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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 149 TO FACILITY OPERATING LICENSE NPF-21

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

NUCLEAR PROJECT NO. 2

DOCKET NO. 50-397

I. INTRODUCTION

Washington Public Power Supply System Nuclear Project No. 2 (WNP-2) has been operating with technical specifications (TS) issued with the original operating license on December 20, 1983, as amended from time to time. By letter dated December 8, 1995, as supplemented by letters dated July 9, August 30, September 6, December 12, 1996, January 14, 1997, January 31, 1997, and February 10, 1997, Washington Public Power Supply System (the licensee) proposed to amend Appendix A of Operating License No. NPF-21 to revise, in their entirety, the WNP-2 TS. The proposed amendment was based on NUREG-1434, "Standard Technical Specifications, General Electric, BWR/6 Plants," Revision 1, dated April 1995, and on guidance in the "NRC Final Policy Statement on Technical Specification Improvements for Nuclear Power Reactors" (Final Policy Statement), published on July 22, 1993 (58 FR 39132). The proposed amendment rewrites, reformats, and streamlines the existing TS for WNP-2.

The proposed TS are here referred to as the "ITS" (improved TS), the existing WNP-2 TS as the "CTS" (current TS), and the TS in NUREG-1434 as the "STS" (standard TS). The TS Bases are referred to as the ITS Bases, CTS Bases, and STS Bases.

The ITS are based on the STS and the Final Policy Statement. However, the licensee retained portions of the CTS as a basis for certain ITS. The staff discussed plant-specific issues, including design features, requirements, and operating practices, with the licensee during a series of conference calls and meetings. Based on these discussions the licensee revised its proposed changes by submittals dated July 9 and December 12, 1996. In addition, the licensee proposed some generic changes that were not in the STS for specific application in the WNP-2 ITS. The NRC staff requested that the licensee submit such generic changes through the Nuclear Energy Institute's Technical Specifications Task Force (TSTF). Following the Final Policy Statement, the licensee proposed transferring some CTS requirements to licensee-controlled documents. In addition, the licensee utilized human factors principles to make the CTS requirements retained in the ITS easier to grasp and to make the scope of the ITS clearer. Further, significant changes were proposed to the CTS Bases to make the ITS requirements more comprehensible.

In addition to the original December 8, 1995, submittal, the staff has approved a number of other proposed changes to the WNP-2 TS:

May 8, 1996	Adoption of Option B to Appendix J to 10 CFR 50. Performance based surveillance requirements for containment testing (Amendment No. 144)
June 3, 1996	Technical specification changes for adjustable speed drives for reactor recirculation pumps and digital feedwater control (Amendment No. 145)
June 4, 1996	Technical specification changes for reload codes for new fuel vendor (Amendment No. 146)
September 19, 1996	Technical specification changes for reactor water clean-up system high energy line break (Amendment No. 147)
October 1, 1996	Technical specification changes for administrative controls (Amendment No. 148)

The staff reviewed these TS changes independently. These previous TS changes are reflected in the ITS. This safety evaluation describes only TS changes which affected implementation of the ITS and not these previously evaluated and approved TS changes.

The Commission's proposed action on the WNP-2 application for an amendment dated December 8, 1995 was published in the Federal Register on June 26, 1996 (61 FR 33144). Supplements to the licensee's ITS proposal, submitted by letters dated July 9, 1996, December 12, 1996, January 14, 1997, January 31, 1997, and February 10, 1997, that resulted from discussions with the licensee during the staff's review are incorporated in this safety evaluation. These plant-specific changes clarify the ITS with respect to the guidance in the Final Policy Statement and the STS. Therefore, the changes are within the scope of the action described in the initial Federal Register notice.

During its review, the NRC staff relied on the Final Policy Statement as codified in 10 CFR 50.36 (60 FR 36593, July 19, 1995) and on the STS as guidance for acceptance of changes to the CTS. This safety evaluation documents the basis for the staff's conclusion that WNP-2 can develop ITS based on the STS, as modified by plant-specific changes, and that the use of the ITS is acceptable for continued operation. In accordance with the Final Policy Statement, the staff also acknowledges that the conversion to the STS is voluntary. Therefore, the WNP-2 ITS differ somewhat from the STS, reflecting the current licensing basis. The significant changes are discussed in this safety evaluation.

For the reasons stated, the staff finds that the TS issued with this license amendment comply with Section 182a of the Atomic Energy Act, Section 50.36 of Title 10 of the Code of Federal Regulations (10 CFR 50.36), and the

guidance in the Final Policy Statement, that they are in accord with the common defense and security, and that they will provide adequate protection to public health and safety.

II. BACKGROUND

Section 182a of the Atomic Energy Act requires that TS for nuclear power plant operating licenses shall include

> information of the amount, kind, and source of special nuclear material required, the place of the use, the specific characteristics of the facility, and such other information as the Commission may, by rule or regulation, deem necessary in order to enable it to find that the utilization . . . of special nuclear material will be in accord with the common defense and security and will provide adequate.protection to the health and safety of the public. Such technical specifications shall be a part of any license issued.

In 10 CFR 50.36, the Commission established its regulatory requirements related to the content of TS. In doing so, the Commission emphasized preventing accidents and mitigating accident consequences; the Commission noted that applicants were expected to incorporate into their TS "those items that are directly related to maintaining the integrity of the physical barriers designed to contain radioactivity." ("Technical Specifications for Facility Licenses; Safety Analysis Reports," Statement of Consideration, 33 FR 18610, December 17, 1968). Pursuant to 10 CFR 50.36, TS are required to include five categories of requirements: (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.

For several years, NRC and industry representatives have sought to develop guidelines for improving the content and quality of nuclear power plant TS. On February 6, 1987, the Commission issued an "Interim Policy Statement on Technical Specification Improvements for Nuclear Power Reactors" (52 FR 3788). From 1989 to 1992, the utility Owners Groups and the NRC staff developed improved standard technical specifications that would establish models of the Commission's policy for each primary reactor type. In addition, the staff, licensees, and Owners Groups developed generic administrative and editorial guidelines in the form of a Writers Guide for preparing technical specifications. This guide utilizes human factors principles and was used extensively in developing licensee-specific ITS.

In September 1992, the Commission issued the improved STS (with associated STS Bases) as Revision 0 of NUREG-1433 and NUREG-1434, which were developed utilizing the guidance and criteria in the Commission's Interim Policy Statement. Incorporating changes made in accordance with the improved STS generic change process, the Commission issued Revision 1 to the STS in April 1995. The STS were established as a model for developing ITS for boiling water reactor (BWR) plants in general and for WNP-2 specifically. The STS and associated Bases reflect the results of a detailed review of the application of the criteria in the Policy Statement to generic system functions. These results were published in a "split report" issued to the nuclear steam supply system (NSSS) Owners Groups in May 1988. The STS also reflect the results of extensive discussions on various drafts of improved standard technical specifications to ensure that the application of the TS criteria and the Writers Guide would consistently reflect detailed system configurations and operating characteristics for all NSSS designs. Accordingly, the STS Bases offer an abundance of generic information regarding the extent to which the present STS requirements are necessary to protect public health and safety.

On July 22, 1993, the Commission issued its Final Policy Statement, affirming its view that the guidance in the Final Policy Statement conforms with Section 182a of the Atomic Energy Act and 10 CFR 50.36. The Final Policy Statement described the safety benefits of the STS and encouraged licensees to use the STS as the basis for plant-specific TS amendments, and for complete conversions to the STS. Further, the Final Policy Statement gave guidance for evaluating the required scope of the TS and defined the guidance criteria to be used in determining which of the limiting conditions for operation (LCOs) and associated surveillances should remain in the TS. The Commission noted (58 FR 39132) that, in allowing certain items to be relocated to licensee-controlled documents while requiring that other items be retained in the TS, it was adopting the qualitative standard enunciated by the Atomic Safety and Licensing Appeal Board in *Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-531, 9 NRC 263, 273 (1979). There, the Appeal Board observed:

> [T]here is neither a statutory nor a regulatory requirement that every operational detail set forth in an applicant's safety analysis report (or equivalent) be subject to a technical specification, to be included in the license as an absolute condition of operation which is legally binding upon the licensee unless and until changed with specific Commission approval. Rather, as best we can discern it, the contemplation of both the Act and the regulations is 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.

In accordance with this approach, current LCO requirements that satisfy any of the criteria in the Final Policy Statement should be retained in the TS; LCO requirements that do not satisfy these criteria may be relocated to licensee-controlled documents. The Commission codified the four criteria in 10 CFR 50.36 (60 FR 36593, July 19, 1995):

> *Criterion 1*
>
> Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.

Criterion 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.

Criterion 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.

Criterion 4

A structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety.

Part III of this safety evaluation explains the staff's conclusion that the conversion of the WNP-2 CTS to technical specifications based on the STS, as modified by plant-specific changes, is consistent with the WNP-2 current licensing basis, the requirements and guidance of the Final Policy Statement, and 10 CFR 50.36.

III. EVALUATION

This part explains the organization of the staff's evaluation of the proposed ITS, defines the four categories of changes to the CTS, and evaluates the adequacy of existing regulatory requirements to control future changes to requirements removed from the CTS and placed in licensee-controlled documents. The staff's plans for monitoring the licensee's implementation of these controls at WNP-2 are also discussed.

ITS Chapters 1.0, 2.0, 4.0, and 5.0 are evaluated in Sections 1.0, 2.0, 4.0, and 5.0 of this safety evaluation; ITS Chapter 3.0 is evaluated in Sections 3.0 through 3.10. Each of these sections of the safety evaluation contain at least four of the following subsections: (1) Administrative Changes, (2) Less Restrictive Requirements, (3) More Restrictive Requirements, (4) Deviations from the STS, and (5) Relocated Specifications.

During the evaluation, the terms Operational Conditions (CTS) and Mode (ITS) may be used interchangeably and mean the same thing.

Administrative Changes

Administrative (nontechnical) changes are made to incorporate human factors principles. These changes reword, reorganize, or reformat CTS requirements without affecting technical content or operational restrictions. Every section of the ITS contains this type of change. To ensure consistency, the

NRC staff and the licensee have used the STS as guidance to reformat and make other administrative changes. Among other changes, the licensee proposed to:

(1) provide plant-specific numbers, etc., for information requested in brackets in the STS,

(2) make system names, etc., plant specific,

(3) change the wording of specification titles in the STS to conform to current WNP-2 practices,

(4) split up requirements currently grouped under a single current specification to more appropriate locations in two or more specifications of the ITS, and

(5) combine related requirements currently presented in separate specifications of the CTS into a single specification of the ITS.

The staff has reviewed all of the administrative and editorial changes proposed by the licensee and finds them acceptable, since they are compatible with the Writers Guide and the STS and are consistent with the Commission's regulations. The most significant administrative changes are discussed individually in this safety evaluation.

Less Restrictive Requirements

Less restrictive requirements are justified on a case-by-case basis in this safety evaluation. When requirements have been shown to give little or no safety benefit, their removal from the TS may be appropriate. In most cases, relaxations previously granted to individual plants on a plant-specific basis were the result of (1) generic NRC actions, (2) new staff positions that have evolved from technological advancements and operating experience, or (3) resolution of the Owners Groups' comments on the STS. The NRC staff has reviewed generic relaxations contained in the STS and finds them acceptable because they are consistent with current licensing practices and the Commission's regulations. The WNP-2 design was also reviewed to determine if the design basis and licensing basis are consistent with the technical basis for the model requirements in the STS and thus serve as a basis for the ITS.

The licensee also proposed changes to the CTS that were not related to the conversion process but were based on plant-specific considerations and requirements. These changes are discussed with the conversion issues.

A significant number of changes to the CTS involved the removal of specific requirements and detailed information that can be adequately maintained in licensee-controlled documents by applicable regulatory requirements. Such changes have been made to retained specifications that contained specific requirements and detailed information of the following general types:

Type 1 Details of system design

Type 2 Procedural details for system operation

Type 3 Procedural details for performing action and surveillance requirements

Type 4 Performance requirements for indication-only instrumentation and alarms

Type 5 Post-maintenance testing requirements

Type 6 Preventive maintenance requirements

Type 7 Conditions constituting the operability of a system

Type 8 CTS requirements redundant to retained CTS requirements

Type 9 CTS requirements redundant to applicable regulatory requirements

The staff has concluded that these types of detailed information and requirements are not necessary to protect public health and safety. Accordingly, these requirements may either be deleted, if appropriate, or moved to one of the following licensee-controlled documents, changes to which are adequately governed by a regulatory or TS requirement: (1) TS Bases controlled by ITS 5.5.10 "Technical Specifications Bases Control Program;" and (2) the Final Safety Analysis Report (FSAR) (including the Licensee-Controlled Specifications (LCS) by reference) controlled by 10 CFR 50.59.

Table 1 lists the changes involving the nine types of requirements or information that have been removed or deleted. The most significant changes are addressed in this safety evaluation. Table 1 also lists the licensee-controlled documents and the TS or regulatory requirements governing changes to those documents.

The nine types of information or specific requirements do not need to be included in the ITS for the following reason.

(1) Details of system design

Under 10 CFR 50.34, the design of the facility must be described in the FSAR. In addition, the quality assurance (QA) requirements of Appendix B to 10 CFR Part 50 require that plant design be documented in controlled procedures and drawings, and maintained in accordance with an NRC-approved QA plan (FSAR Chapter 17). In 10 CFR 50.59 controls are specified for changing the facility as described in the FSAR, and in 10 CFR 50.54(a) criteria are specified for changing the QA plan. The ITS Bases also contain descriptions of system design. ITS 5.5.10 specifies controls for changing the Bases. Removing details of system design from

the CTS is acceptable because this information will be adequately controlled in the FSAR, controlled design documents and drawings, or the TS Bases, as appropriate.

(2) Procedural requirements for system operation

Under 10 CFR 50.34, the plans for the normal and emergency operation of the facility must be described in the FSAR. ITS 5.4.1.a requires written procedures to be established, implemented, and maintained for plant operating procedures including procedures recommended in Regulatory Guide 1.33, "Quality Assurance Program Requirements," Revision 2, Appendix A, February 1978. Controls specified in 10 CFR 50.59 apply to changes in procedures as described in the FSAR. In the ITS, the Bases also contain descriptions of system operation. It is acceptable to remove details of system operation from the TS because this type of information will be adequately controlled in the FSAR, plant operating procedures, and the TS Bases, as appropriate.

(3) Procedural details for performing action and surveillance requirements

Details for performing action and surveillances requirements are more appropriately specified in the plant procedures required by ITS 5.4.1, the FSAR, and the ITS Bases. For example, control of the plant conditions appropriate to perform surveillance tests is an issue for procedures and scheduling and has previously been determined to be unnecessary as a TS restriction. As indicated in Generic Letter 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," the vast majority of other surveillance requirements do not dictate plant conditions for surveillances. Prescriptive procedural information in an action requirement is unlikely to contain all procedural considerations necessary for the plant operators to complete the actions required. Such information in the TS could distract the plant operators from applying the appropriate plant operational or emergency procedure to accomplish the action requirement. Thus, removal of such information from the TS is potentially beneficial to safe operation of the plant during compliance with a TS action statement. Removing these kinds of procedural details from the CTS is also acceptable because they will be adequately controlled in the FSAR, plant procedures, and the TS Bases, as appropriate.

(4) Performance requirements for indication-only instrumentation and alarms

Indication-only instrumentation, test equipment, and alarms are usually not required to be operable to support TS operability of a system or component. Thus, the STS generally contain no operability requirements for indication-only equipment. The availability of such indication instruments, monitoring instruments, and alarms, and necessary compensatory activities if they are not available, are more appropriately specified in plant operational, maintenance, and annunciator response procedures required by ITS 5.4.1. Removal of requirements for indication-only instrumentation and alarms from the CTS is acceptable because they will be adequately controlled in plant procedures.

(5) Post-maintenance testing requirements

Any time the operability of a TS-required component or system has been affected by maintenance (e.g., repair or replacement of a component), appropriate post-maintenance tests must be performed to demonstrate operability of the system or component. For some TS-required components and systems, the CTS contain specific post-maintenance surveillance requirements. In the ITS, all surveillance requirements associated with a TS-required component or system must be met before the component or system is considered operable. Consequently, appropriate testing following maintenance must include satisfying the surveillance requirements in order to return the affected equipment to an operable status. Deletion of the post-maintenance surveillance requirements contained in the CTS is acceptable because they are not necessary to ensure the performance of appropriate testing following maintenance on TS-required equipment.

(6) Preventive maintenance requirements

Generally, the STS include surveillance requirements that directly relate to system operability. However, preventive maintenance surveillances in the CTS do not directly demonstrate system or component operability. Removal of these requirements from the CTS is acceptable because they will be adequately controlled in plant maintenance procedures required by ITS 5.4.1. Similarly, surveillances that are duplicative of the inservice testing (IST) requirements of 10 CFR 50.55a and ITS 5.5.8 are within the scope of preventive maintenance. It is acceptable to remove these duplicative requirements from the CTS because the procedures that implement the IST program must be consistent with 10 CFR 50.55a and ITS 5.5.8.

(7) Conditions constituting the operability of a system

To be operable, a system must satisfy the TS definition of operability for the system, and the specified surveillance requirements associated with the LCO governing the system must be met. Some current LCOs contain information about design and configuration, implying that they relate to meeting the operability requirements of the LCO. Such information is usually incomplete and is actually redundant to the operability definition and the associated surveillances. Removal of this information from the CTS is acceptable because it will be adequately controlled in the FSAR, the LCS, and the TS Bases, as appropriate. In addition, because the operability requirements for the affected systems and supporting surveillances are being retained in the ITS, removal of this information does not impact safety.

(8) CTS requirements redundant to retained CTS requirements

Current specifications that have not been retained as separate specifications in the ITS may contain requirements that are redundant to other TS requirements. Such redundant requirements have been deleted. Such changes are essentially administrative but have been characterized as less restrictive because information has been removed from the TS. Thus, this type of change has no impact on safety. Therefore, deletion of Type 8 requirements is acceptable. (ITS locations of the retained requirements from these current specifications are discussed with administrative changes.)

(9) CTS requirements redundant to regulations

CTS requirements that are redundant to requirements contained in the Code of Federal Regulations have been deleted from the CTS, and will be verified to be in the plant procedures and programs that implement those regulations. Deletion of these requirements is appropriate because where conflict exists between a TS requirement and a more restrictive regulation, the regulation has precedence. Deleting the redundant TS requirements does not impact safety because the limiting level of regulatory requirements are not reduced. Therefore, deletion of Type 9 requirements is acceptable.

These nine general types of CTS requirements that have been removed or moved to licensee-controlled documents are not required by 10 CFR 50.36 to be in the TS. For the reasons presented above, such information and requirements are not required to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to the public health and safety. Further, where such information and requirements are contained in limiting conditions for operation and associated requirements in the CTS, the staff has concluded that they do not satisfy any of the four criteria in the Final Policy Statement (discussed in Part II of this safety evaluation). In addition, the staff has found that sufficient regulatory controls exist in 10 CFR 50.59 and in other regulations cited herein and in ITS 5.5.10, "TS Bases Control Program." Accordingly, detailed information and specific requirements, such as generally described above, may be removed from CTS and placed in appropriate licensee-controlled documents, or deleted, as appropriate.

Extension of 18-month surveillance intervals to 24 months

In addition, the licensee proposed changing the frequency of the 18-month surveillances to 24 months to accommodate a change to the WNP-2 maintenance cycle from 12 months to 24 months. Currently, most of the surveillances that are required to be performed on an 18-month interval are performed annually because they must be performed while the plant is shut down. Because of seasonal conditions in the Northwest, WNP-2 is shut down every spring for an annual maintenance and refueling outage. This has necessitated more frequent testing, resulting in increased costs, wear on equipment, and personnel radiation exposure.

In Generic Letter 94-01, the NRC advised all licensees moving to a 24-month fuel cycle that extending the 18-month surveillance intervals to 24 months could be justified on the basis of a successful equipment performance history. Although the motivation for the surveillance interval extension proposed for WNP-2 is different from that addressed in the generic letter (to accommodate a 24-month maintenance cycle instead of a 24-month fuel cycle), the technical basis for the extension is the same. A successful equipment performance history is exhibited by evaluating the surveillance test results, corrective and preventive maintenance history, and operating history for the affected equipment and systems. In its submittal, Attachment 2 to the letter dated July 9, 1996 (evaluation of the 24-month surveillance interval), the licensee described its review of the test, maintenance, and operating history of all systems at WNP-2 that have surveillance requirements that would be affected by the extension. This review included test data from 1990 through 1995, equipment history from maintenance-rule-scoping and performance-criteria documents, licensee event reports, and the plant tracking log. Most 18-month surveillance test failures occurred toward the beginning of the review period; recent testing and equipment reliability have been satisfactory. In addition, all but one of the test failures would likely have been detected by other surveillances that are performed more frequently. The one exception resulted from a procedural adherence problem, not equipment malfunction. All negative equipment performance history is provided in the "Evaluation of the 24-month surveillance interval." To provide additional justification for extending the surveillance interval for the reactor core isolation cooling system, the licensee supplemented the information with Attachment 4 to its submittal dated August 30, 1996 (G02-96-172).

If the maintenance, testing, and performance history of the affected systems and equipment are determined to be satisfactory, the assumptions in the plant licensing basis would not be invalidated by performing any surveillance at the bounding surveillance interval limit of 30 months (1.25 times 24 months) permitted by ITS Surveillance Requirement (SR) 3.0.2. The staff reviewed this information provided in the submittals identified above and determined the results to be satisfactory. Thus, this change does not degrade equipment reliability or the safe operation of the plant. Therefore, the staff finds that extending the 18-month surveillance intervals to 24 months is acceptable. Additional considerations supporting this change for instrumentation surveillances are presented in Section 3.3.b of Part III of this safety evaluation. Each surveillance to which this change applies is described in the appropriate section of this safety evaluation.

More Restrictive Requirements

Certain ITS requirements are more restrictive than the CTS requirements. These ITS requirements are either more conservative than corresponding requirements in the CTS or have additional restrictions that are not in the CTS but are in the STS. Examples of more restrictive requirements are placing an LCO on plant equipment which is not required by the CTS to be operable, more restrictive requirements to restore inoperable equipment, and more restrictive SRs.

Deviations From the STS

In electing to adopt the STS, the licensee proposed specifications containing differences from the STS to reflect plant-specific design features and wording preferences, to maintain a current requirement, and in a few cases to adopt a provision demonstrated by the licensee to be an acceptable change in the licensing basis. The significant differences from the STS are discussed for each chapter of the ITS.

Relocation of Current Specifications

The Final Policy Statement states that CTS Section 3/4.0 specifications (LCOs and associated requirements) that do not satisfy any of the four specified criteria may be relocated to appropriate licensee-controlled documents. In its application, the licensee proposed relocating such specifications to the FSAR, the inservice inspection program, and the LCS, as appropriate. Unless otherwise stated in this safety evaluation, these specifications, which include the LCOs (system description, design limits, functional capabilities, and performance levels), current TS action statements (actions), and associated SRs, are being relocated to the LCS. These provisions will continue to be implemented by appropriate plant procedures, i.e., operating procedures, maintenance procedures, surveillance and testing procedures, and work control procedures.

Control of Specifications, Requirements, and Information Removed from the CTS

The facility and procedures described in the FSAR and the LCS (incorporated into the FSAR by reference) can only be revised in accordance with the provisions of 10 CFR 50.59, which ensures an auditable record and establishes appropriate control over requirements removed from CTS and over future changes to the requirements. Other licensee-controlled documents contain provisions for making changes consistent with other applicable regulatory requirements: for example, the Offsite Dose Calculation Manual (ODCM) can be changed in accordance with 10 CFR Part 20; the emergency plan implementing procedures (EPIPs) can be changed in accordance with 10 CFR 50.54(q); and the administrative instructions that implement the Quality Assurance Manual (QAM) can be changed in accordance with 10 CFR 50.54(a) and 10 CFR Part 50, Appendix B. Temporary procedure changes are also controlled by 10 CFR 50.54(a). The documentation of these changes will be maintained by the licensee in accordance with the record retention requirements specified in the licensee's QA plan for WNP-2 and such applicable regulations as 10 CFR 50.59.

The licensee committed by letter dated December 12, 1996, to confirm that CTS requirements designated for placement in the FSAR or the LCS are appropriately reflected in these documents, or that they will be included in the next required update of these documents. The licensee has also committed to maintain an auditable record of, and an implementation schedule for, the procedure changes associated with the development of the ITS. The licensee will also maintain the documentation of these changes in accordance with the record retention requirements in the QA plan.

The staff has concluded that appropriate controls have been established for all of the current specifications, information, and requirements that are being moved to licensee-controlled documents. Until incorporated in the FSAR, changes to these specifications, this information, and these requirements will be controlled in accordance with the applicable current procedures that control these documents. Following implementation, the NRC will audit the removed provisions to ensure that an appropriate level of control has been achieved. The staff has concluded that, in accordance with the Final Policy Statement, sufficient regulatory controls exist under the regulations, particularly 10 CFR 50.59. Accordingly, this information, and these requirements, as described in this safety evaluation, may be removed from the CTS and placed in the FSAR or other licensee-controlled documents as specified herein.

1.0 USE AND APPLICATION

The licensee has proposed administrative and technical changes to the CTS to bring them into conformance with 10 CFR 50.36 and with STS Section 1.0, "Use and Application." The changes are discussed in the order of the specifications in STS Section 1.0. The corresponding ITS Section 1.0 specification titles are listed in italics before each discussion.

a. Administrative Changes

The CTS specifications that have been retained in ITS Section 1.0 have been reworded to conform to the STS presentation. The following changes are the most significant.

1.1 Definitions

The definitions appearing in Chapter 1.0 of the WNP-2 ITS are reformatted. The identification numbers are deleted, and the definitions are listed in alphabetical order.

The following definitions are retained in the WNP-2 ITS. Some editorial changes are made so that these defined terms are consistent with NUREG-1434 and with WNP-2 plant-specific terminology, but the intent of the definitions has not been changed.

ACTIONS
AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)
CHANNEL CALIBRATION
CHANNEL CHECK
CHANNEL FUNCTIONAL TEST
CORE ALTERATION
CORE OPERATING LIMITS REPORT (COLR)
DOSE EQUIVALENT I-131
EMERGENCY CORE COOLING SYSTEM (ECCS) RESPONSE TIME
END OF CYCLE RECIRCULATION PUMP TRIP (EOC-RPT) SYSTEM
RESPONSE TIME
ISOLATION SYSTEM RESPONSE TIME

LEAKAGE (formerly IDENTIFIED LEAKAGE, PRESSURE BOUNDARY
  LEAKAGE and UNIDENTIFIED LEAKAGE)
LINEAR HEAT GENERATION RATE (LHGR)
LOGIC SYSTEM FUNCTIONAL TEST
MAXIMUM FRACTION OF LIMITING POWER DENSITY (MFLPD)
MINIMUM CRITICAL POWER RATIO (MCPR)
MODE
OPERABLE-OPERABILITY
PHYSICS TESTS
RATED THERMAL POWER (RTP)
REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME
SHUTDOWN MARGIN (SDM)
STAGGERED TEST BASIS
THERMAL POWER
TURBINE BYPASS SYSTEM RESPONSE TIME
TABLE 1.2

None of the other definitions in the WNP-2 CTS (1.2, 1.3, 1.9, 1.11, 1.12A, 1.13A, 1.14, 1.15, 1.16, 1.20, 1.24, 1.25, 1.27, 1.29, 1.31, 1.31a, 1.32, 1.33, 1.34, 1.37, 1.38, 1.39, 1.41, 1.43, 1.46, 1.48, 1.49, 1.50, 1.51 and Table 1.1) are used as defined terms in the WNP-2 ITS. However, definitions 1.9, 1.14, 1.16, 1.48 and Table 1.1 are reformatted and the concepts therein presented in ITS Section 1.4. In addition, definitions 1.27 and 1.33 have also been reformatted and the concepts therein presented in ITS Chapter 5.0. The remaining definitions are not applicable under the ITS and therefore may be deleted from the ITS.

As noted above, the staff and the licensee have agreed to minor word changes throughout the WNP-2 ITS definition section. These word changes are clarifications that do not alter the meaning of the definitions or change the restrictive level of the TS. The definitions in Chapter 1.0 support other sections of the WNP-2 ITS. Therefore, these definitions are acceptable for WNP-2.

The staff reviewed the proposed changes in the definition section for their effect on the safety limits (SLs) and SL violations that appear in Chapter 2.0 and the LCOs and action statements in Chapter 3.0, including the surveillance requirements. The staff finds that no adverse effects would result from the proposed changes and concludes that when the definitions, as modified, are applied in other sections of the TS, the restrictive level of the requirements are not changed and, therefore, the safety margins are not affected. In addition, the staff concludes that the licensee's proposed changes clarify the definitions and make them less susceptible to misinterpretation. Further, the staff finds that WNP-2 ITS definitions have appropriately applied the guidance provided in STS. Therefore, these changes are acceptable.

1.2 Logical Connectors

This is a new section in the WNP-2 ITS. Utilizing human factors principles, this section explains Logical Connectors through examples. The staff has reviewed this section and considers this proposed addition and reformatting

enhances the WNP-2 ITS. The staff further finds that the addition is consistent with STS and is acceptable.

1.3 Completion Times

This is a new section in the WNP-2 ITS. This section does not change completion times, but uses examples to provide guidance on Completion Times. Completion Time is the amount of time allowed to complete an action or the amount of time allowed for a structure, system or component to be inoperable. This section is administrative and is provided as an aid to the licensee's staff. The NRC staff has reviewed this section, and finds that it is consistent with STS and is acceptable.

1.4 Frequency

This is a new section in the WNP-2 ITS. This section uses examples to explain the proper application of surveillance frequencies. A clear understanding of the correct application of a specified frequency is necessary to ensure compliance with a surveillance requirement.

The staff reviewed this section and finds that the frequency notation definition and the frequency notation table (Definition 1.16 and Table 1.1; respectively) of the CTS have been adequately incorporated into the descriptions and examples of this section and that this section is consistent with STS and is acceptable.

Conclusion

These changes to the CTS are administrative. They clarify, reorganize, or reformat the current specifications. None of these changes alters the limits in the current requirements. Accordingly, these changes are acceptable.

b. Less Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 1.0, proposed a number of requirements less restrictive than those in the CTS. The following changes are the most significant:

The phrase "or actual," in reference to the injected signal, is added to the definition of Channel Functional Test and Logic System Functional Test. Some channel functional tests are performed by insertion of the actual signal into the logic (e.g., rod block interlocks). An actual signal does not preclude satisfactory performance of the test. Use of an actual signal instead of the current requirement which limits use to a simulated signal, will not affect the performance of the channel. Operability can be adequately demonstrated in either case since the channel itself cannot discriminate between "actual" or "simulated" signals.

As with analog channels, the licensee proposes to allow the signal used to test bistable channels in the channel functional test definition to be injected "as close to the sensor as practicable." Also, the definition of logic system functional test allows the signal to be injected "as close to the sensor as practicable" in lieu of "from the sensor." Injecting a signal at the sensor would in some cases significantly increase the probability of initiating undesired circuits during the test since several logic channels are often associated with a particular sensor. Performing the test by injection of a signal at the sensor requires jumpering the other logic channels to prevent their initiation during the test or increases the scope of the test to include multiple tests of the other logic channels. Either method significantly increases the difficulty of performing the surveillance. Allowing initiation of the signal close to the sensor provides a complete test of the logic channel while significantly reducing the probability of undesired initiation.

A change is proposed to allow the physical movement of a control rod not to be considered a core alteration. In this activity, all the fuel bundles are removed from the control cell before the control rod is moved. In this configuration, the negative reactivity inserted by removing the adjacent four fuel assemblies is significantly more than any minimal positive reactivity inserted during the movement of the control rod. Appropriate technical specification controls are applied during the fuel movements preceding the control rod movement to protect against or mitigate a reactivity excursion event. Since sufficient margin exists and since a control rod cannot be removed until all fuel assemblies in the cell have been removed, removing the TS controls during the control rod movement is acceptable.

The definition of logic system functional test (LSFT) is changed to exclude the actuated device. The actuated device is to be tested as part of a system functional test, which is specified in the system specification. Deleting the actuated device from the definition of LSFT eliminates the confusion as to whether a previously performed LSFT is rendered invalid if the final actuated device is discovered to be inoperable as a consequence of another surveillance (e.g., valve cycling). In instances where the CTS does not contain a corresponding "system functional test," which would test the actuated device, one is added in the ITS. As an example, the ATWS-RPT breaker actuation is now required by ITS SR 3.3.4.2.4. Therefore, actuated device testing will be adequately controlled in the ITS.

The CTS definition of core alteration states that "normal" movement of SRMs, IRMs, LPRMs, TIPs, or special movable detectors (i.e., incore instruments) is not a core alteration. However, no definition of "normal" component movement is given. The ITS definition focuses on activities that can affect the core reactivity. Since incore instruments have negligible (or no) effect on core reactivity, any movement of incore instruments has essentially no effect on core reactivity. Therefore, deletion of "normal" from the TS definition maintains core alterations as movement of only that which can affect core reactivity and does not place any restrictions on incore instrument movement.

CTS definition of fraction of rated thermal power (FRTP) is only used in the ITS in LCO 3.2.4, average power range monitor (APRM) gain and setpoints. The elements of the definition are moved to the Bases for Specification 3.2.4. The ITS requirements of LCO 3.2.4 are sufficient to ensure APRM Gain and

Setpoints are appropriately controlled. This is consistent with the format of the STS. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

The definition of P_a in CTS 1.31a is moved to the Bases of the applicable primary containment specifications: LCO 3.6.1.1, primary containment, and LCO 3.6.1.2, primary containment air locks. In addition, with the exception of the actual peak containment internal pressure value, this definition is duplicated in 10 CFR 50, Appendix J. As defined in Appendix J, P_a is the minimum pressure at which leak rate testing must be performed. This detail is not necessary for ensuring operability of primary containment and the primary containment air lock. SR 3.6.1.1.1 and SR 3.6.1.2.1 and the requirements of 10 CFR 50 Appendix J, as modified by approved exemptions, provide adequate assurance that primary containment and the primary containment air lock are maintained operable. This is consistent with the STS format. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

Conclusion

These less restrictive requirements are acceptable because they will not affect the safe operation of the plant. As discussed in the evaluation format section and summarized in Table 1, to the extent that these less restrictive requirements involve the relocation of matters from the CTS to licensee-controlled documents, they are not otherwise required to be in the TS under 10 CFR 50.36 and they are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to public health and safety. The TS requirements that remain are consistent with current licensing practices, operating experience, and plant accident and transient analyses, and provide reasonable assurance that public health and safety will be protected.

c. More Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 1.0, proposed a number of requirements more restrictive than those in the CTS. The following changes are the most significant.

In the ITS, startup mode is now defined to include any time the reactor mode switch is in the refuel position concurrent with the reactor vessel head bolts being fully tensioned. This is currently a plant condition that has no corresponding mode and could therefore be incorrectly interpreted as not requiring the application of the majority of CTS.

In the ITS, shutdown modes are redefined with a footnote stating "all reactor vessel head bolts fully tensioned" to eliminate the current overlap in defined modes when the mode switch is in shutdown position with the vessel head detensioned, a condition in which the definition of both refuel and cold shutdown could apply. It is not the intent of the TS to allow the option of applying either LCOs applicable in the refuel mode or LCOs applicable in the

cold shutdown. This proposed change eliminates an unacceptable interpretation.

The current refueling definition would cease to be applicable when average coolant temperature exceeds 140°F since with the mode switch in refuel, a plant condition exists which has no corresponding mode. This condition could therefore be incorrectly interpreted as not requiring the application of the majority of TS. By defining the refuel mode as including plant conditions with no specific coolant temperature range, sufficiently conservative restrictions will be applied by the applicable LCOs during all fueled conditions with the vessel head bolts detensioned.

Conclusion

These more restrictive requirements strengthen the CTS and are therefore acceptable.

d. Deviations from the STS

The licensee, in electing to adopt the specifications of STS Section 1.0, proposed to not include the definition of the pressure and temperature limits report (PTLR). This definition requires the NRC approval of detailed methodologies for future revisions to the pressure versus temperature limits curves. The licensee stated that at this time these methodologies are not developed, therefore, the specific limits are provided in LCO 3.4.11. This is acceptable.

e. Relocated Requirements

None.

2.0 SAFETY LIMITS

This chapter contains essentially the same information as CTS Chapter 2.0, which was named "Safety Limits and Limiting Safety System Settings." Information not retained in this chapter is contained elsewhere in the WNP-2 ITS.

The licensee has proposed administrative and technical changes to the CTS to bring them into conformance with 10 CFR 50.36 and with STS Section 2.0, "Safety Limits." The changes are discussed in the order of the specifications in STS Section 2.0.

This chapter has been reformatted and reorganized to separate the safety limits and safety limit violations. The staff has reviewed WNP-2's proposed Chapter 2.0, based on NUREG-1434, as modified to include plant-specific limits and terminology, and finds this chapter is consistent with the Commission's regulations and is acceptable.

a. Administrative Changes

The CTS specifications that have been retained in ITS Section 2.0 have been reworded to conform to the STS presentation. The following changes are the most significant:

CTS 2.2 lists the limiting safety system settings (LSSS), which are the reactor protection system (RPS) instrumentation allowable values that ensure safety limits are not violated. The CTS LSSS are moved to ITS 3.3.1.1, "RPS Instrumentation," consistent with STS format. The protection and monitoring functions of the RPS ensure safe operation of the reactor by specifying limiting safety system settings (LSSS) for parameters directly monitored by the RPS, as well as by establishing LCOs on other reactor system parameters and on equipment performance. The LSSS are defined in the specifications as the "allowable values," which, in conjunction with the LCOs, establish the threshold for protective system action to prevent acceptable limits, including SLs, from being exceeded during design basis accidents (DBAs). Nominal trip setpoints are specified in the setpoint calculations and in the FSAR or Licensee-Controlled Specifications (LCS). The nominal setpoints are selected to ensure that the actual setpoints do not exceed the allowable value between successive channel calibrations. Operation with a trip setpoint less conservative than the nominal trip setpoint but within its allowable value is acceptable. A channel is inoperable if its actual trip setpoint is not within its required allowable value. Thus, the RPS setpoints are effectively retained within the ITS. Technical changes to the requirements are discussed in the evaluation of ITS 3.3.1.1. Moving the requirements within the TS is an administrative change and is therefore acceptable.

The CTS referencing Specification 6.7.1 on safety limit violations has been removed from TS since it duplicates existing regulatory reporting requirements. The requirements of CTS 6.7.1.a, 6.7.1.b, and 6.7.1.c that relate to NRC notification and the requirement of CTS 6.7.1.d that relates to permission to restart the unit are duplicative of requirements located in 10 CFR 50.36(c)(1). Since WNP-2 is required by its operating license to comply with 10 CFR Part 50, the removal of these requirements from TS is administrative and acceptable.

Conclusion

These changes to the CTS are administrative. They clarify, reorganize, or reformat the current specifications. None of these changes alters the limits in the current requirements. Accordingly, these changes are acceptable.

b. Less Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 2.0, proposed a number of requirements less restrictive than those in the CTS. The following changes are the most significant.

CTS SL 2.1.4 requires that "the ECCS...be manually initiated after depressurizing the reactor" if the reactor vessel water level is at or below the top of active fuel. This action is moved from the TS to the LCS/FSAR. ITS 2.2.2 requires that compliance with safety limits be restored and all insertable control rods inserted within 2 hours, but does not specify actions for restoring reactor vessel water level. Using the LCS/FSAR to restore water level is consistent with CTS 2.1.4 because they will contain the CTS requirements, plus additional methods for restoring reactor vessel water. The 2-hour limit for completion of the action is consistent with the allowed time to restore other safety limit violations and gives the operator time to evaluate and complete appropriate actions. Moving the requirements to the LCS/FSAR is acceptable since changes will be controlled by the provisions of 10 CFR 50.59.

CTS 6.7.1.a requires that the Corporate Nuclear Safety Review Board (CNSRB) be notified of a safety limit violation. CTS 6.7.1.b requires that the Plant Operations Committee (POC) review the Safety Limit Violation Report. The Safety Limit Violation Report is replaced by submission of a Licensee Event Report (LER) within 30 days per 10 CFR 50.73, which is acceptable because 10 CFR 50.73 requires more information to be submitted. CTS 6.7.1.c requires that the Safety Limit Violation Report be submitted to the CNSRB. These requirements are moved to the FSAR/LCS, with a 10 CFR 50.73 Licensee Event Report (LER) substituted for the Safety Limit Violation Report. This change is acceptable because 10 CFR 50.73 requires more information to be submitted. The Vice President, Nuclear Operations, to whom the CNSRB is an advisory board, is notified of a safety limit violation. The duties of the CNSRB, as defined in Chapter 6.0 of the CTS, are removed from the technical specifications and placed in the Quality Assurance Program Description in the FSAR. The POC reviews the LER and submits it to the CNSRB after plant shutdown; the POC's activities thus do not affect the safe operation of the plant. Therefore, maintaining these requirements in the FSAR/LCS to be controlled under the provisions of 10 CFR 50.59, is an acceptable less restrictive change.

Conclusion

These less restrictive requirements are acceptable because they will not affect the safe operation of the plant. As discussed in the evaluation format section and summarized in Table 1, to the extent that these less restrictive requirements involve the relocation of matters from the CTS to licensee-controlled documents, they are not otherwise required to be in the TS under 10 CFR 50.36 and they are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to public health and safety. The TS requirements that remain are consistent with current licensing practices, operating experience, and plant accident and transient analyses, and provide reasonable assurance that public health and safety will be protected.

c. More Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 2.0, proposed a number of requirements more restrictive than those in the CTS. The following changes are the most significant.

CTS Section 2.1 includes applicability statements for each safety limit. These are removed in the ITS, thereby making all safety limits applicable to all modes of operation. The CTS applicability statements are based on the possibility that a violation could occur in certain modes or specific limitations required for protection in certain modes. The removal of the applicability statements imposes additional evaluation requirements and administrative actions for conditions in which a challenge to a barrier cannot occur; therefore, this change is more restrictive and is acceptable.

Conclusion

These more restrictive requirements strengthen the CTS and are therefore acceptable.

d. Deviations from the STS

None.

e. Relocated Specifications

None.

3.0 LIMITING CONDITIONS FOR OPERATION (LCOs) AND ASSOCIATED APPLICABILITY, ACTION REQUIREMENTS (ACTIONS), AND SURVEILLANCE REQUIREMENTS (SRs)

The licensee has proposed administrative and technical changes to the CTS to bring them into conformance with 10 CFR 50.36 and with STS Section 3.0. The changes are discussed in the order of the specifications in STS Section 3.0. The corresponding ITS Section 3.0 specification titles are listed in italics before each discussion.

a. Administrative Changes

The CTS specifications that have been retained in ITS Section 3.0, "LCO and SR Applicability," have been reworded to conform to the STS presentation. The following changes are the most significant.

LCO 3.0.1

The phrase in CTS 3.0.1 "Compliance with...is required" is replaced with the phrase "LCOs shall be met" in ITS 3.0.1 for consistency with the other ITS Chapter 3.0 LCOs. In addition, "OPERATIONAL CONDITIONS" is changed to "MODES" and "Conditions specified therein" is changed to "specified conditions in the Applicability," to be consistent with STS terminology. The phrase "that upon failure to meet the Limiting Conditions for Operation, the associated ACTION requirements shall be met" was changed to "as provided in LCO 3.0.2 and LCO 3.0.7." ITS LCO 3.0.2 addresses the requirement of meeting the associated ACTIONS when not meeting a Limiting Condition for Operation. ITS 3.0.7 addresses another situation when an LCO requirement is allowed not to be met. The added exception of ITS LCO 3.0.7 is discussed below in subsection 3.0.a, LCO 3.0.7. These changes are purely administrative because they do not change current requirements.

LCO 3.0.2

The lead-in sentence of CTS 3.0.2 defines when "noncompliance with a Specification" exists. In corresponding ITS LCO 3.0.2, this definition is replaced with "Upon discovery of a failure to meet an LCO..." because the term "noncompliance" is not used in the ITS. In the ITS, not meeting a requirement is the same as not complying with a requirement. Thus, this wording change is purely administrative.

Other wording changes to CTS 3.0.2 to conform to the STS are: "restored" is changed to "met or is no longer applicable;" "time intervals" is changed to "Completion Time(s);" "ACTION requirements" is changed to "Required Action(s)." Also, the phrase "unless otherwise stated" is added consistent with exceptions found in a few CTS LCOs. These purely administrative changes will clarify LCO 3.0.2 and make it less likely to be misapplied.

LCO 3.0.3

CTS 3.0.3 requires a unit shutdown when an LCO is not met, "except as provided in the associated Action requirements." In ITS LCO 3.0.3, this exception is replaced with "and the associated Actions are not met, an associated Action is not provided, or if directed by the associated Actions," to cover all possible conditions that require entry into LCO 3.0.3. Clarifying this exception is purely administrative.

The specified time period to reach each mode during the unit shutdown is revised to include the 1-hour time period allowed by CTS 3.0.3 for initiating the shutdown. Also, the time period for reaching each mode is specified to start on entry into LCO 3.0.3, instead of at the end of the previous time period (e.g., "the next," or "the following," or "the subsequent"). These presentation changes are purely administrative.

The general exception to CTS 3.0.3 reads, "Where corrective measures are completed that permit operation under the action requirements, the action may be taken in accordance with the specified time limits as measured from the time of failure to meet the Limiting Condition for Operation." This exception is reworded in ITS LCO 3.0.3 to read, "Where corrective measures are completed that permit operation *in accordance with the LCO or actions, completion of the actions required by LCO 3.0.3 is not required*" (italics added). Clarifying the intent of the current exception is a purely administrative change.

The sentence "This Specification is not applicable in Operational Condition 4 or 5" is changed to "LCO 3.0.3 is only applicable in Modes 1, 2, and 3." This administrative change replaces all CTS exceptions to CTS 3.0.3 contained in individual specifications that are not applicable in Modes 1, 2, or 3.

LCO 3.0.4

CTS 3.0.4 is reworded as follows to clarify the current restrictions on changing the operational condition of the unit:

CTS 3.0.4	ITS LCO 3.0.4
Entry into an OPERATIONAL CONDITION or other specified condition shall not be made unless the conditions for the Limiting Condition for Operation are met	When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall not be made
without reliance on provisions contained in the ACTION requirements.	*except when the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time.*
This provision shall not prevent passage thru OPERATIONAL CONDITIONS	This Specification shall not prevent changes in MODES or other specified conditions in the Applicability
as required to comply with ACTION requirements.	that are required to comply with ACTIONS
	or that are part of a shutdown of the unit.
Exceptions to these requirements are stated in the individual Specifications.	Exceptions to this Specification are stated in the individual Specifications.

The italicized words are less restrictive than the corresponding CTS words. This less restrictive requirement is discussed in subsection 3.0, LCO 3.0.4.

In addition to the above wording changes, the following statement is added to further clarify the intent of the exceptions:

> These exceptions allow entry into MODES or other specified conditions in the Applicability when the associated ACTIONS to be entered allow unit operation in the MODE or other specified condition in the Applicability only for a limited period of time.

These clarifications (except for the italicized change) are purely administrative because they do not reduce or increase the current restrictions on changing the operational condition of the unit.

Finally, the ITS appears to narrow the applicability of this specification in stating that "LCO 3.0.4 is only applicable for entry into a MODE or other specified condition in the Applicability in Modes 1, 2, and 3."

However, the licensee's review of the CTS and the proposed ITS shows that this statement does not add any exceptions to this specification beyond those that currently exist or that are proposed in individual specifications in the ITS (and justified on a case-specific basis). Therefore, this change is also purely administrative.

LCO 3.0.6

ITS LCO 3.0.6 is a new specification that provides guidance regarding the appropriate actions to be taken when a single inoperability (a support system) also results in the inoperability of one or more related systems (supported systems). Addition of this specification is administrative because it makes explicit the intent of the CTS and is consistent with current operating practice. However, in conjunction with this clarification, the ITS contain a new specification, ITS 5.5.11, "Safety Function Determination Program (SFDP)." Evaluations of this programmatic specification must be performed whenever a support system is discovered to be inoperable (i.e., upon entry to ITS LCO 3.0.6). The SFDP is addressed as a more restrictive requirement in Subsection 5.0.c of this safety evaluation.

LCO 3.0.7

ITS LCO 3.0.7 is a new specification that provides guidance for meeting LCOs in ITS Section 3.10, "Special Operations." Special operation LCOs allow certain TS requirements to be temporarily changed (made applicable in part or whole or suspended) to permit the performance of special tests or operations which otherwise would be prohibited. Without special operation LCOs, many of the special tests and operations necessary to demonstrate selected plant performance characteristics, special maintenance activities, and special evolutions could not be performed. LCO 3.0.7 eliminates the confusion which would otherwise exist regarding which LCOs apply during the performance of a special test or operation. This is consistent with the intent of CTS Section 3/4.10, "Special Test Exceptions." However, without this specific allowance to change the requirements of another LCO, a conflict of requirements could be incorrectly interpreted to exist. Addition of this specification is purely administrative because it only clarifies the intent of the special test provisions of the CTS.

SR 3.0.1

The first sentence of ITS SR 3.0.1 retains the requirement of CTS 4.0.1 to meet the surveillance requirements when meeting the associated LCO is required (unless otherwise stated in the surveillance requirement).

ITS SR 3.0.1 contains three additional provisions to more clearly define the relationship between meeting surveillance requirements and complying with the associated LCOs:

(1) The second sentence of ITS SR 3.0.1 is an addition to the CTS that explicitly states the intent of the CTS; it is thus a purely administrative change. It reads, "Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO."

(2) The third sentence of ITS SR 3.0.1 incorporates the first sentence of CTS 4.0.3, with the following administrative clarifications:

First sentence of CTS 4.0.3	Third sentence of ITS SR 3.0.1
Failure to perform a Surveillance Requirement	Failure to perform a Surveillance
within the allowed surveillance interval defined in Specification 4.0.2	within the specified Frequency
shall constitute noncompliance with the OPERABILITY requirements for a Limiting Condition for Operation.	shall be failure to meet the LCO
	except as provided in SR 3.0.3.

In keeping with STS terminology, the phrase "allowed surveillance interval defined in Specification 4.0.2" is replaced with "specified Frequency" and the phrase "noncompliance with the OPERABILITY requirements for a Limiting Condition for Operation" is replaced with the phrase "failure to meet the LCO."

The reference to CTS 4.0.2 (ITS SR 3.0.2) is omitted from ITS SR 3.0.1 because it is not necessary for understanding what is meant by "specified Frequency." Finally, the exception to ITS SR 3.0.1 contained in SR 3.0.3 is a less restrictive requirement addressed below in subsection 3.0.b, SR 3.0.3.

(3) The fourth sentence of CTS 4.0.3 is retained as the fourth sentence of ITS SR 3.0.1 with the following minor wording changes to clarify the intent of the CTS:

Fourth sentence of CTS 4.0.3	Fourth sentence of ITS SR 3.0.1
Surveillance requirements do not have to be performed on inoperable equipment.	Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.

