactor coolant pressure boundary. The required water level does not constitute a process variable or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. Likewise, the water level does not function as part of the primary success path for such design basis accidents or transients.

Accordingly, the staff has concluded that the requirements for Refueling Operations: Water Level - Reactor Vessel do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.9.10.2, Refueling Operations: Water Level - Reactor Vessel, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

### 3/4.10 SPECIAL TEST EXCEPTIONS

3/4.10.1 - The licensee has proposed to delete TS 3/4.10.1, Special Test Exceptions - Shutdown Margin, based upon other changes included in this request which render the exception unnecessary. This test exception is applicable to Mode 2 and provides temporary relief from the requirements of the existing TS 3/4.1.1.1, Shutdown Margin. However, as addressed previously in this evaluation, the applicability of the Shutdown Margin TS was changed to delete Modes 1 and 2. In accordance with the proposed changes, the SDM requirements for those modes are addressed in TS associated with parameters such as control rod insertion limits. Test exceptions 3/4.10.2 and 3/4.10.3 provide the necessary provisions for deviating from the remaining LCOs during core physics testing. The staff finds that TS 3/4.10.1 is not necessary following the previously addressed changes to TS 3/4.1.1.1 and its deletion is therefore acceptable.

3/4.10.5 - The licensee has proposed to relocate 3/4.10.5, Special Test Exceptions: Position Indication System - Shutdown to the UFSAR along with TS 3/4.1.3.3 which contains the requirements for the position indication system during Modes 3, 4, and 5. In the staff's evaluation of the relocation

of TS 3/4.1.3.3, Position Indication System - Shutdown, it was concluded that the current LCO requirements related to the control rod digital position could be relocated to the UFSAR. Given that the requirements contained in TS 3/4.1.3.3 have been relocated from the TS to the UFSAR, the associated special test exceptions contained in 3/4.10.5 have become unnecessary. The staff finds the relocation of the special test exceptions for the position indication systems during shutdown conditions to be acceptable.

### 3/4.11 RADIOACTIVE EFFLUENTS

3/4.11.1.4 - The licensee has proposed to relocate TS 3/4.11.1.4, Liquid Effluents - Liquid Holdup Tanks, to the UFSAR and add a program description to the Administrative Controls Section of TS. The TS requirements for the program are added as TS 6.8.5.a, Explosive Gas and Storage Tank Radioactivity Monitoring Program. The current TS defines a maximum quantity of radioactive material that is allowed to be contained in several outside storage tanks. Restricting the quantity of radioactive material contained in the specified tanks provides assurance that in the event of an uncontrolled release of a tank's contents, the resulting concentrations of radioactive material at the nearest potable water supply and nearest surface water supply in the unrestricted area would remain below levels defined in 10 CFR 20, Appendix B. However, the limitations related to the restrictions on the quantity of radioactive material in the tanks are not related to the detection or mitigation of conditions or events involving possible degradation of fission product barriers. This addition of the administrative controls TS and relocation of the specific liquid effluent LCO is consistent with NUREG-1431.

Accordingly, the staff has concluded that the requirements for Liquid Effluents - Liquid Holdup Tanks do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.11.1.4, Liquid Effluents - Liquid Holdup Tanks, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

3/4.11.2.5 - The licensee has proposed to relocate the existing TS 3/4.11.2.5, Gaseous Effluents - Explosive Gas Mixture, to the UFSAR and add a program description to the Administrative Controls Section of TS. The TS requirements for the program are added as TS 6.8.5.a, Explosive Gas and Storage Tank Radioactivity Monitoring Program.

Limitations on the concentration of hydrogen and oxygen in the Waste Gas Holdup System relate to possible precursors to the failure of a waste gas system but do not prevent or mitigate design basis accidents or transients which assume a failure of or present a challenge to a fission product barrier. Concentrations of explosive gases will continue to be controlled in accordance with the licensee's proposed addition of TS 6.8.5.a, Explosive Gas and Storage Tank Radioactivity Monitoring Program. This addition of the administrative controls TS and relocation of the specific explosive gas instrumentation LCO is consistent with NUREG-1431.

Accordingly, the staff has concluded that the requirements for Gaseous Effluents - Explosive Gas Mixture do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.11.2.5, Gaseous Effluents - Explosive Gas Mixture, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

3/4.11.2.6 -The licensee has proposed to relocate the existing TS 3/4.11.2.6, Gas Storage Tanks, to the UFSAR and add a program description to the Administrative Controls Section of TS. The TS requirements for the program are added as TS 6.8.5.a, Explosive Gas and Storage Tank Radioactivity Monitoring Program.

Restrictions on the quantity of radioactive gases in each gas storage tank limits the consequences of possible failures of a waste gas system but do not prevent or mitigate design basis accidents or transients which assume a failure of or present a challenge to a fission product barrier. The quantity of radioactive gases in storage tanks will continue to be controlled in accordance with the licensee's proposed addition of TS 6.8.5.a, Explosive Gas and Storage Tank Radioactivity Monitoring Program. This addition of the administrative controls TS and relocation of the specific gas storage tank LCO is consistent with NUREG-1431.