Since not all LCOs deal exclusively with equipment operability, a clarifying phrase "or variables outside specified limits" is added.

SR 3.0.2

CTS 4.0.2 states that:

> Each surveillance requirement shall be performed within the specified surveillance interval with a maximum allowable extension not to exceed 25% of the specified surveillance interval.

This requirement is retained in the first sentence of ITS SR 3.0.2 with the following clarification:

> The specified Frequency for each SR is met if the Surveillance is performed within 1.25 times the interval specified in the Frequency, as measured from the previous performance or as measured from the time a specified condition of the Frequency is met.

The revised statement more clearly establishes what constitutes meeting the specified frequency of each SR. Thus, it represents an administrative enhancement to the CTS.

The last sentence of ITS SR 3.0.2 reads: "Exceptions to this Specification are stated in the individual Specifications." This statement acknowledges the explicit use of exceptions in various SRs within the ITS. Thus, its addition is also an administrative enhancement to the CTS.

SR 3.0.4

CTS 4.0.4 is retained with the following clarifications in the first two sentences of ITS SR 3.0.4:

CTS 4.0.4	ITS SR 3.0.4
Entry into an OPERATIONAL CONDITION or other specified applicable condition	Entry into a MODE or other specified condition in the Applicability of an LCO
shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation	shall not be made unless the LCO's Surveillances
have been performed within the applicable surveillance interval or as otherwise specified.	have been met within their specified Frequency.

CTS 4.0.4

This provision shall not prevent passage through or to OPERATIONAL CONDITIONS as required to comply with ACTION requirements.

ITS SR 3.0.4

This provision shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with ACTIONS

or that are part of a shutdownof the unit.

These clarifications are purely administrative because they change neither the current restrictions on changing the operational condition of the unit nor the current exceptions to those restrictions. In particular, addition of the phrase "or that are part of a shutdown of the unit" only makes explicit the intent of the current exception to those restrictions.

The third sentence of ITS SR 3.0.4 states: "SR 3.0.4 is only applicable for entry into a MODE or other specified condition in the Applicability in Modes 1, 2, and 3." This clarification of the applicability of SR 3.0.4 is added for consistency with ITS LCO 3.0.4. The previous discussion of the applicability of LCO 3.0.4 applies equally to SR 3.0.4. Therefore, adding this clarification is a purely administrative change.

5.5.6 Inservice Testing Program

CTS 4.0.5 defines the requirements for inservice inspection (ISI) and inservice testing (IST) of ASME Code Class 1, 2, and 3 components. The IST requirements are moved to ITS Section 5.5, where they are presented as a programmatic specification to conform to the STS format. This change is administrative because no technical changes to the CTS IST requirements are being made. However, the ISI requirements are being placed in the licensee's ISI program. This change is addressed below in subsection 5.0.b, ITS 5.5 Programs and Manuals.

Conclusion

These changes to the CTS are administrative. They clarify, reorganize, or reformat the current specifications. None of these changes alters the limits in the current requirements. Accordingly, these changes are acceptable.

b. Less Restrictive Requirements

The licensee, in electing to implement the LCOs and SRs of STS Section 3.0, proposed a number of requirements less restrictive than those in the CTS. The following changes are the most significant.

LCO 3.0.4

As noted above in subsection 3.0.a, LCO 3.0.4, replacement of the words "without reliance on provisions contained in the ACTION requirements" with "except when the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time" is a relaxation of CTS 3.0.4. The current requirement is unduly restrictive. For many specifications, in the event the LCO is not met, continued operation is permitted for an unlimited period of time provided that the applicable specified action requirements are and continue to be met. For these cases, entry into the Applicability of the associated specification should also be permitted, provided such action requirements are and continue to be met. Meeting these action requirements during operation of the unit affords the same level of protection as meeting the associated LCO. Therefore, this change does not affect safe operation of the unit and is acceptable.

LCO 3.0.5

ITS LCO 3.0.5 is a new provision, consistent with the STS, that permits inoperable equipment to be returned to service under administrative controls to perform testing to determine operability. It allows an exception to ITS LCO 3.0.2 for instances in which inoperable equipment cannot be restored to an operable status while continuing to comply with actions associated with the LCO.

Many action requirements in the CTS require an inoperable component to be removed from service (e.g., require an isolation valve to be closed). An exception to these actions is necessary to allow the performance of SRs to demonstrate the operability of the equipment being returned to service. This exception is also needed in order to restore other equipment to operable status, if performance of the SR to demonstrate operability requires returning the inoperable equipment to service.

LCO 3.0.5 is necessary to establish an allowance that, although informally utilized in restoration of inoperable equipment, is not formally recognized in the CTS. It is considered a less restrictive change because it specifies an exception to LCO 3.0.2. Because this provision is restricted to activities deemed necessary to restore equipment operability and is consistent with current practice, it is acceptable.

SR 3.0.2

The statement "If a Completion Time requires periodic performance on a 'once per...' basis, the above frequency extension applies to each performance after the initial performance," is added to CTS 4.0.2 to allow the 25% extension applied to surveillance frequencies to also apply to required actions with periodic completion times. By extending this allowance to periodic action requirements, the flexibility in scheduling the performance of all periodic requirements, whether surveillances or required actions, is made consistent. This change does not reduce the effectiveness of periodic action requirements to compensate for the associated action conditions because periodic action requirements will still, on average, be performed once during each specified interval. Therefore, this change is acceptable.

SR 3.0.3

The second and third sentences of CTS 4.0.3 state:

> The time limits of the ACTION requirements are applicable at the time it is identified that a Surveillance Requirement has not been performed. The ACTION requirements may be delayed for up to 24 hours to permit the completion of the surveillance when the allowable outage time limits of the ACTION requirements are less than 24 hours.

ITS SR 3.0.3 allows that, at the time it is discovered that the surveillance has not been performed, the requirement to declare the equipment inoperable (LCO not met) may be delayed for up to 24 hours regardless as to whether the Completion Times of the Actions are 24 hours or less. This is based on Generic Letter 87-09 which states, "It is overly conservative to assume that systems or components are inoperable when a surveillance has not been performed. The opposite is in fact the case, the vast majority of surveillances demonstrate that systems or components in fact are operable. When a surveillance is missed, it is primarily a question of operability that has not been verified by the performance of the required surveillance."

Based on consideration of plant conditions, adequate planning, availability of personnel, the time required to perform the surveillance and the safety significance of the delay in completing the surveillance, the staff concluded in the Generic Letter that 24 hours is an acceptable time limit for completing a missed surveillance when the allowable outage times of the actions are less than the 24 hour limit or a shutdown is required to comply with actions.

However, it stands to reason that since 24 hours has been determined to be an acceptable time limit for completing the surveillance, this 24-hour deferral should apply to all systems or components, regardless of whether or not their actions completion time is 24 hours or less. This is primarily because shorter completion times are generally provided for more safety significant required actions. Therefore, if a 24-hour delay can be safely applied to a required action with a short (e.g., 2 hour) completion time, there should be less of a safety impact when a 24-hour delay is applied to a required action with a long (e.g., 7 day) completion time. Furthermore, consistent application of the 24-hour delay regardless of completion time is critical to eliminating potential confusion and misapplication. For example, some actions have more than one completion time; some >24 hours and others ≤ 24 hours. The confusion associated with the application of the 24-hour deferral to the completion times of this example's required actions, illustrates the potential for misapplication throughout the technical specifications. Therefore, this change is acceptable.

These less restrictive requirements are acceptable because they will not affect the safe operation of the plant. As discussed in the evaluation format section and summarized in Table 1, to the extent that these less restrictive requirements involve the relocation of matters from the CTS to licensee-controlled documents, they are not otherwise required to be in the TS under 10 CFR 50.36 and they are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to public health and safety. The TS requirements that remain are consistent with current licensing practices, operating experience, and plant accident and transient analyses, and provide reasonable assurance that public health and safety will be protected.

c. More Restrictive Requirements

The licensee, in electing to implement the LCOs and SRs of STS Section 3.0, proposed a number of requirements more restrictive than those in the CTS. The following changes are the most significant.

SR 3.0.2

CTS 4.0.2 allows extending the time of performance of a surveillance by 25% of the specified surveillance interval. As noted above, ITS SR 3.0.2 retains this allowance except for frequencies specified as "once." This exception clarifies the intent of the CTS to provide flexibility for the scheduling of periodic surveillances. Removing the possibility of misapplying the CTS allowance to nonperiodic surveillance requirements is a benefit to safety. Therefore, ITS SR 3.0.2 is acceptable.

SR 3.0.3

The second and third sentences of CTS 4.0.3 state:

> The time limits of the ACTION requirements are applicable at the time it is identified that a Surveillance Requirement has not been performed. The ACTION requirements may be delayed for up to 24 hours to permit the completion of the surveillance when the allowable outage time limits of the ACTION requirements are less than 24 hours.

ITS SR 3.0.3 retains the allowance to delay performing the associated LCO action requirements for 24 hours (for surveillance intervals ≥ 24 hours), but bases the length of the delay not on the allowable outage time (AOT) but on the length of the surveillance interval. Regardless of the completion times of the required actions that would otherwise apply, ITS SR 3.0.3 specifies the delay as "from the time of discovery, up to 24 hours or up to the limit of the specified frequency, whichever is less." This change is more restrictive in the event the missed surveillance is required to be performed more often than once per 24 hours. Surveillances with frequencies > once per 24 hours can easily be performed well within the specified interval. Thus, the current allowance of 24 hours is unnecessary in such cases. Deleting the 24-hour allowance for such cases ensures a more timely operability verification of the affected system. Therefore, this change is acceptable.

In addition, ITS SR 3.0.3 contains two additional sentences to clarify that the LCO must be declared not met and the applicable conditions must be entered if either (a) the surveillance is performed but not met within the delay period, or (b) the surveillance is not performed within the delay period. These sentences replace the second sentence of CTS 4.0.3 and clarify its intent. Thus, they are an enhancement and are acceptable.

Conclusion

These more restrictive requirements strengthen the CTS and are therefore acceptable.

d. Deviations from the STS

The licensee, in electing to adopt the LCOs and SRs of STS Section 3.0, proposed no deviations from the STS.

e. Relocated Specifications

None.

3.1 Reactivity Control Systems

The licensee has proposed administrative and technical changes to the CTS to bring them into conformance with 10 CFR 50.36 and with STS Section 3.1, "Reactivity Control Systems." The changes are discussed in the order of the specifications in STS Section 3.1. The corresponding ITS Section 3.1 specification titles are listed in italics before each discussion.

a. Administrative Changes

The CTS specifications that have been retained in ITS Section 3.1 have been reworded to conform to the STS presentation. The following changes are the most significant.

3.1.1 Shutdown Margin

CTS 3.1.1, Action b, requires suspending all activities that could reduce shutdown margin (SDM). The ITS deletes this requirement for Modes 3 and 4. In Modes 3 and 4 immediate insertion of control rods terminates the only action that can significantly reduce SDM, control rod withdrawal. ITS 3.1.1, Required Actions C.1, D.1, and E.2, require immediate insertion of control rods. The requirement to suspend all activities that could reduce the SDM is redundant with immediate rod insertion.

CTS 3.1.1, Action c, requires suspending core alterations and all other activities that could reduce the shutdown margin. The ITS deletes the requirement for suspending all other activities that could reduce the shutdown margin. ITS 3.1.1, Required Actions E.1 and E.2, provide actions to terminate all Mode 5 activities that can reduce SDM. The requirement to suspend other

activities that could reduce SDM is redundant to ITS 3.1.1, Required Actions E.1 and E.2.

Deleting these CTS requirements is an acceptable administrative change.

CTS 3.1.1, Actions b and c, require establishing secondary containment integrity. The ITS conversion removes the definition of secondary containment integrity and incorporates the elements of the definition into ITS 3.1.1, Required Actions D.2, D.3, D.4, E.3, E.4, and E.5, which provide a means to control a potential radioactive release. This meets the intent of "establishing SECONDARY CONTAINMENT INTEGRITY" as required by the CTS; therefore, this is an acceptable administrative change.

CTS 4.1.1.a requires an SDM test to be performed before or during the first startup. The SR is changed to state definitively that it will be performed within 4 hours after criticality. Most SDM tests are performed in-sequence while critical. Therefore, 4 hours after reaching criticality is provided as a reasonable time to perform the required calculations and complete the appropriate verification. The ITS SR 3.1.1.1 frequency clearly defines a current requirement of CTS; therefore, it represents an enhanced presentation of the CTS intent and is an acceptable administrative change.

CTS 4.1.1.a requires SDM surveillance performance "after each refueling." "Refueling" is replaced with "following fuel movement within the reactor pressure vessel or control rod replacement," which are the activities that occur during refueling that can alter SDM. ITS SR 3.1.1.1 requires the SDM verification following the specific activities that could cause a change in the SDM, which is an enhancement of the CTS intent; therefore, this is an acceptable administrative change.

CTS 4.1.1.c requires SDM verification after detection of an immovable rod. This requirement is moved to ITS LCO 3.1.3, Required Action A.4. This is an administrative move of the requirement to be consistent with STS format and any technical changes to the requirement are evaluated under ITS 3.1.3; therefore, this is an acceptable administrative change.

CTS 3.1.1, Action c, is modified by a footnote that excludes movement of IRMs, SRMs, or special movable detectors from the requirement to suspend core alterations. This exclusion is incorporated in the definition of core alterations in ITS Section 1.1; therefore, this is an acceptable administrative change.

3.1.2 Reactivity Anomalies

CTS 3.1.2 requires performing the reactivity anomaly surveillance "during the first startup," whereas the ITS requires this surveillance "within 24 hours after reaching equilibrium conditions following startup." The surveillance compares the monitored K_{eff} with the predicted K_{eff} as a function of cycle exposure at steady state reactor power conditions, which are described in the ITS Bases. The ITS SR 3.1.2.1 frequency is based on achieving steady state conditions plus a reasonable time, 24 hours, for performing the required calculations and completing appropriate verifications. This change clearly defines the intention of the CTS to perform the surveillance during the first startup; therefore, it is an acceptable administrative change.

3.1.3 Control Rod Operability

CTS 3.1.3.1 contains the requirements for inoperable control rods. The requirements are revised to consider all cases, including those from other CTS LCOs, in which the control rod is unable to perform its scram function. The terminology is changed for control rods that are immovable to the ITS terminology of "stuck" and "inoperable." These are acceptable administrative changes. Special considerations are added to the ITS for complying with the banked position withdrawal sequence when control rods are inoperable. This change is an acceptable administrative change.

The ITS LCO 3.1.3 actions add a note allowing separate entry for each control rod. The CTS does not require this note because of the structure of the action statements, but the ITS structure requires the note. The note allows a specified period of time for verifying limits and, when necessary, fully inserting and disarming the control rod. This retains the CTS intent and is an acceptable administrative change.

The ITS allows bypassing the rod worth minimizer (RWM), if needed for inserting control rods and continued operations, provided the appropriate actions of ITS 3.3.2.1 (the RWM specification) are taken. This change uses human factors principles to clarify the requirement and the allowance. This change is an acceptable administrative change.

In CTS LCO 3.1.3.1, Action a, and CTS 4.1.1.c, the phrase "Immovable, as a result of excessive friction or mechanical interference, or known to be untrippable" is replaced by "stuck" in the ITS. ITS 3.1.3, Condition A, removes unnecessary details of potential mechanisms by which control rods may be stuck. This change is an acceptable administrative change.

CTS 3.1.3.1, Footnote **, CTS 3.1.6 Footnote **, and CTS 3.1.3.7 Footnote ** permit intermittently rearming a control rod, under administrative control, to permit testing associated with restoring the control rod to operable status. Consistent with the STS, the ITS has incorporated this allowance into ITS LCO 3.0.5; therefore, this is an acceptable administrative change.

CTS 3.1.3.1, Action b.3, CTS 3.1.3.2, Action b, CTS 3.1.3.6, Action c, and CTS 3.1.3.7, Action c, state "the provisions of Specification 3.0.4 are not applicable." Consistent with the STS, the ITS has incorporated this allowance into ITS LCO 3.0.4; therefore, this is an acceptable administrative change.

CTS 3.1.3.1 includes the requirements for scram discharge volume drain and vent valves. These requirements are moved to ITS 3.1.8, consistent with the format of the STS. Any changes to the requirements are discussed under ITS 3.1.8. This is an acceptable administrative change.

CTS 4.1.3.1.2 requires proving operability of control rods when above the low power setpoint of the RWM and the rod sequence control system (RSCS). CTS 3.1.3.6, Actions a.1 and a.2 provide actions to recouple control rods based upon whether or not RWM and RSCS will permit the recoupling attempts. CTS 3.1.3.7, Action a.3 provides actions when a control rod position indicator is inoperable, based upon whether or not the RSCS will allow insertion of the associated control rod. The ITS deletes references to the RSCS. This change is consistent with the evaluation of deleting CTS 3.1.4.2, which addresses the acceptability of deleting requirements concerning the RSCS. This is an acceptable administrative change.

CTS 4.1.3.1.2 is not required to be met for inoperable control rods that are disarmed electrically or hydraulically, as stated in the surveillance requirement and in CTS 4.0.3. Therefore, operable control rods are not currently required to have their directional control rods disarmed. This explicit exemption is deleted because CTS SR 4.0.3 and ITS SR 3.0.1 do not require inoperable control rods to meet surveillance requirements and because the ITS does not require withdrawn operable control rods to have directional control valves disarmed. This an acceptable administrative change.

CTS 4.1.3.1.3 lists surveillances performed to prove operability of the control rods. The ITS omits this SR because it is redundant to cross-reference surveillances. This is an acceptable administrative change.

CTS 4.1.1 requires verifying SDM with an allowance for the rod worth of an immovable or untrippable control rod. This allowance is moved to the ITS definition of SDM in Section 1.1. The technical changes are evaluated in Chapter 1.0. Moving this requirement is an acceptable administrative change.

CTS 3.1.3.2 requires that the maximum control rod scram insertion time be ≤ 7 seconds. ITS incorporates this requirement as a surveillance requirement that must be met to meet the rod operability LCO. ITS SR 3.1.3.4 does not eliminate any CTS requirements or impose new or different treatment of the requirements except as evaluated in subsection 3.1.b, ITS 3.1.3, below. Therefore, this is an acceptable administrative change.

CTS 3.1.3.2 defines time zero as deenergization of the scram pilot valve solenoids. This is incorporated in the ITS as a footnote to Table 3.1.4-1. This is an acceptable administrative change.

CTS SR 4.1.3.2 requires performing control rod scram timing at specific frequencies. The control rod scram timing surveillances are moved to ITS SRs 3.1.4.1, 3.1.4.2, 3.1.4.3 and 3.1.4.4, which are required by ITS SR 3.1.3.4. Technical changes are discussed under ITS 3.1.4. This is an acceptable administrative change.

CTS 3.1.3.6 requires control rods to be coupled to their drive mechanism. This requirement is incorporated into a surveillance requirement that must be met to consider control rods operable. ITS SR 3.1.3.5 requires verifying that each control rod does not go to the withdrawn overtravel position, which

verifies control rod coupling. This change is an acceptable administrative change.

CTS LCO 3.1.3.6, Action a, requires inserting an uncoupled control rod to accomplish recoupling. Consistent with the STS, the ITS omits the method for restoring operability. Coupling the control rod by inserting it remains an option, but the ITS omits the details. This is an acceptable administrative change.

CTS 4.1.3.6.a requires performing an overtravel check "prior to reactor criticality after completing CORE ALTERATIONS that could have affected the control rod drive coupling integrity." The frequency requirement for ITS SR 3.1.3.5 requires verification of coupling "prior to declaring control rod OPERABLE after work on control rod or CRD system that could affect coupling." Incorporating the words, "following CORE ALTERATIONS," as a subset of "work" is an acceptable administrative change.

CTS 3.1.3.7 requires that the control rod position indication shall be operable. This is included in the ITS as a surveillance requirement. ITS SR 3.1.3.1 requires determining the position of each control rod every 24 hours. An operable control rod position indication system is required to comply with the surveillance requirement. This is an acceptable method for assuring control rod position indication is operable. This change is an acceptable administrative change.

The CTS 3.1.3.7 applicability requires the control rod position indication to be operable in Operational Condition 5 for withdrawn control rods. The operability requirements for Mode 5 are moved to ITS LCO 3.9.4. The move is an acceptable administrative change.

Action a.3.a)2) of CTS 3.1.3.7 requires verifying the position of and bypassing control rods with inoperable position indicators by a second licensed operator or other technically qualified member of the unit technical staff. The requirements of this action are now covered by the note to Required Action C.2 of ITS 3.1.3, which states, in part, that RWM may be bypassed as allowed by LCO 3.3.2.1. LCO 3.3.2.1 in conjunction with LCO 3.1.6 provides the requirements of CTS Action a.3.a)2). Therefore, an explicit action in ITS 3.1.3 to verify the position and bypassing of control rods is not needed.

CTS 3.1.3.4, Action a.1, requires declaring inoperable control rods that exceed the specified scram times (but not maximum scram time of 7 seconds). ITS 3.1.4 considers control rods with excessive scram times as specified by ITS 3.1.4 "slow" instead of inoperable. CTS 3.1.3.1, Action c, requires going to hot shutdown if more than eight control rods are inoperable. This requirement is modified to apply if more than eight control rods are "slow" or inoperable. This change is incorporated as ITS 3.1.3, Required Action C.1 and Condition F, and ITS 3.1.4, Required Action A.2. The change is an acceptable administrative change because, although the terminology for rods with excessive scram times has changed, the same number of control rods are required for shutting down.

CTS 3.1.3.6, Action a.1, requires verifying recoupling by demonstrating that the control rod will not go to the overtravel position. This requirement to proving coupling is incorporated in ITS SR 3.1.3.5, which verifies that a control rod does not go to the withdrawn overtravel position. An uncoupled control rod would fail to meet SR 3.1.3.5, since only an uncoupled control rod would go to the overtravel position during the performance of this SR. After restoration of a component that caused a required SR to be failed, SR 3.0.1 requires the appropriate SRs (in this case SR 3.1.3.5) to be performed to demonstrate the operability of the affected components. ITS SR 3.1.3.5 verifies control rod coupling and thus verifies control rod operability. ITS SR 3.1.3.5 contains the same requirement as CTS 3.1.3.6, Action a.1, to verify the control rod will not withdraw to the overtravel position. This is an acceptable administrative change.

3.1.4 Control Rod Scram Times

CTS 4.1.3.2.a requires demonstrating the maximum scram times of all control rods "following CORE ALTERATIONS" before thermal power exceeding 40% of rated thermal power. The ITS revises "following CORE ALTERATIONS" to "following refueling" in the frequency for ITS SR 3.1.4.1. This is equivalent to core alterations excluding control rod movement and should not affect scram time or work on control rods, which is tested by ITS SRs 3.1.4.3 and 3.1.4.4. This is an acceptable administrative change.

CTS 4.1.3.2 references a footnote: "Except movement of SRM, IRM, or special movable detectors or normal control rod movement." Section 1.1 of the ITS incorporates this footnote in the definition of core alterations. This is an acceptable administrative change.

ITS Table 3.1.4-1 includes a note that requires declaring inoperable control rods with scram times > 7 seconds. The note requires entry into ITS LCO 3.1.3. This is needed since the proposed LCO distinguishes between "slow" control rods and inoperable control rods (changes related to slow control rods are discussed under subsection 3.1.a, ITS 3.1.3 and 3.1.4 above). Addition of the note is an acceptable administrative change.

CTS 4.1.3.2.b requires verifying maximum scram times for individual control rods following control rod drive (CRD) system maintenance that affects specific individual control rods. This verifying of maximum scram time for individual control rods is allowed, by Footnote ** on page 3/4 1-6, at < 950 psig provided the scram times are within established limits. Footnote (b) for ITS Table 3.1.4-1 retains the requirement for scram times to be within established limits (the ITS change from 950 psig to 800 psig is evaluated in subsection 3.1.c, ITS 3.1.3 below). The movement of CTS Footnote ** to Footnote b for ITS Table 3.1.4-1 is an acceptable administrative change.

ITS 3.1.4 adds an action note allowing separate condition entry for each two-by-two array. This note is consistent with the intent of CTS 3.1.3.4 not to meet control rod scram times. When a two-by-two array is discovered not within the scram time limits, the specified action is applied, regardless of whether the action has previously been applied to other two-by-two arrays. This is an acceptable administrative change.

CTS 3.1.4, Action a.1, requires declaring inoperable control rods that do not meet average scram times when the two-by-two array does not meet its scram times. The ITS changes this requirement to declaring the control rods that do not meet the average scram time criteria as "slow." ITS 3.1.4, Required Action A.1, in declaring these rods as "slow," is consistent with the CTS because, while the CTS declare these control rods inoperable, they allow them to remain withdrawn provided separation criteria are met and no more than eight control rods are inoperable. Required Actions A.2 and A.3 of ITS 3.1.4 have been added to ensure these two requirements are maintained. This is an acceptable administrative change.

CTS 3.1.3.4, Action b, provides an exemption to the provisions of CTS 3.0.4. ITS LCO 3.0.4 incorporates the exemption, which is discussed in Section 3.0.a of this safety evaluation. This is an acceptable administrative change.

3.1.5 Control Rod Scram Accumulators

The CTS 3.1.3.5 applicability specifies Modes 1, 2, and 5*. The asterisk refers to a footnote: "At least the accumulator associated with each withdrawn control rod. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2." CTS 3.1.3.5, Action b, also specifies required actions for inoperable accumulators in Mode 5. The ITS moves the requirements associated with Mode 5 to ITS 3.9.5. This is an acceptable administrative change.

ITS 3.1.5 adds an action note allowing separate condition entry for each control rod scram accumulator. This note provides more explicit instructions for applying the actions of the ITS. In conjunction with ITS Section 1.3, "Completion Times," this note provides direction consistent with the intent of the CTS actions for inoperable control rod accumulators. When an inoperable accumulator is discovered, the ITS requires applying the specified action, regardless of whether the action has previously been applied to other inoperable accumulators. This is an acceptable administrative change.

CTS LCO 3.1.3.5, Action a.1, contains the following action: "Otherwise be in at least HOT SHUTDOWN within the next 12 hours." The ITS deletes this action because no circumstances preclude the possibility of complying with actions to declare the control rod accumulator inoperable or "slow" per ITS LCO 3.1.5, Action A.1. Therefore, it is not necessary to include this instance of shutting down to hot shutdown. This is an acceptable administrative change.

CTS 3.1.3.5, Action a.2.a, requires verifying a control rod drive (CRD) pump is operating by inserting at least one withdrawn control rod at least one notch. Action B.1 of ITS 3.1.5 requires restoring charging water header pressure to at least 940 psig. These methods both ensure that sufficient control rod drive pressure exists to insert control rods. The proposed method for determining charging water header pressure provides added assurance that the charging water pressure is sufficient to insert all control rods, whereas the current method only ensures that one rod can be inserted. Since the change is exchanging one verification method for another equivalent (or better) method, this is an acceptable administrative change.

CTS 3.1.3.5, Action a.2.b, requires inserting and disarming the inoperable control rods. The ITS 3.1.5 actions for inoperable accumulators do not repeat the actions for an inoperable control rod. Once declared inoperable, the actions for an inoperable control rod must be taken. ITS 3.1.3, Required Actions C.2, C.3, and F.1, contain these requirements for inoperable control rods. Since this is a difference in presentation only, it is an acceptable administrative change.

CTS 3.1.3.5, Action c, provides an exemption to the provisions of ITS 3.0.4. ITS LCO 3.0.4 incorporates the exemption, which is discussed in Section 3.0.a of this safety evaluation. This is an acceptable administrative change.

CTS 4.1.3.5.a exempts performing the surveillance if the control rod is inserted and disarmed or if the control rod is scrammed. ITS SR 3.0.1 incorporates this requirement exempting performance of surveillances on inoperable equipment. This is an acceptable administrative change.

3.1.7 Standby Liquid Control System

CTS 4.1.5.b.3 verifies each automatic valve in the correct position. The ITS deletes this requirement because the standby liquid control (SLC) system has no automatic valves. This is an acceptable administrative change.

CTS 4.1.5.b.3 requires verifying each valve is in its correct position. The SLC system is manually actuated (requiring the operator to reposition the valves and start the SLC pumps). The CTS recognizes and interprets "in the correct position" to allow the valves to be in a nonaccident position provided they can be realigned to the correct position. In ITS SR 3.1.7.5, the words "in the correct position" mean that the valves must be in the accident position, unless they can be automatically aligned on an accident signal (in which case they may be in the nonaccident position). Thus, for the SLC system and other manually actuated systems, the words "or can be aligned to the correct position" have been added to clarify that it is permissible for this system's valves to be in the nonaccident position and still be considered operable. Since this is the current requirement, this change is considered administrative.

CTS Figure 3.1.5-1 is a graph of allowable solution concentration versus solution saturation temperature for the range of concentrations from 7.5% to 42%. The ITS uses a graph that only displays the acceptable range of 13.6% to 15.0% solution concentration. The ITS Figure 3.1.7-1 is a better presentation of the graph because it only displays allowable values for concentration and is less confusing. This is an acceptable administrative change.

3.1.8 SDV Vent and Drain Valves

The scram discharge volume (SDV) vent and drain requirements contained in CTS 3.1.3 are moved to new ITS 3.1.8, thereby requiring LCO and applicability statements. The LCO and applicability are consistent with CTS 3.1.3.1, the LCO that previously contained SDV vent and drain valve requirements. This is an acceptable administrative change.

Conclusion

These changes to the CTS are administrative. They clarify, reorganize, or reformat the current specifications. None of these changes alters the limits in the current requirements. Accordingly, these changes are acceptable.

b. Less Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 3.1, proposed a number of requirements less restrictive than those in the CTS. The following changes are the most significant.

3.1.1 Shutdown Margin

CTS 3.1.1, Actions b and c, requires establishing secondary containment integrity within 8 hours. This is revised to require action to be initiated within 1 hour to establish secondary containment. The current action to "establish SECONDARY CONTAINMENT INTEGRITY within 8 hours" appears to allow a period during which integrity could be violated even if capable of being maintained. Additionally, if integrity cannot be established within 8 hours, the current action results in "non-compliance with the Technical Specifications" and requires an LER. The intent of the action is more appropriately presented in proposed Required Actions D.2, D.3, D.4, E.3, E.4, and E.5. With the proposed required actions, a significantly more conservative requirement is provided to establish and maintain the secondary containment boundary as quickly as is consistent with safe operation. However, this conservatism assumes that if best efforts to establish the boundary exceed 8 hours, no LER will be required. This interpretation of the actions' intent is supported by the STS. This clarifies the intent of the CTS and is therefore acceptable.

CTS 3.1.1, Action c, requires inserting all insertable control rods within 1 hour. The ITS changes the rod insertion requirement to immediate initiation of action to insert all insertable control rods. The current action to "insert...within 1 hour" is revised to "initiate action to insert...Immediately." The current requirement appears to provide an hour in which control rods can be left withdrawn, even if able to be inserted. If the control rod is incapable of being inserted in 1 hour, the current action results in "non-compliance with the Technical Specifications" and a requirement for an LER. The intent of the action is more appropriately presented in proposed Required Action E.2. The proposed required action imposes a significantly more conservative requirement to insert the control rod(s) as quickly as is consistent with safe operation and maintain insertion.

The provision to withdraw or leave withdrawn one or more control rods for up to 1 hour no longer exists. However, this conservatism assumes that if best efforts to insert the control rod(s) exceed 1 hour, no LER will be required. This interpretation of the actions' intent is supported by the STS. Because this is an enhanced presentation of current intent, the proposed change is acceptable.

CTS 3.1.1, Action c, requires suspending all core alterations in Mode 5 if shutdown margin (SDM) is less than specified. The ITS modifies the requirement to suspend core alterations, "except for control rod insertion and fuel assembly removal." ITS 3.1.1 Required Action E.1, allows continuing activities that have the potential to correct the problem and restore a margin of safety to inadvertent or uncontrolled core criticality; this is a conservative action and therefore an acceptable less restrictive change.

CTS 3.1.1, Action c, requires inserting all control rods if the SDM is less than specified. ITS 3.1.1, Required Action E.2, requires inserting control rods in cells with fuel assemblies installed. Control rods in core cells without fuel assemblies have negligible effect on the reactivity of the core, so inserting these control rods does not significantly improve SDM. In fact, due to a variety of considerations (i.e., location of blade guides, ongoing instrumentation maintenance, water chemistry), inserting these control rods may not be desirable. This is an acceptable less restrictive change.

CTS 4.1.1 b requires verifying SDM within 500 megawatt-days per ton (MWD/T) of the predicted exposure at which the SDM is equal to the limit. The ITS deletes this requirement. The SDM limits account for uncertainties and biases and for fuel cycle changes. If the margin is met, as determined by the initial startup test and corroborated by the periodic reactivity anomaly surveillance, ITS SR 3.1.2.1 and CTS 4.1.2, there is no need for additional surveillance requirements. The requirement for maintaining SDM remains in the ITS; only a specific verification of the SDM is deleted. This is an acceptable less restrictive change.

3.1.2 Reactivity Anomalies

CTS 3.1.2, Action a, requires determining, and doing an analysis to explain, the reactivity difference. This requirement is moved to the ITS Bases. Restoring the reactivity difference to acceptable limits may include an analysis of predicted core reactivity conditions to explain and correct the difference. Details about the method of restoring compliance with the limit are not necessary to ensure the plant restores the limit in a timely manner. This is an acceptable less restrictive change.

CTS 3.1.2, Action a, requires explaining and correcting a core reactivity difference within 12 hours; the ITS changes the time to 72 hours. Since SDM is demonstrated after startup by a test before reaching the conditions for this surveillance, the safety impact of the extended time for evaluation is negligible. The ITS 3.1.2 completion time is based on the low probability of a DBA during this period. The 72 hours allow sufficient time to assess the physical condition of the reactor and complete the evaluation of the core

design and safety analysis. Changing this value is an acceptable less restrictive change.

CTS 4.1.2.a requires performing the surveillance "following CORE ALTERATIONS." The phrase "following fuel movement within the reactor pressure vessel or control rod replacement" replaces "following CORE ALTERATION." These activities occur during core alterations and can alter core reactivity. ITS SR 3.1.2.1 requires performing the anomaly surveillance following the specific activities that could cause a change in the core reactivity. This change clarifies the intent of the CTS; therefore, this is an acceptable change.

CTS SR 4.1.2 requires performing a reactivity anomaly surveillance at least once per 31 effective full power days. ITS SR 3.1.2.1 replaces the frequency with 1000 MWD/T during operations in Mode 1. Both consider the relatively slow change in core reactivity and are generally equivalent. Therefore, using a more common value is an acceptable less restrictive change.

3.1.3 Control Rod Operability

CTS 3.1.3.1, Actions a.1.b), b.1, and b.2; CTS 3.1.3.6, Action a.2; and CTS 3.1.3.7, Action a.3.b), include details for disarming control rod drives. These details are moved to the Bases because these details are not necessary to ensure the associated CRDs of inoperable control rods are disarmed. ITS 3.1.3, Required Actions A.2 and C.3, are adequate to ensure disarming of control rod drives associated with inoperable control rods. This is an acceptable requirement because it moves the methods of performing actions to the Bases.

CTS 3.1.3.7, Actions a.1 and a.2, specify two methods of determining control rod position. The details of these methods are moved to the Bases for ITS SR 3.1.3.1. This surveillance requires determining each control rod position every 24 hours. Movement of details of performing specific actions to the Bases is an acceptable change.

CTS 3.1.3.1, Action b.1.a), requires verifying that inoperable control rods are separated from other inoperable control rods by at least two control cells no matter what the reactor's thermal power level. If the inoperable control rods do not meet separation criteria, then the inoperable control rods must be inserted. ITS 3.1.3, Required Action C.2, requires insertion of inoperable control rods. In the ITS, all inoperable control rods which will not scram or cannot be verified to scram (e.g., through loss of position indication) are required to be fully inserted and, therefore, cannot affect scram reactivity. Therefore, scram reactivity is preserved at all power levels. Implementation of ITS 3.1.3, Action D, is only applicable below 10% thermal power because of control rod drop accident (CRDA) concerns related to control rod worth. Above 10% power, control rod worths that are of concern for the CRDA are not possible. ITS 3.1.3, Action D, allows 4 hours to correct the situation before a shutdown is required to begin, while the CTS (Action a.1) allows 1 hour. This extension is acceptable given the probability of a CRDA during this brief proposed time extension is low and because excessive time constraints on operator actions could lead to hasty corrective actions. The proposed extension for this action does not represent a significant safety concern. This is an acceptable less restrictive change.

CTS 3.1.3.1, Action a.1, requires disarming a stuck control rod within 1 hour. The required time for disarming the control rod is extended to 2 hours to account for the actual expected time to perform the action. The completion time for ITS 3.1.3, Required Action A.2, is acceptable as a less restrictive change because the action protects the control rod drive mechanism and does not adversely affect reactor safety.

CTS 3.1.3.1, Action a.2, requires restoring the stuck rod to operable status within 48 hours or going to hot shutdown within the next 12 hours. This is revised to allow continuous operation with one stuck rod provided the other action requirements of ITS 3.1.3, Condition A, are met. The ITS 3.1.3 allowance for continuous operation with a single stuck control rod is acceptable because Required Actions A.1, A.3, and A.4 verify that rod separation criteria are met, SDM is maintained, and all other withdrawn control rods can be moved. With a single withdrawn control rod stuck, the remaining operable control rods can provide the required scram and shutdown reactivity. During a transient, a single stuck control rod in addition to an assumed single failure will have no significant impact on the established operating limits. Therefore, this is an acceptable less restrictive change.

CTS 3.1.3.6, Action a, allows 2 hours to recouple an uncoupled control rod, and, if unsuccessful, insert the control rod before entering CTS 3.1.3.1, Action b.1, which allows an additional 1 hour to disarm the control rod (a total of 3 hours to insert and disarm). The ITS require all inoperable nonstuck control rods to be fully inserted and disarmed. The ITS extends the time allowed to complete the insertion to 3 hours for all cases (i.e, uncoupled control rods, loss of position indication, excessive scram speed, certain combinations of conditions with a low pressure on a control rod scram accumulator). The 3 hours provides a minimal time to attempt restoration before inserting and disarming. Since inoperable nonstuck control rods do not represent a loss of SDM and since ITS LCO 3.1.3 allows no more than eight control rods to be inoperable, the extended time does not represent a significant safety concern.

In the CTS, the disarming of a control rod must occur during the time allotted to insert the control rod. Disarming a control rod can involve personnel actions by other than control room operating personnel. This process requires coordination of personnel and preparation of equipment, and potentially requires anti-contamination "dress-out," in addition to the actual procedure of disarming the control rod. In recognition of the potential for excessive haste required to complete this task, the ITS provides an additional hour to complete disarming a control rod, for a total of 4 hours. The proposed 4-hour time does not represent a significant safety concern since the control rod is already in its required position (in accordance with other actions), and since the action to disarm is solely a mechanism for precluding the potential for future misoperation. This is an acceptable less restrictive change.

CTS 4.1.3.1.2.a requires moving each partially or fully withdrawn control rod one notch to demonstrate operability at least once per 7 days. The frequency for this surveillance is extended to 31 days for partially withdrawn control rods. The ITS SR 3.1.3.1 frequency of 31 days is acceptable because (1) fully withdrawn control rods are exercised weekly and are a significant sample size of the control rods, (2) the operability of all control rods must be verified if a stuck control rod is discovered, and (3) stuck rods rarely occur during operation. This is an acceptable less restrictive change.

CTS 4.1.3.1.2.b, requires moving withdrawn control rods one notch to prove operability at least once per 24 hours after a stuck control rod is discovered. This is revised to only require performing the operability tests once within 24 hours of discovering a stuck control rod. ITS 3.1.3, Required Action A.3, requires performing ITS SR 3.1.3.2 and ITS SR 3.1.3.3, control rod notch tests, to ensure that a common mode problem does not exist and that control rod insertion capability remains. Performing the control rod notch test once is acceptable because it accomplishes the same objective as the daily notch test of the CTS without requiring the additional testing. This is an acceptable less restrictive change.

CTS 4.1.1.c requires verifying acceptable SDM within 12 hours of detecting a stuck control rod. The time allowance for verifying acceptable SDM is extended to 72 hours in ITS 3.1.3, Required Action A.4. This is acceptable because failure to reach cold shutdown is only likely if an additional control rod adjacent to the stuck control rod also fails to insert during a scram. Even with this postulated additional single failure, sufficient reactivity control remains to reach and maintain hot shutdown conditions. Also, ITS 3.1.3 requires a notch test for each remaining withdrawn control rod to ensure that no additional control rods are stuck. For these reasons, the extended time (72 hours versus the current 12 hours) allowed to demonstrate shutdown margin provides a reasonable time to perform the analysis or test. This is an acceptable less restrictive change.

CTS 3.1.3.2, Action a.2, requires performing the scram time surveillances of CTS 4.1.3.2.c on a 60-day frequency when operation continues with average scram insertion time(s) greater than the limit. The ITS deletes testing on a 60-day frequency. During normal power operating conditions, more frequent scram testing is not desirable because it is a significant perturbation to steady state operation, involving significant power reductions, abnormal control rod patterns, and abnormal control rod drive hydraulic system configurations. Because of the frequent testing of control rod insertion capability (SR 3.1.3.2 and SR 3.1.3.3) and accumulator operability (SR 3.1.5.1), and the operating history demonstrating a high degree of reliability, more frequent scram time testing is not deemed necessary to ensure safe plant operation. This is an acceptable less restrictive change.

The CTS 3.1.3.6 applicability specifies Operational Conditions 1, 2, and 5* with the asterisk referring to the footnote: "At least each withdrawn control rod. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2." Also, CTS 3.1.3.6, Action b, requires taking specific action for an uncoupled control rod in Operational Condition 5*. Applicability to

Operational Condition 5* is deleted. This is acceptable because ITS Mode 5 requires the mode switch to be in shutdown or refuel position. In Shutdown no control rods can be withdrawn and in Refuel only one control rod can be withdrawn. Coupling requirements during refueling are not necessary since only one control rod can be withdrawn from core cells containing fuel assemblies. The probability and consequences of a single control rod dropping from its fully inserted position to the withdrawn position of the control rod drive are negligible (i.e., reactor will remain subcritical and within the limits of the CRDA assumptions). This is an acceptable less restrictive change.

CTS 3.1.3.6, Action a.2, requires inserting and disarming the uncoupled control rod if recoupling is not accomplished on the first attempt or if the RWM does not permit recoupling. ITS 3.1.3, Required Action C.2, retains the requirement to insert the uncoupled control rod and provides a time allowance of 3 hours. This will require bypassing the RWM and operation with an out-of-sequence control rod. Therefore, coupling attempts are allowed regardless of the RWM allowance because of the short time allowed. The note in ITS 3.1.3, Required Action C.2, allows bypassing the RWM. If coupling cannot be restored or the control rod cannot be inserted within 3 hours, ITS 3.1.3, Required Action F, requires going to hot shutdown. Allowing unrestricted coupling attempts within 3 hours is an acceptable less restrictive change.

CTS 3.1.3.6, Action a.1.a), and CTS 4.1.3.6 require verifying recoupling or coupling by observing any indicated response of the nuclear instrumentation. This verification is deleted in the ITS because this is not a positive check that the control rod is coupled. If sufficient friction is not present an uncoupled rod would follow the drive being withdrawn and provide the same neutron indication as a coupled rod. ITS SR 3.1.3.5 requires verification that a control rod does not go to the withdrawn overtravel position. The overtravel feature provides a positive check of coupling integrity since only an uncoupled control rod can go to the overtravel position. Performance of ITS SR 3.1.3.5 provides adequate assurance that the control rod is coupled. This is an acceptable less restrictive change.

CTS 4.1.3.7.b and 4.1.3.7.c require determining that the control rod position indication system is operable during performance of CTS 4.1.3.1.2 (control rod movement tests) and CTS 4.1.3.6.b (control rod coupling verifications). The CTS surveillances for verifying rod position indication operability during other surveillances is deleted. If position indication is not available, ITS SR 3.1.3.2, SR 3.1.3.3, and SR 3.1.3.5 (control rod movement tests and control rod coupling verifications) cannot be satisfied and appropriate actions will be taken for inoperable control rods in accordance with the actions of ITS 3.1.3. As a result, the requirements are adequately addressed for the control rod position indication system by ITS 3.1.3 and associated SR 3.1.3.2, SR 3.1.3.3, and SR 3.1.3.5. This is an acceptable less restrictive change.

CTS LCO 3.1.3.8 delineates the requirements for the control rod drive housing support. The ITS implements the control rod drive housing support in the control rod operability requirements of ITS LCO 3.1.3. ITS LCO 3.1.3 contains the CTS 3.1.3.8 applicability to Operational Conditions 1 and 2. Post-maintenance inspections conducted through plant configuration management control have the same function as the CTS requirement. Work is not normally performed on the CRD housing support at power, and checks on its installation are not made at power, so there is no current requirement to verify CRD housing support installation in power operating conditions. Accordingly, since plant configuration management control ensures proper CRD housing support installation, the deletion of this CTS is acceptable.

CTS 3.1.4.2 contains specifications for the rod sequence control system (RSCS) that the ITS deletes. Deletion of the RSCS is acceptable for the following reasons: (1) the RSCS's function is similar to the RWM's, and the ITS retains the requirements for the RWM, (2) an NRC Safety Evaluation Report (SER) approves eliminating the RSCS while retaining the RWM to provide a backup to the operator for control rod pattern control, and the changes made in the ITS conversion are consistent with the guidelines of the SER (dated December 27, 1987, in support of Amendment 17 of General Electric Topical Report NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel"), (3) ITS LCO 3.3.2.1 requires that another operator or qualified member of the technical staff verify rod moves when the RWM is inoperable, and (4) ITS 3.3.2.1 limits the number of startups without the RWM to one per calendar year and allows the bypassing the RWM only after 12 control rods have been withdrawn. This is an acceptable less restrictive change.

CTS 3.1.6, "Feedwater Temperature," specifies the limitations when lowering feedwater temperature for cycle extension. The ITS conversion moved the requirements to the Core Operating Limits Report (COLR) which is controlled by ITS 5.6.5. The purpose of this allowance is to extend the operating cycle by lowering feedwater temperature for reactivity addition to compensate for the reactivity loss due to fuel depletion. Before reaching end-of-cycle exposure, operation with reduced feedwater temperature is allowed and controlled by plant procedures. This is considered to be acceptable since the short-term effect of the increased subcooling is to more strongly bottom peak the axial power shape allowing a scram to suppress the flux faster. Compensation for the long-term effect of a pronounced bottom burn can be made by rod pattern adjustments and axial flux shape monitoring. After reaching end-of-cycle exposure, final feedwater temperature reduction operation is allowed with reduced feedwater temperatures provided the feedwater temperature is maintained ≥ 355°F, as assumed in the final feedwater temperature reduction transient analyses. CTS 3/4.1.6 allows modification to a limit (feedwater temperature) that is not controlled by the technical specifications. Since the allowance to modify the feedwater temperature limit is not directly applicable to any technical specification, it need not be maintained in the technical specifications. This is an acceptable removal of details not required in TS.

3.1.4 Control Rod Scram Times

CTS 4.1.3.2.c requires testing at least 10% of the control rods on a rotating basis. ITS SR 3.1.4.2 changes this requirement to verify a representative sample as defined by the Bases for SR 3.1.4.2. ITS 3.1.4 and associated SR

3.1.4.2 are adequate to ensure scram time testing is performed. This is an acceptable less restrictive change to the TS.

CTS 3.1.3.4, Action a.2.c, requires performing the scram time surveillances of CTS 4.1.3.2 on a 60-day frequency when operation continues with average scram insertion time(s) greater than the limit. The ITS deletes testing on a 60-day frequency. During normal power operating conditions, more frequent scram testing is not desirable because it is a significant perturbation to steady state operation, involving significant power reductions and requiring abnormal control rod patterns and abnormal control rod drive hydraulic system configurations. Because of the frequent control rod insertion capability testing (SR 3.1.3.2 and SR 3.1.3.3), accumulator operability testing (SR 3.1.5.1), and an operating history demonstrating a high degree of reliability, more frequent scram time testing is not necessary to ensure safe plant operation. This is an acceptable less restrictive change.

3.1.5 Control Rod Scram Accumulators

CTS 3.1.3.5, Action a.2.b, provides details for disarming control rod drives. These details are moved to the Bases for ITS 3.1.3. ITS 3.1.3, Required Actions A.2 and C.3, ensure disarming control rod drives associated with inoperable control rods. This is an acceptable less restrictive requirement.

CTS 4.1.3.5.b requires performing surveillances on pressure and leak detection instrumentation. The scram accumulator leak detectors, pressure detectors, and associated alarm do not necessarily relate directly to accumulator operability, and are removed from the TS. These requirements are moved to the LCS/FSAR. This is an acceptable less restrictive change.

CTS 3.1.3.5, Action a.1.b, requires declaring a control rod inoperable with an inoperable accumulator but allows the control rod to remain withdrawn and not disarmed. ITS 3.1.5, Required Actions A.1 and B.2.1, provide the flexibility to declare a control rod "slow" within certain limitations. At reactor pressures > 900 psig the control rod will scram even without the associated accumulator, although probably not within the required scram times. Therefore, the ITS provides the option to declare a control rod with an inoperable accumulator slow when reactor pressure is acceptable. The ITS 3.1.3 and 3.1.4 actions for a slow control rod, with the restrictions included in the ITS and the ITS actions for slow control rods, are effectively similar to the CTS required actions for a control rod that is inoperable because of an inoperable accumulator. ITS 3.1.5, Required Actions B.2.1, B.2.2, and C.2, will allow 1 hour to declare a control rod, with an inoperable accumulator, inoperable or slow which is a reasonable time to attempt investigating and restoring an inoperable accumulator. ITS 3.1.5, Required Actions B.1 and Condition C, do not allow the 1 hour for a control rod to be declared inoperable or slow with insufficient reactor pressure or charging header pressure to ensure the rods with inoperable accumulators can be scrammed. The ITS allows only 20 minutes to restore charging water pressure if reactor pressure is ≥ 900 psig, and no time if reactor pressure is < 900 psig. When this time expires, the ITS requires immediate shutdown in this case. This less restrictive change is acceptable.

CTS 3.1.3.5, Action a.2, does not specify a time limit for declaring inoperable multiple control rods with inoperable accumulators; therefore, the CTS time limit is assumed to be immediate. The ITS change allows 1 hour before declaring the rod slow or inoperable. The completion times for ITS 3.1.1, Required Actions B.2.1, B.2.2, and C.2, allow a reasonable amount of time for investigating and restoring inoperable accumulator(s). This less restrictive requirement is limited to times when sufficient reactor pressure or charging header pressure exists to ensure that the control rods can be inserted. This is an acceptable less restrictive change.

CTS 3.1.3.5, Action a.2.a), requires immediately verifying at least one control rod drive (CRD) pump is operating or placing the reactor mode switch in the shutdown position. The ITS allows 20 minutes for restoring charging header pressure to > 940 psig when more than one control rod accumulator is inoperable, provided reactor pressure is ≥900 psig. ITS 3.1.5, Required Action B.1, is acceptable with a 20 minute completion time when adequate reactor pressure exists to ensure that the control rods will be inserted. For example, the twenty minutes allows time for restoring a CRD pump and avoids an unnecessary reactor scram if a lost charging pump is the cause of the inoperable accumulators. This is an acceptable less restrictive change.

CTS 4.1.3.5.b.2 requires measuring and recording the time, up to 10 minutes, that the accumulators remain above the pressure alarm setpoint with no CRD pump running. The ITS deletes this surveillance requirement because there is no accident or transient analytical assumption that the control rod scram accumulator check valves maintain accumulator pressure for a specified time period with no CRD pump operating. The reactor must be scrammed per ITS 3.1.5, Required Action D.1, within 20 minutes of two accumulators becoming inoperable if the CRD charging header pressure is not restored to > 940 psig (i.e., no operating CRD pump). Removing the CTS surveillance requirement is an acceptable less restrictive change.

3.1.7 Standby Liquid Control System

The requirement of CTS 4.1.5.d to perform the tests of the SLC system "during shutdown" is moved to the LCS/FSAR and controlled by 10 CFR 50.59. The testing in CTS 4.1.5.d (proposed SR 3.1.7.7 and SR 3.1.7.8) is moved in accordance with the guidance of Generic Letter 91-04. ITS SR 3.1.7.7 and SR 3.1.7.8 adequately ensure the test is performed; therefore, including the details of test performance in the ITS is not necessary. This is an acceptable change.

CTS 4.1.5.d.1, specifies the system flow through an explosive valve. This SR also specifies the method for selecting the replacement explosive valve. These requirements are moved to the ITS Bases. ITS SR 3.1.7.8 adequately ensures system flow test performance; therefore, including the details of test performance and selecting the replacement valve in the ITS is not necessary. This is an acceptable change.

CTS 4.1.5.d.1 specifies performing the SLC system flow test by pumping demineralized water into the reactor vessel and CTS 4.1.5.d.3 specifies verifying the storage tank and pump suction piping unblocked by pumping from the storage tank to the test tank and flushing the piping with demineralized water. These requirements are moved to the Bases. ITS SR 3.1.7.7 and SR 3.1.7.8 ensure test performance; therefore, including the details of test performance in the ITS is not necessary. This is an acceptable change.

CTS 4.1.5.d.2 requires demonstrating the operability of the SLC pump relief valve. The IST program, required by 10 CFR 50.55a, provides requirements for the testing of all ASME Code Class 1, 2, and 3 valves in accordance with Section XI of the ASME Code. This test is moved to the IST program, prescribed in ITS 5.5.6, which is an acceptable change.

CTS Figure 3.1.5-2 shows the setpoint for the low and high storage tank level alarms. These details of system design are moved to the FSAR. ITS LCO 3.1.7 and the definition of operability adequately define the requirements that the SLC system must meet to be operable. This is an acceptable change.

The frequencies for performing CTS Surveillances 4.1.5.d.1 and 4.1.5.d.3 (proposed ITS SRs 3.1.7.7 and 3.1.7.8) have been extended from 18 months to 24 months to facilitate the extension of the WNP-2 maintenance cycle from 12 months to 24 months. Currently, WNP-2 shuts down for an annual maintenance and refueling outage each spring (when there is an abundance of hydroelectric power in the Northwest), and most of the current surveillances that are required to be performed on an 18-month interval are performed annually because they must be performed while the plant is shut down. This has resulted in increased testing, with a resultant increase in cost and personnel exposure but with no comparable increase in reliability or safety. This change is being proposed to support limiting the amount of surveillance testing that must be performed each maintenance and refueling outage. The proposed change will allow the frequency of these surveillances to be extended from the current 18 months (i.e., a maximum of 22.5 months, including the allowable grace period specified in CTS 4.0.2 and proposed SR 3.0.2) to 24 months (i.e., a maximum of 30 months, including the allowable grace period specified in CTS 4.0.2 and proposed ITS SR 3.0.2). This proposed change was evaluated in accordance with the guidance provided in NRC Generic Letter 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991. Reviews of historical maintenance and surveillance data have shown that these tests normally pass their surveillances at the current frequency and that extending the frequency will have little effect on safety. In addition, the proposed 24-month surveillances, if performed at the maximum interval allowed by proposed SR 3.0.2 (30 months), do not invalidate any assumptions in the plant licensing basis. This change is acceptable.

The CTS 3.1.5 applicability specifies Operational Condition 5*. The asterisk refers to a footnote: "With any control rod withdrawn. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2." Also, CTS 3.1.5, Action b requires taking specific action for an inoperable SLC System in OPERATIONAL CONDITION 5*. The ITS deletes applicability to Mode 5 because

ITS LCO 3.1.1, "Shutdown Margin," ensures that the reactor remains subcritical with one control rod withdrawn. In Mode 5 only one control rod can be withdrawn. This is an acceptable less restrictive change.

CTS 4.1.5.a.2 verifies the available volume of sodium pentaborate is within. the CTS Figure 3.1.5-2 limits. The ITS includes the value for the low level limit in ITS SR 3.1.7.1 and deletes Figure 3.1.5-2, including the high level limit in CTS, as indicated by the high level alarm. The high level alarm is based on preventing an overflow of the storage tank; therefore, it is not necessary to ensure SLC operability. In addition, ITS SR 3.1.7.4 verifies the concentration of boron in solution, which along with ITS SR 3.1.7.1 verifies SLC storage tank operability. This is an acceptable less restrictive change.

CTS 4.1.5.b.2 requires determining that the available weight of sodium pentaborate is ≥ 5500 lbs. The ITS deletes this requirement because the minimum volume allowed by ITS SR 3.1.7.1 and the minimum concentration allowed by ITS SR 3.1.7.4 ensure 5536 lb of available sodium pentaborate in the SLC storage tank. Therefore, these surveillances ensure that sodium pentaborate in the SLC storage tank is ≥ 5500 lb, and including the CTS 4.1.5.b.2 requirement would be redundant. This is an acceptable change.

CTS 4.1.5.d.4 verifies the operability of the storage tank heaters by verifying the expected temperature rise of the solution after energizing the heaters. The ITS deletes this SR because ITS SR 3.1.7.2 verifies the capability of the heaters to maintain the sodium pentaborate solution within limits. This is an acceptable change.

3.1.8 SDV Vent and Drain Valves

The frequency for performing CTS Surveillance 4.1.3.1.4.a (proposed ITS SR 3.1.8.3) has been extended from 18 months to 24 months to facilitate the extension of the WNP-2 maintenance cycle from 12 months to 24 months. Currently, WNP-2 shuts down for an annual maintenance and refueling outage each spring (when there is an abundance of hydroelectric power in the Northwest), and most of the current surveillances that are required to be performed on an 18-month interval are performed annually because they must be performed while the plant is shut down. This has resulted in increased testing, with a resultant increase in cost and personnel exposure but with no comparable increase in reliability or safety. This change is being proposed to support limiting the amount of surveillance testing that must be performed each maintenance and refueling outage. The proposed change will allow the frequency of these surveillances to be extended from the current 18 months (i.e., a maximum of 22.5 months, including the allowable grace period specified in CTS 4.0.2 and proposed SR 3.0.2) to 24 months (i.e., a maximum of 30 months, including the allowable grace period specified in CTS 4.0.2 and proposed ITS SR 3.0.2). This proposed change was evaluated in accordance with the guidance provided in NRC Generic Letter 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991. Reviews of historical maintenance and surveillance data have shown that these tests normally pass their surveillances at the current frequency and that extending the frequency will have little effect on safety.

In addition, the proposed 24-month surveillances, if performed at the maximum interval allowed by proposed SR 3.0.2 (30 months), do not invalidate any assumptions in the plant licensing basis. This change is acceptable.

CTS 4.1.3.1.4.b requires performing a channel functional test of the scram discharge volume (SDV) scram and control rod block level instrumentation following a scram from a pressurized condition. The ITS deletes the scram instrumentation portion of the SR because of historical evidence, maintenance and SR data, that the SR has never failed because of a scram from pressurized conditions. Additionally, ITS 3.3.1.1 (CTS 3.3.1) requires performing a channel functional test of the scram instrumentation on a 92-day frequency. Specifications for control rod block instrumentation associated with the SDV are found in plant procedures. This is an acceptable less restrictive change.

Conclusion

These less restrictive requirements are acceptable because they will not affect the safe operation of the plant. As discussed in the evaluation format section and summarized in Table 1, to the extent that these less restrictive requirements involve the relocation of matters from the CTS to licensee-controlled documents, they are not otherwise required to be in the TS under 10 CFR 50.36 and they are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to public health and safety. The TS requirements that remain are consistent with current licensing practices, operating experience, and plant accident and transient analyses, and provide reasonable assurance that public health and safety will be protected.

c. More Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 3.1, proposed a number of requirements more restrictive than those in the CTS. The following changes are the most significant.

3.1.1 Shutdown Margin

An additional surveillance frequency for SDM verification is added to require an SDM test be performed before each in-vessel fuel movement during the fuel loading sequence in ITS SR 3.1.1.1. This additional verification ensures the required SDM is maintained during fuel loading. Since SDM is assumed in several refueling mode analyses in the FSAR, assurance that intermediate fuel loading patterns have adequate SDM is necessary. This change imposes a requirement where none is explicitly provided in the CTS. This will have no adverse effect on plant safety. This is an acceptable more restrictive change.

3.1.3 Control Rod Operability

ITS 3.1.3, Condition D, incorporates the requirements for compliance with the banked position withdrawal system (BPWS) into TS and is applicable to all control rods whether withdrawn or inserted. CTS 3.1.3.1, Actions a and b,

requires action only for withdrawn control rods; therefore this is a more restrictive change and enhances safety. The change is acceptable.

CTS 3.1.3, Action a, addresses a single stuck rod, but a LCO 3.0.3 entry is required for more than one stuck rod. This requirement is now explicitly stated as ITS 3.1.3, Required Action B. Because the ITS allows separate entry for each stuck control rod, the actions of ITS 3.1.3, Condition A, are performed in addition to the actions of Condition B. ITS 3.1.3, Required Action A.2, now requires disarming the control rod drive of all stuck CRs, and therefore is a more restrictive requirement. The additional action protects the control rod drive if there is a scram during the shutdown. It has no adverse effect on plant safety, but it does provide additional protection for plant equipment. This is an acceptable more restrictive change.

ITS 3.1.3, Required Action C.2, which requires insertion of inoperable control rods, is more restrictive than the CTS, which allows the inoperable control rods to remain withdrawn if the ability to insert the rod is verified. Inserting all inoperable control rods will enhance plant safety; therefore, this is an acceptable more restrictive change.

ITS 3.1.3, Action E, incorporates the inoperable-control-rod separation criteria of the BPWS analysis into the TS. Currently, the only separation criterion in technical specifications is to ensure all inoperable control rods are separated by two operable control rods. The current BPWS analysis also requires that no more than three inoperable control rods be in any one rod group. Therefore, Action E has been added to provide appropriate actions when this occurs. This is a more restrictive TS requirement which will have no adverse effect on plant safety. This change is an acceptable more restrictive change.

ITS SR 3.1.3.2 and SR 3.1.3.3 demonstrate control rod operability by inserting the control rods. This is more restrictive than CTS 4.1.3.1.2, which allows demonstrating operability by moving the control rods in either direction. Inserting the control rod better proves the ability of the control rod to perform its scram function. This change will enhance plant safety and is an acceptable more restrictive change.

ITS SR 3.1.3.4 measures the time from full-out to Position 5 for scram insertion times. This is more restrictive than measuring the time from full out to Position 6. The change, which conforms to the STS, will have no adverse effect on plant safety and is an acceptable more restrictive change.

ITS 3.1.3, Required Action C.2, requires inserting and disarming inoperable control rods. CTS 3.1.3.7, Action a.3.a)1) requires declaring rods without position indication inoperable. CTS 3.1.3.1, Action b.1.b), allows the control rods with failed indication to remain withdrawn if power is below the low power setpoint of the rod sequence control system (RSCS). By declaring control rods without rod position indication inoperable, the ITS imposes a more restrictive requirement to insert and disarm the control rods. This is an acceptable more restrictive change.

3.1.4 Control Rod Scram Times

CTS 4.1.3.2 requires testing control rods with reactor coolant pressure ≥ 950 psig. The pressure at which the control rods must be tested has been changed in the ITS to ≥ 800 psig. This pressure corresponds to the limiting pressure for CRD scram testing: the maximum scram times experienced below this pressure cannot be utilized to verify scram times at rated pressure because of the competing effects of the scram forces from the reactor vessel pressure and the accumulator pressure. The scram time requirements, applied at 800 psig, are related to transients analyzed at rated reactor pressure (assumed to be > 950 psig). Scram times demonstrated at 800 psig are conservative with respect to the conditions assumed in the design basis transient and accident analyses. This change is therefore an acceptable more restrictive change, and is consistent with NUREG-1433 (the applicable STS for this system).

The allowance of CTS 3.1.3.4, Action a.1, to declare slow control rods operable if an analysis determines that the required scram reactivity remains for the "slow four" control rod group is deleted. This has a positive effect on plant safety because no longer can there exist an unlimited number of slow two-by-two arrays, provided the safety analysis is reperformed each time. The requirement for shutdown based on the number of "slow" and inoperable control rods remains the same in the ITS as in the CTS. This is an acceptable more restrictive change.

3.1.5 Control Rod Scram Accumulators

ITS 3.1.5, Condition C, imposes additional restrictions on operation if "One or more control rod scram accumulators inoperable with reactor steam dome pressure < 900 psig." With reactor pressure < 900 psig and charging header pressure < 940, the ITS requires verifying that all control rods associated with inoperable accumulators are fully inserted. If this requirement cannot be met, ITS 3.1.3, Required Action D.1, requires immediately placing the mode switch to shutdown. Also, when reactor pressure is < 900 psig and there is a single control rod with an inoperable accumulator, ITS 3.1.3, Required Action C.2, imposes a more restrictive time limit of 1 hour for declaring the rod inoperable, for which the CTS previously allowed up to 8 hours. These additional ITS action requirements are conservative when both reactor pressure and charging header pressure are below values that ensure that the control rods can be inserted. This has a positive effect on plant safety and is an acceptable more restrictive change.

3.1.6 Rod Pattern Control

A new specification, ITS 3.1.6, is added which requires compliance with the banked position withdrawal sequence (BPWS). This addition to the CTS incorporates current plant requirements for compliance with the BPWS. Adding this change increases BPWS requirements and has a positive effect on plant safety and is an acceptable more restrictive change.

3.1.7 Standby Liquid Control System

ITS SR 3.1.7.8 adds a frequency of once within 24 hours of restoring solution temperature within the limits of Figure 3.1.7-1. This SR verifies the heat-traced piping between the storage tank and the pump suction valve is heat traced and remains unblocked from the precipitation of the boron in the heat traced piping. The CTS have no comparable statement of frequency, and this addition is therefore a more restrictive requirement. This is an acceptable addition.

Conclusion

These more restrictive requirements strengthen the CTS and are therefore acceptable.

d. Deviations From the STS

The licensee, in electing to adopt the specifications of STS Section 3.16, "Reactivity Control Systems," proposed a number of deviations. The following deviations are the most significant.

3.1.3 Control Rod Operability
3.1.6 Rod Pattern Control

The WNP-2 rod pattern control design, like the BWR/4 design, has a rod worth minimizer (RWM), instead of a rod action control system. Therefore, the notes have been modified to reflect the RWM design, and are consistent with NUREG-1433 (the applicable STS for this system).

3.1.4 Control Rod Scram Times
3.1.5 Control Rod Scram Accumulators

STS 3.1.4 and the associated actions have been modified to be consistent with the current WNP-2 licensing basis for scram times. The concept of a "slow" control rod has been retained. The current WNP-2 licensing basis scram times are based on two-by-two arrays, and allow a total combination of eight slow and inoperable control rods. The actions of both STS 3.1.4 (Required Action A.2) and STS 3.1.3 (Required Action C.1) have been modified to ensure no more than eight control rods are either slow or inoperable and the actions of STS 3.1.4 (Required Action A.3) have been modified to ensure the separation criteria are met, as in the current requirements. The note in STS Table 3.1.4-1 has been deleted since it has been replaced with Required Action A.1. The current action of STS 3.1.4 and the notes to Table 3.1.4-1, as well as the Required Actions of Condition C to STS 3.1.3, have been renumbered to reflect these changes. In addition, STS 3.1.5, Required Actions A.1 and B.2.1, and associated notes have been modified to reflect the scram time methodology (i.e., based on a two-by-two array).

As currently written, STS SR 3.1.4.1 requires each control rod to be tested if any fuel movement in the reactor pressure vessel (RPV) occurs. This effectively means that even if only one bundle is moved (e.g., replacing a leaking fuel bundle midcycle), all the control rods must be tested. Although a generic change to the Bases attempted to ensure that only rods affected be tested (BWR-18, comments C.2 and C.14, which were adopted in NUREG-1434, Revision 1), the current wording of the STS Bases does not preclude misinterpretation of this requirement. The actual SR was not modified by the generic change and continues to require each rod to be tested. In addition, there are other SRs (SR 3.1.4.2 and SR 3.1.4.3) that require only the affected control rods to be tested, adding more confusion. Therefore, it is proposed that SR 3.1.4.1 be modified to require each rod to be tested following a refueling and that SR 3.1.4.4 be modified to require each affected rod to be tested following fuel movement within the RPV. This is consistent with the actual intent of the SRs.

ITS Table 3.1.4-1 has been modified since the WNP-2 safety analysis, like NUREG-1433 (the applicable STS for this system), assumes only one set of scram times at one pressure.

3.1.7 Standby Liquid Control System

The WNP-2 design is such that heat tracing is only applied up to the pump suction valve of each SLC pump. Therefore, ITS SR 3.1.7.8 has been changed to reflect this design.

3.1.8 SDV Vent and Drain Valves

The current WNP-2 licensing basis for CTS 3.1.3.1 allows continued operation when one valve is inoperable in one or more SDV vent or drain lines, provided the associated line or lines are isolated. Therefore, ITS 3.1.8, Required Action A.1 has been modified to reflect this allowance. In addition, the note to Required Action B.1 has been moved so that it now applies to both Action A and Action B, consistent with current licensing basis.

Conclusion

These deviations from STS Section 3.1 are consistent with the WNP-2 design and with existing requirements and commitments, or with proposed changes which have been found acceptable, as discussed elsewhere in this evaluation. Therefore, these differences are acceptable.

e. Relocated Specifications

None.

3.2 Power Distribution Limits

The licensee has proposed administrative and technical changes to the CTS to bring them into conformance with 10 CFR 50.36 and with STS Section 3.2, "Power Distribution Limits." The changes are discussed in the order of the specifications in STS Section 3.2. The corresponding ITS Section 3.2 specification titles are listed in italics before each discussion.

a. Administrative Changes

The CTS specifications that have been retained in ITS Section 3.2 have been reworded to conform to the STS presentation. The following changes are the most significant.

3.2.4 APRM Gain and Setpoint

CTS 3.2.2 includes the APRM Flow Biased Simulated Thermal Power—Upscale scram trip setpoint and allowable value. The allowable value is moved to ITS LCO 3.3.1.1, Function 2.b. The ITS deletes the trip setpoint as evaluated in subsection 3.3.b related to ITS 3.3.1.1. The CTS allowable value is reduced by the value of "T," the ratio of the fraction of rated thermal power to the maximum fraction of limiting power density (FRTP/MFLPD). The ITS retains this reduction to the APRM allowable value by using the definition of "T" as ITS LCO 3.2.4.b. This is an acceptable change.

Conclusion

These changes to the CTS are administrative. They clarify, reorganize, or reformat the current specifications. None of these changes alters the limits in the current requirements. Accordingly, these changes are acceptable.

b. Less Restrictive Changes

The licensee, in electing to implement the specifications of STS Section 3.2, proposed a number of requirements less restrictive than those in the CTS. The following changes are the most significant.

3.2.1 Average Planar Linear Heat Generation Rate

The CTS 3.2.1 action requires initiating corrective action within 15 minutes. The ITS replaces this completion time with a discussion of "prompt action" in the Bases for ITS 3.2.1. The 2-hour completion time allows the operator to evaluate and complete appropriate actions in a timely manner. Also, the probability of a DBA occurring simultaneously with the APLHGR out of specification is low during the 2-hour completion time. This is an acceptable less restrictive change.

CTS 4.2.1.b specifies a frequency of within 12 hours after completing a 15% power increase. ITS SR 3.2.1.1 changes this frequency to 12 hours after reaching or exceeding 25% RTP and incorporates the CTS 4.2.1.a frequency of at least once per 24 hours. Performing the SR once during initial startup is sufficient because of the large inherent margin to operating limits. After the initial verification, performing the SR every 24 hours is sufficient to identify trends that may lead to noncompliance. This is an acceptable less restrictive change.

CTS SR 4.2.1.c verifies the average planar linear heat generation rate (APLHGR) is within limits initially and on a 12-hour interval when operating with a limiting control rod pattern for APLHGR. Since a limiting control rod pattern is currently defined as operating on a power distribution limit such as APLHGR, the condition is extremely unlikely and the surveillance would seldom be required. Additionally, the initial surveillance is superfluous since a limiting control rod pattern is not evident until the surveillance is performed. Therefore, the ITS deletes this requirement.

3.2:2 Minimum Critical Power Ratio

The CTS 3.2.3 action requires initiating corrective action within 15 minutes. The ITS replaces this completion time with a discussion of "prompt action" in the Bases for ITS 3.2.2. The 2-hour completion time allows the operator to evaluate and complete appropriate actions in a timely manner. Also, the probability of a DBA occurring simultaneously with the MCPR out of specification is low during the 2-hour completion time. This is an acceptable less restrictive change.

CTS 4.2.3.1.b specifies performing the surveillance within 12 hours after completing a 15% power increase. ITS SR 3.2.2.1 changes this frequency to 12 hours after reaching or exceeding 25% RTP and incorporates the CTS 4.2.3.1.a frequency of at least once per 24 hours. Performing the SR once during initial startup is sufficient because at low power levels there is a large inherent margin to operating limits. After the initial verification, performing the SR every 24 hours is sufficient to identify trends that may lead to MCPR outside limits. This is an acceptable less restrictive change.

CTS 4.2.3.1.c, verifies MCPR is within limits initially and on a 12-hour interval when operating with a limiting control rod pattern for MCPR. Since a limiting control rod pattern is currently defined as operating on a power distribution limit such as MCPR, the condition is extremely unlikely and the surveillance would seldom be required. Additionally, the initial surveillance is superfluous since a limiting control rod pattern is not evident until the surveillance is performed. Therefore, the ITS deletes this requirement.

3.2.3 Linear Heat Generation Rate

The CTS 3/4.2.4 action requires initiating corrective action within 15 minutes. The ITS replaces this completion time with a discussion of "prompt action" in the Bases for ITS 3.2.3. The 2-hour completion time allows the operator to evaluate and complete appropriate actions in a timely manner. Also, the probability of a DBA occurring simultaneously with the linear heat generation rate (LHGR) out of specification is low during the 2-hour completion time. This is an acceptable less restrictive change.

CTS 4.2.4.b specifies a frequency of within 12 hours of completing a 15% power increase. ITS SR 3.2.3.1 changes this frequency to 12 hours after reaching or exceeding 25% RTP and incorporates CTS SR 4.2.4.a frequency of at least once per 24 hours. Performing the SR once during initial startup is sufficient because of a large inherent margin to operating limits.. After the initial verification, performing the SR every 24 hours is sufficient to identify trends that may lead to noncompliance. This is an acceptable less restrictive change.

CTS 4.2.4.c, verifies LHGR is within limits initially and on a 12 hour interval when operating with a limiting control rod pattern for LHGR. Since a limiting control rod pattern is currently defined as operating on a power distribution limit such as LHGR, the condition is extremely unlikely and the surveillance would seldom be required. Additionally, the initial surveillance is superfluous since a limiting control rod pattern is not evident until the surveillance is performed. Therefore, the ITS deletes this requirement.

3.2.4 APRM Gain and Setpoint

The CTS 3.2.2 action requires initiating corrective action within 15 minutes. The ITS replaces this completion time with a discussion of "prompt action" in the Bases for ITS 3.2.2. The 6-hour completion time allows the operator to evaluate and complete appropriate actions in a timely manner. Also, the probability of a transient or DBA occurring simultaneously with the LCO not met is low during the 6-hour completion time. This is an acceptable less restrictive change.

A footnote to the CTS 3/4.2.2 Action includes details about the APRM gain adjustment methodology. These details are moved to the LCS/FSAR which are controlled by 10 CFR 50.59. ITS LCO 3.2.4.c and associated SR 3.2.4.2.b ensure that required APRM gains adjustments occur. This is an acceptable change.

The CTS 3.2.2 action requires adjusting APRMs within 2 hours. ITS 3.2.4 imposes a completion time of 6 hours to comply with the LCO. Adjusting the average power range monitors (APRMs) is one method for complying with the LCO. The 6-hour completion time allows the technician sufficient time to perform adjustments, but still requires completing appropriate actions in a timely manner. Also, the probability of a transient or DBA occurring simultaneously with the LCO not met is low during the 6-hour completion time. This is an acceptable less restrictive change.

CTS 4.2.2.b specifies a frequency of within 12 hours after completing a 15% power increase. ITS SR 3.2.4.1 changes this frequency to 12 hours after reaching or exceeding 25% RTP and incorporates the CTS 4.2.1.a frequency of at least once per 24 hours. Performing the surveillance once during initial startup is sufficient because of the large inherent margin to operating limits. After the initial verification, performing the surveillance every 24 hours is sufficient to identify trends that may lead to the APRM gain and setpoint outside limits. This is an acceptable less restrictive change.

CTS 3.2.2 includes requirements for the APRM flow biased neutron flux—upscale rod block. These requirements are moved to the LCS which is controlled by 10 CFR 50.59. No design basis accident or transient takes credit for APRM rod block signals. Also, NEDO-31466 notes that loss of the APRM rod block signals is not a significant risk contributor to core damage frequency and offsite release. This is an acceptable change.

Conclusion

These less restrictive requirements are acceptable because they will not affect the safe operation of the plant. As discussed in the evaluation format section and summarized in Table 1, to the extent that these less restrictive requirements involve the relocation of matters from the CTS to licensee-controlled documents, they are not otherwise required to be in the TS under 10 CFR 50.36 and they are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to public health and safety. The TS requirements that remain are consistent with current licensing practices, operating experience, and plant accident and transient analyses, and provide reasonable assurance that public health and safety will be protected.

c. More Restrictive Changes

None.

d. Deviations from the STS

The licensee, in electing to adopt the specifications of STS Section 3.2, proposed a number of deviations. The following deviations are the most significant.

3.2.4 APRM Gain and Setpoint

The APRM "setpoint" is not normally specified in the COLR since it is not cycle specific. Therefore, references to the COLR have been deleted and the proper modification to the "setpoint" has been provided. This modification (i.e., ≥ the ratio of FRTP to MFLPD) is consistent with words currently provided in the Bases. In addition, the word "setpoint" has been replaced with the name of the actual APRM function that is being modified, consistent with similar statements in other places in the ITS. Also, the acronym FRTP has been defined in LCO 3.2.4.a, since it is now used in LCO 3.2.4.b. SR 3.2.4.2 has been modified to reflect the changes made to the LCO.

Conclusion

These deviations from STS Section 3.2 are consistent with the WNP-2 design and with existing requirements and commitments, or with proposed changes found acceptable, as discussed elsewhere in this evaluation. Therefore, these differences are acceptable.

e. Relocated Specifications

None.

3.3 Instrumentation

The licensee has proposed administrative and technical changes to the CTS to bring them into conformance with 10 CFR 50.36 and with STS Section 3.3,

"Instrumentation." The changes are discussed in the order of the specifications in STS Section 3.3. The corresponding ITS Section 3.3 specification titles are listed in italics before each discussion.

a. **Administrative Changes**

The CTS specifications that have been retained in ITS Section 3.3 have been reworded to conform to the STS presentation. The following changes are the most significant.

3.3.1.1 Reactor Protection System (RPS) Instrumentation

CTS 3.3.1 provides the LCO requirements for the reactor protection system (RPS) instrumentation. ITS 3.3.1.1 provides these requirements with more explicit instructions for Actions application for TS compliance. In conjunction with the ITS Section 1.3, "Completion Times," the action note ("Separate Condition entry is allowed for each....") and the wording of ITS Actions B and C ("One or more functions") provide direction consistent with the intent of the CTS action for an inoperable RPS instrumentation channel. This change provides more explicit requirements, conforms to the STS format, and is therefore acceptable.

CTS 3.3.1, Action a, provides an exception to the applicability of the provisions of CTS 3.0.4 for RPS instrumentation. ITS 3.0.4 provides requirements that allow operation consistent with CTS 3.0.4; therefore the specific CTS allowance is deleted. This change is acceptable based on ITS 3.0.4 instructions and conformance to the STS format.

CTS Table 3.3.1-1, Table Notation (e), provides an applicability exception for the Reactor Vessel Steam Dome Pressure-High function in Mode 2 "when the reactor vessel head is removed per Specification 3.10.1." ITS Table 3.3.1.1-1 does not provide this Mode 2 applicability exception because the applicable condition during which the reactor vessel head is unbolted and removed in Mode 2 has been deleted in the ITS. Therefore, the note is not required. The change is an acceptable administrative change that is in conformance with the STS.

CTS Table 3.3.1-1 Table Notation (f), provides an applicability exception for the Primary Containment Pressure—High function in Mode 2 "not required operable when PRIMARY CONTAINMENT INTEGRITY is not required." ITS Table 3.3.1.1-1 does not provide this Mode 2 applicability exception because the applicable condition during which primary containment operability is not required in Mode 2 has been deleted in the ITS. Therefore, the note is not required and the change is an acceptable administrative change that is in conformance with the STS.

The CTS Table 3.3.1-1 minimum-channels-operable-per-trip-system requirement for the Main Steam Isolation Valve—Closure function is four. The ITS Table 3.3.1.1-1 requirement is eight. Each of the eight main steam isolation valves (MSIVs) transmit a closure signal to each RPS trip system. All channels are required operable to ensure a scram with the worst single failure.

Accordingly, the ITS Table 3.3.1.1-1 minimum-channels-operable requirement is eight. Since this involves no design change but is a difference of nomenclature, this change is an acceptable administrative change.

The CTS Table 3.3.1-1 minimum-operable-channels-per-trip-system requirement for the reactor mode switch shutdown position is one. ITS Table 3.3.1.1-1 requires two. The reactor mode switch transmits signals to all four logic channels of the RPS trip logic. Therefore, all four channels of this function are required operable to ensure a manual scram with the worst single failure. The ITS Table 3.3.1.1-1 minimum-channels-per-trip-system requirement is appropriately specified as two. Since this involves no design change, but is a difference of nomenclature, this acceptable change is administrative and conforms to the format of the STS.

CTS Table 3.3.1-1, Actions 3 and 9, specified for several RPS functions in Mode 5, requires, in part, the suspension of all operations involving core alterations and the insertion of all insertable control rods within 1 hour. ITS 3.3.1.1, Required Action H.1, replaces these CTS actions. ITS Required Action H.1 requires immediate initiation of action to fully insert all insertable control rods in core cells containing one or more fuel assemblies. The CTS action to "insert...within 1 hour" is revised to "initiate action to insert...Immediately." The CTS requirement appears to provide an hour in which control rods may be left withdrawn, even if insertable. Also, if the control rod cannot be inserted in 1 hour, the CTS action appears to result in the requirement for an LER. The intent of the required action is more appropriately presented in ITS Required Action H.1. ITS Required Action H.1 imposes a significantly more conservative requirement to insert the control rods and maintain them inserted. This change eliminates the apparent provision to withdraw or leave withdrawn one or more control rods for up to 1 hour. As an enhanced presentation of the current intent, the change is an acceptable administrative change.

CTS Table 3.3.1-1, Table Notation (h), modifies the Mode 5 applicability of RPS Function 8, Scram Discharge Volume Water Level—High. CTS Table Notation (h) requires Function 8 applicability in Mode 5 only when any control rod is withdrawn (not applicable to control rods removed per CTS 3.9.10.1 or 3.9.10.2). ITS Table 3.3.1.1-1, Footnote (a), replaces CTS Table Notation (h). ITS Footnote (a) requires RPS Function 8 applicability in Mode 5 only with any control rod withdrawn from a core cell containing one or more fuel assemblies. This applicability is consistent with CTS Table Notation (h), but is clarified by removing the cross-references to the special operations LCOs. The change is administrative. The clarification of RPS function applicability and the removal of the special operations LCO cross-references are supported by the STS and are acceptable.

CTS Table 4.3.1.1-1, the Function 1a and 2a channel functional test surveillance frequency of "S/U," and Note c, "within 24 hours prior to startup, if not performed within the previous 7 days," are deleted in ITS Table 3.3.1.1-1. The S/U and Note c requirements are redundant to ITS SR 3.0.4, which requires the surveillance to be successfully performed before entry into the applicable operational conditions. Once the applicable conditions are entered, the surveillance frequency requires the periodic testing to ensure operability requirements are met. Therefore, the removal of this S/U channel functional test requirement is administrative and acceptable.

CTS Table 4.3.1.1-1, Table Notation (f), requires the low power range monitors (LPRMs) to be calibrated "at least once per 1000 Effective Full Power Hours (EFPH)." ITS SR 3.3.1.1.7 changes the LPRM calibration frequency to "1130 MWD/T average core exposure." Both frequencies consider operating experience with changes in LPRM sensitivity and represent roughly the same time interval, approximately 6 weeks. The change allows a more convenient tracking parameter since MWD/T is commonly calculated and recorded by the core monitoring software system. This administrative change is consistent with the STS format and is acceptable.

CTS Table 4.3.1.1-1 requires performing a daily channel check on the Average Power Range Monitor (APRM) Flow Biased Simulated Thermal Power—Upscale function. Table Notation (g) of this daily surveillance test requires the core flow to be measured and compared with the rated core flow. The flow comparison requirements are not retained in ITS Table 3.3.1.1-1. Table 4.3.1.1-1 instrumentation testing duplicates requirements in CTS jet pump SRs 4.4.1.2.1 and 4.4.1.2.2, which are retained in ITS as SR 3.4.2.1. Additionally, Note (g) establishes separate limits that are less stringent than the ITS jet pump surveillance SR 3.4.2.1, which requires the recirculation loop (jet pump) flow to be within 10% of the established pattern. Since this SR is redundant to CTS 4.4.1.2.1 and 4.4.1.2.2, the change is administrative and is acceptable.

CTS Table 2.2.1-1, which contains RPS limiting safety system settings, and RPS CTS 3/4.3.1 have been combined into ITS Table 3.3.1.1-1. This change conforms to the format of the STS and is acceptable.

CTS Table 2.2.1-1, Function 9, Turbine Stop Valve—Closure, and Function 10, Turbine Control Valve Fast Closure, Trip Oil Pressure—Low, are respectively renamed in ITS Table 3.3.1.1-1 as follows: Function 8, Turbine Throttle Valve—Closure, and Function 9, Turbine Governor Valve Fast Closure, Trip Oil Pressure—Low. Renaming the RPS functions to match the WNP-2 design is an acceptable administrative change.

3.3.1.2 - Source Range Monitors

In Modes 3 and 4, with one or more of the required source range monitor channels inoperable, CTS 3.3.7.6, Action b, requires that a "verification" within 1 hour that all insertable control rods are inserted into the core. In Modes 3 and 4 a single control rod may be withdrawn under the provisions of special operations LCO 3.10.3 and LCO 3.10.4, or some unanticipated event may have resulted in uninserted control rods. Therefore, rather than an action to "verify...inserted," a more definitive action statement is required. ITS 3.3.1.2, Required Action D, provides the instruction to "Fully insert all insertable control rods" within 1 hour when one or more required source range monitor channels are inoperable in Modes 3 and 4. This provides the same intent in the event all insertable control rods are found to be inserted, but

also requires that any uninserted control rods are to be inserted. This administrative change clarifies the LCO without changing the technical requirement.

CTS 4.3.7.6 lists the applicable surveillance requirements for the source range monitoring instrumentation. ITS 3.3.1.2 includes all of the source range instrumentation surveillance requirements in a more organized table format, consistent with the STS. These format changes include a note on proper application of the surveillance requirements for TS compliance. This change represents a presentation preference only and is an acceptable administrative change.

CTS 3.9.2 requires an immediate halt to all operations involving core alterations and the insertion of all insertable control rods when in Mode 5 with source range monitor (SRM) operability requirements not met. ITS 3.3.1.2 adds the control rod insertion requirement by including the phrase "except for control rod insertion," since, as currently required, insertion of all insertable control rods results in a core alteration (i.e., control rod movement). The intent of the action to suspend core alterations was to stop any additional core alterations. This change retains the intent of the CTS and is therefore administrative, and is acceptable.

3.3.2.1 Control Rod Block Instrumentation

CTS Table 3.3.6-1 and CTS Table 4.3.6-1 Table Notation * modifies the Mode 1 applicability of the rod block monitor functions to "With THERMAL POWER ≥ 30% of RATED THERMAL POWER". ITS Table 3.3.2.1-1, Footnote (a), provides this ≥30% RTP applicability requirement and adds "and no peripheral control rod selected" to the applicability of the RBM functions. The RBM functions are not required when a peripheral control rod is selected, because the RBM design includes an automatic bypass when any peripheral rod is selected, as stated in CTS Table 3.3.6-1 Notation (a). Therefore, the ITS applicability is changed to reflect this plant design. The change is administrative and acceptable.

CTS 3.1.4, Action (b), allows exclusion of CTS 3.0.4 applicability for the rod worth minimizer. The ITS does not include this specific allowance, because ITS 3.0.4 is written to provide the allowance. The change is consistent with the STS format and is acceptable.

3.3.2.2 Feedwater and Main Turbine High Water Level Trip Instrumentation

CTS Table 3.3.9-1 presents the feedwater and main turbine high water level trip instrumentation channel applicability in a table format. ITS 3.3.2.2 provides the applicability for these functions with the LCO in the STS format rather than the CTS table format. This administrative change is a presentation preference consistent with the STS format and is acceptable.

CTS SR 4.3.9.2 requires performance of a logic system functional test and "simulated automatic operation" of all channels at least once per 18 months. The "simulated automatic operation" procedural detail is not included in the ITS requirements. The required automatic operation for this system is to close the feedwater and main turbine valves, and closure of these valves is specifically included in the ITS logic system functional test, SR 3.3.2.2.4. This is a administrative change which conforms to the STS format and is acceptable.

3.3.3.1 Post Accident Monitoring (PAM) Instrumentation

CTS 3.3.7.5 and CTS Table 3.3.7.5-1 provides the LCO requirements for the accident monitoring instrumentation. ITS 3.3.3.1 provides these requirements with more explicit remedial actions for TS compliance. In conjunction with ITS Section 1.3, "Completion Times," the action note ("Separate Condition entry is allowed for each....") and the wording of ITS Actions A and C ("one or more functions") provide direction consistent with the CTS action for an inoperable post-accident monitoring channel. This administrative change provides more explicit TS requirements, conforms to the STS format and is therefore acceptable.

CTS Table 3.3.7.5-1 includes Instrument 2, Reactor Vessel Water Level"; Function 3, Suppression Chamber Water Level; and Function 5, Drywell Pressure. These accident monitoring instrumentation functions include instruments with different ranges to satisfy Regulatory Guide 1.97 requirements.

For the reactor vessel water level instrumentation, the different ranges are -150 inches to +60 inches and -110 inches to -310 inches. However, the CTS require two channels of reactor vessel water level, with two instrument transmitters for each channel, one for each range. In the ITS format, these instruments are shown in Table 3.3.3.1-1 as Functions 2.a and 2.b, with two required channels for each instrument function.

For the suppression pool water level instrumentation, the different ranges are -25 inches to +25 inches and 2 feet to 52 feet. However, the CTS require channels of suppression pool water level, with two instrument transmitters for each channel, one for each range. In the ITS format, these instruments are shown in Table 3.3.3.1-1 as Functions 3.a and 3.b with two required channels for each instrument function.

For the drywell pressure instrumentation, the different ranges are -5 psig to +3 psig; 0 psig to 25 psig; and 0 psig to 180 psig. However, the CTS require two channels of drywell pressure, with three instrument transmitters for each channel, one for each range. In the ITS format, these instruments are shown in Table 3.3.3.1-1 as Function 5.a, Function 5.b, and Function 5.c with two required channels for each instrument function. These administrative changes provide more explicit TS requirements, conform to the STS format, and are therefore acceptable.

CTS Table 3.3.7.5-1, minimum-channels-operable column provides information to determine which CTS 3.3.7.5 actions to perform (i.e., if the minimum-channels-operable requirement of one is not met in a two-channel design, two channels are inoperable). ITS Table 3.3.3.1-1 changes the required channels presentation to conform to the STS format. The ITS format provides explicit conditions and required actions for the number of inoperable required channels. This acceptable administrative change represents a presentation preference only.

In CTS Table 3.3.7.5-1, Function 27, Primary Containment Valve Position, the minimum-channels-operable requirement is "1/valve." ITS Table 3.3.3.1-1 renames this function "Function 7, PCIV Position" (where PCIV stands for primary containment isolation valve), changes the operable-channels requirement to "2 per penetration flow path," and adds Note (a). Note (a) provides an exception to the "2 per penetration flow path" requirement. When a PCIV is isolated by closing and deactivating an automatic valve, closing a manual valve, installing a blind flange, or securing flow through a check valve, the PCIV indication is not required for that valve. Implementing this exception to CTS requirements is a common industry practice. The ITS note clarifies the PCIV position indication requirements in a format consistent with the STS. This change provides more explicit TS requirements, conforms to the STS format, and is therefore acceptable.

CTS 3.3.7.5, Action 81.b, provides instructions and technical requirements for submitting a special report to the Commission per CTS 6.9.1, when operability requirements are not met for the primary containment gross radiation monitoring instrumentation. ITS 3.3.3.1, Condition F, provides the requirement to initiate action according to ITS 5.6.6, where the instructions and technical requirements for special reporting in the STS format. Any technical changes to the PAM reporting requirement are discussed under ITS 5.6.6. This administrative change provides equivalent TS requirements, conforms to the STS format, and is therefore acceptable.

3.3.3.2 Remote Shutdown System

CTS 3.3.7.4 and CTS Table 3.3.7.4-1 provide the LCO and surveillance requirements for the remote shutdown monitoring instrumentation. ITS 3.3.3.2 provides these requirements with more explicit instructions for TS compliance. In conjunction with the ITS Section 1.3, "Completion Times," the actions note ("Separate Condition entry is allowed for each....") and the wording for ITS Action A ("one or more required functions") provide direction consistent with the intent of the CTS action for an inoperable remote shutdown system instrument channel. This administrative change provides more explicit TS requirements, conforms to the STS format, and is therefore acceptable.

3.3.4.1 End of Cycle Recirculation Pump Trip (EOC-RPT) Instrumentation

CTS 3.3.4.2 applicability requires the end-of-cycle recirculation pump trip (EOC-RPT) instrumentation to be operable in Operational Condition 1 when thermal power is ≥ 30% of rated thermal power. ITS 3.3.4.1 deletes the Mode 1 applicability because, when thermal power is ≥ 30% of RTP, the unit will always be in Mode 1. Therefore, it is unnecessary to state Mode 1 in the applicability. This administrative change provides more explicit TS requirements, conforms to the STS format, and is therefore acceptable.

CTS 3.3.4.2 and CTS Table 3.3.4.2-1 provide the LCO requirements for the EOC-RPT instrumentation. ITS 3.3.4.2 provides these requirements with more explicit instructions for TS compliance. In conjunction with the ITS Section 1.3, "Completion Times," the action note ("Separate Condition entry is allowed for each....") and the wording of ITS Action A ("one or more required channels") provide direction consistent with the intent of the CTS action for an inoperable EOC-RPT instrument channel. This administrative change provides more explicit TS requirements, conforms to the STS format, and is therefore acceptable.

Footnote * to the CTS 3.3.4.2 actions states the provisions of CTS 3.0.4 are not applicable. This allowance is provided in ITS 3.0.4. Therefore, this footnote has been deleted in the ITS. This administrative change conforms to the STS format and is acceptable.

CTS 4.3.4.2.2 requires performance of a logic system functional test and "simulated automatic operation" of all channels at least once per 18 months. The only automatic operation required for this system is to open the pump trip breakers. Opening the pump trip breakers is specifically included in the ITS SR 3.3.4.1.4 logic system functional test. This change conforms to the STS format and preserves the CTS requirements and is therefore an acceptable administrative change.

3.3.4.2 ATWS Recirculation Pump Trip Instrumentation

CTS 3.3.4.1 and CTS Tables 3.3.4.1-1 provide the LCO requirements for the anticipated transient without scram recirculation pump trip (ATWS-RPT) instrumentation. ITS 3.3.4.2 provides these requirements with more explicit instructions for compliance. In conjunction with ITS Section 1.3, "Completion Times," the action note ("Separate Condition entry is allowed for each....") and the wording of ITS Action A ("one or more required channels") provide direction consistent with the intent of the CTS action for an inoperable ATWS-RPT instrument channel. This administrative change provides more explicit TS requirements, conforms to the STS format, and is therefore acceptable.

CTS 4.3.4.1.2 requires performance of a logic system functional test on all ATWS-RPT channels, including the "simulated automatic operation" of each channel every 18 months. The "simulated automatic operation" is normally conducted with the system functional test. However, for the ATWS-RPT system automatic operation is only required to be demonstrated for opening the pump trip breakers. The opening of these breakers is specifically identified in the ITS logic system functional test, SR 3.3.4.2.4. This change conforms to the STS format and is acceptable.

3.3.5.1 Emergency Core Cooling (ECCS) Instrumentation

CTS 3.3.3 provides the LCO requirements for the emergency core cooling system (ECCS) actuation instrumentation. ITS 3.3.5.1 provides these requirements with more explicit instructions for TS compliance. In conjunction with the ITS Section 1.3, "Completion Times," the action note ("Separate Condition entry is allowed for each....") and the wording of ITS Action A ("One or more functions") provide direction consistent with the intent of the CTS action for an inoperable ECCS actuation instrumentation channel. This administrative change provides more explicit requirements, conforms to the STS format, and is therefore acceptable.

CTS Table 3.3.3-1 column title, "Minimum operable Channels Per Trip System," is replaced in ITS Table 3.3.5.1-1 with "Required Channels Per Function." Therefore, the number of channels listed in the ITS column represents the number of instrument channels required for each ECCS actuation function. This change conforms to the STS format and is an acceptable administrative change.

CTS Table 3.3.3-1 requires one manual initiation channel per trip system for each ECCS actuation function, and two manual initiation channels for each automatic depressurization system (ADS) trip system. ITS Table 3.3.5.1-1 requires two channels per manual ECCS actuation function and four channels per manual ADS actuation function. Each of the ECCS manual-initiation-switch and push-button channels provides two inputs to the initiation logic. Each of the ADS manual-initiation-switch and push-button channels (two switch and push buttons per ADS trip system) provide two inputs to the ADS initiation logic. Therefore, with each input considered a channel, the required-channels-per-function requirement in ITS Table 3.3.5.1-1 is specified as two for CTS ECCS trip functions A.1.h, B.1.f, and C.1.g, and four for current trip functions A.2.f and B.2.e. This is a change in nomenclature and does not involve design differences. This change conforms to the STS format and is an acceptable administrative change.

CTS 3.3.3 LCO requirements for loss of power ECCS instrumentation trip functions are moved to ITS LCO 3.3.8.1, "Loss of Power Instrumentation" in conformance with the STS format. This is an acceptable administrative change.

In CTS Table 3.3.3-1, Actions 30, 32, and 35 for specified emergency core cooling system (ECCS) actuation instrumentation functions require declaring the associated system (i.e., trip system or division) inoperable when the number of inoperable channels results in a loss of trip function capability or when the time allowed to restore inoperable channels to operable status has elapsed. The requirement to declare the associated trip system or division inoperable is not used in ITS.3.3.5.1 Required Actions C, F and G. As an alternative, ITS 3.3.5.1, Required Action C.2 only permits a repair action; whereas Required Actions F.2 and G.2, require that the inoperable channels be placed in the tripped condition after the specified time to restore the channels to operable status. If Required Actions C, F or G are not performed within the allowed time, ITS 3.3.5.1, Required Action H.1, requires declaring the supported features inoperable. The STS format separates the action requirements for repairing inoperable channels from the requirements to declare systems inoperable. In the STS format, the actions for single channel inoperabilities may require that entire systems or subsystems be declared inoperable. The changes are acceptable administrative changes.

CTS Table 3.3.3-1, Action 36, requires placing an inoperable Condensate Storage Tank Level—Low, or a Suppression Pool Water Level—High channel in the tripped condition or declaring the HPCS system inoperable. An additional alternative to the CTS requirement is ITS 3.3.5.1, Required Action D.2.2, which allows aligning the HPCS pump suction to the suppression pool in lieu of tripping the channel. Aligning the HPCS pump suction to the suppression pool results in the same condition as tripping the channel because tripping one channel aligns suction to the suppression pool. This change conforms to the STS format and is an acceptable administrative change.

Footnote * to CTS Table 3.3.3-1 action statements allows exclusion of CTS 3.0.4 applicability for some ECCS actuation instrumentation actions. This footnote is not included in the ITS, because ITS 3.0.4 is written to provide the allowance. The change is consistent with the STS format and is acceptable.

The CTS 4.3.3.1 channel functional test requirement for all ECCS manual initiation functions is excluded in the ITS. Performance of ITS SR 3.3.5.1.6, logic system functional test (LSFT), satisfies the requirements of the CTS 4.3.3.1 channel functional test. The manual initiation functions have no adjustable setpoints, but are based on switch manipulation. Therefore, the LSFT, which tests all required contacts, provides the proper testing of these channels. The change is consistent with the STS format, and is acceptable.

CTS 3.3.3, Action c, requires placing the plant in the hot shutdown condition if an ADS trip system is not restored to operable status within a required period of time. ITS 3.3.5.1, Required Action H, replaces this requirement with a requirement to declare the ADS valves inoperable. The ADS valve specification, ITS 3.5.1, requires a plant shutdown when ADS valves are declared inoperable. Therefore, in lieu of repeating the shutdown actions, ITS 3.3.5.1, Required Action H, requires declaring ADS valves inoperable. This satisfies the intent of the CTS requirement. The change is consistent with the STS format and is acceptable.

3.3.5.2 RCIC System Instrumentation

CTS 3/4.3.5 provides the LCO requirements for the reactor core isolation cooling (RCIC) actuation instrumentation. ITS 3.3.5.2 provides these requirements with more explicit instructions for TS compliance. In conjunction with ITS Section 1.3, "Completion Times," the action note ("Separate Condition entry is allowed for each....") and the wording of ITS Action A ("One or more functions") provide direction consistent with the intent of the CTS action for an inoperable RCIC actuation instrumentation channel. This administrative change provides more explicit requirements, conforms to the STS format, and is acceptable.