Accordingly, the staff has concluded that the requirements for Gas Storage Tanks do not meet the revised 10 CFR 50.36 criteria. The staff finds the proposed relocation of TS 3/4.11.2.6, Gas Storage Tanks, to the UFSAR and control of subsequent changes in accordance with 10 CFR 50.59, "Changes, tests and experiments," to be acceptable.

6.8.5.a - The licensee has proposed the addition of TS 6.8.5.a, Explosive Gas and Storage Tank Radioactivity Monitoring Program. The description includes:

- (1) Program to limit the concentration of hydrogen and oxygen in the waste gas holdup system. Specific concentration limits had previously been contained in TS 3/4.11.2.5, Explosive Gas Mixture, which has been relocated as part of this amendment request. The relocation of those requirements to the UFSAR and this addition to TS 6.8 was discussed previously in this evaluation. This section is generally consistent with the contents of the equivalent section of NUREG-1431.
- (2) Program to limit the quantity of radioactivity contained in each gas storage tank. A specific quantity limit had previously been contained in TS 3/4.11.2.6, Gas Storage Tanks, which has been relocated as part of this amendment request. The relocation of those requirements to the UFSAR and this addition to TS 6.8 was discussed previously in this evaluation. The proposed TS 6.8.5.a.2 includes reference to Branch Technical Position ETSB 11-5, "Postulated Radioactive Releases Due to Waste Gas System Leak or Failure," which had been included in the Bases of TS 3/4.11.2.6. This section is generally consistent with the equivalent section of NUREG-1431.

- (3) Program to limit the quantity of radioactivity contained in specified outdoor liquid radwaste tanks. Specific limits regarding these tanks had previously been contained in TS 3/4.11.1, Liquid Holdup Tanks, which has been relocated as part of this amendment request. The relocation of these requirements to the UFSAR and this addition as TS 6.8.5.a was previously discussed in this evaluation. The proposed TS 6.8.5.a.3 includes the specific list of outdoor tanks from the relocated TS 3/4.11.1. This section is generally consistent with the equivalent section of NUREG-1431.

The proposed TS 6.8.5.a also included a statement that the provisions of TS 4.0.2 and TS 4.0.3 are applicable to the described surveillances. This is consistent with the equivalent section of NUREG-1431. The staff finds that the addition of TS 6.8.5.a, in order to require programmatic controls over the relocated requirements of TSs 3/4.11.1, TS 3/4.11.2.5, and TS 3/4.11.2.6, is acceptable. As previously discussed in this evaluation, changes to specific limits within the programs are adequately controlled by 10 CFR 50.59.

6.8.5.b - The licensee has proposed the addition of TS 6.8.5.b, Reactor Coolant Pump Flywheel Inspection Program. The program description consists of the requirement which was previously TS SR 4.4.10. The inclusion of this program is consistent with NUREG-1431 and does not constitute an actual change in the TS requirements. The staff finds the addition of TS 6.8.5.b acceptable.

6.8.5.c - The licensee has proposed to add TS 6.8.5.c, Containment Tendon Surveillance Program. Prior to this amendment request, the containment tendon surveillance program was controlled in accordance with TS 3/4.6.1.6, Containment Vessel Structural Integrity. This amendment request included the relocation of specific requirements to the UFSAR, the addition of TS 6.8.5.c and reference to the surveillance program in the added surveillance 4.6.1.1.e. The licensee has included a statement in the proposed TS 6.8.5.c that the inspection frequencies and acceptance criteria will be based on draft Revision 3 of Regulatory Guide 1.35, "Inservice Inspection of UngROUTED Tendons in Prestressed Concrete Containments," dated April 1989. A sentence stating that the provisions of TS 4.0.2 and 4.0.3 are applicable to the tendon surveillance program is also included. The content of the proposed TS 6.8.5.c is consistent with the equivalent section of NUREG-1431. The staff concludes that the program description, with reference to the applicable regulatory guide, provides sufficient controls over the tendon surveillance program. Changes to the program are adequately controlled by the provisions of 10 CFR 50.59 and the program description in TS 6.8.5.c.

In summary, the staff has determined that the items relocated from the TS to the UFSAR are not required to be in the TS (1) under 10 CFR 50.36, (2) under the Trojan standard of averting an immediate threat to the public health and safety, and (3) under any of the Commission's criteria. Sufficient controls on the requirements and any future changes thereto are provided by 10 CFR 50.59. The licensee submitted the proposed updated Chapter 16 of the UFSAR. The staff's review determined that the requirements were properly relocated and are subject to the controls of 10 CFR 50.59.

The staff has also determined that those items relocated within TS, revised as a result of relocations, retained with revised requirements, or added to the TS as new requirements are adequate to ensure protection of public health and safety.

The staff reviewed the changes to the Bases that accompanied the submittal and those changes are acceptable.

#### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Kansas State Official was notified of the proposed issuance of the amendment. The State official had no comments.

#### 5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (59 FR 34671). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). This amendment also involves changes in recordkeeping, reporting or administrative procedures or requirements. Accordingly, with respect to these items, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

#### 6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: W. Reckley

Date: October 2, 1995