CTS Table 3.3.5-1 presents RCIC actuation instrumentation operability requirements in a "per trip system" format. ITS Table 3.3.5.2-1 presents operability requirements for this instrumentation in a "per Function" format, consistent with the STS. Thus, the number of required channels for CTS Table 3.3.5.2-1, Function a, Reactor Vessel Water Level—Low Low, Level 2, is changed to four in ITS Table 3.3.5.2-1, since there are two trip systems with two channels per trip system. CTS Table 3.3.5-1, Functions b, c, and d, are not

affected since there is only one trip system for each of these three functions. This change is consistent with the STS format and is acceptable.

CTS Table 3.3.5-1 requires one manual RCIC initiation channel per trip system operable. The RCIC manual initiation switch and push button introduce into the RCIC system initiation logic a signal that is redundant to the automatic protective instrumentation and provides manual initiation capability. There are one switch and push button (two channels) for the RCIC system. The ITS format considers each input to initiation logic a channel; therefore, ITS Table 3.3.5.2-1 presents the operability requirement as two channels of manual RCIC initiation per function. The change is not a design change but a result of the different STS format. This change is therefore acceptable.

CTS Table 3.3.5-1, Action 52, requires placing at least one inoperable RCIC actuation function channel in the tripped condition when more than one channel per function is inoperable. ITS 3.3.5.2 adds Required Action D.2.2 to allow the RCIC pump suction to be aligned to the suppression pool in lieu of tripping the channel, if a Condensate Storage Tank Water Level—Low channel is inoperable. Allowing the RCIC pump suction to be aligned to the suppression pool results in the same condition as tripping a channel, since tripping one channel aligns suction to the suppression pool. This change is consistent with the STS format and is acceptable.

CTS Table 4.3.5.1-1 requires that a channel functional test be performed on the RCIC manual initiation function on a "refueling" surveillance test interval. The channel functional test requirement is deleted in the ITS, since it is redundant to the logic system functional test required by ITS SR 3.3.5.2.4. The manual initiation function has no adjustable setpoints, but is based on switch manipulation. Therefore, the logic system functional test, which tests all required switch contacts, provides proper testing of the manual initiation function. This change is consistent with the STS and is acceptable.

3.3.6.1 Primary Containment Isolation Instrumentation

CTS 3.3.2 provides the LCO requirements for the primary containment isolation actuation instrumentation. ITS 3.3.6.1 provides these requirements with more explicit instructions for TS compliance. In conjunction with the ITS Section 1.3, "Completion Times," the action note ("Separate Condition entry is allowed for each....") and the wording for ITS Action B ("One or more automatic functions") provide direction consistent with the intent of the CTS action for an inoperable isolation instrumentation channel. This administrative change provides more explicit requirements, conforms to the STS format, and is therefore acceptable.

CTS 3.3.2 action includes an exception to the applicability of CTS 3.0.4. ITS 3.3.6.1 deletes this exception because ITS 3.0.4 contains the provision to allow continued operation once a channel is placed in the tripped condition. This change is consistent with the STS format and is acceptable.

CTS Surveillance Requirement 4.3.2.3, verifying the isolation system response time, requires each test to include at least one channel per trip system so that all channels are tested at least once every N times 18 months. This statement is deleted in ITS SR 3.3.6.1.7, since it is covered by the definition of Staggered Test Basis in ITS 1.1, "Definitions." This change is consistent with the STS, and is therefore acceptable.

CTS Table 3.3.2-1 provides operability requirements for the manual initiation switch on a "per trip system" basis. Each manual-initiation-switch and push-button channel (except for the RCIC system) provides two inputs to the isolation logic. Therefore, in the ITS format each input is a channel; thus the operability requirements for these functions in ITS Table 3.3.6.1-1 are more appropriately specified as two for CTS Table 3.3.2-1, Trip functions 1.g (Group 2 and 5 logic), 3.j, and 5.f, and four for Trip Function 1.g (Group 1 logic). This is a change in nomenclature and does not involve design differences. This change conforms to the STS format and is an acceptable administrative change.

CTS 3/4.3.2 includes requirements for both primary and secondary containment isolation functions. ITS 3.3.6.2 contains those CTS 3/4.3.2 requirements specified for secondary containment isolation functions. Any technical changes to secondary containment isolation functions are discussed in the changes for ITS 3.3.6.2. The isolation instrumentation functions common to primary and secondary containment isolations are listed in both ITS 3.3.6.1 and ITS 3.3.6.2. These are changes in nomenclature and do not affect design. These changes conform to the STS format and are acceptable.

In CTS Table 3.3.2-1, the minimum-operable-channels-per-trip-system requirement for Trip Function 3.f, SLCS Initiation, is "N.A.". ITS Table 3.3.6.1-1 changes this requirement to "2." Each of the standby liquid control system (SLCS) pumps provides input into the reactor water cleanup (RWCU) isolation logic. Therefore, the number of channels is changed to correspond to the actual number of input channels from the SLCS. The CTS and ITS requirements would result in declaring the RWCU function inoperable if either input was inoperable. The change to the required number of channels reflects the current design, is consistent with the STS format and is acceptable.

CTS Table 3.3.2-1, Actions 22, 24, and 26, require declaring the affected systems inoperable when inoperable isolation actuation instrument channels render a system inoperable. ITS 3.3.6.1 does not include the requirement to "declare the affected system inoperable" because cross-references to other TS are generally removed from the ITS. The change is consistent with the STS format and is acceptable.

CTS Table 3.3.2-1, Function 3.i, lists Room 409 as a RWCU Line Routing Area. The room number is changed from 409 to 509 in ITS Table 3.3.6.1-1 only to correct a typographical error in the CTS. The change is consistent with the STS format and is acceptable.

CTS Table 4.3.2.1-1 requires a channel functional test for Manual Initiation Functions 1.g, 2.d, 3.j, 4.i, and 5.g and SLCS Initiation Function 3.f. These channel functional test requirements are deleted in the ITS, since they are redundant to the logic system functional test of ITS SR 3.3.6.1.6. The manual initiation and SLCS initiation channels have no adjustable setpoints, but require switch manipulation to verify operability. ITS SR 3.3.6.1.6 tests switch movement and switch contact and provides proper testing of channels previously tested by the channel functional test. Therefore, this deletion is an acceptable administrative change.

3.3.6.2 Secondary Containment Isolation Instrumentation

CTS 3.3.2 provides the LCO requirements for the secondary containment isolation actuation Instrumentation. ITS 3.3.6.2 provides these requirements with more explicit instructions for TS compliance. In conjunction with ITS Section 1.3, "Completion Times," the action note ("Separate Condition entry is allowed for each....") and the wording of ITS Action B ("One or more automatic functions") provide direction consistent with the intent of the CTS action for an inoperable isolation instrumentation channel. This administrative change provides more explicit requirements, conforms to the STS format, and is acceptable.

The CTS 3.3.2 actions include an exception to the applicability of CTS 3.0.4. The exception is deleted in ITS 3.3.6.2 because ITS 3.0.4 allows continued operation once a channel is placed in the tripped condition. This change is consistent with the STS format and is acceptable.

CTS Table 3.3.2-1, Action 24, requires a plant shutdown when a manual secondary containment isolation initiation function is not restored to operable status within 8 hours, unless the affected system isolation valves are closed within the next hour and the system is not declared inoperable. The requirement to shut down the plant is not included in ITS 3.3.6.2. The shutdown requirement is not necessary since the required actions to close the affected valves or to declare the secondary containment isolation valve inoperable are sufficient. In addition, if the valves are not closed but declared inoperable, ITS 3.6.4.2 provides appropriate shutdown actions consistent with the CTS Action 24 shutdown requirement. Therefore, deleting the shutdown requirement is an acceptable administrative change.

CTS Table 3.3.2-1, Action 25, requires establishing secondary containment integrity with the standby gas treatment (SGT) system operating within 1 hour. ITS 3.3.6.2, Required Actions C.1.1 and C.2.1, replaces the use of the defined term "secondary containment integrity" with the instruction "isolate the associated penetration flow path" and clarifies the need to start the associated SGT subsystem(s). Each of the individual CTS requirements is specifically addressed by ITS 3.3.6.2, Required Actions C.1.1 and C.2.1. The change is consistent with the STS and is acceptable.

CTS Table 4.3.2.1-1 requires a channel functional test for the secondary containment isolation manual initiation function. This channel functional test requirement is deleted in the ITS, since it is redundant to the ITS

SR 3.3.6.2.4 logic system functional test. The manual initiation channels use switches and have no adjustable setpoints. ITS SR 3.3.6.2.4 tests all required contacts and provides proper testing of channels previously tested by the CTS channel functional test. Therefore, this deletion is acceptable.

CTS 4.6.5.3.d.2 requires verifying that the Standby Gas Treatment System filter train starts and isolation dampers open on manual initiation from the main control room and on a simulated automatic initiation signal. This requirement is split into two surveillances in the ITS. Most of the surveillance is performed as ITS SR 3.3.6.2.4, a logic system functional test (LSFT), which verifies that each initiation signal functions properly. The actual system functional test is performed in ITS SR 3.6.4.3. These requirements ensure that the entire system is properly tested. This is an administrative change and is acceptable.

3.3.7.1 Control Room Emergency Filtration

CTS 3.3.7 provides the LCO requirements for the radiation monitoring instrumentation. ITS 3.3.7.1 provides these requirements and additional control room emergency filtration (CREF) function requirements with explicit instructions for TS compliance. In conjunction with ITS Section 1.3, "Completion Times," the action note ("Separate Condition entry is allowed for each....") and the wording of ITS Action E provide direction consistent with the intent of the CTS action for an inoperable radiation monitoring instrumentation channel. This administrative change provides more explicit requirements, conforms to the STS format, and is acceptable.

CTS 3.3.7.1, Action c, excludes applicability of CTS 3.0.3 and 3.0.4 for the radiation monitoring channel operability requirements. A note to ITS 3.3.7.1, Condition E, maintains the exclusion of CTS 3.0.4 applicability in the ITS. ITS 3.3.7.1 conditions and required actions cover all potential conditions for inoperable equipment in the system; accordingly, a TS statement that Specification 3.0.3 is not applicable is unnecessary. This omission only changes the way the TS requirements are presented and is acceptable.

CTS 4.7.2.e.2, requires verifying that each CREF pressurization mode actuation test signal initiates an automatic switchover to the pressurization mode of operation. The actuation instrumentation portion of the SR is included in the ITS LSFT SR (3.3.7.1.4). The LSFT verifies that each signal functions properly. The actual system functional testing in CTS 4.7.2.e.2 is moved to ITS SR 3.7.3.3. This will ensure that the entire system is tested with the proper overlap. Moving the actuation instrumentation surveillance testing to ITS 3.3.7.1 is consistent with the STS format and is acceptable.

3.3.8.1 Loss of Power (LOP) Instrumentation

CTS 3.3.3 deals with emergency core cooling system actuation instrumentation, portions of which include the loss-of-power functions. ITS 3.3.8.1 deals exclusively with loss-of-power instrumentation and incorporates the loss of power functions from CTS 3.3.3. The ITS LCO requires the instruments listed

in ITS Table 3.3.8.1-1 to be operable. The table includes all appropriate functions. This change reorganizes CTS requirements and is acceptable.

The CTS 3.3.3 provides the LCO requirements for loss of power (LOP) instrumentation. ITS 3.3.8.1 provides these requirements with more explicit instructions for TS compliance. In conjunction with the ITS Section 1.3, "Completion Times," the action note ("Separate Condition entry is allowed for each....") and the wording of ITS Action A ("One or more automatic functions") provide direction consistent with the intent of the CTS action for an inoperable LOP instrumentation channel. This administrative change provides more explicit requirements, conforms to the STS format, and is therefore acceptable.

CTS 4.3.3.3 requires that at least once per 18 months the response time of each ECCS trip function is demonstrated to be within the limit; however, CTS Table 3.3.3-3 has no response time requirements for loss-of-power instrumentation. ITS Table 3.3.8.1-1 has no response time testing requirements because Amendment 139 deleted this requirement from CTS Table 3.3.3-3. This change is consistent with the approved licensing basis for WNP-2 and is acceptable.

CTS Table 3.3.3-1, Action 37, directs taking the action "required by Specification 3.8.1.1 or 3.8.1.2, as appropriate." ITS Required Action B.1 requires the associated diesel generator to be declared inoperable if the inoperable channel is not tripped in 1 hour, but the ITS format does not provide cross-references to the diesel TS. Removal of the CTS reference to another technical specification is acceptable.

CTS Table 3.3.3-1, Action 38, Footnote *, states that the provisions of CTS 3.0.4 are not applicable when an inoperable loss-of-power instrument channel is placed in trip within 1 hour. The ITS 3.3.8.1 action does not include this footnote as a requirement, since the ITS LCO 3.0.4 action allows operation to continue once a channel is in the tripped condition. Therefore, omitting this footnote is acceptable.

3.3.8.2 RPS Electric Power Monitoring

CTS 3.8.4.4, Action a and Action b, require operators to "restore the inoperable power monitoring channel to operable status" and "restore at least one electric power monitoring channel to OPERABLE status," respectively. The format of ITS 3.3.8.2 actions follows the format of the STS in omitting restore-to-operable-status options because it is always acceptable to exit a required action by restoring equipment to within the LCO limits. Omitting this action is an editorial change to conform to the STS format and is acceptable.

ITS 3.3.8.2, Action C, requires a reactor shutdown if the required actions are not complete. This action is not part of the CTS; however, CTS Action 3.0.3 is functionally equivalent to the ITS action. CTS 3.0.3 allows 1 hour to commence a shutdown, in addition to the time allowed by the ITS to achieve

Mode 3 (12 hours) and Mode 4 (36 hours). Thus, this change to the STS format results in essentially the same requirements and is acceptable.

Conclusion

These changes to the CTS are administrative. They clarify, reorganize, or reformat the current specifications. None of these changes alters the limits in the current requirements. Accordingly, these changes are acceptable.

b. Less Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 3.3, "Instrumentation," proposed a number of requirements less restrictive than those in the CTS. Several of these changes affected more than one specification and so were submitted as generic changes. The most significant of these generic changes are discussed first without reference to ITS specification titles.

Surveillance Frequency Extensions

The proposed TS modifications will extend the nominal frequencies for performing the following surveillance tests for certain safety system instruments channels from the current 18 months to a nominal refueling interval of 24 months, not to exceed 30 months. ITS specifications affected are 3.3.1.1, 3.3.2.2, 3.3.3.1, 3.3.3.2, 3.3.4.1, 3.3.4.2, 3.3.5.1, 3.3.5.2, 3.3.6.1, 3.3.6.2, and 3.3.7.1.

1. Logic System Functional Tests:

   CTS 4.3.1.2/ITS SR 3.3.1.1.14
   CTS 4.3.9.2/ITS SR 3.3.2.2.4
   CTS 4.3.4.2.2/ITS SR 3.3.4.1.4
   CTS 4.3.4.1.2/ITS SR 3.3.4.2.4
   CTS 4.3.3.2/ITS SRs 3.3.5.1.6 & 3.3.8.1.4
   CTS 4.3.5.2/ITS SR 3.3.5.2.4
   CTS 4.3.2.2/ITS SR 3.3.6.1.6 & SR 3.3.6.2.4

2. Response Time Tests (RTT):

   CTS 4.3.1.2/ITS SRs 3.3.1.1.15
   CTS 4.3.4.2.3/ITS SR and 3.3.4.1.5
   CTS 4.3.2.3/ITS SR 3.3.6.1.7
   CTS 4.3.3.3/ITS SR 3.3.5.1.7

3. Channel Functional Test:

   CTS 4.3.1.1/ITS SR 3.3.1.1.13 For Functional Unit 11, "Reactor Mode Switch Shutdown Position"

4. Channel Calibration:

CTS 4.3.9.1/ITS SR 3.3.2.2.3, For Trip Function 1a, "Reactor Vessel Water Level-High, Level 8".

CTS 4.3.7.4/ITS SR 3.3.3.2.3, For instrument, "Suppression Chamber Water Level"

CTS 4.3.7.5/ITS 3.3.3.1.4, Instrument 3, "Suppression Chamber Water Level and Instrument 28, "Primary Containment Gross Radiation Monitors."

CTS 4.3.2.1-1/ITS SR 3.3.6.1.5, For Trip Function 3.a, "Reactor Water Cleanup System Isolation, Differential Flow-high."

CTS 4.3.2.1-1/ITS SR 3.3.6.1.5, For Trip Function 3.k, "Reactor Water Cleanup System Isolation Blowdown Flow-high."

In its submittal, the licensee stated that the above proposed modifications are based on guidance provided by the staff in Generic Letter (GL) 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991. GL 91-04 provides guidance on how licensees should evaluate the effects of a 24 month refueling interval on the safety of the plant and perform an evaluation to support a conclusion that the effect of such an extension on safety is insignificant. The licensee has performed a detailed engineering review of all instrument loops affected to establish the basis for a 30 month (24 months + 25% as permitted by TS) calibration frequency. Using the WNP-2 procedures, the analyses were performed to verify that the surveillance interval extensions have only a very small effect on plant safety and would not invalidate any assumptions in the plant licensing basis. In GL-91-04, the NRC staff discussed seven issues pertaining to increasing the interval of instrument surveillance and identified specific actions that licensees should take to address each of these issues. The staff evaluated the licensee's submittal to verify that the licensee has addressed these issues and provided an acceptable basis for increasing the calibration interval for instruments that are used to perform safety functions, and concluded that the licensee's response was acceptable.

For the proposed extension in channel calibration frequency, the licensee stated that the scope of this request is limited to those instruments that are calibrated during the annual refueling outage. The current plant operating conditions have WNP-2 shutdown each spring for an annual maintenance and refueling outage. Consequently, most of the current surveillances that are required to be performed on an 18 month interval are performed annually since they are performed while the plant is shutdown. The licensee stated that this has resulted in increased testing with a resultant increase in cost and personel radiation exposure. The proposed extension in frequency of channel calibration is intended to limit the amount of testing that must be performed during each maintenance and refueling outage. The setpoint drift analysis performed by the licensee shows that the impact of the extended frequency of the channel calibration on the reliability of the instrumentation to perform its safety function is very small and that the instrument setpoint drift is not a significant factor. This is acceptable.

Revised Surveillance Test Intervals (STIs) and Allowed Outage Times (AOTs)

In accordance with staff-approved topical reports, the licensee has proposed to revise STIs and AOTs for instrument channels as follows:

1. Proposed change: CTS 3.3.1/ITS 3.3.1.1, "Reactor Protection System Instrumentation. Extend AOT for placing the inoperable channel or trip system in trip condition from 1 hour to 12 hours for the first trip system and to 6 hours for the second trip system.

2. Proposed change: CTS 3.3.9/ITS 3.3.2.2. Add the following note to the surveillance requirements: "When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated conditions and required actions may be delayed for up to 6 hours provided feedwater and main turbine high water level trip capability is maintained."

3. Proposed change: CTS 4.3.9.1 Table 4.3.9.1-1/ITS 3.3.2.2, Trip Function 1.a, Reactor Vessel Water Level—High, Level 8. Revise frequency for channel calibration from M (monthly) to 92 days.

4. Proposed change: CTS 3.3.4.2/ITS 3.3.4.1 "End-of-Cycle Recirculation Pump Trip System Instrumentation." Revise Actions b and c.1 to extend AOT for placing an inoperable channel into tripped condition from 1 hour to 72 hours.

5. Proposed change: CTS Table 3.3.4.2-1/ITS 3.3.4.1. Revise Footnote (a), "A trip system may be placed in an inoperable status for up to 2 hours for required surveillance provided that the other trip system is OPERABLE," to read: that a trip system may be placed in an inoperable status for up to 6 hours for required surveillance provided that the other trip system is operable.

6. Proposed change: CTS 4.3.4.2.2/ITS SR 3.3.4.1.1, Trip Functions 1, Turbine Throttle Valve—Closure, and 2, Turbine Governor Valve—Fast Closure. Revise frequency for channel functional test from 31 days to 92 days.

7. Proposed changes: CTS Table 3.3.4.1-1/ITS 3.3.4.2. Revise Footnote (a), "One channel may be placed in an inoperable status for up to 2 hours for required surveillance provided the other channel is OPERABLE," to read: that One channel may be placed in an inoperable status for up to 6 hours for required surveillance provided the other channel is operable.

8. CTS Table 4.3.4.1-1/ITS SR 3.3.4.2.2. Revise channel functional test frequency from 31 days to once in 92 days.

9. Proposed changes: CTS Table 3.3.3-1/ITS 3.3.5-1. ECCS instrumentation. Revise Footnote (a) to include Trip Functions C.1.c, Reactor Vessel Water Level—High, Level 8; C.1.f, HPCS System Flow Rate—Low (Minimum Flow); and C.1.g, Manual Initiation, for which a channel may be placed in an inoperable status for 6 hours during periods of required surveillance without placing the trip system in the tripped condition.

10. Proposed change: CTS Table 3.3.5.1/ITS 3.3.5.2-1, "Reactor Core Isolation Cooling System Actuation Instrumentation." Add the words "for Functions 1 and 3 only" after word "provided" in Footnote (a), to read, "A channel may be placed in an inoperable status for up to 6 hours for required surveillance without placing the trip system in the tripped condition provided for Functions 1 and 3 only at least one other operable channel in the same trip system is monitoring that parameter."

11. Proposed change: CTS Table 3.3.2-1/ITS 3.3.6.1-1, ("Isolation Actuation Instrumentation"/"Primary Containment Isolation Instrumentation") and CTS Table 3.3.2-1/ITS 3.3.6.2-1 ("Isolation Actuation Instrumentation"/ "Secondary Containment Isolation Instrumentation"). Revise part of Note (a), "provided at least one other OPERABLE channel in the same trip system is monitoring that parameter," to read: "provided the associated function maintains isolation capability" (Note 2 to SR) .

12. Proposed change: CTS 4.3.7.1-1/ITS Table 3.3.7.1-1 (CREF Instrumentation surveillance requirements). Revise frequency for channel functional test from 31 days to 92 days for Instrumentation #1, Main Control Room Ventilation Radiation Monitor.

The licensee in its submittal has stated that the proposed changes described in items 1 through 12, were evaluated in reliability analyses NEDC-30851-P-A, March 1988, NEDC-30936-P-A, December 1988, NEDC-30851-P-A, Supplement 2, March 1989, NEDC-31677-P-A, June 1989, GENE-770-06-1-A, December 1992, and GENE-770-06-2-A, December 1992, and were approved by the staff. These analyses indicated that the proposed STIs and AOTs maintain an acceptable level of risk. The licensee stated that the logic design of the affected instrumentation is bounded by that analyzed in the reliability analyses and the conclusions of the analyses are applicable to the WNP-2 design. The Safety Evaluation Reports (SERs) for these analyses stipulated certain conditions which must be met by the licensee before approved results of the analyses could be applied to plant-specific systems. In Revision B to this submittal the licensee stated that the requirements of the NRC SER accepting the generic reliability analyses have been met by WNP-2. On this basis, these changes are acceptable to the staff.

The following changes are made within the conversion to the STS:

1. <u>Proposed change</u>: Numerous instrumentation allowable values have been modified with respect to the existing Allowable Value. (ITS 3.3.1.1, 3.3.4.2, 3.3.5.1, 3.3.5.2, 3.3.6.1, 3.3.6.2, 3.3.7.1, 3.3.8.1, and 3.3.8.2)

Evaluation: This change revises the TS setpoints for instrumentation to reflect revised allowable values consistent with NUREG-1434. This is a result of the licensee's in-house evaluation of all safety system setpoints. In revision B to its submittal, the licensee stated that methodologies used for the setpoint evaluations were consistent with the guidance of Instrument Society of America (ISA) Standard, SP67.04-1982, "Setpoints for Nuclear Safety-Related Instruments used in Nuclear Power Plants," which was approved for use by the staff in Regulatory Guide 1.105, Revision 2, February 1986. The licensee's evaluation indicated that the proposed allowable values ensure that the design or safety analysis limits will not be exceeded in the event of any design basis transient or accident condition. This is acceptable.

For some functional units (ITS 3.3.5.1), the licensee has proposed to replace the existing allowable value by a range of values (i.e., from.... value to ...value) instead of a single value. The staff believes that the allowable value for any controlled process variable is a single unique value, which is calculated per approved calculation methodologies. From the submittal it was not clear how a range for allowable values could be established by using the standard setpoint methodology. To address this concern, the licensee provided an explanation of how a range of allowable values is established from its setpoint methodology. In addition, the licensee provided new wording for the BASES Section of the ITS as follows.

> "Some Functions have both an upper and a lower limit that must be evaluated. The Allowable Values and the trip setpoint are derived from both the upper and lower analytic limits using the methodology described above so that the trip setpoint is bounded by both the upper and lower Allowable Values."

The above proposed additional wording describes how a trip setpoint (SP) and an allowable value (AV) for any controlled process variable is calculated and provide an adequate explanation for an apparent range of AVs. However, from the above paragraph it appears that the SP will be located somewhere between the two values of AVs and not at its calculated nominal position. The staff believes that in this situation, there can be a larger margin between the calculated AV and the actual SP. Therefore, an instrument whose characteristics are degraded, could be found within calibration in consecutive surveillances without encroaching its AV. As a result, it may not be possible to accurately assess instrument operability even though the setpoint calculation assumptions continue to be met during routine instrument surveillances. Thus, although the licensee's revised TS bases resolved the AV-range related concern, it introduced an operability assessment concern.

To resolve the staff's concern relating to accurate assessment of instrument operability, the licensee stated that in some cases where the margin between actual SP and its AV is larger than that was assumed in the setpoint calculation, the in-house calibration surveillance procedures will verify that the instrument operability is accurately

assessed and, that the setpoint calculation assumptions continue to be met during routine instrument surveillances. This explanation resolved the staff's operability concerns.

By letter dated July 9, 1996, the licensee provided the following revised version of the BASES Section of the ITS:

> "Some Functions have both an upper and lower analytic limit that must be evaluated. The Allowable Values and the trip setpoint are derived from both an upper and lower analytic limit using the methodology described above. Due to the upper and lower analytic limits, Allowable Values of these Functions appear to incorporate a range. However, the upper and lower Allowable Values are unique, with each Allowable value associated with one unique analytic limit and trip setpoint."

The revised bases paragraph provides the necessary information on the AV and is acceptable to the staff.

Additional Functions 1.c, 1.d, 2.c and 2.d were added to the ITS 3.3.5.1 to provide low pressure ECCS pumps LOCA time delay relay instrumentation. These additions are acceptable to the staff.

CTS Table 3.3.2-2, Functional Unit 1.f/ITS Table 3.3.6.1-1, Functional Unit 1.d, "Condenser vacuum low" was revised to identify the allowable value in inches Hg vaccum rather than inches Hg absolute. In its initial submittal, the licensee determined the allowable value for this functional unit to be equal to 22.8 inches Hg absolute. In revision B to the initial submittal, the licensee revised it to 7.2 inches Hg vacuum. Since the actual allowable value is not changed, the proposed change in revision B to the submittal is acceptable to the staff.

2. <u>Proposed change</u>: CTS Table 4.3.1.1-1/ITS 3.3.1.1-1, Functional Unit 3, "Reactor Vessel Steam Dome Pressure-High." Delete Channel Check requirement.

   <u>Evaluation:</u> WNP-2 uses pressure switches to generate a signal relating to the above RPS function. These switches are either in the tripped or the untripped position. The current channel check requirement is satisfied simply by verifying that the switches are in the untripped position. Such a verification does not provide information on the overall condition of the switches and also does not provide assurance that the switch will trip on demand. The current channel check provides only the same information which is already available through the plant annunciator system and does not provide any additional information. Therefore, deletion of this channel-check requirement is acceptable.

3. <u>Proposed change</u>: CTS 4.3.7.6 b./ITS SR 3.3.1.2.6, for channel functional test of the source range monitors (SRMs). Add a requirement to determine signal to noise ratio. Add a new surveillance requirement SR 3.3.1.2.7 to calibrate the SRMs in Mode 5 every 18 months.

Evaluation: The new TS requirement to determine the signal-to-noise ratio and verify that it is greater than or equal to 2:1 or 20:1 depending upon the count rate and the new requirement that the SRM be calibrated in Mode 5 are additional operability verifications that assure proper performance of the instrument. This revision is acceptable.

4. Proposed change: CTS 4.7.9.a/ITS SR 3.7.6.1, turbine bypass system test frequency is revised from once every 7 days to once every 31 days

   Evaluation: In its submittal, the licensee stated that historical maintenance and surveillance data have shown that turbine bypass system has never failed the above test. The licensee's evaluation determined that a test interval extension could result in an increased core damage frequency with increased risk due to reduced reliability (by testing the turbine bypass valves less frequently). However, this increased risk is offset by a deceased core melt frequency due to reduced wear and tear of the equipment (due to less frequent testing) and due to reduced test-related spurious trips which could challenge safety systems. The licensee concluded that the overall effect of a test interval extension on safety is very small. In addition, Westinghouse (the turbine vendor), General Electric (GE) (the bypass valve vendor) and Control Components, Inc. (the vendor for the bypass valve internals) support the test extension as it will reduce wear and tear on this equipment. GE confirmed that a 31 day test frequency does not increase any NSSS safety concerns. Therefore, a surveillance test frequency extension from 7 days to 31 days is acceptable.

3.3.1.1 Reactor Protection System (RPS) Instrumentation

CTS Table 4.3.1.1-1, Note (f), requires LPRM calibrations to be performed using the traversing in-core probe (TIP) system. ITS SR 3.3.1.1.7 requires the LPRM calibration but does not specify the use of the TIP system for accomplishing the required TS surveillance testing. Instead, the Bases indicate that changes in neutron detector sensitivity are compensated for by performing calorimetric calibrations using the TIP system (ITS SR 3.3.1.1.7). Since the instruction to calibrate the LPRMs using the TIP system does not affect the outcome of LPRM calibrations, it is not necessary to include this instruction as an ITS requirement to ensure the operability of the RPS Instrumentation. Therefore, the change is acceptable.

CTS 4.3.1.2 requires each of the logic components of channel logic circuits to be tested, including the "simulated automatic operation of all channels." ITS SR 3.3.1.1.14 does not include the instruction to simulate automatic operation of all channels. Instead, ITS Bases B 3.3.1.1 state that the testing demonstrates operability of the required trip logic. Since this CTS instruction does not affect the outcome of logic system channel functional testing, it is not necessary to include this instruction as an ITS requirement to ensure the operability of the RPS instrumentation. Therefore, the change is acceptable.

CTS Table 4.3.1.1-1, Table Notation (b) requires determining that the SRM/IRM channels, and the APRM and IRM channels overlap "for at least ½ decade." ITS SR 3.3.1.1.5 and SR 3.3.1.1.6 provide the surveillance requirements for the APRM and IRM channel checks. The CTS limits that define APRM and IRM channel operability as having an overlap of "at least ½ decade" is moved to ITS Bases B 3.3.1.1 in accordance with the STS format. These surveillances ensure that no gaps in neutron flux exists from subcritical to power operation for monitoring core reactivity status. In addition to the ½ decade overlap, the ITS accepts any overlap between the APRMs and the IRMs if the transition between modes can be made without either APRM downscale rod block or IRM upscale rod block. Since these instructions are not limits to operation but rather acceptable methods for meeting ITS requirements, these CTS requirements can be moved to the Bases for SRs.

CTS 3.3.1 Footnote * states, "An inoperable channel need not be placed in the tripped condition where this would cause the trip function to occur," and Note ** states, "If more channels are inoperable in one trip system than in the other, place the trip system with more inoperable channels in the tripped condition, except when this would cause the Trip Function to occur." ITS Bases B 3.3.1.1 includes these details concerning the actions of ITS 3.3.1.1. Including these details in the ITS is not necessary to ensure the appropriate actions are taken in the event of inoperable RPS channels. This change is in accordance with the STS and is acceptable.
CTS Table 3.3.1-1, Table Notation (b), requires removing the RPS shorting links from the RPS circuitry before and while any control rod is withdrawn and while shutdown margin demonstrations are performed per CTS 3.10.3 for IRM Neutron Flux—High functions in Mode 5. In the ITS details for controlling RPS shorting link removal are moved to the FSAR or Licensee-Controlled Specifications. The refueling functions (refueling interlocks and shutdown margin) are required to be operable by LCO 3.9.1 and LCO 3.9.2. Although shutdown margin may not have been demonstrated in Mode 5, shutdown margin calculations are performed and, along with procedural compliance for any core alterations, indicate that adequate shutdown margin is available. In addition to SRM operability with shorting links removed, IRM operability continues to provide backup for the credited functions for any significant reactivity excursions. Placing the shorting link requirements in the FSAR controlled by provisions of 10 CFR 50.59 provides acceptable control for future changes to these requirements and is consistent with the content and scope of the STS; therefore, the change is acceptable.

In CTS Table 3.3.1-1, Table Notation (c) states that if there are less than 2 LPRM inputs per level or less than 14 LPRM inputs to an APRM channel, the APRM channel is inoperable. In the ITS, the LPRM acceptance criterion is placed in ITS Bases B 3.3.1.1, which states that if sufficient LPRMs are not available (i.e., the same number as in CTS Table 3.3.1-1, Note (c)), then the associated APRM is inoperable. Since this acceptance criterion is one of many limits that underlie the TS requirement to be operable (i.e., capable of performing the intended design function), placing it in the Bases establishes RPS instrumentation is appropriate. The change conforms to the STS format and is acceptable.

CTS Table 3.3.1-1, Table Notation (d), states the Main Steam Isolation Valve—Closure function shall be automatically bypassed when the reactor mode switch is not in run and reactor pressure is < 1060 psig; CTS Table 3.3.1-1, Table Notation (g), states that the Primary Containment Pressure—High function also actuates the standby gas treatment system; CTS Table 3.3.1-1, Table Notation (i), states that the Turbine Throttle Valve—Closure and the Turbine Governor Valve Fast Closure, Valve Trip System Oil Pressure—Low functions are automatically bypassed based on turbine first stage pressure when thermal power is less than 30% of RTP; and CTS Table 3.3.1-1, Table Notation (j), states that Turbine Throttle Valve—Closure and the Turbine Governor Valve—Fast Closure, Valve Trip System Oil Pressure—Low functions also actuate the EOC-RTP system. These statements explain safety system capabilities rather than establish CTS limits to operation that ensure RPS instrumentation operability; therefore, these design details are appropriately contained in the FSAR. In addition, the applicabilities for the Turbine Throttle Valve—Closure and the Turbine Governor Valve Fast Closure, Valve Trip System Oil Pressure—Low functions have been modified to be ≥ 30% RTP, consistent with the design and current Note (i), and the reference to the turbine first stage pressure in Action 6 has been moved to the FSAR since it describes how the 30% RTP signal is generated. Changes to the FSAR are controlled by the provisions of 10 CFR 50.59. These changes conform to the STS and are acceptable.

CTS Table 4.3.1.1-1, Table Notation (h), concerning the refueling interval channel calibration for Functional Unit 2.b, Flow Biased Simulated Thermal Power—Upscale, requires that the calibration verify a simulated thermal power time constant equal to 6 ± 1 seconds. The minimum thermal power time constant is moved to the Licensee-Controlled Specifications (LCS) Manual. ITS SR 3.3.1.1.11 states the time constant (≤ 7 seconds) as the upper range of the band, which is to be verified every 18 months in accordance with the STS format. If the actual time constant is less than the minimum time, then the function will cause an RPS trip sooner than is required. While this situation may be undesirable from an availability standpoint, it does not result in a safety-significant change because the assumptions of the safety analysis will continue to be met. Other RPS allowable values include either the minimum or the maximum values, not both, even though WNP-2 has a range to which the actual setpoint is set. Changes to thermal power time constants can be adequately controlled by the provisions of 10 CFR 50.59. The ITS fomat is consistent with the STS format and is acceptable.

CTS Table 2.2.1-1 lists the limiting safety system setting (LSSS) trip setpoint and allowable value for each RPS function. ITS Table 3.3.1.1-1 only lists the RPS allowable values, consistent with the STS format. The LSSS values are defined by ITS Bases to be the Table 3.3.1.1-1 allowable values. Section 50.36 requires LSSSs for variables having significant safety functions in automatic protective devices. LSSSs are implicit in the assumptions of the staff-approved setpoint methodology. The allowable value is also implicit in the assumptions of the staff-approved setpoint methodology, and the Bases state that the allowable value is the TS limit for instrument function operability. The trip setpoint details are moved to the FSAR/LCS. Changes to the trip setpoints in the FSAR or LCS can be adequately controlled by the provisions of 10 CFR 50.59. The ITS format is consistent with the STS format and the staff-approved setpoint methodology; therefore these changes are acceptable.

CTS LCO 3.3.1 Modes 3 and 4 requirements for APRMs, IRMs, reactor mode switch shutdown position, and manual scram are deleted in ITS LCO 3.3.1.1. During normal operation in Modes 3 and 4, all control rods are fully inserted and the reactor mode switch shutdown position control rod withdrawal block TS (ITS 3.3.2.1) requires instrumentation to be operable that prohibits control rod withdrawal. To ensure adequate protection from a reactivity excursion, the IRM scram function of the RPS is required to be operable by LCO 3.10.3 and LCO 3.10.4. With the rod block instrumentation operable and all rods inserted, the APRM, IRM, and reactor mode switch shutdown position and manual scram functions are not required to be operable because there are sufficient controls in place to ensure positive core reactivity changes do not occur. Special operations LCO 3.10.3 and LCO 3.10.4 allow a single control rod to be withdrawn in Modes 3 or 4 by allowing the reactor mode switch to be in the refuel position. This change is in accordance with the STS format and is acceptable.

CTS Table 3.3.1-1 requires Mode 5 applicability for IRM Functional Units 1a and 1b, Reactor Mode Switch Shutdown Position and Manual Scram. ITS Table 3.3.1.1-1, Note (a), is added to the Mode 5 applicability for these functions. Note (a) requires Mode 5 applicability for these functions with any control rod withdrawn from a core cell containing one or more fuel assemblies. During normal operation in Mode 5, all control rods are fully inserted. This change is consistent with the STS. Under these conditions, the RPS function is not required to be operable because there are sufficient administrative controls in place to ensure positive core reactivity changes do not occur. If a rod is withdrawn such that positive reactivity is added, the IRM function is required to be operable.

The CTS Table 3.3.1-1 APRM applicability in Mode 5 (except during shutdown margin demonstrations) is deleted in ITS Table 3.3.1.1-1. The remaining requirements during SDM demonstrations are moved to the shutdown margin demonstration special operations technical specification.

The staff concludes that in general the APRMs are not necessary for safe operation of the plant in Mode 5 with the mode switch in Refuel for the following reasons:

(1) The IRMs are a safety-related subsystem of the neutron monitoring system (NMS) and are required by technical specifications to be operable in Mode 5 (with a control rod withdrawn). The IRMs will generate an RPS scram or control rod block if neutron flux increases to the applicable setpoint.

(2) The IRMs and SRMs are designed and calibrated to be more sensitive to neutron flux than the APRMs.

(3) The IRMs are designed to monitor local core events while the APRMs provide a measure of core average power conditions. The IRMs can monitor and react to the most probable reactivity events expected during refueling (i.e., control rod withdrawal or fuel insertion).

(4) The IRMs will detect and respond (by a control rod block or reactor scram) to an inadvertent criticality event before the APRMs provide a trip function.

(5) The withdrawal of only one control rod in Mode 5 is permitted by the one-rod-out interlock in Refuel. The core is designed to be subcritical with one rod out.

(6) The withdrawal of a second control rod or inadvertent addition of a fuel bundle in Mode 5 is precluded by refueling interlocks, refueling procedures, and administrative controls.

(7) The APRMs will still be required (Special Operation LCO 3.10.8) to be operable during a shutdown margin demonstration performed in Mode 5.

(8) The SRMs are required to be operable in Mode 5.

(9) The transient analysis discussed in the FSAR does not require the APRMs to be operational in Mode 5 to mitigate an undesirable operational or transient condition.

In place of the Mode 5 APRM requirements, the licensee has committed to institute various levels of control to prevent inadvertent reactor criticality and fuel damage during refueling operations. These commitments include the following: (a) licensed plant operators will be trained to operate equipment and follow approved procedures, (b) plant-approved refueling and maintenance procedures will specify core alteration steps, (c) SRMs indicate the potential for reactor criticality and generate a control rod block signal on high neutron flux levels. When shutdown margin has not been demonstrated and control rods are withdrawn, procedures will require that the shorting links be removed so that the SRMs will operate in the noncoincident scram mode to cause a reactor scram as necessary, (d) refueling interlocks will prevent the removal of more than one control rod and prevent the insertion of fuel bundles into the core unless all control rods are fully inserted, and (e) the IRMs will provide an indication of local power. IRMs will provide control rod blocks and scram signals on high neutron flux levels.

The staff concludes that if operator errors should occur, followed by postulated equipment malfunctions, there will be adequate systems and interlocks without the APRMs to preclude inadvertent criticality or violation of a safety limit.

CTS Table 3.3.1-1, Actions 3 and 9 and Table Notation (h), and CTS Table 4.3.1.1-1, Table Notation (j), have been modified by ITS Table 3.3.1.1-1, Note (a), to only require RPS functions to be operable in Mode 5 with any control rod withdrawn from a core cell containing one or more fuel assemblies. In

addition, proposed Action H for Mode 5 only requires action to be initiated to fully insert control rods in core cells containing one or more fuel assemblies. Control rods withdrawn from or inserted into a core cell containing no fuel assemblies have a negligible impact on the reactivity of the core and therefore are not required to be operable with the capability to scram. Provided all rods otherwise remain inserted, the RPS functions serve no purpose and are not required. In this condition the required shutdown margin and the required one-rod-out interlock ensure no event requiring the RPS will occur. The actions for inoperable equipment in Mode 5 are also revised to be consistent with the applicability. Since all control rods are fully inserted during fuel movement, the applicable conditions cannot be entered while moving fuel. The only possible core alteration is control rod withdrawal which is addressed by Action H. In addition, since the required action requires the control rods to be inserted, the requirement to also lock the mode switch in shutdown (current Action 9) has been deleted. This change is in accordance with the STS and is acceptable.

In Mode 1, CTS Table 3.3.1-1, Action 6, for RPS Functional Unit 9, Turbine Throttle Valve—Closure, and Functional 10, Turbine Governor Valve Fast Closure, Valve Trip System Oil Pressure—Low, require initiating a reduction in thermal power within 15 minutes. ITS 3.3.1.1, Action E, deletes this requirement. Immediate power reduction may not always be the conservative method to ensure safety. The required action to be < 30% RTP within 6 hours remains in ITS Required Action E, ensuring prompt action is taken to exit the applicability because of the inoperability of the associated RPS functions. This change conforms to the format of the STS and is acceptable.

In Mode 1, CTS Table 3.3.1-1, Action 6, for RPS Functional Unit 9, Turbine Throttle Valve—Closure, and Functional Unit 10, Turbine Governor Valve Fast Closure, Valve Trip System Oil Pressure—Low, require reducing RTP to < 30% within 2 hours. ITS 3.3.1.1 Action E extends this 2-hour requirement to 4 hours. This additional 2 hours provides time to decrease power in a controlled and orderly manner, assuming the minimum required equipment is operable. The extra time reduces the potential for a unit upset that could challenge safety systems. This time is consistent with the STS requirement and is acceptable.

CTS Table 4.3.1.1-1 provides channel calibration and channel functional test surveillance requirements for the RPS APRM and IRM functions. A note to ITS SR 3.3.1.1.3, Note 2 to ITS SR 3.3.1.1.9, and Note 2 to ITS SR 3.3.1.1.10 are added to exempt the channel functional test and channel calibration requirements until 12 hours after entering Mode 2 from Mode 1. The IRM and APRM setdown functions are required in Mode 2 but not in Mode 1, and the required surveillances cannot be performed in Mode 1 (before entry in the applicable Mode 2) without utilizing jumpers or lifted leads. Use of these devices is not recommended since minor errors in their use may increase the probability of a reactor transient or event which is a precursor to a previously analyzed accident. Therefore, time is allowed to conduct the SRs after entering the applicable mode. This frequency is consistent with the STS requirement and is acceptable.

CTS Table 4.3.1.1-1 requires a channel functional test performed for Functional Unit 2b, APRM Flow Biased Simulated Thermal Power—Upscale, and Functional Unit 2c, APRM Fixed Neutron Flux—Upscale, before each reactor startup. The startup CTS surveillance test requirement is deleted in the ITS. ITS SR 3.3.1.1.8 requires these surveillance tests on a quarterly surveillance test interval (STI) while in the applicable Modes, as required by SR 3.0.1, and that they be current before entering the applicable Modes, as required by SR 3.0.4. The quarterly STI is sufficient verification that the APRMs are properly functioning. Performing a reactor startup does not impact the ability of the monitors to perform their required function. Therefore, requiring an additional surveillance "prior to a reactor startup" is unnecessary. The required surveillance has proven reliability and, therefore is acceptable.

CTS Table 4.3.1.1-1 Notation (e) requires a weekly channel calibration of the APRM Flow Biased Simulated Power—Upscale function, consisting of adjusting of the APRM flow-biased channel to conform to a calibrated flow signal. The frequency for performing this surveillance is extended from 7 days to 92 days as part of the ITS SR 3.3.1.1.8 channel functional test requirement for the APRM Flow Biased Simulated Thermal Power—High function. In its submittal the licensee stated that a review of historical maintenance and surveillance data for the past 2 years has shown that this test always passes the surveillance at the current frequency (i.e., the instruments have never been required to be adjusted due to a failure of this surveillance). The licensee also stated that an evaluation of these data has shown that the effect on safety due to the extended surveillance frequency will be small. The effect of the increased interval on instrument drift was also considered in the licensee's evaluation. In addition to the proposed 92-day surveillance frequency, the licensee stated that if the surveillance is performed at the maximum 115-day interval allowed by SR 3.0.2, the licensing basis assumptions are not invalidated. Based on the historical test data and extended drift analysis for the 92-day test interval, the staff concludes that extending the STI from 7 days to 92 days has a negligible impact on safety and does not invalidate any assumptions in the plant licensing basis. Therefore, the changes are acceptable.

CTS Table 4.3.1.1-1 channel check requirement for the Reactor Vessel Steam Dome Pressure—High function is deleted in the ITS. Pressure switches perform this RPS function. These switches are either in the "tripped" or "not tripped" condition, depending on the sensed pressure relative to the trip setpoint. The CTS channel check requirement is satisfied by verifying each of the pressure switches are "not tripped" as indicated by the associated alarm annunciators. No read-out indication is provided that can be used to compare these instruments to the indications of other similar instruments measuring the same parameter. This channel check methodology provides a comparison of the "tripped" and "not tripped" status of the pressure switches, but does not provide an indication of the overall condition of the pressure switch beyond that provided by the annunciators. Thus, the verification of this status on a 12-hour periodicity does not provide information that is not constantly available to the plant operations staff through the absence of an annunciator. The change is acceptable.

A note is added to the APRM heat balance calibration (ITS SR 3.3.1.1.2). The note states that the surveillance is not required to be performed until 12 hours after thermal power is ≥ 25% RTP. This note is added because it is difficult to determine core thermal power from a heat balance. At low power levels, a high degree of accuracy is unnecessary because of the large inherent margin to thermal limits (MCPR and APLHGR). This frequency change is consistent with the STS and is acceptable.

3.3.1.2 Source Range Monitors

CTS 4.3.7.6.c requires prior to withdrawing control rods, the verification that the source range monitor count rate is at least 0.7 count per second (cps) "with the detector fully inserted." The instructional requirement "with the detector fully inserted" is omitted from ITS SR 3.3.1.2.4. Details of the methods for performing the surveillances are moved to the ITS Bases. The instructional requirements are procedural details that are not necessary for ensuring SRM operability. The surveillance requirements of ITS 3.3.1.2 provide adequate assurance the SRMs are maintained operable. The intent of the modified surveillance is supported by the STS, and the change is acceptable.

CTS 3.9.2 requires at least two SRM channels to be operable "and inserted to the normal operating level with continuous indication in the control room". CTS 4.9.2.b requires a verification once per 12 hours; that the detectors are inserted to the normal operating level. This detail relating to SRM operability is moved to the Bases. ITS 3.3.1.2 provides the requirements for SRM operability without clarifying that the SRM must be "inserted to the normal operating level with continuous indication in the control room." Procedural details of the methods for complying with the LCO are requirements that are not necessary for ensuring SRM operability. The definition of operability in Chapter 1.0 and the Bases discussion provide adequate assurance the SRMs are maintained operable. The change conforms to the STS format and is acceptable.

CTS 3.9.2.d requires the "shorting links" associated with the SRMs to be removed from the RPS circuitry before and while any control rod is withdrawn and shutdown margin demonstrations are in progress in Mode 5, except when control rods are removed for refueling operations (CTS 3.9.10.1 and 3.9.10.2). CTS 4.9.2.b requires a verification once per 8 hours that the detectors are inserted to the normal operating level. Requirements for removing the RPS shorting links are moved from the TS to the FSAR/LCS. ITS 3.3.1.2 and Table 3.3.1.2-1 provide the requirements for SRM operability. The primary reactivity controls during refueling are the refueling interlocks and the shutdown margin described in the FSAR. The refueling interlocks are required to be operable by ITS 3.9.1 and 3.9.2. Although shutdown margin is not demonstrated for entry into Mode 5, shutdown margin calculations and procedural compliance for any core alterations ensure adequate shutdown margin. Additionally, in place of SRM operability with the shorting links removed IRM operability provides backup to refueling interlocks and the shutdown margin functions credited in the safety analysis. Since the SRM channel high flux scram (with shorting links removed) provides only an

uncredited backup in Mode 5, moving the shorting link removal requirement to the FSAR/LCS does not significantly affect safety and is acceptable.

In Mode 2 with IRMs on Range 2 or below, CTS 3.3.7.6 Action a allows 4 hours to restore one inoperable SRM to operable status or be in hot shutdown within the next 12 hours. ITS 3.3.1.2 allows four hours to restore one or more required inoperable channels in this mode of operation. The CTS requirement to shut down the unit when more than one required SRM is inoperable is unnecessarily restrictive and does not allow concentration of efforts on repair. Therefore, the completion time of 4 hours is provided (in conformance with STS) for any number of inoperable SRMs as long as adequate capabilities remain to monitor the core. With no operable SRMs, the ability to monitor positive reactivity changes is significantly restricted; thus ITS Action B ensures that no further control rod withdrawal is allowed. This less restrictive change conforms with the STS format and is acceptable.

In Modes 3 and 4 with one or more of the required SRM channels inoperable, CTS 3.3.7.6 Action b requires that the reactor mode switch is "locked" in the shutdown position within 1 hour. ITS 3.3.1.2 requires "placing" the reactor mode switch in the shutdown position for this condition. The position of the reactor mode switch in Mode 3 or 4 is controlled by the modes definition Table (ITS Table 1.1-1). Reactor mode switch positions other than shutdown, result in the unit entering some other mode; with the associated TS compliance requirements of that mode and of ITS 3.0.4. Therefore, deleting the CTS requirement to verify the reactor mode switch in the "locked" position, is acceptable because mode switch position requirements that remain provide sufficient control to prohibit unauthorized rod withdrawal.

CTS 4.3.7.6 channel functional test and CTS 4.3.7.6.a.2 channel calibration operability requirements are changed by application of SR notes for ITS SR 3.3.1.2.6 and ITS SR 3.3.1.2.7. These notes allow entry into the modes and conditions in which the SRMs are required to be operable before satisfactory completion of the required channel functional test and channel calibration. This is effectively a CTS 4.0.4 exception, and is similar to the operability exception already allowed for the APRMs in the RPS specification. The SRMs are required in Modes 2 and 3, but not in Mode 1, and the required surveillance cannot be performed in Mode 1 (before entry in the applicable Mode 2 or 3) without utilizing jumpers or lifted leads. Use of these devices is not recommended since minor errors in their use may significantly increase the probability of a reactor transient or event which is a precursor to a previously analyzed accident. Therefore, in accordance with the STS, time is allowed to conduct the SR after entering the applicable mode and this is acceptable.

CTS SR 4.3.7.6.b.1 requires the performance of a channel functional test in the 24 hours before the reactor mode switch is moved from the shutdown position, if the test has not been performed within the previous 7 days. CTS 4.9.2.b.1 requires a channel functional test within 24 hours prior to the start of core alterations. CTS 4.9.2.c.1 requires the count rate to be verified prior to control rod withdrawal in Mode 5. ITS SR 3.3.1.2.5 and SR 3.3.1.2.6 do not require the channel functional test to be performed in the 24

hours before moving the reactor mode switch from the shutdown position, but require the test to be performed every 7 days while in Mode 5 and 31 days in Modes 2, 3, and 4. ITS 3.3.1.2.4 does not require the count rate to be verified prior to control rod withdrawal in Mode 5, but does require the verification every 12 hours prior to core alterations (which encompasses rod withdrawal). The required periodic frequency has been determined to be sufficient verification that the source range monitors are properly functioning. Moving the reactor mode switch, withdrawing control rods, and performing core alterations do not impact the ability of the monitors to perform their required function. The 7-day and 31 day frequency for ITS SR 3.3.1.2.4, SR 3.3.1.2.5 and SR 3.3.2.1.6, respectively ensure that the channels are operable while core reactivity changes could be in progress. Therefore, an additional surveillance required to be performed "prior to" one of these events is unnecessary. This less restrictive change conforms with the STS and is acceptable.

3.3.2.1 Control Rod Block Instrumentation

CTS 3/4.3.6 requires all control rod block channels to be operable with their trip setpoints set consistent with specified values. However, CTS actions are only required if the trip setpoint exceeds the allowable value. ITS Table 3.3.2.1-1 only lists the TS allowable values. Trip setpoints are operational details that relate to the instrumentation operability. Setpoints limits for instrument loops are established in the plant procedures to ensure that safety systems will actuate when process parameters reach these limits before exceeding TS allowable values. These trip setpoints are moved to the FSAR/LCS controlled by provisions of 10 CFR 50.59. The ITS allowable value is the chosen limit for process parameters that ensure the assumptions of the safety analysis are met. This change is consistent with the STS format and is acceptable.

CTS Table 3.3.6-1, Table Notation (a), states that "the RBM shall be automatically bypassed when a peripheral control rod is selected or the reference APRM channel indicates less than 30% of RATED THERMAL POWER." CTS requirements "shall be automatically bypassed" and "the reference APRM channel indicates" are details of the system design that do not establish the necessary applicability requirements to ensure RBM operability. The design details are moved to the FSAR. In addition, when a peripheral control rod is selected, RBM is automatically bypassed and cannot generate a rod block. Therefore, RBM applicability requirements in ITS Table 3.3.2.1-1, Note a, require operable instrument channels when "Thermal Power ≥ 30% RTP and no peripheral control rod selected." These TS requirements establish a sufficient level of control to ensure RBM functions are operable consistent with the system design and assumptions of the safety analysis. CTS operability requirements are unchanged, formatted consistent with STS format. The design details are moved to the FSAR and are controlled by provisions of 10 CFR 50.59. This change is acceptable.

CTS Table 4.3.6-1 Table, Notation c), requires that reactor manual control multiplexing system inputs be included in the quarterly channel functional test of RBM functions. CTS 4.1.4.1 requires the RWM operability to be demonstrated prior to withdrawal of control rods for the purpose of making the reactor critical and in Mode 1 prior to RWM automatic initiation "by verifying proper indication of the selection arrow of at least one out-of-sequence control rod" and "by verifying the rod block function by demonstrating inability to withdraw an out-of-sequence control rod." The details of what channel components are to be included during surveillance testing are moved to the ITS Bases. The moved requirements are a partial listing of system components and describe the system design without establishing requirements necessary to ensure control rod block instrumentation operability. ITS 3.3.2.1 SRs establish TS requirements at a sufficient level to ensure control rod block instrumentation operability. Future changes to the Bases are controlled by the provisions of the Bases Control Program described in Chapter 5.0. CTS requirements are reduced consistent with the STS format, and these changes are acceptable.

CTS Table 4.3.6-1 requires performance of a channel functional test for RBM functions in the 24 hours preceding each plant startup, if the test has not been performed within the previous 7 days. The CTS startup surveillance requirement is deleted in ITS Table 3.3.2.1-1. The CTS required periodic testing before and during applicable modes have been shown to provide sufficient requirements for verifying that the RBMs are operable. Performing additional testing before a reactor startup does not adversely affect current testing practice or the ability of the monitors to perform their required function. Therefore, it is acceptable to delete the surveillance requirement "prior to a reactor startup."

CTS 3/4.1.4 RWM low power setpoint is reduced to 10% RTP from 20% RTP in ITS Table 3.3.2.1-1 based on Amendment 17 to NEDE-24011-P-A (GESTAR-II), which uses the analytical value basis for the bypass power level. Amendment 17, "Acceptance for Referencing the Licensing Topical Report NEDE-24011-P-A, General Electric Standard Application for Reactor Fuel, Revision 8, Amendment 17," December 27, 1988, states that the previous 20% RTP TS limit was an extreme bound that included large uncertainties in the Rod Drop Accident (RDA) analyses that existed in the early 1970's. It is now recognized that if core power level exceeds 10% RTP, no control rod pattern can generate rod worths such that the fuel enthalpy would exceed the 280 cal/gm fuel enthalpy limit during the worst RDA. For this reason, this reduction in the bypass power level to the analytical limit value in the TS was approved. The licensee has reviewed Amendment 17 to NEDE-24011-P-A and the NRC SER, and finds the results and conclusions applicable to WNP-2. The staff finds this is acceptable.

CTS SR 4.1.4.1 requires surveillance testing to demonstrate RWM operability at the following frequencies for every reactor startup and shutdown regardless of the actual frequency of these events: (a) in Mode 2 within 8 hours before withdrawal of control rods for making the reactor critical, and in Mode 1 within 8 hours before RWM automatic initiation when reducing thermal power, by verifying proper indication of the selection error of at least one out-of-sequence control rod; (b) in Mode 2 within 8 hours before withdrawal of control rods for making the reactor critical, by verifying the rod block function by demonstrating inability to withdraw an out-of-sequence control rod; and (c) in Mode 1 within 1 hour after RWM automatic initiation when

reducing thermal power, by verifying the rod block function by demonstrating inability to withdraw an out-of-sequence control rod. The frequency of these surveillances have been changed in ITS SR 3.3.2.1.2 and 3.3.2.1.3 to every 92 days because the RWM is a very reliable system as shown both by a review of the maintenance history and by the successful completion of the startup surveillance testing during the last six reactor startups. In addition, other similar rod block functions have a 92-day channel functional test. This is acceptable.

CTS 3.1.4.3 Action a.1 and CTS 4.1.4.3.b have been deleted from the ITS. These requirements require the operator to verify that the reactor is not operating on a limiting control rod pattern when a rod block monitor channel is discovered to be inoperable, and they require additional channel functional testing before withdrawing rods when operating on a limiting control rod pattern. In TS a limiting control rod pattern is defined as operating on a power distribution limit such as APLHGR or MCPR. This condition is unlikely; furthermore, the status of power distribution limits does not affect the operability of the RBM. TS LCO requirements for power distribution limits are specified in ITS Section 3.2. Therefore, placing additional remedial action requirements on the RBM system (e.g., that it be tripped within 1 hour with a channel inoperable while on a limiting control rod pattern) does not substantially ameliorate the reactor condition for which the RBM will protect against an analyzed rod withdrawal event at equal to or > 30% RTP. Furthermore, requiring additional testing for the improbable condition of operating exactly on a thermal limit and requiring the testing to be performed "prior to" rod withdrawal is more appropriately addressed by the LCO containing the initial surveillance that detected the limiting control rod pattern. The change is consistent with the STS and is acceptable.

3.3.2.2 Feedwater and Main Turbine High Water Level Trip Instrumentation

CTS 3.3.9 requires the feedwater main turbine trip system trip setpoints to be adjusted to CTS Table 3.3.9-2 values. The CTS and the ITS define instrument setpoint allowable values as the TS setpoint variable for which TS action requirements must be met. Based on this convention, trip setpoints are procedural details used in the evaluating setpoint limits but are not limits specified in the ITS. Accordingly, the trip setpoints are being moved to the FSAR/LCS Manual controlled by the provisions of 10 CFR 50.59. The setpoint allowable value limit for the parameter is retained for use in ITS SR 3.3.2.2.3. This change conforms to the STS format and is acceptable.

CTS 3.3.9 requires the feedwater system/main turbine trip actuation instrumentation in "Mode 1." ITS 3.3.2.2 changes this mode applicability "≥ 25% RTP". The feedwater and main turbine high water level trip instrumentation is provided to ensure that MCPR is maintained above the safety limit; however, MCPR is not a concern below 25% RTP due to the large inherent margin that ensures the MCPR safety limit is not exceeded, even if a limiting transient occurs. Therefore, the ITS mode applicability is modified to be ≥ 25% RTP, and the CTS shutdown action is changed to only require power reduced to < 25% RTP, consistent with the general instructions for using the STS format. In addition, ITS 3.3.2.2 adds Action B to allow 2 hours to restore trip capability (if two or more channels are inoperable trip capability has been lost) before requiring a unit shutdown. This time is consistent with the time required to restore a MCPR limit. With the addition of ITS 3.3.2.2, Action B, a note is added to the ITS Actions Table to provide explicit instructions for application of the Actions for TS compliance. In conjunction with ITS Section 1.3, "Completion Times," the action note ("Separate Condition entry is allowed for each....") provides direction consistent with the intent of the ITS actions for an inoperable channel. This change conforms to the format of the STS and is acceptable.

CTS 3.3.9, Action b, requires restoring an inoperable channel within 7 days or be in at least startup within the next 6 hours when the number of operable channels is one less than required by the minimum-operable-channels requirement. ITS 3.3.2.2 Required Action A.1 changes the requirement, allowing the channel to be placed in the tripped condition and operations to continue without a requirement to restore the channel. Placing the inoperable channel in trip essentially changes the current two-out-of-three logic to a one-out-of-two logic, and continues to provide single failure protection. Placing the inoperable channel in the tripped condition is a conservative change which does not preclude channel restoration in an expeditious manner while in the LCO. The change conforms with the STS and is acceptable.

CTS 3.3.9, Action a, requires placing a channel in the tripped condition when the channel trip setpoint is found less conservative than the allowable value listed in CTS Table 3.3.9-2 or declaring the associated system inoperable, with no stated completion time for meeting the action. CTS 3.3.9, Action a), is treated as an inoperable channel in ITS 3.3.2.2 because the ITS definition of inoperable encompasses a channel made inoperable due to trip setpoints outside their limits or for other reasons. ITS 3.3.2.2, Conditions A and B, set forth requirements for one or more inoperable channels including remedial actions with completion times and shutdown requirements if the degraded condition persists. The format of ITS 3.3.2.2 more clearly presents the TS requirement for one or more channels inoperable because of trip setpoints outside the limits or surveillance requirements not met, and the ITS clearly states the completion time requirements. This is an acceptable change consistent with the STS format.

3.3.3.1 Post Accident Monitoring (PAM) Instrumentation

CTS Table 3.3.7.5-1, Action 81.a, requires initiation of preplanned alternate methods of monitoring inoperable primary containment gross radiation monitoring channels when specified LCO conditions are not met. This requirement is moved to ITS B 3.3.3.1 Bases. Including these details in the ITS is not necessary to ensure actions are taken to initiate the preplanned alternate method of monitoring since ITS 3.3.3.1, Action F, requires an immediate action according to ITS 5.6.6. ITS 5.6.6 requires that a report be submitted to the NRC within the following 14 days and that the report outline the preplanned alternate method of monitoring. This change conforms to the STS and is an acceptable change.

CTS Table 4.3.7.5-1, Footnote *, gives details for performing the channel calibration of the primary containment gross radiation monitors. The details include an electronic calibration using portable instrumentation. The calibration includes checks of the detector range limits but not the detector. These details are not necessary for assuring the operability of the primary containment gross radiation monitors because the ITS definition of channel calibration provides the necessary surveillance test objectives and, together with ITS SR 3.3.3.1.4, ensures that the primary containment gross radiation monitors are maintained operable. Therefore the details in CTS Note * are moved to ITS Bases B 3.3.3.1. This change conforms to the STS and is an acceptable change.

CTS Table 3.3.7.5-1 requires the primary containment gross radiation monitor operable in Modes 1, 2, and 3. Mode 3 operability requirements are not included in ITS 3.3.3.1. The PAM instrumentation assists in the diagnosing and preplanning actions required to mitigate design basis accidents that are assumed to occur in Modes 1 and 2. The probability of an event occurring in Modes 3, 4, or 5 requiring PAM instrumentation is sufficiently low that the post-accident monitors are not required in these modes. This change is consistent with the STS and is acceptable.

CTS Table 3.3.7.5-1, Action 80.a, provides a 7-day allowed outage time (AOT) for one inoperable channel of PAM instrumentation. ITS 3.3.3.1, Required Action A.1, extends this AOT to 30 days. The CTS Table 3.3.7.5-1, Action 80.b, also provides a 48-hour AOT for two inoperable channels of PAM instrumentation. ITS 3.3.3.1, Required Action C.1, extends this AOT for two or more inoperable channels to 7 days. CTS Action 80 applies to all accident monitoring functions except primary containment radiation monitors. CTS Table 3.3.7.5-1, Action 81, for primary containment radiation monitors has a 72-hour AOT for two inoperable channels of PAM instrumentation. ITS 3.3.3.1, Required Action C.1, extends this AOT to 7 days. In addition, for special circumstances involving primary containment penetrations with only one isolation valve (i.e., General Design Criterion (GDC) 56 containment penetration lines), the ITS AOT for one inoperable channel is extended from 48 hours to 30 days. Due to the monitoring design function of the PAM instrumentation and due to the availability of alternate instruments and methods for monitoring critical parameters in a post-accident environment, the AOT extensions to 30 days and 7 days are acceptable. Note 1 is also added to the ITS 3.3.3.1 actions. The note provides an exception to the applicability of ITS 3.0.4. This exception, which was not allowed in CTS 3.3.7.5, allows mode changes while relying on the remedial actions provided in the LCO for inoperable instrumentation. This exception is included because of the likelihood that inoperable instrumentation can be repaired within the allowed outage times; entry into the applicable conditions for monitoring instrumentation should therefore not be prohibited. For this reason, this exception is acceptable.

A note has been added to ITS 3.3.3.1 which allows one channel of PAM instrumentation to be inoperable for up to 6 hours for performing surveillance, provided the other channel or channels in the associated function are operable. The staff has granted the 6-hour testing allowance in

previous plant specific TS amendments. Also, the staff granted the 6-hour allowance on a generic basis in safety evaluations of topical reports for reactor protection system, emergency core cooling system, and isolation actuation system equipment. The licensee stated that the 6 hour testing allowance does not significantly reduce the probability of properly monitoring post-accident parameters since the other instrument channel must be OPERABLE for this allowance to be used. This is also true for the leakage detection instrumentation which provides indication of a plant condition without initiating safety systems. Therefore this is acceptable to the staff.

CTS Table 3.3.7.5-1, Action 80, requires a plant shutdown after a 7-day AOT for all instances of one inoperable channel of PAM instrumentation. ITS 3.3.3.1, Action B.1, changes this requirement to "Initiate action in accordance with Specification 5.6.6" after the 30-day AOT, instead of requiring a plant shutdown. Because the PAM instruments function passively and because the operator can use alternate monitoring instruments and methods for monitoring to respond to an accident, this change is acceptable. It is consistent with the STS.

3.3.3.2 Remote Shutdown System

CTS Table 3.3.7.4-1 lists the remote shutdown system functions, including the minimum channels required for function operability and readout location. ITS 3.3.3.4 does not include the table or specific instrument listings. The specific instrument listings and related requirements are moved to the LCS and Bases. Placing the lists of the remote shutdown system functions, the minimum channels required for function operability, and the readout location for each function in the LCS controlled by provisions of 10 CFR 50.59 provides acceptable control for future changes to these requirements and is consistent with the content and scope of the STS; therefore, the change is acceptable.

CTS 3.3.7.4 Action a. requires inoperable remote shutdown monitoring instrument channels to be restored to operable within 7 days. ITS 3.3.3.2 extends the AOT for inoperable remote shutdown system instrumentation and controls to 30 days. The remote shutdown system is not assumed to be operable for any design basis accident evaluated in the FSAR, but this system is required to be operable to ensure the plant complies with GDC 19 design criteria. ITS 3.3.3.2 is retained because the system is a significant contributor to risk reduction, and extending the AOT does not have a significant impact on that contribution. For these reasons, this extension is acceptable.

CTS 4.3.7.4 requires a monthly channel check to demonstrate the operability of each remote shutdown monitoring instrument. A channel check is a qualitative assessment of channel behavior. ITS SR 3.3.3.2.1 requires the same testing except the SR is limited to those channels which are normally energized. Some remote shutdown system instrument channels are deenergized during normal operation and energizing these channels requires use of a transfer switch to take control of the instrument function away from the operators in the control room and shift control to the remote shutdown panel. This deenergizes the instruments and associated controls in the control room, leaving no indication and control available to control room operators. Therefore, this ITS SR 3.3.3.2.1 is modified to exclude the channel check requirement from deenergized channels. These changes provide more explicit TS requirements, conform to the STS format, and are therefore acceptable.

A note has been added to ITS 3.3.3.2 which allows a channel of remote shutdown instrumentation to be inoperable for up to 6 hours for performing surveillances. The remote shutdown system is not required to respond to any design basis accident evaluated in the safety analysis. Extending the AOT does not have a significant impact on the contribution to risk of the system. The 6 hour testing period allowance does not significantly reduce the probability of proper monitoring of post-accident parameters, when necessary. This is acceptable. CTS 4.3.7.4 does not require that the operability of control circuits and transfer switches be demonstrated, but the new SR 3.3.3.2.3 requires this demonstration. Thus, the new SR places an additional operability restriction on plant operation. This is more conservative and is also acceptable.

3.3.4.1 End of Cycle Recirculation Pump Trip (EOC-RPT) Instrumentation

CTS 3.3.4.2 requires the EOC-RPT instrument channel trip setpoints to be set consistent with the values in CTS Table 3.3.4.2-2. Trip setpoints are operational details that relate to the instrumentation operability. Setpoint limits for instrument loops are established in plant procedures to ensure that safety systems will actuate when process parameters reach these limits before exceeding TS allowable values. These trip setpoints are moved to the FSAR/LCS and will be controlled by the provisions of 10 CFR 50.59. The ITS allowable value is the chosen limit for process parameters in SR 3.3.4.1.4 to ensure the assumptions of the safety analysis are met. This change is consistent with the STS format and is acceptable.

CTS Table 3.3.4.2-3 provides EOC-RPT function response times. The response time values are moved to the LCS Manual. Response time testing surveillance requirements for the EOC-RPT functions are provided in ITS SR 3.3.4.1.5 and SR 3.3.4.1.6. The requirements of ITS 3.3.4.1 and the associated SR ensure the EOC-RPT instruments are maintained operable. Changes to the response time values in the LCS Manual will be controlled by the provisions of 10 CFR 50.59. The change is in accordance with the STS and is acceptable.

The requirements of CTS Tables 3.3.2-1, 3.3.2-2, and 4.3.2.1-1 for Trip Function 1, Primary Containment Isolation, are put in ITS Table 3.3.6.1-1. ITS Table 3.3.6.1-1 divides the function into two, main steam line isolation (Function 1) and primary containment isolation (Function 2), each with its proper isolation signal. This change is consistent with the STS format, and therefore is acceptable.

CTS Table 3.3.4.2-1, Note b, states that the Turbine Throttle Valve—Closure and the Turbine Governor Valve—Fast Closure, Valve Trip System Oil Pressure—Low functions shall be automatically bypassed when turbine first stage pressure is less than or equal to the pressure equivalent to thermal power < 30% of rated thermal power. These system design details are moved to

the FSAR. The design details are not necessary in the ITS to ensure operability of the EOC-RPT instrumentation, since bypass circuit operability requirements are adequately addressed in the channel functional test requirements of SR 3.3.4.1.1. Changes to the FSAR will be controlled by the provisions of 10 CFR 50.59. This acceptable change is consistent with the STS.

CTS Action 3.3.4.2.c.2 requires declaring the trip system inoperable when two turbine governor valve channels or two turbine throttle valve channels are inoperable in a trip system. ITS 3.3.4.1, Required Action A.2, provides an option to place all inoperable channels in trip when in this condition. The ITS action conservatively compensates for the inoperable status by restoring the single failure capability to the logic circuit and maintains the required initiation capability of the instrumentation. Therefore, providing this option does not affect continued safe operation of the plant. However, if this action would result in system actuation, then declaring the system inoperable is the preferred action. This change is consistent with the STS format and is acceptable.

CTS 3.3.4.2 provides required Actions d and e for conditions rendering a "Trip System" inoperable. ITS 3.3.4.1 Condition B changes the required actions to address the capability of the EOC-RPT trip functions (e.g., Turbine Throttle Valve—Closure) to perform their intended design function. This change provides appropriate allowed out-of-service times as long as actuation capability is maintained for both functions. The function has lost trip capability if an EOC-RPT trip cannot occur from the function. This change is consistent with the STS and is acceptable.

CTS 3.3.4.2 Actions d and e provide 1 hour to take the actions to adjust the MCPR as required by CTS 3.2.3 when operability requirements for one or both EOC-RPT trip systems are not met or when the MCPR is greater than the limit without EOC-RPT. The purpose of the EOC-RPT instrumentation is to ensure that violation of the established MCPR safety limit will not occur late in core life because of a turbine trip or generator load rejection event without EOC-RPT. Therefore, the time provided to restore EOC-RPT instrument functions to operable status when one or both trip systems are affected and the time to apply the MCPR EOC-RPT inoperable limit are extended in the ITS from 1 hour to 2 hours, consistent with the time provided in CTS 3.2.3 to restore a MCPR limit. The prescribed AOT change is consistent with the STS limits for protecting core thermal limits and is acceptable.

ITS 3.3.4.2, Required Action C.1, is added to allow removal of the associated recirculation pump from service when instrument channels are inoperable or trip capability is not maintained, instead of a required plant shutdown. Since a manual pump trip accomplishes the same action as the actuation instrumentation these changes are functionally equivalent and the ITS Conditions A and B required actions and completion times will allow continued plant operation in an approved configuration. The change is in accordance with the STS, and is acceptable.

3.3.4.2 ATWS Recirculation Pump Trip Instrumentation

CTS 3.3.4.1 requires the ATWS-RPT instrument channel trip setpoints to be set consistent with the values in CTS Table 3.3.4.1-1. Trip setpoints are operational details that relate to the instrumentation operability. Setpoints limits for instrument loops are established in plant procedures to ensure that safety systems will actuate when process parameters reach these limits before exceeding TS allowable values. These trip setpoints are moved to the FSAR/LCS Manual controlled by provisions of 10 CFR 50.59. The ITS allowable value is the chosen limit for process parameters in SR 3.3.4.2.4 to ensure the assumptions of the safety analysis are met. This change is consistent with the STS format and is acceptable.

The CTS 3.3.4.1 Action b for an inoperable trip system is revised to address trip function (e.g., Reactor Pressure Vessel—High) capability. This is consistent with other TS that provide appropriate allowed out-of-service times as long as the actuation capability is maintained. The function has lost trip capability if an ATWS-RPT trip cannot occur from the function. ITS 3.3.4.2 Action B has also been added to allow trip capability to be lost for one of the two trip functions for 72 hours. Currently, no time is allowed if trip capability is lost for a function (i.e., both trip systems are inoperable for the given function); a shutdown to Mode 2 is required within 6 hours. The 72 hour allowance is considered acceptable since the other function continues to maintain trip capability and since the ATWS-RPT system is not assumed to function during any design basis accident or transient; the ATWS-RPT system provides protection during a beyond-design-basis event, whose probability of occurrence is remote. In addition, the plant emergency operating procedures provide requirements to trip the recirculation pumps if an ATWS event occurs, regardless of whether the allowable values of the ATWS-RPT instrumentation functions (reactor pressure or water level) have been exceeded. Thus in many ATWS event scenarios, the operators will manually trip the recirculation pumps (i.e., perform the ATWS-RPT function) before the instrumentation automatically performs the function. For these reasons the 72-hour allowance is acceptable.

CTS 3.3.4.1, Action b, requires a reduction to Mode 2 when required actions are not met within time limits. ITS 3.3.4.2, Required Action D.1, is added in the ITS to allow removal of the associated recirculation pump from service, instead of a reduction to Mode 2, when required actions and completions times are not met. Since a manual pump trip accomplishes the same action as the actuation instrumentation, these changes are functionally equivalent and the ITS will allow continued plant operation in an approved configuration. The change is in accordance with the STS and is acceptable.

CTS Table 4.3.4.1-1 requires a "quarterly" channel calibration STI for the Reactor Vessel Pressure—High instrument channels. ITS SR 3.3.4.2.3 extends the STI for the channel calibration to 18 months. In its submittal, the licensee stated that a review of the past maintenance history has shown that no failures or out of tolerances have been discovered for the reactor vessel pressure instrumentation during past channel calibrations. In addition, the drift data used in the current setpoint calculations support an 18 month

frequency for channel calibration, which is also consistent with the guidelines of NUREG-1434. This is acceptable.

3.3.5.1 Emergency Core Cooling System (ECCS) Instrumentation

CTS Table 3.3.3-2 lists the trip setpoint and allowable value for each ECCS actuation instrument function. ITS Table 3.3.5.1-1 deletes the trip setpoint values and requires only the allowable values for each function. The ECCS actuation instrumentation trip setpoints are moved to the FSAR/LCS and will be controlled according to 10 CFR 50.59. Trip setpoints are operational details that are included in instrumentation operability; however, the allowable value is implicit in the assumptions of the staff-approved setpoint methodology and the Bases state that the allowable value is the TS limit for instrument function operability. Changes to the trip setpoints located in the FSAR/LCS can be adequately controlled by the provisions of 10 CFR 50.59. The single column allowable value format is consistent with the STS format and the staff-approved setpoint methodology; therefore these changes are acceptable.

The CTS 4.3.3.2 logic system functional test requires "simulated automatic operation" of all channels as part of the surveillance requirement. The ITS SR 3.3.5.1.6 logic system functional test does not include the requirement to simulate automatic operation of all channels. Instead, ITS Bases SR 3.3.5.1.6 state that the testing demonstrates operability of the required trip logic. Since these instructions do not affect changes to the outcome of logic system channel functional testing, it is not necessary to include these requirements in the ITS to ensure the operability of the ECCS instrumentation. Changes to the Bases are controlled by the provisions of the ITS Bases Control Program described in ITS Chapter 5.0. Therefore, the change is acceptable.

CTS 3/4.3.3 tables present ECCS actuation instrumentation trip functions as "Division 1 Trip System" of "Division 2 Trip Systems", and some operational requirements are presented in a "per division" format. Other details such as a "increasing" or "decreasing" trip setpoint signal are also included. ITS 3.3.5.1 deletes these design and operational details which are not necessary to ensure the operability of the ECCS actuation instrumentation. System design and operation details (e.g., bypasses, associated division, specific equipment affected, etc.) are moved to ITS Bases B 3.3.5.1. The requirements of ITS 3.3.5.1 and the associated surveillance requirements are adequate to ensure the ECCS instruments are maintained operable. Changes to the Bases are controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0. Removal of these design and operational details to the ITS Bases is consistent with the STS and is acceptable.

CTS 4.5.1 requires performing an ADS backup compressed gas system channel functional test at least once per 31 days. The alarm portion of the functional test is being moved to plant procedures. The ADS accumulator backup compressed gas system pressure alarm instrumentation does not necessarily relate directly to ADS operability. The requirements of ITS SR 3.3.5.1 are adequate to ensure that the ADS backup compressed gas system instrumentation is operable. This change conforms to the STS and is acceptable.

CTS 3.3.3, Action c, requires restoration of an inoperable ADS trip system when either trip system is inoperable. When one or more ADS channels are inoperable in an ADS trip system, ITS 3.3.5.1, Required Action F.2, provides the option of placing all inoperable channels in the tripped condition. This conservatively compensates for the inoperable status, restores the single failure capability, and provides the required initiation capability of the instrumentation. Therefore, this option does not impact safety. However, if this action would result in system actuation, then declaring the associated ADS valves inoperable and taking the action required by Action F.1 is the preferred action. This change also conservatively compensates for the inoperable status and provides the required actions for loss of the initiation capability of the instrumentation. The change is in accordance with the STS and is acceptable.

CTS Table 3.3.3-1, Footnote *, provides an applicability exception for the Condensate Storage Tanks Level—Low, and the Suppression Pool Water Level—High, High Pressure Core Spray (HPCS) initiation functions in Modes 4 and 5. The CTS limits the function operability requirements in Modes 4 and 5 to when the system is required operable per CTS 3.5.2 and 3.5.3. ITS Table 3.3.5.1-1, Note c), modifies the Modes 4 and 5 applicability for the Condensate Storage Tank (CST) Level-Low function only, by requiring the function to be operable when HPCS is operable for compliance with ITS 3.5.2, "ECCS—Shutdown," and aligned to the condensate storage tank while tank water level is not within the limit of SR 3.5.2.2. The Modes 4 and 5 applicability for the Suppression Pool Water Level—High function is deleted in the ITS. The requirements for automatic restoration of the HPCS water source to the suppression pool are dependent on the availability of sources and the need to realign the pump suction sources. With the HPCS prealigned to the suppression pool, there is no need to require automatic realignment. In shutdown, an operable CST can provide sufficient water to adequately minimize the consequences of a vessel draindown event and automatic realignment is unnecessary. Only with insufficient water in the CST is automatic realignment necessary in the shutdown modes. The change is in accordance with the STS and is acceptable.

CTS 3.3.3 requires the ADS to be operable when reactor steam dome pressure is ≥ 128 psig (CTS 3.3.3 Action c, and CTS Table 3.3.3-1, Footnote # and CTS Table 4.3.3-1 Footnote #). The pressure at which the ADS is required to be operable is increased in the ITS to 150 psig (ITS Table 3.3.5.1-1 Footnote d). The ADS operability requirement is changed to provide consistency of the operability requirements for all ECCS and RCIC equipment. Small break loss-of-coolant accidents at low pressures (i.e., between 128 psig and 150 psig) are bounded by analyses performed at higher pressures. The ADS is required to operate to lower the pressure sufficiently so that the low pressure coolant injection (LPCI) and low pressure core spray (LPCS) systems can provide makeup to mitigate such accidents. Since these systems can begin to inject water into the reactor pressure vessel at pressures well above 150 psig (222 psid for LPCI and 285 psid for LPCS), there is no safety significance in the ADS' not being operable between 128 psig and 150 psig. The change is in accordance with the STS and is acceptable.

The frequency for performing CTS 4.5.1.e.2, accumulator backup compressed gas system low-pressure alarm channel functional test (CFT), has been extended to 92 days from 31 days. The staff granted CFT extensions to 92 days in previous license amendments of other ADS instrumentation based on Topical Report NEDC-30936-P-A, December 1988. The topical report conclusions determined that CFT extensions to 92 days had negligible impact on plant safety, and could improve plant safety due to reduced testing requirements. The licensee stated that based on a review of maintenance history these instruments are highly reliable and that the function of these sensors is similar to other instruments that have had their CFT frequency previously extended. The maintenance history has shown that no failures or out of tolerances have been discovered for this instrumentation during a CFT since the trip setpoints have been set in accordance to the current WNP-2 instrument setpoint methodology (which is consistent with the guidance of ISA Recommended Practice ISA-RP67.04, Part II). Although these instruments were not specifically addressed in the staff topical report evaluation, the staff finds that the explanation supports a 92 day CFT frequency and is acceptable.

3.3.5.2 RCIC System Instrumentation

CTS Table 3.3.5-2 lists the trip setpoint and allowable values for each RCIC actuation instrument function. ITS Table 3.3.5.2-1 deletes the trip setpoint values, and provides only the allowable values for each function. The RCIC actuation instrument trip setpoints are moved to the FSAR/LCS and will be controlled according to 10 CFR 50.59. Trip setpoints are an operational detail that is included in instrumentation operability; however, the allowable value is implicit in the assumptions of the staff-approved setpoint methodology, and the Bases state that the allowable value is the TS limit for instrument function operability. Changes to the trip setpoints located in the FSAR/LCS can be adequately controlled by the provisions of 10 CFR 50.59. The single column allowable value format is consistent with the STS format and the staff-approved setpoint methodology; therefore these changes are acceptable.

CTS 4.3.5.2, a logic system functional test, requires the "simulated automatic operation" of all channels as part of the surveillance requirement. The ITS SR 3.3.5.2.4 logic system functional test does not include the instruction to simulate automatic operation of all channels. Instead, ITS Bases B 3.3.5.2.4 states that the testing demonstrates operability of the required trip logic. Since these instructions do not affect changes to the outcome of logic system channel functional testing, it is not necessary to include these requirements in the ITS to ensure the operability of the ECCS instrumentation. Changes to the Bases are controlled by the provisions of the ITS Bases Control Program described in ITS Chapter 5.0. Therefore, the change is acceptable.

CTS Table 3.3.5-1, Footnotes a, b, and c, provide details pertaining to RCIC actuation instrument channel trip logic configuration. Details relating to system design and operation are not necessary to establish the appropriate level of system operability requirements in the LCO. Rather they provide the basis for the TS limits. Therefore, ITS Table 3.3.5.2-1 does not include logic system details. These details are included in the ITS Bases, which use the provisions of the ITS Chapter 5.0 Bases Control Program for the assessing acceptable future Bases changes. The remaining requirements of ITS 3.3.5.2 and the associated surveillance requirements are adequate to ensure the RCIC instruments are maintained operable. This change is consistent with the STS format and is acceptable.

CTS Table 3.3.5-1, Action 50 b), requires declaring the RCIC inoperable when the number of inoperable level instrument channels renders both trip systems inoperable. ITS 3.3.5.2 Required Action B.2 provides the option to place one or more inoperable channels in the tripped condition instead within 24 hours or declare the RCIC system inoperable within 1 hour of determining that the loss of actuation capability exists. This conservatively compensates for the inoperable status, restores the single failure capability, and provides the required initiation capability of the instrumentation. Therefore, providing this option does not impact safety. However, if this action results in system actuation, then declaring the RCIC system inoperable and taking the action required by ITS 3.5.1 and 3.5.2 also conservatively compensates for the inoperable status, and provides the required actions for loss of the initiation capability of the instrumentation. The change is in accordance with the STS and is acceptable.

3.3.6.1 Primary Containment Isolation Instrumentation

CTS Table 3.3.2-1, Action 22, requires closing the affected RWCU system isolation valves within 1 hour and declaring the system inoperable. ITS 3.3.6.1, Required Action I.1, provides the option of declaring the associated standby liquid control (SLC) subsystem inoperable if isolating the RWCU system is not desirable. This action is required if the RWCU system cannot be isolated, since the purpose of RWCU isolation is to ensure the SLC subsystems will function properly by ensuring that the injected boron is not removed from the reactor coolant system. The change provides an equivalent set of remedial actions, is consistent with the STS format, and is acceptable.

CTS Table 3.3.2-2 lists the trip setpoint and allowable values for each primary containment isolation instrumentation function. ITS Table 3.3.6.1-1 deletes the trip setpoint values, and provides only the allowable values for each function. The primary containment isolation actuation instrumentation trip setpoints are moved to the FSAR/LCS and will be controlled by 10 CFR 50.59. Trip setpoints are operational details that are included in instrumentation operability; however, the allowable value is implicit in the assumptions of the staff-approved setpoint methodology, and the Bases state that the allowable value is the TS limit for instrument function operability. Changes to the trip setpoints located in the FSAR/LCS can be adequately controlled by the provisions of 10 CFR 50.59. The single column allowable value format is consistent with the STS format and the staff-approved setpoint methodology; therefore these changes are acceptable.

CTS 3/4.3.2, Action b (first sentences of b.1 and b.2), provides separate requirements for placing inoperable channels in the tripped condition based upon whether performing the action will result in isolating primary containment. These requirements are incorporated into the ITS 3.3.6.1 required actions, and the descriptive text is moved to the ITS Bases. If a

channel is not tripped because tripping the channel will result in isolating primary containment, then the required action of ITS 3.3.6.1, Condition A, is not completed within the required completion time and entry into ITS 3.3.6.1, Action C, is required, as described in the Bases. Action C requires that the reactor be taken out of the applicable condition. Alternatively, if a channel is not tripped even though tripping the channel would not result in isolating primary containment (CTS Action b.2), then ITS 3.3.6.1, Required Action C, is entered. This case is similar to the case where placing a channel in trip results in an isolation. Changes to the Bases are controlled by the provisions of ITS Chapter 5.0 Bases Control Program. This change is consistent with the STS and is acceptable.

CTS 3/4.3.2, Action Footnote *, provides a requirement to place the primary containment isolation trip system with the most inoperable channels in the tripped condition. Further, "The trip system need not be placed in the tripped condition when this would cause the isolation to occur." Details of the methods for performing required actions (i.e., which trip system to trip) are moved to the Bases for ITS 3.3.6.1. Changes to the Bases are controlled by the ITS Chapter 5.0 Bases Control Program. Inclusion of these details in the ITS is not necessary to ensure required actions are taken to restore automatic primary containment isolation capability. The required actions of ITS 3.3.6.1 include tripping one of the affected trip systems to ensure automatic isolation capability is maintained. This change is consistent with the STS and is acceptable.

CTS 4.3.2.2, a logic system functional test, requires the "simulated automatic operation" of all channels as part of the surveillance requirement. The ITS SR 3.3.6.1.6 logic system functional test does not include the instruction to simulate automatic operation of all channels. Instead, ITS Bases B 3.3.6.1.6 states that the testing demonstrates operability of the required trip logic. Since this instruction does not affect the outcome of logic system channel functional testing, it need not be included in the ITS to ensure the operability of the ECCS instrumentation. Changes to the Bases are controlled by the provisions of the ITS Bases Control Program described in ITS Chapter 5.0. Therefore, the change is acceptable.

CTS Table 3.3.2-1 includes a column identifying the primary containment isolation valve groups affected by each isolation function. In addition, CTS Table 3.3.2-1, Table Notations g and h provide additional valve actuation and coincidence details for isolation actuation signals. In the ITS, system design and operational details relating to the primary containment isolation valve grouping and coincidence logic are moved to the ITS Bases. Changes to the Bases are controlled by the ITS Chapter 5.0 Bases Control Program. Details relating to system design and operation (e.g., specific valves or valve groups affected) are unnecessary in the LCO. These details are not necessary to ensure the operability of the primary containment isolation instrumentation. The requirements of ITS 3.3.6.1 and associated surveillance requirements ensure that isolation instrumentation is maintained operable.

CTS Table 3.3.2-1, Table Notation * allows bypassing the Condenser Vacuum—Low function in Modes 2 and 3 with reactor steam pressure ≤ 1060 psig and all turbine stop valves closed. The CTS bypass requirement "with reactor steam pressure ≤ 1060 psig" is moved to the FSAR/LCS Manual since the condenser cannot be pressurized with the main turbine throttle valves closed, regardless of the reactor pressure. The requirement that the main turbine throttle valves are to be closed to allow bypassing the low vacuum function is retained as Footnote a in Table 3.3.6.1-1. In addition, the reactor steam pressure limit is a permissive in the design of the bypass switch. With the reactor pressure > 1060 psig, the low condenser vacuum function cannot be bypassed. Therefore, the CTS reactor steam pressure 1060 psig limit is not needed to ensure the low condenser vacuum function is not bypassed during a mode or specified condition when it is required operable. Changes to the bypass allowance located in the FSAR/LCS can be adequately controlled by the provisions of 10 CFR 50.59. The format is consistent with the STS format and these changes are acceptable.

CTS Table 3.3.2-1, Table Notation i, provides requirements as to when and how the control of valve RHR-V-8 is returned from the remote shutdown panel to the control room for residual heat removal (RHR) system shutdown cooling mode isolation, including the requirement that "the associated key lock switch will be locked" with the valve in the closed position. The ITS moves the requirement that the associated key lock switch will be locked to the FSAR/LCS Manual controlled by the provisions of 10 CFR 50.59. In addition, the CTS requirement to "lock" the control switch, which ensures the valve remains closed, is inconsistent with other ITS actions as they relate to inoperable containment isolation channels. With any other channel inoperable, the ITS required actions require tripping the channel or isolating the penetration. However, there is no requirement to "lock" closed the valve used to isolate the penetration. The means by which the valves are maintained closed are left under plant-specific controls. Therefore, moving the requirement to lock the control switch to the FSAR/LCS is acceptable.

CTS Table 3.3.2-1, Action 27, states that reactor water cleanup system valve RWCU-V-32 is to be isolated when the requirements of the LCO are not met. The details of the methods for performing required actions for isolating the blowdown portion of the RWCU System are moved to the Bases. The requirements that remain in ITS 3.3.6.1 are sufficient to ensure operator actions are taken to isolate the RWCU blowdown piping. Changes to the Bases are controlled by the provisions of the ITS Bases Control Program described in ITS Chapter 5.0. Therefore, the change is acceptable.

CTS 3.3.2, Actions b and c, differentiate between whether primary containment isolation function channels are inoperable in one or both trip systems. With channels inoperable in both trip systems, CTS Action c) does not allow placing all inoperable channels in the tripped condition, even if this would not result in an isolation. The ITS 3.3.6.1 actions for inoperable channels apply whether one or both trip systems are affected. This allows the conservative action of tripping the inoperable channels, which is preferable to initiating a shutdown, as required in CTS 3.3.2 for many cases. Further, ITS 3.3.6.1, Actions A and B, require that all inoperable channels be restored or tripped and reference any further action for a shutdown track to conditions provided in Table 3.3.6.1-1. The change is consistent with the STS and is acceptable.

CTS Table 3.3.2-1, Action 20, requires placing the plant in hot shutdown within 12 hours, and in cold shutdown within the next 24 hours, when the required Actions for the Reactor Vessel Water Level—Low, Level 3, function are not met. The Reactor Vessel Water Level—Low, Level 3, function affects the Group 5 valves only. The Group 5 valves only affect the LPCI A and B subsystems. ITS 3.3.6.1, Required Action F.1, changes this requirement to allow isolating the affected penetration instead of requiring a unit shutdown. Isolating the affected penetration performs the safety function that would otherwise be performed by the actuation instrumentation. Plant operation can continue with these LPCI valves isolated (i.e., the associated LPCI subsystem is inoperable) and actions are provided in ITS 3.5.1 (CTS 3.5.1) that allow operation for a short time. If the penetration is not isolated within 1 hour as required by ITS 3.3.6.1, Required Action F.1, then the plant must be in Modes 3 or 4 as specified by ITS 3.3.6.1, Required Actions H.1 and H.2. Isolating the affected penetration performs the safety function of the isolation instrument channel(s); therefore, this change is acceptable.

CTS Table 3.3.2-1 requires the SLCS initiation instrumentation to be operable in Mode 3. Mode 3 operability requirements are not included in ITS Table 3.3.6.1-1 for this function. The SLC initiation instrumentation is not required in Mode 3 since ITS 3.3.2.1 requires the reactor mode switch to be in the shutdown position, which precludes rod movement because the mode switch enforces a control rod block. This change is consistent with the CTS and ITS applicability requirements for the SLC system. Therefore, deleting the Mode 3 operability requirement is acceptable.

CTS Table 3.3.2-1 includes the RCIC/RHR Steam Line Flow—High instrument function for reactor core isolation cooling (RCIC) isolation. This isolation instrument function is not included in ITS Table 3.3.6.1-1. The RCIC/RHR Steam Line Flow—High function isolates the RCIC system on a pipe break in the RHR steam condensing mode piping because RCIC was originally designed to supply steam to this system. The RHR steam condensing mode is permanently isolated from the RCIC system through a plant modification, removing the need for the RCIC/RHR Steam Line Flow—High function to isolate the RCIC system. This instrument no longer performs a function, and therefore, its deletion is acceptable.

CTS Table 3.3.2-1 requires two channels of the Reactor Vessel Water Level—Low, Level 3, function of RHR shutdown cooling isolation operable in Modes 1, 2, and 3. Footnote e of ITS Table 3.3.6.1-1 changes this requirement to require only one channel operable in Modes 4 and 5 with the RHR shutdown cooling system integrity maintained. Since the RHR shutdown cooling system isolation occurs on low water level and high shutdown cooling return flow rate in Modes 4 and 5 to mitigate a vessel draindown event, an intact system fulfills the function of one trip system of isolation instrumentation. Therefore, the second trip system is not required, provided system integrity is maintained. With the system piping not intact or during maintenance that results in the potential for draining the reactor vessel through the system, both trip

systems are required for RHR system isolation in Modes 4 and 5. Therefore, this change is acceptable.

The CTS Table 3.3.2-1 Mode 1 and 2 RHR shutdown cooling mode isolation requirements for the Reactor Vessel Water Level—Low, Level 3, Equipment Area Temperature—High, Equipment Area Ventilation Differential Temperature—High, and RHR Heat Exchanger Area Temperature—High functions are not included in ITS Table 3.3.6.1-1. The Reactor Vessel Pressure—High is the isolation function assumed in the safety analysis to ensure that RHR shutdown cooling valves are isolated in Mode 1 and Mode 2 above the RHR cut-in permissive pressure setpoint. When operating below the setpoint in Mode 2, RHR shutdown cooling is not in service because ITS 3.5.1 requires all LPCI to be operable in Mode 2, and with RHR aligned to the shutdown cooling mode, LPCI is inoperable. In addition, plant procedures require RHR alignment to the LPCI mode and the recirculation pumps operating, which would necessitate securing the shutdown cooling mode before entering Mode 2. Therefore, deleting the Mode 1 and 2 requirements for these functions is acceptable.

CTS Table 3.3.2-1, Action 20, requires a plant shutdown when the number of inoperable Reactor Vessel Water Level—Low Low, Level 2 instrument channels is less than the minimum-operable-channels-per-trip-system requirement for both main steam line isolation trip systems. ITS 3.3.6.1, Required Action D.1, changes the plant shutdown requirement for this condition to "isolate the affected main steam line," thereby allowing isolation of the affected main steam line because some conditions may affect the isolation logic for only one main steam line. Each MSIV has solenoids that receive signals from the isolation logic through relays and their contacts. If a contact from the isolation logic fails to open when a low water level signal is received, the solenoid would not deenergize and the MSIV would remain open. Since the ITS do not include the logic as a specific line item, the low water level channel is considered inoperable when a solenoid cannot deenergize. This problem could be localized to only one MSIV. In these cases, it is not necessary to require a shutdown of the unit; rather, isolating the affected line returns the system to a status where it can perform the remainder of its isolation function, and continued operation is allowed although it may be at a reduced power level in Mode 2.

CTS Table 3.3.2-1, Action 21, requires placing the plant in startup with the associated isolation valves closed within 6 hours when required actions are not met for primary containment isolation trip functions 1.c.3, 1.d, 1.e, and 1.f. ITS Table 3.3.6.1-1, Required Action D.1, changes the requirement to "isolate all main steam lines." Isolating all main steam lines is a sufficient action with any main steam isolation actuation function inoperable because closing the valves performs the action of the isolation instrumentation and forces the plant to enter Mode 2 to avoid the scram that would occur upon isolation of all MSIVs. The requirement to be in Mode 2 is, therefore, implicit and is deleted. The time allowed to isolate the associated main steam lines is extended from 6 hours to 12 hours. The additional time allows an orderly power reduction. The change is consistent with the STS requirements and is acceptable.

CTS Table 3.3.2-1, Action 24, allows 8 hours to restore an isolation system manual initiation function to operable status, and 1 additional hour to close the affected system isolation valves. This requirement is replaced by ITS 3.3.6.1, Required Action G.1. ITS 3.3.6.1, Required Action G.1, provides 24 hours to isolate the affected flow path. The CTS time is considered overly conservative since the manual initiation function is not assumed in any accident or transient analysis in the FSAR; automatic functions are the only instrument functions assumed to isolate the penetration. This change is consistent with the nonautomatic design of the function and with BWR Standard Technical Specifications, NUREG-1434, and is, therefore, acceptable.

CTS Table 3.3.2-1, Action 26, allows 1 hour to "Lock close or close as applicable the affected system isolation valves" when an inoperable shutdown cooling (SDC) system reactor vessel low water level isolation channel is not tripped within the TS time limit. This action, however, results in a loss of shutdown cooling, and could result in a more significant safety problem than would exist by leaving the isolation valves open with the inoperable level instrument channels. ITS 3.3.6.1, Required Actions J.1 and J.2, require immediate action to either isolate the affected line or restore the channel(s) to operable status. The ITS Bases describes circumstances under which either Required Action J.1 or J.2 is required. These actions are consistent with the STS, ensure that SDC is not interrupted when needed, and ensure continued action to restore the channel(s) as specified. Therefore, the change is acceptable.

The RHR Shutdown Cooling Suction Flow Rate-High isolation instrumentation (Trip Function 5.e, CTS Tables 3.3.2.1-1 and 4.3.2.1-1) has been omitted from the ITS since other instrumentation retained in the ITS provides adequate protection should an RHR line break occur.

The RHR SDC system has five valves (known as Group 6 valves) which are part of primary containment isolation system. Seven signals initiate Group 6 isolation, two of which are the Reactor Vessel Pressure—High and Residual Heat Removal Shutdown Cooling (RHR SDC) Suction Flow Rate—High signals. In its submittal the licensee stated that the accidents and events described in the FSAR do not credit the RHR SDC Suction Flow Rate—High signal to mitigate any design basis accident or event. In the CTS, one channel per trip system is required to be operable in Modes 1, 2 and 3. In Mode 1, the RHR system is isolated. In Modes 2 and 3 it remains isolated for the reactor vessel pressure > 135 psig. Since the Reactor Pressure-High signal instrumentation is single-failure-proof, its operability in Modes 1, 2, and 3 keeps Group 6 isolation valves from opening above 135 psig.

In the ITS, all ECCS subsystems are required to be operable during Modes 1, 2, and 3. The LPCI system, which is another mode of the RHR system with a different valve alignment, cannot be operable in Modes 1 or 2 unless aligned for standby mode for LPCI operation. This alignment precludes RHR SDC isolation valves from being open even with the reactor pressure ≤ 135 psig, when changing from Mode 3 to Mode 2. The proposed ITS (LCO 3.0.4 and SR 3.0.4) will ensure that such a mode change is not permissible unless LPCI is operable, including alignment in standby mode of LPCI operation. This means the RHR SDC valves will remain closed in Mode 2 even with reactor pressure less than or equal to the RHR cut-in permissive pressure of 135 psig.

The Reactor Vessel Water Level—Low, Level 3, signal is one of the seven isolation signals. Instruments for this signal per ITS are required to be operable during Modes 3, 4 and 5. In case a break in the RHR SDC piping outside containment occurs it will be mitigated by signal from this instrument. In addition, area high temperature isolations are also available as a backup to the low water level signal during Mode 3 operation when reactor pressure is less than RHR permissive pressure. In addition, other instrument signals used for initiating isolation are required to be operable by the proposed ITS. As a result, at all times when RHR SDC is in operation, containment isolation will be accomplished and maintained by other safety-related instrumentation, and the Shutdown Cooling Suction Flow Rate-High instrumentation is not needed. Therefore, its deletion is acceptable.

3.3.6.2 Secondary Containment Isolation Instrumentation

CTS Table 3.3.2-2 lists the trip setpoint and allowable values for each secondary containment isolation instrumentation function. ITS Table 3.3.6.2-1 deletes the trip setpoint values, and presents only the allowable values for each function. The secondary containment isolation actuation instrumentation trip setpoints are moved to the FSAR or LCS and will be controlled by 10 CFR 50.59. Trip setpoints are an operational detail that is included in instrumentation operability; however, the allowable value is implicit in the assumptions of the staff-approved setpoint methodology and the Bases state that the allowable value is the TS limit for instrument function operability. Changes to the trip setpoints located in the FSAR or LCS can be adequately controlled by the provisions of 10 CFR 50.59. The single column allowable value format is consistent with the STS format and the staff-approved setpoint methodology; therefore, these changes are acceptable.

CTS 3/4.3.2, Action b, provides separate requirements for placing inoperable channels in the tripped condition according to whether performing the action will result in isolating secondary containment. These requirements are incorporated into the ITS 3.3.6.2 required actions, and descriptive text is moved to the ITS Bases. If a channel is not tripped because tripping the channel will result in isolating secondary containment then the required action of ITS 3.3.6.2, Condition A, is not completed within the required completion time and entry into ITS 3.3.6.2, Action C, would be required, as described in the Bases. Action C requires that the reactor be taken out of the applicable condition. Alternatively, if a channel is not tripped but tripping the channel will not result in isolating secondary containment (CTS Action b.2), then ITS 3.3.6.2 Required Actions C is entered. This case is similar to the case where placing a channel in trip results in an isolation. Changes to the Bases are controlled by the provisions of the ITS Chapter 5.0 Bases Control Program. Since the same response is required, this change is one of presentation preference, consistent with the STS, and is acceptable.

Footnote * to the CTS 3/4.3.2 action provides a requirement to place the secondary containment isolation trip system with the most inoperable channels in the tripped condition. Further, "The trip system need not be placed in the tripped condition when this would cause the isolation to occur." Details of the methods for performing required actions (i.e., which trip system to trip) are moved to the Bases for ITS 3.3.6.2. Changes to the Bases are controlled by the ITS Chapter 5.0 Bases Control Program. Including these details in the ITS is not necessary to ensure required actions are taken to restore automatic secondary containment isolation capability. The required actions of ITS 3.3.6.2 include tripping one of the affected trip systems to ensure automatic isolation capability is maintained. This change is consistent with the STS and is acceptable.

CTS 4.3.2.2, a logic system functional test, requires the "simulated automatic operation" of all channels as part of the surveillance requirement. The ITS SR 3.3.6.2.4 logic system functional test does not include the instruction to simulate automatic operation of all channels. Instead, ITS Bases B 3.3.6.2.4 states that the testing demonstrates operability of the required trip logic. Since this instruction does not affect the outcome of logic system channel functional testing, it need not be included in the ITS to ensure the operability of the ECCS Instrumentation. Changes to the Bases are controlled by the provisions of the ITS Bases Control Program described in ITS Chapter 5.0. Therefore, the change is acceptable.

CTS Table 3.3.2-1 includes a column identifying the secondary containment isolation valve groups affected by each isolation function. In addition, CTS Table 3.3.2-1, Table Notations b and e provide additional valve actuation and coincidence details for isolation actuation signals. In the ITS, system design and operational details relating to the primary containment isolation valve grouping and coincidence logic are moved to the ITS Bases. Changes to the Bases are controlled by the ITS Chapter 5.0 Bases Control Program. Details relating to system design and operation (e.g., specific valves or valve groups affected) need not be included in the LCO to ensure the operability of the secondary containment isolation instrumentation. The requirements of ITS 3.3.6.2 and associated surveillance requirements ensure that isolation instrumentation is maintained operable. Therefore, the movement of these details to the Bases is acceptable.

CTS 3.3.2, Actions b and c, differentiate between whether secondary containment isolation function channels are inoperable in one or both trip systems. With channels inoperable in both trip systems, CTS Action c does not allow placing all inoperable channels in the tripped condition, even if this would not result in an isolation. The ITS 3.3.6.2 actions for inoperable channels apply whether one or both trip systems are affected. This allows the conservative action of tripping the inoperable channels, which is preferable to initiating a shutdown, as required in CTS 3.3.2 for many cases. Further, ITS 3.3.6.2, Actions A and B, require that all inoperable channels be restored or tripped and reference any further action for a shutdown track to conditions provided in Table 3.3.6.2-1. The change is consistent with the STS, and is acceptable.

CTS Table 3.3.2-1, Action 25, requires establishing secondary containment integrity and having the standby gas treatment system (SGTS) operating within 1 hour, or entering TS 3.0.3, which results in a plant shutdown. ITS 3.3.6.2, Condition C, Required Actions C.1.2 and C.2.1, are added to allow declaring the affected components inoperable and taking the appropriate actions in the associated secondary containment isolation valve (SCIV) or SGTS TS if the associated penetrations and SGT subsystems are not placed in the proper condition within 1 hour. Since the affected instrument functions provide a signal for the SCIVs and SGTS (i.e., the instrumentation supports SCIV and SGTS operability), it is appropriate to declare the associated SCIVs and SGT subsystems inoperable. Currently, if an instrument is inoperable but the associated SCIVs and SGT subsystems are otherwise fully operable, an immediate shutdown is required. The CTS action requirements are overly restrictive, because if the associated SCIVs and SGT subsystems are inoperable for other reasons, a much longer restoration time is provided. The change is consistent with the STS format and established repair times and is acceptable.

Footnote # to CTS Tables 3.3.2-1 and 4.3.2-1 extends the Modes 1, 2, and 3 applicability for the Reactor Vessel Water Level—Low Low, Level 2, function of secondary containment isolation to include "During CORE ALTERATION". ITS Table 3.3.6.2-1 does not include the extended applicability requirements for the reactor vessel level function. Automatic secondary containment isolation capabilities on reactor vessel water level decreases are not required during core alterations. Core alterations do not result in any increased potential for vessel draindown. If ongoing activities involve a potential for draining the reactor vessel, then the ITS applicability requires the Reactor Vessel Water Level—Low Low, Level 2, function to be operable. Therefore this change is consistent with STS applicability requirements, and is acceptable.

3.3.7.1 Control Room Emergency Filtration (CREF)

CTS Table 3.3.7.1-1 lists the alarm setpoint for the CREF main control room ventilation radiation monitor function. ITS Table 3.3.7.1-1 deletes the alarm setpoint values, and presents only the allowable values for each function. The instrumentation alarm setpoints are moved to the FSAR/LCS and will be controlled according to 10 CFR 50.59. Alarm setpoints are an operational detail that is included in instrumentation operability; however, the allowable value is implicit in the assumptions of the staff-approved setpoint methodology and the Bases state that the allowable value is the TS limit for instrument function operability. Changes to the alarm setpoints located in the FSAR/LCS can be adequately controlled by the provisions of 10 CFR 50.59. The single column allowable value format is consistent with the STS format and the staff-approved setpoint methodology, therefore these changes are acceptable.

CTS Tables 3.3.7.1-1 and 4.3.7.1-1 require the CREF main control room ventilation radiation monitor function to be operable in Mode 5. ITS Table 3.3.7.1-1 replaces the function's Mode 5 applicability with Footnotes a and b. Footnote a requires the CREF main control ventilation radiation monitor function to be operable "During operations with potential for draining the reactor vessel". Footnote "b" requires the function to be operable "During

CORE ALTERATIONS, and during movement of irradiated fuel assemblies in the secondary containment." These footnotes limit the system operability requirements to those operations that have a potential to create a need for system operation. The conditions omitted by this change are not initiators of events which require operation of the system; therefore, the change does not impact safety. Thus, Mode 5 requirements are modified to include those conditions that could result in a potential for a radiation release in Mode 5. This change is consistent with the STS and is acceptable.

In addition, CTS Tables 3.3.7.1-1 and 4.3.7.1-1, Table Notation *, provides for applicability of the main control room radiation monitor "when the main condenser air evacuation system is in operation." This applicability has been deleted in ITS Table 3.3.7.1-1 because it restates the Modes 1, 2, and 3 definitions. The main condenser air evacuation system is normally operated in Modes 1, 2, and 3, when the reactor could be pressurized. In Modes 4 and 5, the reactor is depressurized. Thus the system is not used to remove noncondensible radioactive gases released from the reactor coolant.

The CTS control room emergency filtration system actions have been modified in ITS 3.3.7.1 to provide more appropriate actions when one or more main control room ventilation radiation monitors (which provide only an alarm function) are inoperable.

Main control room ventilation radiation signals are initiated from four channels of radiation monitors. Two channels are assigned to each remote intake plenum and are required to be operable to provide operators with indication of which intake plenum is in the radioactive plume generated during a design basis LOCA. The accident analysis assumes that remote air intake radiation monitors are needed to ensure that the remote air intake which is in the plume pathway is isolated before dose limits to the control room personal are exceeded. According to the CTS, two-out-of-two radiation monitoring channels per intake shall be operable. In case one of the channels becomes inoperable, the affected intake shall be isolated within 1 hour and the inoperable channel has to be restored to operable status within 7 days or the CREF system shall be initiated and maintained in the pressurization mode within the next 6 hours (CTS Action 70.a).

The change removes the requirement to isolate the air intake if one of the two radiation monitors on any air intake becomes inoperable. If one out of two monitors on any air intake becomes inoperable, Required Action E.2 requires restoring the inoperable channel to the operable status in 30 days, and if loss of one out of two monitors occurs on both air intakes, Required Action E.2 requires the inoperable channel to be restored to its operable status in 7 days. With one radiation monitor inoperable on any air intake, the other monitor is fully capable of providing indication of radiation levels at that air intake. The purpose of the monitors is to provide indication of radiation-levels at the remote air intake and annunciate in the control room if high radiation is detected above the specified setpoint. On initiation of an alarm, plant personnel will isolate the affected air intake. Isolation of the air intake with just one inoperable channel is not necessary, when indication and annunciation for high-radiation level is available through the

other operable channel. Also, the licensee stated that the location of air intakes is such that the plume cannot be over both remote air intakes at the same time. Therefore deletion of the requirement to isolate the air intake if one of the two radiation monitors is inoperable is acceptable to the staff.

If both monitors of the same air intake are inoperable, the affected air intake will be isolated within 1-hour (Required Action E.1). Isolation of the air intake will preclude the dose limits from being exceeded if the unmonitored remote air intake is in the plume exposure pathway. If all monitors become inoperable or if it is not desired to isolate the other air intake, Action F.1 will require declaring both CREF systems inoperable, which will result in unit shutdown as required by LCO 3.7.3. In addition, a note in Required Action E.1 requires entry to LCO 3.7.3 if both air intakes are isolated due to inoperable radiation monitors. The above changes place restrictions on plant operation which are appropriate for plant design and safety analysis assumptions. This is acceptable to the staff.

CTS Table 3.3.7.1-1, Action 70.a, requires restoring one inoperable main control room ventilation radiation monitor to operable status within 7 days. ITS 3.3.7.1, Required Action E.2, changes the allowed restoration time for either one or two radiation monitors inoperable on one air intake to 30 days. The function of the monitor is to provide indication as to whether or not an accident plume is over the respective remote air intake. The location of the remote air intakes is such that a plume cannot be over both remote air intakes at the same time. If the operable radiation monitors indicate that the plume is over its respective remote air intake, the other remote intake, which has no operable radiation monitors, cannot have the plume over it. Therefore, it is acceptable to extend the allowed outage time of radiation monitors on one remote air intake to 30 days, provided the other two radiation monitors on the other remote intake are operable.

The remaining operable radiation detectors receive AC power from opposite electrical divisions; thus if a loss of offsite power occurs coincident with a LOCA and a failure of a diesel generator to start, one of the two detectors will remain energized and capable of providing indication to the operators. The proposed 30-day completion time is consistent with the 30-day completion time provided for post-accident monitoring (PAM) instrumentation. The radiation monitors are like a PAM instrumentation Type A variable; they provide indications so that the control room operation staff can take a specific, preplanned, manual action for which no automatic control is provided. In addition, manual sampling of the remote air intake location would provide the necessary information. The proposed 30-day completion time is provided in the dual completion times of proposed Required Action E.2. A 7-day completion time is provided if one or more radiation monitors are inoperable in both remote air intakes, and a 30-day completion time is provided if a radiation monitor is inoperable in one remote air intake.

3.3.8.1 Loss of Power Instrumentation

CTS Table 3.3.3-2 lists the trip setpoint and allowable values for each loss-of-power (LOP) instrumentation function. CTS 3.3.3, action a, requires adjusting the trip setpoint consistent with the trip setpoint specified in CTS Table 3.3.3-2. ITS Table 3.3.8.1-1 deletes the trip setpoint values, and provides only the allowable values for each function. The loss-of-power actuation instrumentation trip setpoints for both a 4160-VAC bus and a 120-VAC bus are moved to the FSAR/LCS and will be controlled by 10 CFR 50.59. Trip setpoints are an operational detail that is included in instrumentation operability; however, the allowable value is implicit in the assumptions of the staff-approved setpoint methodology, and the Bases state that the allowable value is the TS limit for instrument function operability. Changes to the trip setpoints located in the FSAR/LCS can be adequately controlled by the provisions of 10 CFR 50.59. The single column allowable value format is consistent with the STS format and the staff-approved setpoint methodology; therefore these changes are acceptable.

CTS 4.3.3.2, logic system functional test, requires the "simulated automatic operation" of all channels as part of the surveillance requirement. ITS 3.3.8.1.4, logic system functional test, does not include the instruction to simulate automatic operation of all channels. Instead, ITS Bases SR 3.3.8.1.4 states that the testing demonstrates operability of the required trip logic. Since this instruction does not affect the outcome of logic system channel functional testing, it need not be included in the ITS to ensure the operability of the LOP instrumentation. Changes to the Bases are controlled by the provisions of the ITS Bases Control Program described in ITS Chapter 5.0. Therefore, the change is acceptable.

CTS Table 3.3.3-1 lists the loss-of-voltage and degraded voltage loss-of-power instrumentation total number of channels and channels to trip requirements. CTS Table 3.3.3-2, Footnote ##, identifies design and operational characteristics of the inverse time delay relays and instantaneous voltage relays. ITS moves these system design details to the ITS Bases; therefore these requirements are not included in ITS Table 3.3.8.1-1. Specifying channels to trip and relay types does not add requirements which ensure the loss-of-power instruments remain operable. The ITS 3.3.8.1 requirements and the associated surveillance requirements ensure the licensing basis instrument channels remain operable or that necessary restrictions are placed on plant operations when channels are inoperable. The provisions of the Bases Control Program, described in Chapter 5.0 of the ITS, control changes to the TS Bases. The ITS Bases Control Program provides appropriate control of the Bases details and requirements, and the operability of the loss-of-power instrumentation is assured by ITS 3.3.8.1. Therefore, moving these design details and requirements to the ITS Bases is acceptable.

CTS Table 3.3.3-2 lists the allowable values for a 4160-VAC nominal voltage basis, and a 120-VAC voltage basis. ITS Table 3.3.8.1-1 lists only the 4160-VAC nominal voltage allowable value. The 120-VAC allowable value duplicates the 4160-VAC allowable value because of the constant transformer ratio between the 4160-VAC and the 120-VAC buses. Therefore, the ITS format for the plant design moves the 120-VAC basis allowable value to the FSAR. There is only one setpoint per instrument channel. The 120-VAC analytical setpoint relates to the 4160-VAC bus allowable value specified in ITS Table 3.3.8.1-1. The operability of the loss-of-power instrumentation is assured by ITS 3.3.8.1, Changes to the allowable value located in the FSAR can be adequately controlled by the provisions of 10 CFR 50.59. The format is consistent with the STS format. Therefore, this change is acceptable.

CTS Table 3.3.3-1 requires a minimum of two loss of voltage channels for each division and two degraded voltage channels for TR-S Division 1 and 2. The Division 1, 2, and 3 loss-of-voltage logic is one-out-of-two logic. The Division 1 and 2 degraded voltage logic are two-out-of-three logic, and the Division 3 degraded voltage logic is two-out-of-two logic. The instrumentation is a support system for the 4160-VAC engineered safety feature buses and diesel generators (DGs), which themselves are support systems for the various systems they power. The diesel generators and engineered safety feature buses meet the single failure criterion, that is, the assumption of one diesel generator and associated engineered safety feature bus failure in the accident analyses. The ITS Table 3.3.8.1-1 requires only two Division 1, 2 and 3 degraded voltage channels per division. A single failure of any one of these required channels will result in the loss of degraded voltage protection to one diesel generator, however, the two channel design is consistent with staff positions for this second level of bus voltage protection and is acceptable.

CTS 3.3.3 does not include a requirement to declare the diesel generator inoperable for loss of a LOP instrumentation channel associated with a diesel generator. ITS 3.3.8.1, Required Action B.1, requires declaring the associated diesel generator inoperable. This results in taking the appropriate actions in the diesel generator specification (LCO 3.8.1 or LCO 3.8.2) if the inoperable LOP channel remains untripped after 1 hour. The CTS actions for an untripped channel require entry into CTS 3.0.3, resulting in an immediate shutdown. Since LOP instrumentation provides a DG start signal, it supports diesel generator operability; therefore the appropriate TS action is to declare the diesel generator inoperable. If the DG is inoperable for other reasons, the CTS provides a 72-hour restoration time; yet if an instrument is inoperable with the diesel otherwise fully operable, the CTS requires an immediate shutdown. Declaring the diesel generator associated with inoperable loss-of-power instrumentation inoperable is appropriate and acceptable.

CTS Table 3.3.3-1, Action 38, allows operation to continue with an inoperable channel until the next channel functional test if an inoperable channel is tripped within 1 hour. ITS also require inoperable channels to be tripped in 1 hour. SR 3.3.8.1.1 requires a channel functional test every 31 days. ITS SR 3.0.1 and CTS SR 4.0.3 require all channels to be tested; failure to meet a test is failure to meet the LCO, however surveillance of inoperable channels is not required. Thus, deleting the requirement that operation may continue only until the next channel functional test will allow continued operation with an inoperable, tripped channel for longer than currently allowed. This is acceptable since placing the channel in trip conservatively compensates for the inoperable status, restores the single failure capability, and provides the required initiation capability of the instrumentation. Therefore, it is not necessary to limit the time the channel is allowed to be tripped.

The ITS adds Note 2 to the surveillance requirements. This note allows a 2-hour delay for entering the associated conditions and required actions when a channel is placed in an inoperable status solely to perform required surveillances. This allowance is not a part of the CTS. It requires maintaining DG initiation capability by the associated instrument function. Upon completion of the surveillance, the channel must return to operable status. If the 2-hour allowance expires, the applicable condition and required actions apply. Since the 2 hours in this condition will not substantially impact risk, this is acceptable.

3.3.8.2 RPS Electric Power Monitoring

CTS 3.8.4.4 always requires two reactor protection system electric power monitoring channels for each inservice reactor protection system motor-generator set or alternate source. ITS 3.3.8.2 requires the same operable equipment in Modes 1, 2, and 3. ITS 3.3.8.2 also applies in Modes 4 and 5 with any control rod withdrawn from a core cell containing one or more fuel assemblies or if both residual heat removal shutdown cooling suction isolation valves are open. With no control rods withdrawn from core cells containing fuel assemblies or with either residual heat removal shutdown cooling suction isolation valve closed, there is no need for the reactor protection system or the reactor protection system bus powered components to perform their functions. Therefore, there is no need to require monitoring of the power to protect the equipment. In addition, Special Operations LCO 3.10.4 will allow a single control rod to be withdrawn in Mode 4 by allowing the reactor mode switch to be in the refuel position. Therefore, the applicability only includes those modes or conditions requiring the reactor protection system and the reactor protection system bus powered components, including Mode 4 operations for LCO 3.10.4; this is acceptable.

CTS 3.8.4.4, Action b, allows 30 minutes to remove the associated power source from service, if both reactor protection system electric power monitoring channels for a power source are inoperable. ITS 3.3.8.2, Required Action B.1, allows 1 hour to remove the associated inservice power supply from service for the same condition. Increasing the allowed outage time for two redundant inoperable channels from 30 minutes to 1 hour provides time for corrective actions. The time extension also applies to two inoperable assemblies. Allowing time for the appropriate planning to perform required actions based on current plant conditions and available personnel is prudent and appropriate, and is acceptable.

A note has been added to ITS 3.3.8.2 which allows a channel of RPS electric power monitoring instrumentation to be inoperable for up to 6 hours for performing surveillances provided the other RPS electric power monitoring assembly for the associated power supply maintains trip capability. The loss of one electric power monitoring assembly is a degraded condition, however, since only one of the two assemblies is required to trip the associated power supply, trip capability is maintained. The electric power monitoring equipment required by this LCO supports the RPS and isolation instrumentation. In approving various topical reports for the ITS, the staff approved the 6 hour allowance for reactor protection system and isolation instrumentation,

provided actuation capability is maintained. The short period of time (6 hours) in this condition will have no appreciable impact on risk. This surveillance allowance is therefore acceptable.

Conclusion

These less restrictive requirements are acceptable because they will not affect the safe operation of the plant. As discussed in the evaluation format section and summarized in Table 1, to the extent that these less restrictive requirements involve the relocation of matters from the CTS to licensee-controlled documents, they are not otherwise required to be in the TS under 10 CFR 50.36 and they are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to public health and safety. The TS requirements that remain are consistent with current licensing practices, operating experience, and plant accident and transient analyses, and provide reasonable assurance that public health and safety will be protected.

c. More Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 3.3, proposed a number of requirements more restrictive than those in the CTS. The following changes are the most significant.

3.3.1.1 Reactor Protection System (RPS) Instrumentation

ITS 3.3.1.1 includes Condition C, which is not included in the CTS 3/4.3.1. When in Condition C, "one or more functions with RPS trip capability not maintained," the ITS provide 1 hour to restore RPS trip capability. With two channels inoperable for the same function in the same trip system, an RPS scram due to that function cannot occur. ITS Action C limits restoration time to 1 hour. This is an additional more conservative restriction on plant operation and is acceptable.

ITS SR 3.3.1.1.12 adds a surveillance which was not included in the CTS. ITS SR 3.3.1.1.12 verifies the automatic enabling of the turbine throttle valve and turbine governor valve scrams when rated thermal power is equal to or > 30% RTP. This is consistent with the STS, and is an additional restriction on plant operation and therefore acceptable.

3.3.1.2 Source Range Monitors

CTS 4.3.7.6.b and 4.9.2.b require performance of a SRM channel functional test. ITS SR 3.3.1.2.4 includes an additional requirement to determine a signal-to-noise ratio and verify it is ≥ 2:1 or 20:1, depending upon the count rate requirement. This additional restriction on plant operation ensures that the SRM reading is greater than the specified minimum count rates indicative of neutron flux levels in the core, since with a few assemblies loaded, the SRMs will not have a high enough count rate to satisfy the SR. Therefore, the change is a more restrictive change and is acceptable.

CTS 4.3.7.6.c requires verification that the source range monitor count rate is at least 0.7 cps before withdrawal of control rods. The instructional requirement "prior to control rod withdrawal" is replaced in ITS SR 3.3.1.2.4 with a specified time limit before control rod withdrawal is allowed. The ITS requires the surveillance to be performed once per 24 hours and every 12 hours during core alterations. In addition, the surveillance must be performed once per 24 hours, regardless of whether control rods are withdrawn. Since the surveillance is to be performed at a specified time, not just before control rod withdrawal, the change improves upon CTS requirements and is more restrictive than current plant practice and is acceptable.

An additional channel calibration surveillance has been added in the ITS for the SRMs. CTS 4.9.2 does not require a channel calibration to be performed on the SRMs in Mode 5. The new ITS SR 3.3.1.2.7 requires an SRM channel calibration every 18 months in Mode 5 to verify performance of SRM detectors and associated circuitry. Since these requirements ensure that the reactivity of the core will be continuously monitored during core alterations, the additional restriction on plant operation is added in conformance with the STS and is acceptable.

3.3.2.1 Control Rod Block Instrumentation

The reactor mode switch Shutdown position function is added to ITS 3.3.2.1 for shutdown conditions (Modes 3, 4, and 5). Modes 3 and 4 requirements ensure that all control rods remain inserted when the mode switch is in the shutdown position, since positive reactivity insertion events are not analyzed for these modes. In Mode 5 with the reactor mode switch in the refuel position, the refuel position one-rod-out interlock (LCO 3.9.2, "Refuel Position One-Rod-Out Interlock") provides operability requirements for the control rod withdrawal blocks. In Mode 5 with the mode switch in shutdown, the control rod withdrawal blocks are assumed in the safety analysis to prevent criticality. Therefore, when the reactor mode switch is in the shutdown position, the control rod withdrawal block is required to be operable to meet the assumptions of the safety analysis. The change enhances CTS requirements and is acceptable.

ITS SR 3.3.2.1.4 has been added to CTS requirements to require calibration of the rod block monitor (RBM) automatic enabling setpoints (permissives) of the RBM. This test establishes a necessary requirement to ensure that the RBM will function as designed during plant operation. The more restrictive change enhances CTS requirements and is acceptable.

Two required actions are added to the CTS to restrict control rod movement during plant startup with the rod worth minimizer (RWM) inoperable. For reactor startup conditions during which the RWM is inoperable, continued movement of control rods will only be allowed if at least 12 control rods are withdrawn (ITS Required Action C.2.1.1), or if a startup with the RWM inoperable has not been performed in the last calendar year (ITS Required Action C.2.1.2). These new requirements replace the CTS 3/4.1.4.2 requirements for the rod sequence control system (RSCS) and ensure the RWM is reliable. These requirements enhance plant operation and are acceptable.

ITS SR 3.3.2.1.6 is added to the CTS to ensure the automatic enabling setpoints (permissives) of the RWM are properly calibrated. The RWM is designed to be automatically bypassed when thermal power is > 10% RTP as measured by the steam flow signal. The automatic bypass setpoint must be periodically calibrated to ensure the RWM functions as designed. ITS SR 3.3.2.1.6 provides test requirements for the periodic verification of the setpoint. This is an enhancement to plant operation and is acceptable.

CTS 3.1.4.1 Footnote *, for RWM Mode 2 applicability, is moved to ITS SR 3.3.2.1.2 as a note. The CTS footnote allows entry into Mode 2 and withdrawal of selected control rods for the purpose of determining operability of the RWM before withdrawal of control rods for bringing the reactor to criticality. There is no established time limit for satisfying Note *. The ITS SR 3.3.2.1.2 note provides a 1-hour time limit to verify RWM operability by performing channel functional test after any control rod is withdrawn at equal to or < 10% RTP in Mode 2. The addition of a time limit is an enhancement to plant operation and is acceptable.

3.3.2.2 Feedwater and Main Turbine High Water Level Trip Instrumentation

ITS SR 3.3.2.2.1 adds a surveillance requirement to perform a channel check of the feedwater and main turbine high water level trip instrumentation. This is consistent with the STS and is an acceptable additional restriction on plant operation.

3.3.3.1 Post Accident Monitoring (PAM) Instrumentation

An additional PAM function, ECCS pump room flood level, is included in ITS Table 3.3.3.1-1. CTS Table 3.3.7.5-1 does not include ECCS pump room flood level as a PAM function. The ECCS pump room flood level function is included in ITS Table 3.3.1-1 because it is a Regulatory Guide 1.97 Type A Category I variable; therefore it is a PAM function according to the STS format. This is an additional restriction on plant operation, and therefore is acceptable.

CTS Table 3.3.7.5-1, Action 80.b, is based on a minimum-channels-operable requirement of one channel (i.e., two channels operable in a two-channel design). A new accident monitoring function, ECCS Pump Room Flood Level, is added to ITS Table 3.3.3.1-1, which requires five operable channels. ITS 3.3.3.1, Condition C and Required Action C.1, are modified to address two or more inoperable channels for one or more ITS PAM functions so that actions are clearly presented in the ITS format for the five-channel ECCS pump room flood level instruments. This change provides more explicit TS requirements, conforms to the STS format, and is therefore acceptable.

ITS 3.3.3.1 provides remedial action requirements for the primary containment gross radiation monitor PAM channels when one channel is inoperable. CTS 3.3.7.5 Action 81 for these radiation channels does not address the plant condition of one channel inoperable. ITS 3.3.3.1, Actions A and B, provide requirements to restore the channel to operable status within 30 days or submit a special report, consistent with actions for other PAM instruments. This more restrictive change is acceptable.

3.3.3.2 Remote Shutdown System

A new surveillance requirement is included in the ITS (ITS SR 3.3.3.2.4), to verify, once per 24 months, that each required control circuit and transfer switch is capable of performing its intended function, which is to transfer control power to the remote control panel. This system is not required to respond to any mechanistic DBA evaluated in the safety analysis and this change is an additional restriction on plant operation. The change is consistent with the recommendations of the STS and is acceptable.

3.3.4.1 End of Cycle Recirculation Pump Trip (EOC-RPT) Instrumentation

CTS 3.3.4.2, Action b, requires placing inoperable channel(s) in one or both trip systems in trip within 1 hour. If the channels are inoperable due to a trip breaker that will not open, placing the channels in the tripped condition will not accomplish the intended restoration of the functional capability. A note is added to ITS 3.3.4.1, Required Action A.2, to exclude the requirement to trip the channel when channel inoperability is the result of an inoperable breaker. Therefore, a channel that is inoperable due to an inoperable breaker must be restored according to ITS 3.3.4.1 Required Action A.1 within 72 hours or the associated recirculation pump must be removed from service or the plant shut down within 4 hours. The change is more restrictive on plant operation and conforms to the STS; therefore this change is acceptable.

New SR 3.3.4.1.3 is added to the ITS to require a verification that the Turbine Throttle Valve—Closure and Turbine Governor Valve Fast Closure, Trip Oil Pressure—Low functions are not bypassed when the thermal power is ≥ 30% RTP. This surveillance verifies every 18 months that the bypass circuit is functioning properly. This additional requirement is more restrictive on plant operations and is acceptable.

3.3.4.2 ATWS Recirculation Pump Trip Instrumentation

CTS 3.3.4.1, Action b, provides a 14-day out-of-service time for one or more inoperable ATWS trip function channels (i.e. low reactor water level or high reactor pressure) if the channels in the other trip system for the affected function are operable. ITS 3.3.4.2 Condition A revises the action to allow each inoperable channel to be out of service for 7 days without the requirement to verify the operability status of the channels in the opposite trip system. At the end of the completion time the channel must be either repaired or placed in trip. Once the channel is placed in trip the trip system logic input for the inoperable channel is performed and indefinite operation in this configuration is allowed. With one pressure or one level channel inoperable and untripped in a trip system, the ATWS trip capability, which is the capability to trip both pumps on either a level or pressure signal, cannot be met for both recirculation pumps. The 7-day out-of-service time considers the reliability of the instrument channels, the likelihood of an ATWS event, and the configuration of the pump trip logic which retains an operable pump trip on the diverse signal. The 7-day out-of-service time is more restrictive than the CTS requirements, changing the STS completion times for an inoperable ATWS instrumentation channel on the basis of the plant design. This change is acceptable.

3.3.5.1 Emergency Core Cooling (ECCS) Instrumentation

CTS 3.3.3, Action b allows 24 hours to take CTS Table 3.3.3-1 actions when one or more ECCS actuation instrument channels are inoperable. CTS 3.3.3, Action c allows 7 days to restore automatic depressurization system (ADS) trip system A or B to operable status if the HPCS and RCIC are inoperable, and 72 hours if HPCS and RCIC are not operable. ITS 3.3.5.1, Required Actions B.1, B.2, C.1, D.1, E.1, F.1, and G.1, provide requirements for the loss of initiation capability of a function for both divisions/trip systems. These additional required actions provide clear direction of the necessary Actions when in this condition. These ITS required actions allow operations for 1 hour with a loss of initiation capability of a function for both divisions/trip systems. This additional requirement to plant operation is consistent with the STS and is acceptable.

ITS Table 3.3.5.1-1 includes six additional ECCS actuation instrument functions. ITS Table 3.3.5.1-1, Functions 1.c, 1.d, 2.c, and 2.d, provide requirements for low pressure ECCS pump LOCA time delay relay instrumentation. The logic of this instrumentation is important to the proper functioning of the ECCS in response to a design basis accident. Appropriate actions and SRs have also been added. To provide unique names for these functions, Functions A.1.f and B.1.d in CTS Table 3.3.3-1 are renamed "LOCA/LOOP," to properly describe the function of the time delay relay. In addition, Functions 4.f and 5.e are included in ITS Table 3.3.5.1-1 because the CTS does not specify instrumentation TS actions for inoperable channels of the Accumulator Backup Compressed Gas System Pressure—Low function. The CTS do not require specific actions when one or more of the channels are inoperable, and, since the channels are arranged in a two-out-of-three logic, the associated ADS valves are declared inoperable when two of the channels in a subsystem are inoperable. This TS action is consistent with other ADS actuation instrumentation. The TS do not require any action when one channel of Accumulator Backup Compressed Gas System Pressure—Low function per subsystem is inoperable. The proposed Action F will require an individual channel to be tripped in 8 days. When more than one channel in a subsystem is inoperable, Action F will require declaring the associated ADS valve inoperable, consistent with the current licensing basis. The logic system functional test requirement of SR 3.3.5.1.5 has been added to ensure the two-out-of-three logic is properly tested, similar to other ADS functions. Currently, only a channel calibration is required for these instruments. These additional restrictions on plant operation are acceptable.

ITS Table 3.3.5.1-1, Note b), is added to the Reactor Vessel Water Level—Low Low Low, Level 1, and Drywell Pressure—High ECCS actuation instrument functions to ensure the diesel generators are covered by the associated instruments. Thus, when a channel is not restored to operable status within required completion times, the affected DG is declared inoperable in addition to the affected ECCS division. This is an additional restriction on plant operation, conforms to the STS and is acceptable.

CTS 3.3.3, Action b, allows one or more ECCS actuation instrument channels to be inoperable for 24 hours before requiring the actions of CTS Table 3.3.3-1. The CTS Table 3.3.3-1 actions then allow additional time to trip or restore a channel. This additional time is deleted in the ITS, except for the time allowed for the minimum flow channels, which is reduced from 7 days to 6. The ITS Table 3.3.5.1-1 actions allow 24 hours to trip or restore inoperable channels except for the minimum flow channels, which are allowed 7 days before the associated subsystem must be declared inoperable. These allowed outage times are derived from the staff-approved BWROG topical report, NEDC-30936-P-A, dated December 1988, and are used in the STS. This is an additional restriction to plant operation and is acceptable.

CTS Table 3.3.3-1, Action 31, applies to "minimum flow" ECCS actuation instrument channels and requires placing an inoperable channel in the tripped condition within 1 hour and then allows 7 days to repair the channel before declaring the system inoperable. ITS Table 3.3.5.1-1 removes the option to trip the inoperable channel which means the channel must be restored to operable status in the 7-day period. Placing a channel in trip may not compensate for the inoperability, or may be less safe because the single channel actuation logic results in flow paths for minimum or full ECCS flow. If these channels are not made operable the associated subsystem must be declared inoperable and the associated TS-required actions taken. This is an additional restriction on plant operation and is acceptable.

3.3.5.2 RCIC System Instrumentation

ITS 3.3.5.2 adds Required Actions B.1 and D.1 for response to a loss of RCIC initiation capability of a Table 3.3.5.2-1 function. The CTS does not include these additional requirements which require the RCIC system declared inoperable within 1 hour of discovery of a loss of RCIC initiation capability. This additional restriction on plant operation is consistent with the STS and is acceptable.

3.3.6.1 Primary Containment Isolation Instrumentation

CTS Table 3.3.2-1, Table Notation (d), allows up to two of the four Main Steam Line (MSL) Flow—High instrument channels to be inoperable before TS actions are required. The CTS allowance could result in operations where high steam flow exists in some MSLs without triggering the appropriate action to isolate the MSIV. ITS Table 3.3.6.1-1 removes this allowance because the accident analysis assumes an isolation of the MSIV occurs following detection of high steam flow in any main steam line. The ITS identifies the required number of MSL channels to be two channels per MSL in ITS Table 3.3.6.1-1. This additional restriction on plant operation is consistent with the STS and is acceptable.

The CTS 3/4.3.2 actions for Trip Functions 2.a, Reactor Building Vent Exhaust Plenum Radiation—High, 2.b, Drywell Pressure—High, 2.c, Reactor Vessel Water Level—Low Low, Level 2, and 2.d, Manual Initiation, specify actions for inoperable channels in the affected Group 3 secondary containment isolation valves and SGT system but do not specify similar actions for the affected primary containment isolation valves (PCIVs). ITS 3.3.6.1, Actions F, G, and H add the appropriate isolation and alternate shutdown requirements for the Group 3 PCIVs. These requirements are an additional restriction on plant operation consistent with the STS and are acceptable.

CTS Table 3.3.2-1, Function 2.d, Group 3 PCIV Manual Initiation, requires one channel to be operable per trip system per PCIV group. ITS Table 3.3.6.1-1 requires four channels per trip system. The Group 3 hardware design has two switches and two push buttons, providing four logic inputs per trip system. Each switch and push button combination provides two channels of input to the isolation logic. In the ITS format, since each input is a channel, the operability requirement for this function in ITS Table 3.3.6.1-1 is more appropriately specified as four. In addition, since currently only one of the two switch and push buttons combinations per trip system is required, this change is more restrictive and is acceptable.

Time delay functions which delay initiation of the RCIC high steam flow isolation and the RWCU high differential flow isolation have been added as Functions 3.b and 4.b respectively. In addition, the appropriate TS actions and SRs have also been added. These requirements are additional restrictions on plant operation, consistent with the plant design licensing basis and are acceptable.

The CTS Table 3.3.2-1 applicability for the Reactor Vessel Water Level—Low, Level 3, function of RHR system shutdown cooling mode isolation is revised in ITS Table 3.3.6.1-1 to include Modes 4 and 5. The Reactor Vessel Water Level—Low, Level 3, function protects against potential draining of the reactor vessel through the RHR suction line during shutdown conditions, when the RHR shutdown cooling system is normally operating. ITS 3.3.6.1 also requires Action J when the function is inoperable in Modes 4 and 5. This restriction on plant operations is consistent with the STS and is acceptable.

3.3.6.2 Secondary Containment Isolation Instrumentation

In CTS Table 3.3.2-1, the "required number of channels per trip system" for the secondary containment isolation manual initiation function is one per trip system. The required number of channels for this function is four per trip system in ITS Table 3.3.6.2-1. The design of the secondary containment isolation system has two switches and two push buttons per trip system. Each of the switch and push button combination provides two channel inputs to the isolation logic. Therefore, using the ITS format whereby each input is a channel, the operability requirement for this function in ITS Table 3.3.6.2-1 is more appropriately specified as four. The change reflects the approved design and is acceptable.

CTS Table 3.3.2-1, Action 24, allows an additional 8 hours following the initial 24-hour repair time to restore an inoperable manual initiation function to operable status; otherwise, the affected system isolation valves must be closed within the next hour and the affected system isolation valves must be declared inoperable. ITS 3.3.6.2 Required Action C.1.1 and C.1.2 do not include the additional 8 hours to restore the manual initiation function.

ITS 3.3.6.2 required actions provide valve isolation requirements and requirements for declaring the isolation valves inoperable consistent with the STS limits. The change is more restrictive and is acceptable.

CTS Table 3.3.2-1, Action 24, allows 8 hours to restore an inoperable manual initiation function to operable status; otherwise, the affected system isolation valves must be closed and declared inoperable. The CTS action does not address SGT inoperability. ITS 3.3.6.2 adds Required Actions C.2.1 and C.2.2 to address inoperable manual initiation channels of the SGT. These actions require either that the SGT be operating or that the SGT subsystem be declared inoperable. The addition of the SGT required actions puts additional restrictions on plant operation. This change is consistent with the STS and is acceptable.

3.3.7.1 Control Room Emergency Filtration

CTS 3.3.7.1, Action a, allows 4 hours to adjust a setpoint to within its TS limits before declaring the channel inoperable. This 4-hour allowance is eliminated in the ITS. ITS 3.3.7.1 requires that setpoints remain within the allowable value presented in ITS Table 3.3.7.1-1. When the setpoint is not within this allowable value, the channel is declared inoperable immediately. This change is an additional restriction on plant operation, consistent with the STS, and is acceptable.

Three new control room emergency filtration system instrumentation functions have been added to ITS Table 3.3.7.1-1 that are not included in CTS Table 3.3.7.1-1. The additional functions are Reactor Vessel Water Level—Low Low, Level 2; Drywell Pressure—High; and Reactor Building Vent Exhaust Plenum Radiation—High. These functions are the same as those used in the secondary containment isolation instrumentation specification and automatically actuate the CREF system. ITS 3.3.7.1, Actions B, C, and D, and SRs 3.3.7.1.1, 3.3.7.1.2, 3.3.7.1.3, and 3.3.7.1.4, complete the limiting condition for operation in the ITS for these additional functions. This change is consistent with the STS and is acceptable.

CTS Table 3.3.7.1-1, Action 70, requires initiating and maintaining operation of the CREF system in the pressurization mode with one or more of the required main control room ventilation radiation monitors in an air intake inoperable. This requirement for continuous operation in the pressurization mode is not an ITS requirement. ITS 3.3.7.1, Required Action E.1, provides time limits to restore inoperable channels to operable status and time limits to isolate a remote air intake upon discovery of a loss of monitoring capability. The associated air intake must be isolated within 1 hour.

With the CREF system in the pressurization mode, makeup air to the control room is provided through both intakes, one of which would be in the accident plume during a design basis accident. In this configuration the dose limits assumed in the accident analysis would be exceeded since one of the remote air intakes will be in the plume exposure pathway. Thus, the current requirements do not adequately compensate for inoperable radiation monitors; initiating and maintaining the CREF system in the pressurization mode will not have any

impact on precluding the dose limits from being exceeded. The analysis assumes the air intake radiation monitors are needed to ensure that the air intake in the accident plume is isolated. The intake radiation monitors function to indicate which air intake is in the accident plume. On the basis of this indication, plant personnel will isolate that air intake. Isolating the uncontaminated air intake ensures that the dose limits to the control room personnel will not be exceeded. During the accident sequence, continued monitoring of the air intake radiation levels is needed to provide indication for shifting the CREF system suction from one intake to the other intake. The accident analysis assumes that the CREF system is in the pressurization mode, with makeup provided through only one of the air intakes. Therefore, if a radiation monitor is not restored within 30 days or 7 days, depending upon whether a monitor is inoperable in one or both air intakes, or if all radiation monitors are inoperable, ITS 3.3.7.1 Required Action F.1 will require both CREF subsystems to be declared inoperable, which will result in a unit shutdown per ITS 3.7.4. In addition, if both radiation monitors on one air intake are inoperable, the associated air intake must be closed within 1 hour (ITS 3.3.7.1, Required Action E.1). With no indication of radiation levels at this intake, it is prudent to initially isolate the air intake during the time provided to restore one of the radiation monitors to operable status. This ensures that if an accident occurs while both radiation monitors are inoperable, the air intake is already isolated to preclude exceeding the dose limits if the unmonitored air intake is in the accident plume. In addition, the note to ITS 3.3.7.1, Required Action E.1, is added to require entry into ITS 3.7.3 if both air intakes are isolated. Since ITS 3.0.6 provides an allowance not to enter the required actions of ITS 3.7.3 when the air intakes are isolated due to inoperable radiation monitors, this note ensures that if both air intakes are isolated, the CREF system is declared inoperable and the actions of ITS 3.7.3 are taken immediately. These changes are additional restrictions on plant operation, are consistent with the STS, and are acceptable.

3.3.8.1 Loss Of Power (LOP) Instrumentation

The times specified by ITS 3.3.8.1 for declaring a DG inoperable due to loss of DG initiation capability resulting from inoperable instrument channels monitoring for a loss of voltage condition (CTS Table 3.3.3-1, Trip Function D.1) and for placing a channel in trip due to inoperable Division 3 DG channels monitoring for a degraded bus voltage condition (CTS Table 3.3.3-1, Trip Function D.3) is changed to 1 hour from 24 hours. The time specified for placing a channel in trip due to inoperable Division 1 and 2 DG channels monitoring for a degraded bus voltage condition (CTS Table 3.3.3-1, Trip Function D.2) is unlimited (not specified) for the first channel and for the second channel is changed to 1 hour from 24 hours. The less restrictive change to the number of required channels for Division 1 and 2 degraded voltage functions is discussed in the less restrictive changes for Section 3.3.8.1 of this SE. The more restrictive changes are additional restrictions on plant operation, are consistent with the STS and are acceptable.

CTS Action 38 requirements to place an inoperable degraded voltage channel in trip within 1 hour is reformatted to be included in ITS Actions B and C, therefore, the 1-hour allowance of Action 38 has been deleted. The change to the ITS (Actions B.2 and C.1) results in tripping inoperable loss of voltage channels within 24 hours and tripping inoperable degraded voltage channels within 1 hour, instead of up to 25 hours allowed by the CTS Action b. This is an additional restriction on plant operation and is acceptable.

CTS Table 3.3.3-1 and Table 4.3.3.1-1 require the loss-of-power instrumentation to be operable in Modes 4 and 5 when TS engineered safety features are required to be operable. ITS 3.3.8.1 requires the loss-of-power instrumentation to be operable when ITS 3.8.2 requires the associated diesel generator to be operable. As a result, the ITS requires loss-of-power instrumentation to be operable during Mode 4 and Mode 5, during movement of irradiated fuel assemblies in the secondary containment, and as required by ITS 3.8.2. As this applicability could occur with the unit defueled, this is an additional restriction on plant operation. These additional requirements are consistent with the STS, and they are acceptable.

The CTS does not include Division 1 and 2 TR-S and Division 3 loss-of-voltage time delays, nor does the CTS separate the sequenced degraded voltage time delay relays for the Division 1 and 2 engineered safety features 4160-VAC buses. ITS Table 3.3.8.1-1 includes these additional instrument functions (functions 1.b, 1.c, 1.d, and 2.b). This change is consistent with the STS. Additionally, the CTS includes only the loss-of-voltage instruments for starting the diesel generators, disconnecting the preferred source of offsite power (TR-S) and auto-transferring to the alternate source of offsite power (TR-B) if available, and shedding the 4.16-kVAC engineered safety feature bus loads. The TR-S loss-of-voltage instruments will not disconnect the TR-B offsite circuit when the TR-B offsite circuit powers the 4.16-kVAC engineered safety feature bus for a loss-of-voltage. The alternate source of offsite power, TR-B, has loss-of-voltage instruments for that function. Therefore, the ITS includes two new functions, functions 1.c and 1.d, that provide requirements for the Division 1 and 2 TR-B loss-of-voltage instruments (TR-B can supply power to Division 1 and 2 only). The ITS also adds suitable actions for when the instrumentation is inoperable. These changes are additional restrictions on plant operation and are appropriate and acceptable.

CTS Table 3.3.3-2 has the following allowable values (4160-VAC basis): 4.16 kV emergency bus undervoltage degraded voltage - 3632 ± 216 V with a time delay of 8 ± 0.8 seconds. ITS 3.3.8.1 adds the following requirements to Table 3.3.8.1-1: (a) degraded voltage allowable value - Divisions 1, 2, and 3 (functions 1.e and 2.c) - ≥ 3685-VAC and ≤ 3755-VAC; (b) degraded voltage - primary time delay - Divisions 1 and 2 (Function 1.f) - ≥ 5.0 seconds and ≤ 5.3 seconds; (c) degraded voltage - secondary time delay - Divisions 1 and 2 (Function 1.g) - ≥ 2.63 seconds and ≤ 3.39 seconds; and (d) Division 3 degraded voltage - time delay (Function 2.d) - ≥ 7.36 seconds and ≤ 8.34 seconds. The degraded voltage and degraded voltage time delay relay function setpoints reflect the proper allowable values. The ITS allowable values replicate the most recent setpoint calculations. These changes are additional restrictions on plant operation and are acceptable.

3.3.8.2 RPS Electric Power Monitoring

CTS 3.8.4.4 contains an "at all times" applicability requirement for two RPS electric power monitoring channels for each inservice motor generator (MG) set or alternate source. CTS action requirements do not delineate between actions for operational modes and shutdown modes. ITS 3.3.8.2, Required Action D, requires restoring the assembly to operable status or initiating action to isolate the residual heat removal (RHR) shutdown cooling (SDC) system and Required Action E requires inserting any withdrawn control rods in cells containing fuel if the required actions of Condition A or B are not met in Modes 4 and 5. These actions place the reactor in the least reactive condition and ensure that the safety function of the RPS and isolation system will not be required. The requirements are appropriate actions for plant operations during shutdown, are consistent with the STS, and are acceptable.

Conclusion

These more restrictive requirements strengthen the CTS and are therefore acceptable.

d. Deviations From the STS

The licensee, in electing to adopt the specifications of STS Section 3.3, proposed a number of deviations from the STS. The following deviations are the most significant.

3.3.1.2 Source Range Monitor Instrumentation JFD #42

A new note has been added to STS SR 3.3.1.2.5 to state that the signal to noise ratio need not be determined with four or fewer fuel assemblies adjacent to the SRM and no other fuel in the associated core quadrant. SR 3.3.1.2.5 must be current before starting to load fuel from the defueled condition. However, with no fuel in the core, a signal to noise ratio cannot be determined. This proposed note is similar to the note in the count rate surveillance (SR 3.3.1.2.4) and is provided for the same reason.

3.3.3.1 Post Accident Monitoring Instrumentation .

STS Action D and the note to Condition C, which specify a 72-hour completion time to restore one hydrogen monitor to operable status when two hydrogen monitors are inoperable have been deleted. The ITS replaces these requirements with a 7-day completion time to restore one hydrogen monitor when both are inoperable, as shown in Action C. With respect to their importance during an accident, there is no difference between the ability of the H_2 or O_2 monitors to determine concentrations of these gases inside containment in order to ensure that H_2 and O_2 concentrations remain below flammability limits. If all channels of H_2 and O_2 monitors become inoperable, then operators have the option to start the H_2 recombiners immediately after an

accident, thereby ensuring flammability limits are not exceeded. In addition, operating the H_2 recombiners too soon after an accident will not adversely affect accident management.

In addition to the H_2 and O_2 monitors the post-accident sampling system (PASS) can be used to sample the primary containment to determine H_2 and O_2 concentrations. This system is independent of the H_2 and O_2 monitors. However, the PASS would normally be used to approximate core damage during a severe accident. Therefore, sufficient systems are available to the operator to collect the data necessary to determine when to begin recombining H_2 and O_2 following an accident, or the recombiners can be initiated as early as possible during accident management to ensure flammable concentrations of these gases are not reached.

3.3.3.2 Remote Shutdown System Monitoring Instrumentation

A new surveillance requirement, ITS SR 3.3.3.2.4, is included in the ITS to verify once per 24 months that each required control circuit and transfer switch is capable of performing its intended function. The remote shutdown system (RSS) is not required to respond to any mechanistic DBA evaluated in the safety analysis, and extending the STS SR interval from 6 months to 24 months does not have a significant impact on the risk reduction contribution of the system. Overall, this is an additional restriction on plant operation and is acceptable.

3.3.4.2 Anticipated Transients Without Scram - Recirculation Pump Trip (ATWS-RPT) Instrumentation

The ATWS-RPT System consists of two trip systems, with two channels of Reactor Vessel Steam Dome Pressure - High and two channels of Reactor Vessel Water Level - Low, Level 2 in each trip system. Each function is a two-out-of-two logic; however, each trip system only trips one of the two recirculation pumps. Therefore, loss of one channel results in the loss of the trip capability of one recirculation pump until the channel is either restored or placed in the trip condition. The STS provide a 14-day completion time based on a design that both recirculation pumps can be tripped by the remaining operable trip system. Since the WNP-2 design does not provide the capability to trip both pumps with the remaining trip system, the completion time is changed to 7 days from 14 days.

3.3.6.1 Primary Containment Isolation Instrumentation

Six primary containment isolation functions, functions 2.a, 3.g, 4.b, 4.c, 5.c, and 5.f, have been added to STS 3.3.6.1. These functions are added for consistency with the current WNP-2 licensing basis. In addition, STS functions 2.c, 2.d, 2.e, 2.f, 3.g, 3.h, 3.i, 3.j, 3.k, 3.l, 3.m, 4.i, 4.j, and 5.e have been deleted since they are not applicable to WNP-2. Function 3.m is a CTS requirement that is deleted based upon a review of the functional requirements of the valves that receive the RCIC containment isolation signal. This change is discussed in detail in the section of this SE which discusses relocated changes and the deleted functions are discussed in detail in the

less restrictive changes for Section 3.3.6.1 of this SE. The ITS functions have been renumbered to reflect these additions and deletions.

3.3.8.1 Loss of Power (LOP) Instrumentation

Bases redefine DG initiation capability for the allowance to perform DG LOP instrumentation surveillances without entering the LCO conditions and required actions. The STS allows a channel to be tested without entering the LCO actions provided the function maintains DG initiation capability. For a typical two-out-of-two trip system, maintaining one channel operable when one channel is tested does not preserve the functional capability of the DG initiation unless the channel being tested is placed in trip. This design is similar to the ECCS design. In ECCS instrumentation, a channel can be inoperable for testing provided the function maintains ECCS initiation capability. This is defined as maintaining the other trip system operable.

3.3.8.2 RPS Electric Power Monitoring JFD #43

In Modes 4 and 5 RPS the requirements for electric power monitoring assemblies required to support the instrumentation that provides an isolation signal to the RHR SDC suction isolation valves has been modified to include only one RPS power supply provided the RHR SDC system integrity is maintained. Currently, this LCO requires RPS electric power monitoring assemblies to be OPERABLE on an inservice RPS power supply, normally maintained inservice at all times, even though no equipment may be required to be OPERABLE. Therefore, the words are added to the LCO "that support equipment required to be OPERABLE" to allow the RPS electric power monitoring assemblies on one of the two RPS power supplies to be inoperable when no required equipment is being powered from the associated RPS power supply. In addition, the word "require" has been added to Conditions A and B for consistency with the Writer's Guide, since, based on the above described change, all RPS electric power monitoring assemblies may not be required OPERABLE at all times.

3.3.8.2 RPS Electric Power Monitoring

The Modes 4 and 5 applicability as it relates to control rod withdrawal, is revised to exclude Mode 4, consistent with the applicability of RPS functions in LCO 3.3.1.1. In Mode 4, a control rod may be withdrawn from a core cell containing one or more fuel assemblies in accordance with LCO 3.10.4. Therefore LCO 3.10.4 includes operability requirements for RPS functions and control rods (LCO 3.9.5). As a result, LCO 3.10.4 has been modified to also include requirements for the RPS electric power monitoring assemblies to be operable when the RPS functions and control rods are required to be operable. Actions of LCO 3.3.8.2 have also been changed for consistency. The current action of LCO D has been split into two separate actions, one applicable when both the RHR SDC suction isolation valves are open and the other applicable in Mode 5 when a control rod is withdrawn.

Conclusion

These deviations from STS Section 3.3 are consistent with the WNP-2 design and with existing requirements and commitments, or with proposed changes found acceptable, as discussed elsewhere in this evaluation. Therefore, these differences are acceptable.

e. Relocated Specifications

In accordance with the criteria in the Final Policy Statement, the licensee has proposed to remove either entirely or portions of the following instrumentation specifications from the CTS and place them in licensee-controlled documents.

CTS 3/4.3.2,	Isolation Actuation Instrumentation
CTS 3/4.3.3	Emergency Core Cooling System Actuation Instrumentation
CTS 3/4.3.6	Control Rod Block Instrumentation
CTS 3/4.3.7.1	Radiation Monitoring Instrumentation
CTS 3/4.3.7.3	Meteorological Monitoring Instrumentation
CTS 3/4.3.7.5	Accident Monitoring Instrumentation
CTS 3/4.3.7.7	Traversing In-Core Probe System
CTS 3/4.3.7.10	Loose-Part Detection System
CTS 3/4.3.7.12	Explosive Gas Monitoring System
CTS 3/4.3.9	Turbine Overspeed Protection System

The CTS 3/4.3.2 LCO, actions, and SRs for isolation actuation instrumentation channels shown in Table 3.3.2-1 and Table 3.3.2-3 for the RCIC Drywell Pressure—High function (3/4.3.2.4.h) are relocated to the LCS.

The function of the RCIC Drywell Pressure—High instrument channels is to provide an isolation signal to the RCIC turbine exhaust inboard and outboard vacuum breaker isolation valves. A high drywell pressure signal in conjunction with a RCIC low steam line pressure signal will isolate these valves. The licensee states that the portion of the RCIC system isolated by these valves is not needed to mitigate a design basis accident (DBA) or transient because the two valves are not primary containment isolation valves. The isolation function of these valves is not provided to protect the RCIC turbine exhaust vacuum breaker line from overpressurization. Accordingly, the limits and SRs applicable to these isolation function may be relocated to the LCS. Changes to the LCS are controlled in accordance with 10 CFR 50.59.

The CTS 3/4.3.3 LCO, actions, and SRs for emergency core cooling system (ECCS) actuation instrumentation channels for the ADS A manual inhibit switch function (CTS 3/4.3.3.A.2.g) and the ADS B manual inhibit switch function (CTS 3/4.3.3.B.2.f) are relocated to the LCS.

The ADS manual inhibit function provides operators with the capability to prevent ADS actuation as directed by the emergency procedures. Inhibiting the ADS assists operators in mitigating an ATWS event low pressure ECCS system initiation that would otherwise dilute sodium pentaborate injected by the standby liquid control (SLC) system, thereby reducing the effectiveness of the SLC system to shut down the nuclear reaction in the core. The ADS inhibit switch function is not needed for operability of ECCS actuation instrumentation because this function does not initiate the ECCS to preserve the integrity of the fuel cladding. The ADS inhibit switches allow management of an ATWS event which is not a DBA or transient and for which operational requirements are addressed in 10 CFR 50.62. The assurance that the ADS trip system is not rendered inoperable by the ADS inhibit function is tested in ITS 3.3.5.1 by the logic system functional test. The ADS manual inhibit switch may be relocated to the LCS and will be controlled in accordance with 10 CFR 50.59. Additionally, Condition 2.c(18) requirements to maintain an ADS manual inhibit function are deleted from the license.

The CTS 3.3.6 conditions, actions, and SRs for the average power range monitors (3/4.3.6.2), source range monitors (3/4.3.6.3), intermediate range monitors (3/4.3.6.4), scram discharge volume (3/4.3.6.5), and reactor coolant system recirculation flow control (3/4.3.6.6) rod blocks are relocated to the FSAR.

The average power range monitor (APRM) control rod block prevents a control-rod-withdrawal error at power transient by using LPRM signals to create the APRM rod block signal. During power operation in Modes 1 and 2 when thermal power is greater than 10% RTP, there is no credible control rod configuration that results in a control rod worth that could exceed the 280 cal/gm fuel damage limit during the design basis control rod drop accident (CRDA).

The source range monitor (SRM) and intermediate range monitor (IRM) control rod blocks prevent a control-rod-withdrawal error during reactor startup by using SRM signals to create the rod block signal. SRM signals are used to monitor neutron flux during startup, shutdown, and refueling conditions. In Modes 1 and 2 when thermal power is < 10% RTP the control rod blocks from the rod pattern controller banked position withdrawal sequence (BPWS) and the rod worth minimizer (RWM) enforce specific control rod sequences designed to mitigate the consequences of the CRDA. During shutdown conditions, control rod blocks from the reactor mode switch shutdown position ensure that all control rods remain inserted to prevent inadvertent criticalities.

The scram discharge volume (SDV) control rod block prevents control rod withdrawals during power range operation, using SDV high water level signals to create the rod block signal if water is accumulating in the SDV. The purpose of measuring the SDV water level is to ensure that there is sufficient volume remaining to contain water discharged by the control rod drives during a scram, thus ensuring that the control rods will be able to insert fully. This rod block signal provides an indication to the operator that water is accumulating in the SDV and prevents further rod withdrawals. Thus, the SDV water level rod block signal provides an opportunity for the operator to take action to avoid a subsequent scram.

An increase in reactor recirculation flow causes an increase in neutron flux, which results in an increase in reactor power. However, this increase in neutron flux is monitored by the neutron monitoring system which has the capability of providing a reactor scram in APRM and IRM high flux when required.

Preventing control rod withdrawal errors when thermal power is less than 10% RTP is adequately controlled by the BPWS, RWM, and reactor mode switch functions and by the neutron monitoring system because no DBA or transient analysis takes credit for rod block signals initiated by the APRM, SRM, IRM, scram discharge volume control, or reactor coolant recirculation flow control rod blocks. The LCO and surveillances applicable to the rod blocks may be relocated to the LCS and will be controlled in accordance with 10 CFR 50.59.

CTS 3/4.3.7.1 LCO, actions, and SRs for radiation monitoring instrumentation channels for the new fuel storage vault function (3/4.3.7.1.2.a.1) and the spent fuel storage pool function (3/4.3.7.1.2.a.2)) of area criticality monitors are relocated to the LCS.

The detection of high radiation in the area surrounding stored fuel in the new fuel vault and the spent fuel pool is provided as an indication of a local criticality. No automatic actuation of safety-related systems is performed by these instruments. The CTS require continuous sampling monitoring using an alternate portable monitor during fuel handling and a periodic sampling at all other times if the required monitor channels are inoperable. The plant safety analysis assumes other instrument functions detect and isolate primary containment penetrations. Operability of instrumentation for ensuring that release limits are met by initiating containment isolation is required by LCO 3.3.6.1 and LCO 3.3.6.2.

The instruments are not used to mitigate a DBA or transient. Information provided by these instruments on the radiation levels within secondary containment would have limited or no use in identifying and assessing core damage. These area monitors are not used for, nor capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary before a DBA. The monitored parameters are not assumed as initial conditions of DBA or transient analyses that assume the failure of, or challenge, to the integrity of a fission product barrier. These area monitors do not act as part of a primary success path in the mitigation of a design basis accident or transient that assumes the failure of, or presents a challenge to, the integrity of a fission product barrier.

The LCO, actions, and SRs for the area criticality monitors (new fuel storage vault and spent fuel storage pool) may be relocated to the LCS and will be controlled in accordance with 10 CFR 50.59.

CTS 3/4.3.7.3 LCO, actions, and SRs for the meteorological monitoring instrumentation are relocated to the FSAR/LCS. The meteorological monitoring instrumentation measures environmental parameters (wind direction, speed, and air temperature differences) which may affect distribution of fission products and gases following a DBA. This instrumentation is to be used in connection with the plans for coping with radiological emergencies, pursuant to 10 CFR 50.34(b), and to provide a basis for estimating maximum potential annual radiation doses resulting from radioactive materials released in gaseous effluents, pursuant to 10 CFR 50.36a(a)(2). The meteorological monitoring instrumentation is not intended to automatically actuate safety systems in response to predetermined environmental effects or otherwise isolate the control room ventilation system from any source of high radiation. The LCO, actions, and SRs may be relocated to the FSAR/LCS and will be controlled in accordance with 10 CFR 50.59.

The CTS 3/4.3.7.5 conditions, actions, and SRs for the accident monitoring instrumentation functions listed in Table 3.7.5-1 are relocated to the LCS.

Accident monitoring parameters are chosen to provide the operator sufficient information to perform necessary emergency operating procedures (EOPs) and confirm that an accident is proceeding per prediction (i.e., automatic safety systems are performing properly) and that deviations from the expected accident course are minimal.

The STS deterministic screening criteria for plant-specific TS include all Regulatory Guide (RG) 1.97 Type A instruments specified in the plant's Safety Evaluation Report (SER) on Regulatory Guide 1.97, and all Regulatory Guide 1.97 Category 1 instruments. Accordingly, these criteria have been applied to the WNP-2 Regulatory Guide 1.97 instruments. Those instruments meeting these criteria have remained in technical specifications. The instruments not meeting these criteria have been relocated to the FSAR. The instruments meeting the criteria are those that monitor the following variables:

<u>Type A Variables</u>

1. Coolant level in reactor
2. RCS pressure
3. Primary containment pressure

<u>Category 1 (non-Type A) Variables</u>

1. PCIV position
2. Suppression pool water level
3. H_2 concentration
4. O_2 concentration
5. Primary containment area high range radiation

The licensee is revising the RG 1.97 requirements related to the wide range neutron flux monitor. The BWR Owners Group submitted Licensing Topical Report, NEDO-31558, which provided alternative neutron monitoring functional design criteria to those of RG 1.97. In a letter to the BWR Owners Group dated January 13, 1993, the staff found the alternate design criteria acceptable. The alternate design criteria allow the licensee to reclassify the wide range neutron flux monitor such that it is not a Type A nor a Category 1 variable. The licensee plans to adopt the staff allowance to reclassify the wide range neutron flux monitor. Therefore, the wide range neutron flux monitor is not included in ITS Table 3.3.1-1.

The non-Regulatory Guide 1.97 Type A or Category 1 variable instruments and their associated LCO and surveillances may be relocated to the LCS and will be controlled in accordance with 10 CFR 50.59.

The CTS 3.3.7.7 LCO, actions, and SRs for the traversing in-core probe (TIP) have been relocated to the LCS. The TIP system is used to calibrate the local power range monitor (LPRM) detectors by positioning the TIP axially and radially throughout the core. When not in use, during conditions for which the LPRMs are required to be operable, TIP instruments are retracted into a storage position inside the drywell wall TIP penetrations. The TIP system LCO and surveillances may be relocated to the LCS and will be controlled in accordance with 10 CFR 50.59.

The CTS 3.3.7.10 LCO, actions, and SRs for the loose-part detection system have been relocated to the FSAR/LCS. The loose-part detection system monitors core noises to identify the existence of loose parts inside the reactor vessel. The relocation of the loose-part monitoring system instrumentation is consistent with the presentation in NUREG-1434. The loose-part detection system provides information only and is not considered in any DBA or transient. The potential of fuel failure due to fuel bundle flow blockage from a lost part will be detected by the radiation monitors in the offgas stream. The loose-part detection system LCO and surveillances may be relocated to the FSAR/LCS and will be controlled in accordance with 10 CFR 50.59.

The CTS 3/4.3.7.12 conditions, actions, and SRs have been relocated to the LCS. The explosive gas monitoring instrumentation detects hydrogen in the gaseous radwaste treatment system to ensure that hydrogen concentrations are maintained below the flammability limit. The offgas system, located in the turbine building, is designed to confine detonations without affecting safety-related equipment. The concentration of hydrogen in the offgas stream is not an initial assumption of any design basis accident or transient analysis. The relocation of the main condenser offgas treatment system, and explosive gas monitoring system instrumentation is consistent with the presentation in NUREG-1434. The explosive gas monitoring instrumentation LCO and surveillances may be relocated to the LCS and will be controlled in accordance with 10 CFR 50.59.

The CTS 3.3.8 LCO, required actions, and SRs for the turbine overspeed protection system instrumentation have been relocated to the LCS. The turbine overspeed protection system instrumentation is not considered to prevent or mitigate any DBA or transient.

This specification is provided to ensure that the turbine overspeed protection instrumentation and the turbine speed control valves are operable and will protect the turbine from excessive overspeed. Excessive overspeed could potentially result in the generation of missiles which could impact and damage safety-related components, equipment, or structures, depending on the size and trajectory of the missiles. The licensee performs turbine inspections and tests on a schedule and so ensures that the probability of unacceptable damage to safety-related structures, systems and components as a result of turbine

missiles is acceptably low. Since the probability of turbine missile damage is acceptably low, the transient due to the actuation of the turbine stop valves in response to a turbine overspeed event should be considered (i.e., load rejection). For this event, the closure of the turbine stop valves initiates the design basis transient (load rejection) and not the turbine overspeed itself. The overspeed instruments do not perform a subsequent function to mitigate the effects of the transient.

Although the design basis accidents and transients include a variety of system failures and conditions which might result from turbine missiles striking various plant systems and equipment, the system failures and plant conditions could be caused by other events as well as 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 design basis accidents and transients. Similarly, the turbine overspeed control is not part of an initial condition of a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. The requirements associated with these instrumentation functions may be relocated to the LCS and will be controlled in accordance with 10 CFR 50.59.

Conclusion

These current specifications are not required to be in the TS under 10 CFR 50.36 and do not meet any of the four criteria in the Final Policy Statement. They are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to the public health and safety. In addition, sufficient regulatory controls exist under the regulations cited above to maintain the effect of the provisions in these specifications. Accordingly, these current specifications may be removed from the TS and placed in the licensee-controlled documents cited above.

3.4 Reactor Coolant System (RCS)

The licensee has proposed administrative and technical changes to the CTS to bring them into conformance with STS Section 3.4, "Reactor Coolant System." The changes are discussed in the order of the specifications in STS Section 3.4. The corresponding ITS Section 3.4 specification titles are listed in italics before each discussion.

a. Administrative Changes

The CTS specifications that have been retained in ITS Section 3.4 have been reworded to conform to the STS presentation. The following changes are the most significant.

3.4.1 Recirculation Loops Operating

CTS 3.4.1.1 states the requirement for operation of both recirculation loops in Operational Conditions 1 and 2 and specifies various actions for conditions in which one or more loops are not in operation. ITS 3.4.1 allows a second option requiring only one recirculation loop in operation, provided certain requirements, currently required by CTS Actions a.3.b and a.3.c, are met. ITS 3.4.1 Actions A through F simplify determining actions for the various combinations of loop flow and power. In addition, the ITS format eliminates the need for an exemption from CTS 3.0.4., formerly contained in CTS 3.4.1.1, Action a.4. This format change is acceptable because it is purely administrative and the requirements are consistent with CTS 3.4.1.1.

CTS 3.4.1.1, Action a.1, cross-references CTS 3.2.6 and CTS 3.2.8. CTS 3.2.6 has been incorporated into ITS LCO 3.4.1, and CTS 3.2.8 has been incorporated into ITS 3.4.1, Actions B and C. The required actions in the ITS are the same in as the CTS. Deleting CTS 3.4.1.1, Action a.1, is an administrative change and is therefore acceptable.

CTS 3.4.1.1, Action a.3.b requires that the minimum critical power ratio (MCPR) safety limit (SL) be increased per CTS SL 2.1.2 when one RCS recirculation loop is not in operation. The ITS maintains the single loop MCPR safety limit in Chapter 2.0. Thus, when the plant is in single loop, the limit applies immediately, not in 4 hours as implied by the CTS action. This administrative change removes an unclear delay in implementing the single loop MCPR safety limit and is acceptable.

The requirements of CTS 3.2.6 have been added to ITS 3.4.1 as a requirement that operation be in the "unrestricted" region of the power-to-flow map specified in the Core Operating Limits Report (COLR) (CTS Figure 3.4.1.1-1). ITS 3.4.1 actions have been provided for operation in any "restricted" region. One of these actions deal with operation in Region A (Action A). This change is acceptable as a purely administrative change that is consistent with the current licensing basis.

CTS 4.2.7.1, 4.2.7.2, 4.2.8.1, and 4.2.8.2 are surveillance requirements for the stability monitoring system in two loop or single loop operation. In the ITS, the requirements for the stability monitoring system are incorporated into an action, ITS 3.4.1, Action B, whose applicability is consistent with the CTS requirements. The exemption in CTS 4.2.7.1 and 4.2.8.1 from the requirements of CTS 4.0.4 is unnecessary because ITS 3.4.1, Action B, covers the requirements. Likewise, the CTS 4.2.7.2 and 4.2.8.2 requirements are deleted from the ITS because of the exemption provided by CTS 4.2.7.1 and 4.2.8.1. CTS 4.2.7.1 and 4.2.8.1 state, "The provisions of CTS 4.0.4 are not applicable," allowing entry into Region B or C of the power-to-flow map before the requirements of CTS 4.2.7.2 and 4.2.8.2 are met. Since ITS 3.4.1, Action B, covers use of the stability monitoring system, deleting CTS 4.2.7.1, 4.2.7.2, 4.2.8.1, and 4.2.8.2 is a purely administrative change. It is consistent with the current licensing basis and is acceptable.

CTS 3.4.1.3, Action a requires restoring mismatched recirculation flow to within specified limits within 2 hours. ITS 3.4.1, Required Action E.1, does not explicitly state the option of restoring mismatched recirculation flow to within the specified limits. This action is always an option and is implied in ITS Required Action E.1 with a 2-hour completion time limit. This change is acceptable because it is purely administrative.

CTS 3.4.1.3, Action b, provides a cross-reference for performing the actions of CTS 3.4.1.1. ITS 3.4.1, Action E, prescribes the conditions for compliance without using references. The CTS reference to take the action required by CTS 3.4.1.1 serves no purpose. This change is acceptable because it is purely administrative.

CTS 3.4.1.1, Action a.3.e provides a reminder to perform the surveillance requirement in CTS 4.4.1.1.2 under certain conditions of rated thermal power or rated recirculation loop flow. ITS SR 3.4.11.5 and SR 3.4.11.6 (CTS 4.4.1.1.2) prescribe the conditions for compliance without using references. The CTS reminder to perform CTS 4.4.1.1.2 serves no purpose. This change is acceptable because it is purely administrative.

3.4.2 Jet Pumps

No significant administrative changes to the CTS are associated with ITS 3.4.2.

3.4.3 Safety/Relief Valves (SRVs)—≥ 25% RTP

No significant administrative changes to the CTS are associated with ITS 3.4.3.

3.4.4 Safety/Relief Valves (SRVs)—< 25% RTP

No significant administrative changes to the CTS are associated with ITS 3.4.4.

3.4.5 RCS Operational LEAKAGE

No significant administrative changes to the CTS are associated with ITS 3.4.5.

3.4.6 RCS Pressure Isolation Valve Leakage

CTS 3.4.3.2.e specifies a testing pressure for RCS pressure isolation valves (PIVs) as 950 ± 10 psig. The observed leakage is then mathematically adjusted to the leakage at the maximum pressure differential, which is 1035 psig. ITS SR 3.4.6.1, requires performing the surveillance test at ≥935 psig, which is in accordance with the applicable ASME Codes and then adjusting to verify that leakage is acceptable at 1035 psig. Since there is no change in the actual requirements (i.e., the same leakage limit applies), this change is administrative and is acceptable.

The ITS 3.4.6 actions include two notes that are not contained in CTS 3.4.3.2. The first note, "Separate Condition entry is allowed for each flow path", provides explicit instructions for proper application of the actions for ITS compliance. In conjunction with ITS 1.3, "completion times," this note provides direction consistent with the intent of the CTS actions for inoperable PIVs. The second note, "Enter applicable Conditions and required actions for systems made inoperable by PIVs," facilitates understanding of the

intent to consider any system affected by inoperable PIVs. The addition of these notes is acceptable because it is a purely administrative change, clarifying the intent of the CTS.

3.4.7 RCS Leakage Detection Instrumentation

CTS 3.4.3.1, Action b, specifies the requirement to use an alternate manual leak rate measurement method when the primary containment sump flow monitoring system is inoperable, allowing continued operation for 30 days. ITS 3.4.7, Action A, does not contain this requirement because it duplicates the requirements of ITS 3.4.5. ITS SR 3.4.5.1 requires the leakage be quantified every 12 hours. If the primary measurement system is not operable, some form of measurement device is necessary or ITS 3.4.5, Action C, dictates a shutdown because Action A or B cannot be performed. This change is acceptable because it maintains the requirements of the CTS and is purely administrative.

If all RCS leakage monitoring systems are inoperable, the CTS would require entering LCO 3.0.3 since CTS 3.4.3.1 would not be met and no other actions are specified for this condition. ITS 3.4.7, Action D, explicitly requires entering ITS 3.0.3 if all required RCS leakage monitoring systems are inoperable. This change is acceptable because it maintains the requirements of the CTS and is purely administrative.

3.4.8 RCS Specific Activity

CTS 3.4.5, Action c, requires increased sampling per Table 4.4.5-1 in Operational Condition 1 or 2 when thermal power is changed by more than 15% in 1 hour, or if offgas radiation level increases during steady state operation by 15,000 microcuries per second or 15% in 1 hour when release rates are < 100,000 microcuries per second. In accordance with CTS LCO 3.0.1, failure to meet an LCO requires that the action requirements be met. In accordance with CTS LCO 3.0.2, if compliance with the LCO is restored, the actions do not have to be completed. Therefore, compliance with CTS 3.4.5, Action c is only required when the LCO is not met. ITS 3.4.8 does not contain the explicit requirements in CTS 3.4.5, Action c. Increased sampling is required by Required Actions A.1 and B.1 when the LCO limit is exceeded. Since increased sampling is already required when the limit has been exceeded, the inclusion of the CTS SR is unnecessary. Therefore, the change is acceptable.

3.4.9 Residual Heat Removal (RHR) Shutdown Cooling System—Hot Shutdown

The ITS 3.4.9 actions include a note that is not contained in CTS 3.4.9.1. The note, "Separate Condition entry is allowed for each RHR shutdown cooling subsystem", provides explicit instructions for proper application of the actions for ITS compliance. In conjunction with ITS 1.3, "Completion Times," this note provides direction consistent with the intent of the actions for CTS 3.4.9.1 to consider each RHR shutdown cooling subsystem separately. This change is purely administrative and is acceptable.

CTS 3.4.9.1, Action a, requires operability verification of at least one alternate decay heat removal method within 1 hour and at least once per 24 hours thereafter. ITS 3.4.9, Action A, requires this verification within 1 hour but deletes the periodic 24-hour verification. Since the reactor is required to be in Mode 4 within 24 hours whenever ITS 3.4.9, Action A, is entered, ITS 3.4.9 is exited and ITS 3.4.10 is entered within the first 24-hour period. Once Mode 4 is entered, ITS 3.4.10 requires periodic operability verification of an alternate decay heat removal method. Therefore, the periodic frequency requirement of CTS 3.4.9.1, Action a, is unnecessary. This change is purely administrative and is acceptable.

CTS 3.4.9.1, Action a, contains a footnote that states that if cold shutdown cannot be attained, then RCS temperature is to be maintained as low as practical using alternate heat removal methods. This footnote is not contained in ITS 3.4.9, because it duplicates the ITS 3.4.9 actions and contains no additional plant operational restrictions. The requirement in ITS 3.4.9, Action A, to achieve Mode 4 ensures efforts are made to maintain reactor coolant temperature as low as practical. If conditions prohibit attaining Mode 4 in 24 hours, the ITS require entering LCO 3.0.3, which only requires that efforts to reach Mode 4 continue. For these reasons, deleting the CTS 3.4.9.1, Action a, footnote is a purely administrative change and is acceptable.

CTS 3.4.9.1, Action b, specifies requirements when no RHR shutdown cooling mode loop is in operation. ITS 3.4.9, Action B, requires the same actions and includes recirculation loop operating conditions along with RHR shutdown cooling loop conditions. ITS 3.4.9, Action B, allows recirculation pump operation as an acceptable method for ensuring necessary RCS flow conditions when no RHR shutdown cooling pump is in operation. CTS 4.4.9.1 requires that at least one shutdown cooling mode loop of RHR be determined to be in operation periodically. ITS SR 3.4.9.1 requires verification that one RHR shutdown cooling subsystem or recirculation pump is operating. These changes are consistent with the LCO requirements of CTS 3.4.9.1, which specifically allows operation of a recirculation pump as an acceptable method for assuring the necessary flow conditions. Therefore, this change is purely administrative and is acceptable.

3.4.10 Residual Heat Removal (RHR) Shutdown Cooling System—Cold Shutdown

The ITS 3.4.10 actions include a note that is not contained in CTS 3.4.9.2. The note, "Separate Condition entry is allowed for each RHR shutdown cooling subsystem," provides explicit instructions for proper application of the actions for ITS compliance. In conjunction with ITS 1.3, "Completion Times," this note provides direction consistent with the intent of the actions for CTS 3.4.9.2 to consider each RHR shutdown cooling subsystem separately. This change is purely administrative and is acceptable.

CTS 3.4.9.2, Action b, specifies requirements when no RHR shutdown cooling mode loop is in operation. ITS 3.4.10, Action B, requires the same actions and includes recirculation loop operating conditions along with RHR shutdown cooling loop conditions. ITS 3.4.10, Action B, allows recirculation pump operation as an acceptable method for ensuring necessary RCS flow conditions, in lieu of RHR shutdown cooling pump operation. CTS 4.4.9.2 requires that at least one shutdown cooling mode loop of RHR be determined to be in operation periodically. ITS SR 3.4.10.1 requires verification that one RHR shutdown cooling subsystem or recirculation pump is operating. These changes are consistent with the LCO requirements of CTS 3.4.9.2 which specifically allows operation of a recirculation pump as an acceptable method for assuring the necessary flow conditions. Therefore, this change is purely administrative and is acceptable.

3.4.11 RCS Pressure and Temperature (P/T) Limits

The action for CTS 3.4.6.1 requires performing an engineering evaluation when the pressure/temperature limits are exceeded. The notes to ITS 3.4.11, Conditions A and C, specify that Required Actions A.2 and C.2 shall be completed if the applicable condition is entered. These notes clarify the intent of the CTS 3.4.6.1 action. This change is purely administrative and is acceptable.

CTS 3.4.6.1 applies to all operating conditions and the CTS action requires that, with any RCS pressure/temperature limit exceeded, operation be restored to within limits within 30 minutes. If the parameters were incapable of being restored to within limits within 30 minutes, then the existing action would result in noncompliance with the TS. ITS 3.4.11, Action C, applies to conditions other than Modes 1, 2, and 3, and requires that action be immediately initiated to restore parameters to within limits, but does not require that the action be completed within a definite time. The CTS action is more appropriately presented in ITS 3.4.11, Action C.1, since there are no other actions to be taken when the plant is shutdown if the parameters cannot be restored within a certain time. This change is therefore acceptable.

CTS 4.4.6.1.3 provides surveillance requirements for reactor vessel material surveillance specimens. This SR duplicates the regulations found in 10 CFR Part 50, Appendix H. These regulations cannot be revised by the licensee; therefore, repeating the details of these regulations in the ITS is unnecessary. Deleting from TS the surveillance to meet the requirements of 10 CFR Part 50, Appendix H, is consistent with Generic Letter 91-01, "Removal of the Schedule for Withdrawal of Reactor Material Specimens from Technical Specifications." This is a purely administrative change and is acceptable.

CTS 4.4.6.1.4.b requires verifying reactor vessel flange and head flange temperature within 30 minutes before tensioning the head bolting studs. ITS SR 3.4.11.7 deletes this requirement. This requirement duplicates requirements of CTS 4.0.1 (ITS SR 3.0.1), which states that the surveillance is to be current in the applicable mode or condition. ITS SR 3.0.1 also states that failure to meet the surveillance constitutes a failure to meet the LCO, which would then require the actions of the LCO to be taken. The actions for ITS 3.4.11 require that immediate action be taken to restore operation to within limits. Thus, this action ensures that the applicability of the SR (as stated in the SR note) is not entered unless the SR is current. This change is acceptable because it is purely administrative.

CTS 4.4.1.1.2.c requires the temperature difference between the reactor coolant within the loop not in operation and the operating loop to be ≤ 50°F. This requirement is deleted in the ITS. Thermal stresses on vessel components are dependent upon the temperature difference between the idle loop coolant and the RPV coolant which is verified in CTS 4.4.1.1.2.b. ITS SR 3.4.11.4 and SR 3.4.11.6 ensure that the temperature difference between the idle loop and the RPV coolant is acceptable. The requirements to monitor the temperature difference between an idle loop and an operating loop are redundant to the loop-to-coolant requirements of ITS SR 3.4.11.4 and SR 3.4.11.6 and therefore have been deleted.

CTS Figure 3.4.6.1.c provides two curves (A′ and B′) that are effective until eight effective full power years (EFPY). After eight EFPY, CTS Figure 3.4.6.1A provides the proper curves. These curves are more limiting than the curves provided by CTS Figure 3.4.6.1.c. CTS Figure 3.4.6.1A has been incorporated into the ITS as Figure 3.4.11-1. Operation at WNP-2 should reach the eight EFPY point within two months after startup from the current refueling outage. At this time, the curves provided by Figure 3.4.6.1.c will no longer be effective. This should occur at approximately the time that the ITS are implemented at WNP-2. Therefore, the curves provided by Figure 3.4.6.1.c, including all references to the curves, have been deleted from the ITS. Since the curves being retained in ITS Figure 3.4.11-1 are more limiting than the curves in CTS Figure 3.4.6.1.c, this change is acceptable.

3.4.12 Reactor Steam Dome Pressure

No significant administrative changes to the CTS are associated with ITS 3.4.12.

Conclusion

These changes to the CTS are administrative. They clarify, reorganize, or reformat the current specifications. None of these changes alters the limits in the current requirements. Accordingly, these changes are acceptable.

b. Less Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 3.4, proposed a number of requirements less restrictive than those in the CTS. The following changes are the most significant.

3.4.1 Recirculation Loops Operating

CTS 3.4.1.1, Action a.2 requires that during operation in Region B of the power-to-flow map with one recirculation loop, action be initiated to correct this situation within 15 minutes and completed within 1 hour. The ITS retains the 1-hour requirement in ITS 3.4.1, Action D, to correct the prohibited power-to-flow condition, but eliminates the 15-minute requirement to initiate action. The Bases for ITS 3.4.1 state that "action must be taken as soon as practicable to restore operation to region C or the Unrestricted Region." Immediate action may not always be the conservative method to ensure safety.

The 1-hour completion time allows the operator to evaluate and complete appropriate actions. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in Chapter 5.0 of the ITS. For these reasons, this change is acceptable.

CTS 3.4.1.1, Action a.2, 3.2.7.a and b, and 3.2.8, Actions a and b provide methods for exiting Regions B and C of the thermal power/core flow map. These methods are being moved to the Bases for ITS 3.4.1, Actions C.1 and D.1, with no change in methodology. It is not necessary to include in the TS methods of complying with actions to ensure safety. These methods are more appropriately maintained in the Bases. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in Chapter 5.0 of the ITS. For these reasons, this change is acceptable.

Details relating to operational limits are addressed in CTS 3.4.1.1, Action a.3.d, and in CTS 4.4.1.1.1.b. The ITS does not contain any of this information. The information is being moved to the FSAR/LCS.

The single loop operation flow rate is an operational limit that does not directly relate to the system safety analysis functions but restricts reactor vessel internals vibration. Since this requirement relates to long-term operability of the recirculation loops and not to immediate safety, moving this limit to the FSAR/LCS is acceptable. Changes to the FSAR and LCS will be controlled by the provisions of 10 CFR 50.59.

The CTS includes operating region limits figures in CTS 3.2.6, 3.2.7, 3.2.8, and 3.4.1.1 (power-to-flow maps). These figures are being moved to the Core Operating Limits Report (COLR), which is referenced in ITS 3.4.1. Moving these figures to the COLR is consistent with Generic Letter 88-16, "Removal of Cycle-Specific Parameter Limits from Technical Specifications," which allows cycle-specific thermal limits to be relocated to the COLR. The current COLR requirements in CTS 6.9.3.2.10 (ITS 5.6.5.b.10) provide the NRC-approved analytical methods to determine the limits for the power-to-flow map. Any change to the analytical methods would require NRC approval before implementation. Changes to the COLR will be controlled by the provisions of the COLR change process described in ITS Chapter 5.0.

The action for CTS 3.2.6 requires that if the thermal power/core flow conditions are in Region A of the power-to-flow map, a manual scram is initiated "as soon as practical" but in all cases within 15 minutes. For the same plant conditions, ITS 3.4.1 requires initiating a reactor scram within 15 minutes if the LCO requirements are not satisfied, but the requirement to initiate action "as soon as practical" is moved to the Bases as a statement that "action must be taken as soon as practicable" to place the reactor mode switch in shutdown. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in ITS Chapter 5.0.

The CTS 3.2.7 and 3.2.8 specify details relating to stability monitoring system operability, as well as how many neutron signals are needed to indicate that the decay ratio is not within specified limits. This technical information is being moved to the Bases for ITS 3.4.1. Inclusion of this information in the TS is not necessary to ensure that the stability monitoring system decay ratios are adequately determined and that action is taken when decay ratios are not within limits. The decay ratio verification requirements of ITS 3.4.1, Required Action B.1, ensure decay ratios are determined. If the decay ratios are not within limits, the ITS 3.4.1, Condition C, ensures the appropriate action is taken. For these reasons, moving the details relating to stability monitoring system operability to the ITS Bases is an acceptable change. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in ITS Chapter 5.0. For these reasons, this change is acceptable.

Actions a and b for CTS 3.2.7 and 3.2.8 require that the licensee "as soon as practical, but in all cases within 15 minutes, initiate action" either to reduce the decay ratio or to exit the associated region (essentially the same action) when the requirements of the associated LCO are not satisfied. These requirements are moved to the Bases for ITS 3.4.1 as a statement that "action must be taken as soon as practicable" to restore operation to the proper region of the proposed power-to-flow map specified in the COLR. Immediate action may not always be the conservative method to ensure safety. The 1-hour completion time of ITS Required Action C.1 gives the operator time to evaluate and complete appropriate actions. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0.

CTS 4.4.1.1.3 requires the operability of the RCS recirculation loop speed controller to limit the average rate of change of pump speed be verified. This requirement is being moved to the FSAR. There is not a comparable requirement in the ITS. This is consistent with the BWR/4 STS requirements in NUREG-1433. The BWR/4 design has a variable speed recirculation pump, similar to the WNP-2 recirculation pump design. The requirement in CTS 4.4.1.1.3 is not credited in the reload licensing analysis. The transient that determines the thermal limit of concern (minimum critical power ratio) and relates to the recirculation loop flow is the recirculation flow run-up transient. The analysis of this transient uses a quasi-steady state recirculation flow input; i.e., a maximum core flow corresponding to a maximum possible recirculation loop flow (108.5% rated core flow) is used in the analysis to determine the thermal limit. This approach yields a thermal limit that is not impacted by the rate of change of loop flow. The quasi-steady state modeling of the recirculation flow run-up is a standard approach used by all BWR fuel suppliers in determining flow-dependent MCPR limits. The approach involves steady-state analysis at two state points: the initial core flow and its associated power level and the final core flow and its associated power level. The final core flow is a maximum value that can be delivered by the recirculation system. In the analysis, the power and core flow are assumed to increase slowly so that there will not be a scram by high neutron flux, which would occur in a case with rapid flow increase. The assumed power and core flow increase is rapid enough, however, that the xenon concentration does not change. This approach bounds the one with the transient modeling of the recirculation flow increases. The rate of decreasing pump speed and corresponding core flow are not limiting parameters because they result in

power reduction transients. Therefore, it is not necessary to control the loop speed controller average rate of change of pump speed in the ITS. Changes to the FSAR will be controlled by the provisions of 10 CFR 50.59.

With no reactor coolant loops in operation, CTS 3.4.1.1 Action b requires that the unit be placed in hot shutdown (Mode 3) within 6 hours. ITS 3.4.1, Required Action G.1, extends the time to reach Mode 3 to 12 hours. The extension is acceptable because it provides the necessary time to shut down the plant in a controlled and orderly manner and reduces the potential for a unit transient that could challenge safety systems.

When only one recirculation loop is in operation, CTS 4.4.1.1.1 requires a surveillance every 8 hours to check that operation is outside Region B of the power-to-flow map. CTS 4.2.6 requires a surveillance at 24-hour intervals to check that operation is outside Region A of the power-to-flow map. ITS SR 3.4.1.2 combines these two surveillances into one surveillance that checks every 24 hours that operation is in the "unrestricted region" of the power-to-flow map. Changing the frequency for CTS 4.4.1.1.1 and combining two surveillances is acceptable because operation in Region B is not as limiting as operation in Region A and because both CTS surveillances are still performed.

CTS Surveillance 4.4.1.3 requires verifying recirculation flow mismatch every 24 hours. ITS SR 3.4.1.1 still requires verifying flow mismatch each 24 hours but adds a note: "Not required to be performed until 24 hours after both recirculation loops are in operation." Since verifying flow mismatch cannot be performed before both recirculation loops are in operation, ITS SR 3.4.1.1 allows time to perform the surveillance to avoid entry into the ITS 3.4.1 actions whenever the second recirculation pump is started.

3.4.2 Jet Pumps

CTS 4.4.1.2.1.c and 4.4.1.2.2.c specify one method for determining individual jet pump flow distribution: measuring diffuser-to-lower-plenum differential pressure. ITS SR 3.4.2.1.c. adds another method, measuring jet pump flow. This additional method is used at other utilities and is described in General Electric Service Information Letter No. 330, "Jet Pump Beam Cracks," June 9, 1980. The addition of another valid method to verify jet pump operability is an acceptable change.

3.4.3 Safety/Relief Valves (SRVs)—≥ 25% RTP and
3.4.4 Safety/Relief Valves (SRVs)—< 25% RTP

The note to CTS 3.4.2 provides details relating to lift setting pressure of the safety/relief valves. These details are being moved to the ITS Bases for SR 3.4.3.1 and SR 3.4.4.1. This change is acceptable because the requirements of ITS SR 3.4.3.1 are adequate to ensure safety/relief valve lift setpoints are within required settings with the testing details moved to the Bases. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0. For these reasons, this change is acceptable.

CTS 3.4.2, Action b provides actions if a stuck open SRV exists. Required Actions for stuck open SRVs are implicit in ITS 3.6.2.1. ITS 3.6.2.1, Required Action D.1 will also require that the reactor mode switch be immediately placed in shutdown if the suppression pool average temperature is ≥ 110°F. CTS 3.4.2, Action b is anticipatory of this requirement in the event of a stuck open SRV, and preemptive in all cases. This action represents detailed methods of responding to an event and not necessarily a compensatory action for failure to meet this LCO. As such, it is not appropriate for ITS 3.4.3 and is adequately addressed in WNP-2 emergency operating procedures and by ITS 3.6.2.1. Therefore, the deletion of CTS 3.4.2, Action b from the ITS is acceptable.

3.4.5 RCS Operational LEAKAGE

CTS 4.4.3.2.1.a and 4.4.3.2.1.b provide details for performing the reactor coolant system leakage surveillance by monitoring the primary containment atmospheric particulate and gaseous radioactivity and the primary containment sump flow rate. These details are being moved to the Bases for ITS SR 3.4.5.1. Inclusion of these details for leak determination in the TS is not necessary to ensure that reactor coolant system leakage is adequately determined. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0.

CTS 3.4.3.2.c specifies an unidentified leakage rate increase limit for Operational Conditions 1, 2, and 3. ITS 3.4.5.d only requires this leakage rate increase limit to be applicable in Mode 1. As a plant starts up, leakage occurs due to the increased pressure. If this increase in leakage rate exceeds the limit, it could require a unit shutdown, even though total identified leakage is less than the limit and no safety problem exists. When Mode 1 is achieved, the reactor pressure stabilizes at normal operating pressure. At this point an increase in leakage rate indicates a problem. The overall 5 gpm unidentified leakage limit is still in effect in Modes 1, 2, and 3. For these reasons, this change is acceptable.

CTS 4.4.3.2.1.c requires monitoring the reactor vessel head leak detection system every 24 hours, but CTS 3.4.3.1, "Leakage Detection Systems," does not require this indication to be operable. ITS SR 3.4.5.1 maintains the requirement to demonstrate that leakage is within limits. Indication-only instrumentation, test equipment, and alarms are usually not required to be operable to support the operability of a system or component. Thus, the STS generally contain no operability requirements for indication-only equipment. The availability of, and activities to compensate for the unavailability of, such indication instruments and monitoring instruments are addressed by plant operational procedures and policies. For these reasons, the removal of these items from TS is acceptable.

3.4.6 RCS Pressure Isolation Valve Leakage

CTS table 3.4.3.2-1 specifies the list of RCS PIVs that are leakage tested. ITS 3.4.6 requires the leakage from each RCS PIV to be within limits but does not list the applicable RCS PIVs. Inclusion of the list of RCS PIVs in TS is

not necessary to ensure PIV leakage is maintained within limits, and the list is being moved to the LCS Manual. Moving this list of valves from the TS is consistent with Generic Letter 91-08, "Removal of Component Lists from Technical Specifications," which allowed lists of components to be moved to plant-controlled documents. For these reasons, this change is acceptable. Changes to the LCS Manual will be controlled by the provisions of 10 CFR 50.59.

CTS 4.4.3.2.2.a provides the frequency for performing the RCS PIV leakage surveillance. The ITS SR 3.4.6.1 frequency for this surveillance is "in accordance with Inservice Testing Program." Including the requirement to leak-test each PIV "at least once per 18 months" in TS is unnecessary because the Inservice Testing (IST) program requires these valves to be leak-tested at least every 18 months. However, this change is less restrictive because the ASME Code specifies a frequency of 24 months or less and the frequency may be changed without prior NRC approval once removed from TS. Compliance with 10 CFR 50.55a, through the IST program, is required by the WNP-2 Operating License. These controls ensure the required leak rate testing of PIVs is performed at the required interval. This change is acceptable because it requires performance of the PIV surveillance testing at the same interval as is currently required and adequate controls exist for monitoring changes to the IST Program. Changes to the IST program will be controlled by the provisions of 10 CFR 50.55a.

CTS 3.4.3.2, Action d, for RCS leakage, specifies action for inoperable high/low pressure interface valve leakage pressure monitors. These requirements, including the supporting surveillances, CTS 4.4.3.2.3.a and 4.4.3.2.3.b, are being moved to the LCS. The high/low pressure interface valve leakage pressure monitors do not necessarily relate directly to the leakage limit requirements of the RCS PIVs. The leakage limit requirements of ITS 3.4.6 and the leakage test requirements of SR 3.4.6.1 will ensure that the limits will be maintained or the appropriate actions will be taken. Changes to the LCS will be controlled by the provisions of 10 CFR 50.59. For these reasons, this change is acceptable.

CTS 3.4.3.2.e specifies a maximum allowable leakage rate of 1.0 gpm for any RCS PIV. ITS SR 3.4.6.1 specifies a limit on PIV leakage of ≤ 0.5 gpm per nominal inch of valve size with a maximum limit of 5 gpm. This change acknowledges that smaller valves should not be allowed to leak as much as larger valves. ITS 3.4.6 continues to limit allowable leakage from the RCS as a whole, precluding operation with large increases in leakage from a number of valves in the RCS. This change in leakage test criteria for PIVs is consistent with ASME Code requirements and is acceptable.

CTS 3.4.3.2.e is applicable in Operational Conditions 1, 2, and 3. ITS 3.4.6 is applicable in Modes 1, 2, and 3, but provides a Mode 3 exception for valves in the shutdown cooling flow path when needed for shutdown cooling. This change resolves a conflict in the CTS, which requires shutdown cooling flow path isolation if the pressure isolation valve leakage is not within limits, even with reactor coolant system pressure below the RHR cut-in permissive pressure, when shutdown cooling is required to be operable and operating. RHR valve use with leaky pressure isolation valves poses no risk at low pressure since the high-to-low pressure interface does not exist. For these reasons, the change is acceptable.

CTS 4.4.3.2.2.b requires leak testing of any RCS pressure isolation valve following any maintenance, repair, or replacement that could affect the RCS leakage rate. This requirement is not expressed in ITS 3.4.6. Any time the operability of a component has been affected by repair, maintenance, or replacement, post-maintenance testing is required to demonstrate operability of the component. After restoring a component that caused a required SR to be failed, ITS SR 3.0.1 requires performing ITS SR 3.4.6.1, to demonstrate operability. Removing the requirement in CTS 4.4.3.2.2.b deletes explicit post-maintenance surveillance requirements from the ITS. Because ITS SR 3.0.1 still requires demonstration of operability, this is an acceptable change.

3.4.7 RCS Leakage Detection Instrumentation

CTS 3.4.3.1 specifies that three systems be operable for RCS leak detection. ITS 3.4.7 requires only two systems to be operable and provides a method that quantifies the "unidentified" leakage and a method that only indicates increased leakage. The CTS primary containment sump flow monitoring system (the drywell floor drain sump flow monitoring system in the ITS) is retained by the ITS as the primary method of quantifying "unidentified" leakage. In ITS 3.4.7, the drywell atmospheric particulate and the drywell atmospheric gaseous monitoring systems, which provide the same type of indication, are grouped so that only one of the two systems is required to be operable. The ITS actions allow the atmospheric monitoring system (consisting of either the particulate or the gaseous monitors) to be inoperable for 30 days provided grab samples of drywell atmosphere are analyzed once every 12 hours. The ITS surveillance requirements also reflect this change in operability requirements. The change is acceptable because the ITS still require the same two diverse methods of leakage detection as the CTS.

A statement that LCO 3.0.4 is not applicable has been added as a note to ITS 3.4.7, Required Actions A.1 and B.1. No similar note is contained in CTS 3.4.3.1. When this allowance is used, either the drywell floor drain sump flow monitoring system or the required drywell atmospheric monitoring system remains available. The compensatory actions for the inoperable system and the requirement that unidentified leakage be quantified in accordance with ITS 3.4.5 provide adequate indication of RCS leakage. For these reasons, the change is acceptable.

A note has been added to the ITS 3.4.7 surveillance requirements to allow a channel to be inoperable for up to 6 hours for performance of required surveillances, provided the other leakage detection system channel is operable. No similar note is contained in CTS 4.4.3.1. The 6-hour testing allowance has been granted by the NRC in topical reports for the reactor protection system, emergency core cooling system, and isolation system Instrumentation. The 6-hour testing allowance does not significantly reduce the probability of properly monitoring leakage since the other channel must be operable for this allowance to be used. Therefore, this change is acceptable.

3.4.8 RCS Specific Activity

CTS 4.4.5, Table 4.4.5-1, Item 5, requires isotopic analysis of an offgas sample for xenon and krypton at least once per 31 days. ITS 3.4.8 does not require this sample and analysis. The offgas isotopic analyses for xenon and krypton are not direct measurements related to the limits of ITS 3.4.8. These analyses are used to routinely monitor and trend coolant activity and are applicable to plant-specific controls and administrative limits only. Therefore, this surveillance is moved to the FSAR/LCS. The requirements of ITS SR 3.4.8.1 ensure that the RCS will be maintained within required limits; thus the additional analysis requirements for xenon and krypton are not necessary. Changes to the FSAR and LCS will be controlled by the provisions of 10 CFR 50.59. This change is therefore acceptable.

CTS 3.4.5.b states the requirement to maintain specific activity ≤ 100/E-bar μCi/gm. ITS 3.4.8 does not contain this requirement or the associated actions and surveillance requirements. The CTS Bases state that the intent of this requirement is to limit the specific activity of the reactor coolant to ensure that whole body and thyroid doses at the site boundary will not exceed a small fraction of the 10 CFR Part 100 limits in the event of a main steamline failure outside containment or an instrument line break. To ensure that offsite thyroid doses do not exceed 30 rem, ITS 3.4.8 requires that reactor coolant dose equivalent iodine-131 (DEI) be limited to ≤ 0.2 μCi/gm.

ITS 3.7.5 pertains to radioactive effluents and requires that the gross gamma radioactivity rate of the noble gases measured at the main condenser evacuation system pretreatment monitor station be limited to ≤ 332 mCi/second after 30 minutes decay. The Bases for ITS 3.7.5 state that restricting the gross radioactivity rate of noble gases from the main condenser provides reasonable assurance that the total-body exposure to an individual at the exclusion area boundary will not exceed a small fraction (10%) of the 10 CFR Part 100 limits in the event this effluent is inadvertently discharged without treatment directly to the environment. The offgas treatment system, required by ITS 3.7.5, provides reasonable assurance the reactor coolant gross specific activity is maintained at a sufficiently low level to preclude offsite doses from exceeding a small fraction of the 10 CFR 100 limits in the event of a main steamline failure. Additional assurance that the offsite doses will not exceed a small fraction of the 10 CFR 100 limits is provided by increasing the frequency of sampling and analysis of the reactor coolant for DEI from at least once per 31 days to at least once per 7 days.

Since (1) the reactor coolant limit on DEI, ITS 3.4.8, ensures that offsite doses will not exceed small fractions of the 10 CFR 100 limits in the event of a main steamline failure outside containment, and (2) gross gamma radioactivity rate of the noble gases measured at the condenser evacuation system pretreatment monitor station is limited by ITS 3.7.5 to a value that provides reasonable assurance the reactor coolant gross specific activity is maintained at a sufficiently low level to preclude offsite doses from exceeding a small fraction of the 10 CFR 100 limits, this change is acceptable.

CTS 3.4.5.a is applicable in Operational Conditions 1, 2, 3, and 4. ITS 3.4.8 is applicable in Mode 1, and Mode 2 or 3 with any main steamline unisolated. The ITS applicability is limited to those conditions which represent a potential for release of significant quantities of radioactive coolant to the environment. Mode 4 applicability is deleted because the reactor is not pressurized and the potential for leakage is significantly reduced. In Modes 2 and 3, with the main steam lines isolated, no escape path exists for significant releases (i.e., a main steamline break outside of primary containment) and TS requirements for limiting the specific activity are not necessary. The required actions are also modified to reflect the new applicability, and an option for exiting the applicable modes is provided for cases where isolation is not desired. This change is acceptable because the ITS applicability covers all conditions with a potential for release of significant quantities of radioactive coolant to the environment.

A note is added to the required actions for ITS 3.4.8, Action A, to indicate that ITS 3.0.4 is not applicable. CTS 3.4.5 actions have no such note. The note allows entry into the applicable Modes without restriction because the response to the excess coolant activity is restoring compliance within 48 hours. Since the ITS 3.4.8 limits ensure the dose due to a LOCA would be a small fraction of the 10 CFR 100 limits, operation during the restoration time frame does not represent a significant hazard to the health and safety of the public. For these reasons, this change is acceptable.

3.4.9 Residual Heat Removal (RHR) Shutdown Cooling System—Hot Shutdown

CTS 3.4.9.1.a and CTS 3.4.9.1.b specify an operable RHR shutdown cooling subsystem as one operable RHR pump and one operable RHR heat exchanger. ITS 3.4.9 does not contain these details but this information is being moved to the Bases for ITS 3.4.9. Inclusion of the details for subsystem operability in TS is not necessary to ensure operability. For these reasons, this change is acceptable.

A note is included in ITS 3.4.9 actions stating that LCO 3.0.4 is not applicable. Another note is added to ITS SR 3.4.9.1 stating that the surveillance is not required to be met until 2 hours after reactor steam dome pressure is less than the RHR cut-in permissive pressure. CTS 3.4.9 contains no similar notes. The RHR system cannot be placed in operation until after applicable conditions are met. Therefore, entry into conditions requiring RHR must be permitted while depending on the ITS 3.4.9 actions to establish RHR and without performing SR 3.4.9.1. Allowances that both ITS LCO 3.0.4 and ITS SR 3.0.4 are not applicable are necessary to provide the time to place the system in service. Therefore, ITS 3.4.9 Actions Note 1 and the ITS SR 3.4.9.1 note are necessary. For these reasons, this change is acceptable.

3.4.10 Residual Heat Removal (RHR) Shutdown Cooling System—Cold Shutdown

CTS 3.4.9.1.a and CTS 3.4.9.1.b specify an operable RHR shutdown cooling subsystem as one operable RHR pump and one operable RHR heat exchanger. ITS 3.4.10 does not contain these details, which are being moved to the Bases for

ITS 3.4.10. Inclusion of the details for subsystem operability in TS is not necessary to ensure operability. Therefore, this change is acceptable.

3.4.11 RCS Pressure and Temperature (P/T) Limits

CTS 4.4.6.1.1 and 4.4.6.1.2 require that RCS pressure and temperature be determined to be to the right of the limit lines in the applicable figures. These details are being moved to the ITS Bases. Inclusion of these details in the TS is not necessary to ensure that the limits, because the requirement to maintain the limits in accordance with the figures is still maintained in ITS 3.4.11, ITS SR 3.4.11.1 and SR 3.4.11.2. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0. Because the requirement to maintain the limits in accordance with the ITS figures is being retained, this change is acceptable.

CTS 4.4.1.1.2, Note ***, provides a detail relating to the basis for the thermal power and recirculation flow limitations: "final values were determined during Startup Testing based upon actual thermal power and recirculation loop flow which will sweep the cold water from the vessel bottom head preventing stratification." This detail is being moved to the Bases for ITS 3.4.11 and is not necessary to ensure the surveillance requirement is performed within the required limitations. The actual limits are maintained in ITS SR 3.4.11.5 and SR 3.4.11.6. For these reasons, this change is acceptable.

CTS 3.4.1.4.b requires operating loop flow ≤ 50% of rated loop flow when starting an idle recirculation loop. This detail is being moved to the FSAR/LCS. The operating loop flow rate limit restricts reactor vessel internals vibration. This is an operational limit and is not directly related to the ability of the recirculation system to perform its safety functions. This requirement maintains long-term operability of the recirculation loops, but has no immediate effect on operability. Changes to the FSAR and LCS will be controlled by the provisions of 10 CFR 50.59. For these reasons, this change is acceptable.

3.4.12 Reactor Steam Dome Pressure

CTS 3.4.6.2 requires reactor steam dome pressure to be < 1035 psig. ITS 3.4.12 requires reactor steam dome pressure to be ≤ 1035 psig. The FSAR safety analysis assumes an initial reactor steam dome pressure of ≤ 1035 psig. Therefore, the ITS reflects assumed initial conditions for transients. This change is in agreement with the FSAR analysis and is acceptable.

Conclusion

These less restrictive requirements are acceptable because they will not affect the safe operation of the plant. As discussed in the evaluation format section and summarized in Table 1, to the extent that these less restrictive requirements involve the relocation of matters from the CTS to licensee-controlled documents, they are not otherwise required to be in the TS under 10 CFR 50.36 and they are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to public health and safety. The TS requirements that remain are consistent with current licensing practices, operating experience, and plant accident and transient analyses, and provide reasonable assurance that public health and safety will be protected.

c. More Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 3.4, proposed a number of requirements more restrictive than those in the CTS. The following changes are the most significant.

3.4.1 Recirculation Loops Operating

CTS 3.2.7, Action a requires initiating action to reduce an excess stability monitoring decay ratio to within limits as soon as practical but in all cases within 15 minutes, but does not set a time limit to complete the action. ITS 3.4.1, Required Action C.1, provides a finite 1 hour completion time to reduce the decay ratio to within limits by restoring operation to the "Unrestricted" Region of the power-to-flow map specified in the COLR. The 1-hour completion time is consistent with the CTS 1-hour time limit for operating in the region of applicability when the stability monitoring system is inoperable (CTS 3.2.7, Action b). The addition of a finite completion time to restore operation to the "unrestricted" region of the power-to-flow map represents an additional restriction on plant operation, is consistent with the CTS completion time for similar conditions, and is, therefore, acceptable.

CTS 4.2.7.3 and 4.2.8.3 require monitoring the decay ratio and peak-to-peak noise values calculated by the stability monitoring system when operating in Region C of the power-to-flow map but do not specify how frequently they shall be monitored. This surveillance requirement is moved to ITS 3.4.1, Required Action B.1, with a completion time of "once within 15 minutes and every hour thereafter." The initial 15-minute completion time is consistent with Action a of CTS 3.2.7 and 3.2.8 which requires action to be taken within 15 minutes if a decay ratio is not within limits. The 1-hour periodic completion time is considered appropriate since the stability monitoring system provides alarms if the decay ratios approach the required limit. This is an additional restriction on plant operation and is acceptable.

3.4.2 Jet Pumps

No more restrictive technical changes to the CTS are associated with ITS 3.4.2.

3.4.3 Safety/Relief Valves (SRVs)—≥ 25% RTP

CTS 3.4.2.a requires that at least 12 of the SRVs be operable. ITS 3.4.3 adds a new requirement that the 12 required SRVs must include two SRVs in the lowest two lift setpoint groups. The small break LOCA analysis assumes that two SRVs with lift setpoints in the lowest two lift setpoint groups are operable. This addition ensures that the ECCS performs as assumed in the analysis. Therefore, this additional restriction on plant operation is acceptable.

CTS 3.4.2, Action a, requires shutting down to hot shutdown within 12 hours when less than the required number of SRVs are operable. ITS 3.4.3 only requires reducing thermal power to < 25%, which is consistent with the applicability of both CTS 3.4.2 and ITS 3.4.3. The CTS 3.4.2 Action a actually allows 12 hours to reach < 25% rated thermal power (RTP) because, even though the action requires going to hot shutdown, continued shutdown actions are unnecessary once the unit is outside the applicability of the LCO (< 25% RTP). The completion time of ITS 3.4.3, Action A, to reach < 25% RTP is 4 hours. This time is reasonable and consistent with other ITS actions that require reduction of thermal power to < 25%. This change is acceptable because it is an additional restriction on plant operations and is consistent with other similar actions.

The ITS contain two new surveillance requirements. ITS SR 3.4.3.1 requires the lift setpoints of the SRVs to be verified in accordance with the IST program and ITS SR 3.4.3.2 requires the SRVs to be manually actuated every 24 months. These changes put additional restrictions on plant operation, imposing requirements for determining operability of the SRVs, and are acceptable.

3.4.4 Safety/Relief Valves (SRVs)—< 25% RTP

The ITS contain two new surveillance requirements. ITS SR 3.4.4.1 requires the lift setpoints of the SRVs to be verified in accordance with the IST program and ITS SR 3.4.4.2 requires the SRVs to be manually actuated every 24 months. These changes put additional restrictions on plant operation, imposing requirements for determining operability of the SRVs, and are acceptable.

3.4.5 RCS Operational LEAKAGE

No more restrictive technical changes to the CTS are associated with ITS 3.4.5.

3.4.6 RCS Pressure Isolation Valve Leakage

No more restrictive technical changes to the CTS are associated with ITS 3.4.6.

3.4.7 RCS Leakage Detection Instrumentation

With no atmospheric monitoring available, CTS 3.4.3.1, Action a, requires analyzing a grab sample every 24 hours to compensate for the inoperable drywell atmospheric monitoring channels. ITS 3.4.7, Required Action B.1, changes the frequency of this sample from 24 hours to 12 hours. This change is acceptable because it will allow earlier detection of RCS leakage when the drywell atmospheric monitoring systems are inoperable.

3.4.8 RCS Specific Activity

CTS 4.4.5, Table 4.4.5-1, item 2, requires isotopic analysis for dose equivalent I-131 concentration at least once per 31 days. ITS SR 3.4.8.1 increases the frequency for isotopic analysis for dose equivalent I-131 concentration to at least once per 7 days. This is a compensatory measure to ensure that, with deletion of the requirement that gross specific activity remain ≤ 100/E-bar μCi/gram, offsite doses will remain within a small fraction of the limits of 10 CFR Part 100. For these reasons, the change is acceptable.

3.4.9 Residual Heat Removal (RHR) Shutdown Cooling System—Hot Shutdown

No more restrictive technical changes to the CTS are associated with ITS 3.4.9.

3.4.10 Residual Heat Removal (RHR) Shutdown Cooling System—Cold Shutdown

No more restrictive technical changes to the CTS are associated with ITS 3.4.10.

3.4.11 RCS Pressure and Temperature (P/T) Limits

The CTS 3.4.6.1 action statement applies to all operating conditions and requires performing an engineering evaluation when the pressure/temperature limits are exceeded but does not specify a time limit for completing this evaluation. ITS 3.4.11, Required Action A.2, applies to Modes 1, 2, and 3, and specifies 72 hours to determine whether the RCS is acceptable for continued operation (complete the engineering evaluation). The 72-hour limit is imposed because stresses in excess of those analyzed may have occurred and may have affected the integrity of the reactor coolant pressure boundary.

ITS Required Action C.2 applies to modes other than Modes 1, 2, and 3 and requires determining the RCS is acceptable for continued operation before entering Mode 2 or 3. This action will allow verification of the integrity of the reactor coolant pressure boundary before approaching criticality or heating up to 200°F. This change provides additional restrictions on plant operation and is acceptable.

The CTS 3.4.1.4 action requires suspending startup of a recirculation loop if the temperature requirements are not met. This statement does not provide an action once the loop is operating if the required conditions are not met. ITS 3.4.11, Actions A and C, require restoring the temperature requirements to within limits and performing an engineering evaluation to determine that the RCS is acceptable for continued operation if starting requirements are violated. The ITS provide more explicit and consistent actions for conditions in which any of the pressure/temperature limits are exceeded. This change adds restrictions on plant operations and is acceptable.

3.4.12 Reactor Steam Dome Pressure

CTS 3.4.6.2 is applicable in Operational Conditions 1 and 2 and includes a note stating that the reactor steam dome pressure limit is not applicable during anticipated transients. ITS 3.4.12 is applicable in Modes 1 and 2 with no exceptions. The reactor steam dome pressure limit is provided to ensure transient analyses assumptions are met. The required actions provide prompt restoration of reactor steam dome pressure in the event a transient causes reactor steam dome pressure to exceed the limit. This change is an additional restriction on plant operation, maintaining transient analysis assumptions, and is acceptable.

Conclusion

These more restrictive requirements strengthen the CTS and are therefore acceptable.

d. Deviations from the STS

The licensee, in electing to adopt the specifications of STS Section 3.4, proposed a number of deviations from the STS. The following deviations are the most significant.

STS 3.4.1, "Recirculation Loops Operating," has been revised in ITS 3.4.1 to reflect the current licensing basis requirements related to core thermal hydraulic stability.

STS 3.4.4 has been divided into two separate specifications, ITS 3.4.3 and 3.4.4, with the appropriate actions and surveillances for the two conditions. The WNP-2 overpressure protection safety analysis assumes that 12 SRVs are operable when thermal power is $\geq$ 25% RTP and only four SRVs are operable when thermal power is < 25% RTP. Splitting the specification into two specifications, one for 12 operable SRVs and one for 4, is consistent with the STS format. The resulting requirements are consistent with the current licensing basis.

STS 3.4.4 specifies the required number of operable SRVs. The WNP-2 design basis analyses for a small break LOCA assume not only that 12 SRVs are operable, but also that the 12 required SRVs include two SRVs in the lowest two lift setpoint groups. Therefore, a requirement that two SRVs in the lowest two lift setpoint groups be operable has been added in ITS 3.4.3.

In addition, STS 3.4.4 requires that the relief function of a certain number of SRVs be operable. The current WNP-2 licensing basis does not include TS requirements for the relief mode of the SRVs since the overpressure protection analysis does not assume the relief mode functions to mitigate an overpressurization event. Therefore, the relief mode requirements of STS 3.4.4 have been deleted in ITS 3.4.3 and 3.4.4.

STS SR 3.4.4.1 requires that lift settings for SRVs be within ± 1% following testing. CTS 3/4.4.2 and ITS SR 3.4.3.1 and SR 3.4.4.1 require that lift settings be within ± 3%. This allowance was approved in Amendment Number 137, dated May 2, 1995, and is therefore consistent with the WNP-2 current licensing basis.

STS SR 3.4.5.1 requires that RCS unidentified and total leakage be verified every 8 hours. The surveillance frequency has been extended to 12 hours in ITS SR 3.4.5.1 consistent with GL 88-01, "NRC Position on Intergranular Stress Corrosion Cracking (IGSCC) in BWR Austenitic Stainless Steel Piping," Supplement 1. The supplement allowed the frequency to be once per shift, not to exceed 12 hours. This difference is also consistent with the current licensing basis.

STS 3.4.6, Required Action A.2, which requires the high pressure portion of the affected system to be isolated from the low pressure portion by closing a second manual, deactivated automatic, or check valve, has been deleted in ITS 3.4.6. The current licensing basis for WNP-2 does not include closing a second valve. As described in the WNP-2 response to GL 87-06, "Periodic Verification of Leak Tight Integrity of Pressure Isolation Valves," WNP-2 tests the valves, and if one is found to be leaking beyond the allowable limits, the penetration will be isolated by one valve that meets the leakage limits. This isolation will preclude an intersystem LOCA from occurring on the affected system. In addition, the note to ITS 3.4.6, Required Action A.1, has been modified to reflect this deletion. The note to Required Action A.1 has also been modified to only apply to check valves, consistent with the current licensing basis.

A note has been added to the surveillance requirements for STS 3.4.7 (ITS 3.4.7) to allow a channel to be inoperable for up to 6 hours solely for performance of required surveillances, provided the other leakage detection system channel is operable. This note is similar to other notes in the ITS, which allow channels that provide automatic actions to be inoperable for up to 6 hours. This instrumentation only provides indication, and the 6-hour allowance is not allowed unless the other channel is operable.

The words in STS LCO 3.4.11 have been changed from "recirculation pump starting temperature requirements" to "loop temperature requirements" in ITS 3.4.11 since the current licensing basis includes additional recirculation loop requirements. These additional requirements have been added as ITS SRs 3.4.11.5 and 3.4.11.6.

The notes to STS SR 3.4.11.3 and 3.4.11.4 have been modified to require only that the SRs be met during recirculation pump startup, when the actual stresses of concern occur and when the SRs really need to be met. The added words are consistent with the wording currently in the Bases for STS 3.4.11, LCO item c, which states, "The temperature difference between the reactor coolant in the respective recirculation loop and in the reactor vessel meets the limit of the Pressure and Temperature Limits Report (PTLR) *during recirculation pump startup* . . . "

The utilization of a PTLR requires the development, and NRC approval, of detailed methodologies for future revisions to the P/T limits. At this time, WNP-2 does not have the necessary methodologies submitted to the NRC for review and approval. Therefore, ITS 3.4.11 removes the references to the PTLR contained in STS 3.4.11 and the specific P/T limits and curves have been included in the P/T limits specification (ITS 3.4.11).

STS 3.4.2 provides requirements for flow control valves (FCVs). WNP-2 has recently modified the reactor recirculation system to add an adjustable speed drive to control the speed of the reactor recirculation pump. As part of this modification, the flow control valves are now locked open. Therefore, the requirement to maintain and test the valves was deleted in Amendment Number 145, dated June 3, 1996, and there are no requirements on FCVs in the ITS.

Conclusion

These deviations from STS Section 3.4 are consistent with the WNP-2 design and with existing requirements and commitments, or with proposed changes found acceptable, as discussed elsewhere in this evaluation. Therefore, these differences are acceptable.

e. Relocated Requirements

In accordance with the criteria in the Final Policy Statement, the licensee has proposed to entirely remove the following reactor coolant system specifications from the CTS and place them in licensee-controlled documents.

3/4.4.4 Chemistry

The reactor coolant system chemistry limits of CTS 3/4.4.4 are being relocated to the LCS. Changes to the LCS will be controlled by the provisions of 10 CFR 50.59. 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 other, direct, means to monitor and correct the degradation of the reactor coolant pressure boundary are controlled by regulations and TS; for example, in-service inspection and primary coolant leakage limits are required to detect and prevent long-term degradation of the reactor coolant pressure boundary materials and to maintain acceptable structural conditions over the long term. These limits of CTS 3/4.4.4 are not of immediate importance to the operator and are not required to ensure operability of the reactor coolant system pressure boundary. These requirements do not meet any of the criteria of 10 CFR 50.36 for inclusion in TS, and relocating them conforms to the STS and is acceptable.

3/4.4.8 Structural Integrity

The structural integrity inspections in CTS 3/4.4.8 establish limiting conditions for operation to prevent long-term degradation of ASME Code Class 1, 2, and 3 components and are being relocated to the FSAR. The inspection program associated with the TS requirements is performed on systems assumed to function to mitigate a design basis accident. However, the TS establish operability requirements for these same systems. The specification limits in CTS 3/4.4.8 are not needed to ensure operability of ASME Code Class 1, 2, and 3 components. Therefore, the requirements specified in CTS 3/4.4.8 can be relocated to the FSAR, changes to which are controlled in accordance with 10 CFR 50.59. These requirements do not meet any of the criteria of 10 CFR 50.36 for inclusion in TS, and relocating them conforms to the STS and is acceptable.

Conclusion

These current specifications are not required to be in the TS under 10 CFR 50.36 and do not meet any of the four criteria in the Final Policy Statement. They are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to public health and safety. In addition, the staff finds that sufficient regulatory controls exist under the regulations cited above to maintain the effect of the provisions in these specifications. Accordingly, these current specifications may be removed from the CTS and placed in the licensee-controlled documents cited above.

3.5 Emergency Core Cooling Systems (ECCS) and Reactor Core Isolation Cooling (RCIC) System

The licensee has proposed administrative and technical changes to the CTS to bring them into conformance with STS Section 3.5, "Emergency Core Cooling Systems (ECCS) and Reactor Core Isolation Cooling (RCIC) System." The changes are discussed in the order of the specifications in STS Section 3.5. The corresponding ITS Section 3.5 specification titles are listed in italics before each discussion.

a. Administrative Changes

The CTS specifications that have been retained in ITS Section 3.5 have been reworded to conform to the STS presentation. The following changes are the most significant.

3.5.1 ECCS—Operating

CTS 3.5.1 references Special Test Exception 3.10.6, which permits one residual heat removal (RHR) subsystem to be aligned to shutdown cooling for training startups. The reference has been deleted in the ITS because the format of the ITS prohibits cross-references and ITS 3.0.7 adequately prescribes the use of the special operations LCOs. The change is acceptable because it is an administrative change that removes a condition that is no longer needed.

CTS 3.5.1, Actions a through e, provide actions for combinations of inoperable ECCS subsystems. For combinations not described in CTS 3.5.1, entry into LCO 3.0.3 is required. ITS 3.5.1, Action H, provides the same requirement to enter LCO 3.0.3 for the same combinations, except as identified in subsection 3.5.b for ITS 3.5.1. This change is acceptable because it is an administrative change that provides the same requirements as the CTS.

The footnote to CTS 3.5.1, Actions b.3 and d.3 states that if cold shutdown cannot be attained when two RHR subsystems are not operable, then reactor coolant system (RCS) temperature is to be maintained as low as practical using alternate heat removal methods. This footnote is not contained in ITS 3.5.1 because it provides unnecessary duplication of the ITS 3.5.1 Actions and contains additional plant operational restrictions. The requirement in ITS 3.5.1, Action D, to achieve Mode 4 ensures that efforts are made to maintain RCS temperature as low as practical. If conditions prohibit attaining Mode 4 in 36 hours, the ITS require entering LCO 3.0.3, which only requires that efforts to reach Mode 4 continue. For these reasons, deleting the footnote to CTS 3.5.1, Actions b.3 and d.3 is a purely administrative change and is acceptable.

CTS 3.5.1.a and 3.5.1.b specify that seven automatic depressurization system (ADS) valves are required to be operable. With two ADS valves inoperable, CTS 3.5.1, Action e.1, allows 14 days to restore one of the two inoperable valves. The CTS do not specify actions or a restoration time for the second inoperable valve; therefore, operation with one of the seven required ADS valves inoperable is allowed for an indefinite period of time. With three or more of the required valves inoperable, CTS Action e.2 requires placing the unit in Mode 3 in 12 hours. ITS 3.5.1 requires six operable ADS valves. Action E allows 14 days to restore one inoperable valve and Action G requires placing the unit in Mode 3 in 12 hours with two or more required valves inoperable. While the required number of operable ADS valves specified in the LCO has been reduced from seven in the CTS to six in the ITS, there is no real change in requirements since the CTS allow indefinite operation with one of the required seven ADS valves inoperable. The ITS action requirements remain the same as in the CTS. The ADS operability requirements are based on an analysis summarized in NEDC-32115P, "Washington Public Power Supply System Nuclear Project 2 SAFER/GESTR-LOCA Loss-of-Coolant Accident Analysis," Revision 2, dated July 1993. This analysis demonstrates adequate core cooling is provided during a small break LOCA and a simultaneous high pressure core spray (HPCS) diesel generator failure (limiting LOCA) with two of the seven ADS valves out of service. This change reflects the credit provided through the use of NRC-approved methods for calculating more realistic (yet conservative) peak cladding temperatures during accident situations. In addition, the above-referenced document was reviewed and accepted by the NRC as documented in Amendment Number 137, dated May 2, 1995. Because the ITS do not change the requirements of the CTS, this change is purely administrative and is acceptable.

3.5.2 ECCS—Shutdown

The CTS 3.5.2 applicability footnote specifies that ECCS operability is not required provided the reactor vessel head is removed, the cavity is flooded, the spent fuel pool gates are removed, and water level is maintained per CTS 3.9.9 and 3.9.8. ITS 3.5.2 is applicable in Mode 5 except with the spent fuel storage pool gates removed and water level ≥ 22 feet over the top of the reactor vessel flange. These are essentially the same criteria as the CTS, presented slightly differently. This change is purely administrative and is acceptable.

CTS 4.5.3.2.b requires, at least once per 12 hours, verifying that CTS 3.5.3.b is satisfied when the suppression chamber water level is less than the limit or drained. This surveillance requirement is part of the ITS 3.5.2 applicability. Therefore, a periodic verification that the unit condition remains within the applicability need not be included in the TS to ensure that the requirements of CTS 4.5.3.2.b are complied with. This change is purely administrative and is acceptable.

3.5.3 RCIC System

CTS 4.7.3.b specifies requirements for the RCIC pump flow test. In the ITS, this requirement is contained in ITS SR 3.5.3.3. The footnote to CTS 4.7.3.b specifies that CTS 4.0.4 is not applicable provided the surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the test. ITS SR 3.5.3.3 has a similar clarifying note, which also includes an allowance for adequate flow. The change is acceptable because it is a purely administrative change that adds clarification.

The footnote to CTS 3.7.3 specifies when the requirement for automatically taking RCIC suction from the suppression pool is effective. The note is being deleted because it no longer applies (i.e., the spring 1993 refueling outage past). This change is purely administrative and is acceptable.

The requirements of CTS 3.7.3, RCIC system are being moved to ITS 3.5.3 in accordance with the format of the STS. This is an acceptable administrative change.

Conclusion

These changes to the CTS are administrative. They clarify, reorganize, or reformat the current specifications. None of these changes alters the limits in the current requirements. Accordingly, these changes are acceptable.

b. Less Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 3.5, proposed a number of requirements that are less restrictive than those in the CTS. The following changes are the most significant.

3.5.1 ECCS—Operating

CTS 3.5.1 a through c specify operable criteria for each system (low pressure core spray, low pressure coolant injection, and high pressure core spray). Operability is defined in Chapter 1.0. The CTS details for defining operability are being moved to the Bases for ITS 3.5.1. This change is acceptable because it is not necessary to include these details in the TS to ensure system operability. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0.

CTS 4.5.1 requires verifying that the low pressure core spray, low pressure coolant injection, and high pressure core spray systems are operable by venting at the high points, verifying the position of automatic valves, verifying actuation, and verifying system pressures during flow tests. The details for defining operability are being moved to the Bases. Inclusion of these details in TS is not necessary to ensure the operability of the ECCS subsystems. The requirements of ITS 3.5.1 and the associated surveillance requirements are adequate to ensure the ECCS subsystems are maintained operable. Changes to the Bases will be controlled by the provisions of the Bases Control Program specified in ITS Chapter 5.0.

CTS 4.5.1.e.2 and 4.5.1.e.3.c require performing a channel functional test and channel calibration, respectively, on the ADS backup compressed gas system pressure alarm, but CTS 3.5.1, "ECCS - Operating," does not require this instrumentation to be operable. ITS SR 3.5.1.3 maintains the requirement to verify that the ADS accumulator backup compressed gas system average pressure is within limits, but the requirements of CTS 4.5.1.e.2 and 4.5.1.e.3.c are being moved to the FSAR/LCS Manual. Indication-only instrumentation, test equipment, and alarms are usually not required to be operable to support the operability of a system or component. Thus, the STS generally contain no operability requirements for indication-only equipment or alarms. The availability of, and activities to compensate for the unavailability of, such indication instruments and alarms are addressed in the FSAR/LCS. For these reasons, the movement of these items to the FSAR/LCS is acceptable. Changes to the FSAR and LCS will be controlled by the provisions of 10 CFR 50.59.

CTS 4.5.1.e.3.d requires a verification of the nitrogen capacity in at least two accumulator bottles per division and specifies calibrating the indication-only accumulator pressure gauges as a verification method. This requirement is being moved to the FSAR/LCS. Inclusion of this requirement in the TS is not necessary to ensure ADS operability. Changes to the FSAR and LCS will be controlled by the provisions of 10 CFR 50.59.

The 18-month frequencies of the surveillances in CTS 4.5.1 retained in ITS 3.5.1 are changed to 24 months. These changes are acceptable for the reasons given in pargraph (10) "Extension of 18-Month Surveillance Intervals to 24 Months" in the general discussion of less restrictive requirements at the beginning of Part III of this safety evaluation.

The CTS 3.5.1 applicability references the minimum reactor pressure for which the ADS is required to be operable at 128 psig. In ITS 3.5.1, this minimum pressure has been raised to 150 psig. The change is made to provide consistency of the operability requirements for all ECCS and RCIC equipment. Small break loss-of-coolant accidents at low pressures are bounded by analyses performed at higher pressures. The ADS is required to lower the pressure so that the low pressure coolant injection and core spray systems can provide makeup to mitigate such accidents. Since these systems can operate at pressures well above 150 psig [222 psid steam dome pressure to drywell pressure, steam dome pressure < 336 psig for low pressure coolant injection (LPCI), 285 psid steam dome pressure to drywell pressure, and steam dome pressure < 336 psig for low pressure core spray (LPCS)], the inoperability of the ADS between 128 psig and 150 psig has no safety significance. Therefore, this change is acceptable.

CTS 3.5.1, Action f, specifies cases where special reports are required to be prepared and submitted to the NRC. This requirement has been deleted from the ITS. The requirement to submit a special report for ECCS actuation and injection is addressed by 10 CFR 50.73(a)(2)(iv). This regulation requires a licensee event report (LER) be submitted for any event or condition that results in manual or automatic ECCS actuation. This LER requirement covers any actuation and injection that would be stipulated by the special report requirement. Regulations provide sufficient control of the reporting requirement provisions to allow the special reporting criteria to be removed from the TS. Therefore, this change is acceptable.

CTS 3.5.1 does not have specific actions for conditions in which either HPCS and one low pressure ECCS subsystem or one ADS valve and one low pressure ECCS subsystem are inoperable, other than defaulting to CTS LCO 3.0.3. ITS 3.5.1, Actions C and F, provide specific actions for these conditions. The CTS require entry into TS 3.0.3 when either HPCS and one low pressure ECCS subsystem or one ADS valve and one low pressure ECCS are inoperable, implying that the plant is outside the design basis. The FSAR analysis demonstrates that adequate core cooling is provided by the operable HPCS or ADS system and the remaining operable low pressure injection/spray systems. However, with HPCS and one low pressure ECCS subsystem or one ADS valve and one low pressure ECCS subsystem inoperable, the redundancy is reduced such that a single additional failure may jeopardize the ability to provide adequate core cooling. When both a high pressure (ADS) and low pressure subsystem are inoperable, ITS 3.5.1, Action F, provides a restoration time of 72 hours for either subsystem. ITS 3.5.1, Action C, addresses the condition of having two ECCS low pressure injection or spray subsystems inoperable with a restoration time of 72 hours for either the HPCS or LPCI subsystem. These changes are acceptable because adequate core cooling is maintained in the new conditions.

CTS 4.5.1.a.2 does not include criteria that specifically address using the LPCI for shutdown cooling modes of operation. The ITS SR 3.5.1.2 note has been added to address shutdown cooling modes of operation. The note allows operation of one or more of the RHR subsystems in the shutdown cooling mode during Mode 3 and clarifies that the subsystems are still considered operable for the LPCI mode. Manual valve positioning is required for this mode of operation; the subsystems cannot respond automatically and would be considered inoperable without this note. The return to operability for the LPCI mode of operation entails only repositioning valves, either remotely or locally. In addition, the energy that must be dissipated in Mode 3, below 135 psig, is considerably less than that at 100% power with normal operating temperature and pressure. Further, because of the low probability of an event requiring ECCS actuation and the certain need for shutdown cooling, it is considered appropriate to have the subsystems aligned for decay heat removal. For these reasons, this change is acceptable.

CTS 4.5.1.c requires performance of a system functional test for the LPCS, LPCI, and HPCS systems, and CTS 4.5.1.e.3.a requires performance of a system functional test for the ADS. These SRs do not allow actual system demands to meet surveillance testing requirements. ITS SR 3.5.1.5 and SR 3.5.1.6 allow verification of ECCS and ADS actuation, respectively, by an actual or simulated signal. The ITS change allows substituting actual system demands for simulated demands in surveillance tests. Operability is demonstrated in either simulated or actual demands since the ECCS subsystem or ADS valve itself cannot discriminate between actual or simulated signals. Therefore, this change is acceptable.

CTS 4.5.1.e.1 requires verifying once per 31 days that the ADS backup compressed gas system pressure in each bottle is ≥ 2200 psig. ITS SR 3.5.1.3 requires verification that the average pressure in all required bottles is ≥ 2200 psig. The associated analysis in NUREG-0892, "Safety Evaluation Report related to the Operation of WPPSS Nuclear Project No. 2," has demonstrated that a 30-day nitrogen supply is available if the required bottles have an average pressure of 2200 psig. Therefore, the ITS requirement to verify an average pressure in all bottles is consistent with the safety analysis and is acceptable.

3.5.2 ECCS–Shutdown

CTS 3.5.2 provides details that define low pressure core spray, low pressure coolant injection, and high pressure core spray system operability. These details are being moved to the Bases for ITS 3.5.2 in conjunction with the Operability definition in Chapter 1.0. This change was made because it is not necessary to include these details in the TS to ensure system operability. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0.

CTS 3.5.2.e.2 provides the volume of water contained in the condensate storage tank in addition to the tank water level as a required limit. ITS 3.5.2 retains the level limit, but the limit on the volume of water has been moved to the Bases for ITS 3.5.2. The level limit is retained since this is the information available to the operator regarding the contents of the condensate storage tank. The volume and level limits are equivalent and interchangeable. Therefore, moving one of them to the Bases does not change the operability requirements for the CST. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0.

CTS 3.5.2, Action b requires that, when two ECCS subsystems become inoperable, core alterations be suspended. Likewise, CTS 3.5.3, Action b requires that, with the suppression chamber water level less than the limit or drained and the LCO conditions not satisfied, core alterations be suspended. The ITS 3.5.2 actions do not require suspension of core alterations under the same conditions. ITS 3.9.6 and 3.9.7 provide requirements for maintaining water level in the reactor vessel during core alterations. The ECCS function provides additional protection for loss of vessel inventory events. However, these events are not initiated by core alteration operations, and ECCS response to loss of inventory events is not hampered by core alteration operations. Therefore, this change is acceptable.

CTS 3.5.3.b requires that while the plant is in Operational Conditions 4 and 5 suppression pool water volume is maintained at least 127,197 ft^3, equivalent to a level of 30 feet 9¾ inches. ITS SR 3.5.2.2 requires verification that the suppression pool water level is ≥ 18 feet 6 inches and the reference to the volume limit has been moved to the Bases. The CTS level requirement is based on Modes 1, 2, and 3 requirements. In Modes 4 and 5, the suppression pool is not needed to condense steam released during a LOCA; therefore, the water level requirement does not need to consider this factor. The new water level limit is based on ensuring adequate net positive suction head and vortex prevention for all the ECCS pumps, and provides an additional 135,000 gallons of water for recirculation and makeup. In addition, the redundant volume requirement (in cubic feet) has been deleted from the TS, leaving the equivalent water level requirement. For these reasons, these changes are acceptable.

CTS 3.5.3.b.2 and associated Action b require that under certain conditions the reactor mode switch be locked in the shutdown or refuel position. This requirement has been deleted in the ITS. This change is being made because the position of the reactor mode switch is controlled by the modes definition table (ITS Table 1.1-1). Reactor mode switch positions other than refuel and shutdown result in the unit entering some other mode with the associated TS compliance requirements of that mode and of ITS LCO 3.0.4. ITS 3.5.2 is only applicable for the shutdown or refuel position of the reactor mode switch since a reactor mode switch position of other than shutdown or refuel results in entry into a mode other than Mode 4 or 5. Therefore, inclusion of a requirement to lock the reactor mode switch in the shutdown or refuel position in TS is unnecessary.

CTS 3.5.3 requires that the suppression chamber be operable. CTS 3.5.3.b specifies that the suppression chamber may be drained in Operational Conditions 4 and 5 provided that certain conditions are met, including that no operations with a potential for draining the reactor vessel (OPDRVs) are performed. In addition, CTS 3.5.3, Action b, specifies actions to take if the LCO conditions aren't satisfied, including suspension of all OPDRVs. If the suppression pool is drained, HPCS is the only ECCS subsystem that can be operable, since no other ECCS subsystem has an alternate source of water. However, with one of the two required ECCS subsystems inoperable, CTS 3.5.2, Action a, allows 4 hours before requiring operations that have a potential for draining the reactor vessel (OPDRVs) to be suspended.

The conditions and actions of CTS 3.5.3 are translated in ITS 3.5.2, Actions A and B, for one inoperable ECCS subsystem. CTS 3.5.3.b.1 and Action b would require immediate suspension of OPDRVs with the suppression chamber water level less that the limit or drained, even though HPCS would remain operable. ITS 3.5.2, Required Action A.1, provides 4 hours to restore the inoperable ECCS subsystem to operable status before Required Action B.1 would require suspending OPDRVs, consistent with the actions in CTS 3.5.2 for one inoperable ECCS subsystem. Therefore, this is a less restrictive change relative to CTS 3.5.3, but, because the ITS retain the actions for one inoperable ECCS subsystem in CTS 3.5.2, the change is acceptable.

3.5.3 RCIC System

CTS 3.7.3 provides details on defining RCIC system operability. Operability is defined in ITS Chapter 1.0, and these details are being moved to the Bases for ITS 3.5.3. These details are being moved to the Bases for ITS 3.5.3 because their inclusion in the TS is not necessary to ensure system operability. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0.

CTS 4.7.3. requires that the RCIC system is verified operable by venting at the high points, setting the pump flow controller in the correct position, and system actuation. The criteria for defining RCIC operability are being moved to the Bases for ITS 3.5.3. Inclusion of these details in the TS is not necessary to ensure the operability of the RCIC system. The requirements of ITS 3.5.3 and the associated surveillance requirements are adequate to ensure the RCIC system is maintained operable. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0.

The 18-month frequencies of the surveillances in CTS 4.7.3.c retained in ITS 3.5.3 are changed to 24 months. These changes are acceptable for the reasons given in paragraph (10) "Surveillance Interval Extension from 18 to 24 Months" in the general discussion of less restrictive requirements at the beginning of Part III of this safety evaluation.

CTS 4.7.3.c.1 requires performance of a functional test on the RCIC system, including a simulated automatic actuation of the system. This SR does not allow actual system demands to be used in the surveillance testing. ITS SR 3.5.3.5 allows verification of RCIC actuation by an actual or simulated signal. The ITS change allows substituting actual system demands for simulated demands in surveillance tests. Operability is demonstrated in either simulated or actual demands since the RCIC system itself cannot discriminate between actual or simulated signals. Therefore, this change is acceptable.

Conclusion

These less restrictive requirements are acceptable because they will not affect the safe operation of the plant. As discussed in the evaluation format section and summarized in Table 1, to the extent that these less restrictive

requirements involve the relocation of matters from the CTS to licensee-controlled documents, they are not otherwise required to be in the TS under 10 CFR 50.36 and they are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to public health and safety. The TS requirements that remain are consistent with current licensing practices, operating experience, and plant accident and transient analyses, and provide reasonable assurance that public health and safety will be protected.

c. More Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 3.5, proposed a number of requirements more restrictive than those in the CTS. The following changes are the most significant.

3.5.1 ECCS—Operating

CTS 4.5.1.e.3.a requires performing a functional test on the ADS system valve logic. This requirement is contained in ITS SR 3.5.1.6. However, a functional test of the ADS accumulator backup compressed gas system initiation to verify that the compressed gas system automatically aligns on an actual or simulated signal has been added as part of this SR as described in the Bases for ITS SR 3.5.1.6. This addition is a more restrictive change that is acceptable because it adds a testing requirement to ensure operation of the accumulator backup compressed gas system. The ADS system could satisfy the requirement in CTS 4.5.1.e.3 without challenging the functions of the backup system, which provides long term air supply for the ADS. Testing of this function should be included to ensure operability of the entire ADS function.

3.5.2 ECCS—Shutdown

CTS 3.5.2, Action b, requires that when two of the ECCS subsystems are inoperable, secondary containment integrity is to be established within the next 8 hours. ITS 3.5.2, Required Action D.1, requires that action be initiated to restore secondary containment immediately. All of the individual requirements needed to establish secondary containment integrity, as required by the CTS, are addressed by the ITS required actions. The change is a presentation preference adopted by the STS. Additionally, CTS 3.5.2, Action b, appears to provide a period of time (8 hours) during which integrity could be violated. The intent of the action is more appropriately presented in ITS Required Actions D.1, D.2, and D.3. With the ITS Required Actions, a more conservative requirement is provided to establish and maintain the secondary containment boundary as quickly as is consistent with safe operation. The ITS Required Action to initiate action to restore secondary containment to operable status immediately is consistent with the intent of the CTS action. Therefore, this change is acceptable.

The note to CTS 3.5.3 Applicability and CTS 4.5.3.2 allows the suppression chamber to be inoperable during cavity flooding. The allowance has been deleted in the ITS. The ITS 3.5.2 applicability requires the suppression pool to be within the required limits until the cavity is completely flooded. This

is an additional restriction on plant operation and provides additional assurance that the ECCS shutdown function will be available if needed. Therefore, this change is acceptable.

3.5.3 RCIC System

No more restrictive changes to the CTS are associated with ITS 3.5.3.

Conclusion

These more restrictive requirements strengthen the CTS and are therefore acceptable.

d. Deviations from the STS

The licensee, in electing to adopt the specifications of STS Section 3.5, proposed a number of deviations from the STS. The following deviations are the most significant.

The completion time for Required Action B.1 of STS 3.5.1 and Required Action A.1 of STS 3.5.3 has been changed from 1 hour to "immediately" in ITS 3.5.1 and 3.5.3. Because of the way completion times work, the 1-hour allowance will probably never be used. For example, if HPCS is inoperable, STS 3.5.1, Condition B, is entered, and the 1-hour verification of Required Action B.1 is performed. If RCIC is not inoperable at this time, the required action is met. However, since the completion time starts upon entry into this condition, if RCIC later becomes inoperable, the 1-hour completion time in STS 3.5.1, Required Action B.1, has already expired. Thus, a unit shutdown would be required immediately upon discovery of inoperable RCIC even though STS 3.5.3, Required Action A.1, for RCIC being inoperable appears to allow 1 hour to verify HPCS operability. To avoid this confusion, the CTS requirement for "immediate" verification has been retained.

A new surveillance requirement, ITS SR 3.5.1.3, which requires verification of the ADS accumulator backup compressed gas system average pressure, replaces STS SR 3.5.1.3, which ensures the ADS receiver pressure is within limits. This difference is consistent with the WNP-2 current licensing basis.

Conclusion

These deviations from STS Section 3.5 are consistent with the WNP-2 design and with existing requirements and commitments, or with proposed changes found to be acceptable, as discussed elsewhere in this evaluation. Therefore, these differences are acceptable.

e. Relocated Requirements

None.

3.6 Containment Systems

In accordance with the guidance in the Final Policy Statement, the licensee has proposed administrative and technical changes to the CTS to bring them into conformance with STS Section 3.6 specifications. For each category of change, the discussions generally follow the presentation order of the individual specifications within STS Section 3.6. As appropriate, the ITS specifications are listed in italics before the applicable discussions.

a. Administrative Changes

The requirements for containment systems in CTS Section 3/4.6 and CTS 3/4.4.7 that are retained in corresponding ITS Section 3.6, have been reworded and reorganized to conform to the STS presentation. In particular, the most significant administrative changes are as follows.

General

(3.6.1.1; 3.6.1.2; 3.6.3.3) Note * to the Mode 2 applicability of CTS 3/4.6.1.1 for primary containment and CTS 3/4.6.1.3 for primary containment air locks references the exception to meeting the LCO during low power physics testing in accordance with CTS 3.10.1. Similarly, Note * to the Mode 1 applicability of CTS 3/4.6.6.2 for drywell and suppression chamber oxygen concentration references the exception to meeting the LCO in accordance with CTS 3.10.5 during the startup test program. Deleting these references to special test exceptions are purely administrative changes because the conditions covered (i.e., startup tests and low power physics tests) have been completed and are no longer applicable.

3.6.1.1 Primary Containment

The requirement of CTS 3.6.1.1 to maintain primary containment integrity is replaced by the requirement of ITS 3.6.1.1 for primary containment to be operable. The ITS words better convey the meaning intended by the CTS definition "primary containment integrity" (which is no longer used). This administrative change is acceptable because ITS 3.6.1.1 through 3.6.1.8 and ITS 5.5.12 retain all the requirements encompassed by the CTS definition and by the other CTS related to primary containment systems.

The requirement of CTS 4.6.1.2 to perform primary containment leakage rate testing is presented in ITS SR 3.6.1.1.1, and the details for these requirements in CTS 4.6.1.1.a, 3.6.1.2, 3.6.1.2.a, and 3.6.1.2 are presented in ITS 5.5.12, "Primary Containment Leakage Rate Testing Program" (corresponding to CTS 6.8.4.f). CTS 4.6.1.2 must be met as a condition of primary containment operability. This is appropriate because leaktightness is an essential element of an operable containment. Additionally, the CTS contain details also found in 10 CFR Part 50, Appendix J. However, only the limit for combined Type B and C leakage (0.6 L_a) and the limit for measured Type A leakage (0.75 L_a) are retained in ITS 5.5.12. The leakage limits in Appendix J are < 0.6 L_a and < 0.75 L_a, not $\leq$ 0.6 L_a and $\leq$ 0.75 L_a, as given in the CTS. Thus, in ITS 5.5.12, these limits are stated to match the Appendix J requirements. All other leakage testing details, such as the description of the test method and when to perform the tests, are deleted because they are redundant to the regulation. Because no decrease in test requirements results, deleting these details from the TS poses no safety questions. Therefore, simplifying the presentation of the CTS containment-leakage-testing requirements in ITS SR 3.6.1.1.1 and ITS 5.5.12 is a purely administrative change.

CTS 3.6.1.2.c, 3.6.1.2.d, and Actions c and d, relating to the position of PCIVs, and the allowed leakage rates and testing of MSIVs and valves in hydrostatically tested lines, are being moved to ITS 3.6.1.3 in accordance with the format of the STS. Evaluations of any technical changes are addressed in the ITS 3.6.1.3 evaluation. This is an acceptable administrative change.

CTS 3/4.6.1.1 and 3/4.6.1.2 contain the following surveillances to verify compliance with other CTS surveillance requirements.

- CTS 4.6.1.1.c requires meeting CTS 4.6.1.3 for primary containment air locks.
- CTS 4.6.1.1.d requires meeting CTS 4.6.2.1 for the suppression chamber.

These redundant requirements are deleted because the CTS surveillances and other requirements for the systems listed are retained in the corresponding ITS SRs. This change is purely administrative because no reductions in current surveillance requirements result.

The definition of the integrated leak rate criteria of L_a given in CTS 3.6.1.2.a "0.50 percent by weight of the containment air per 24 hours at P_a for a primary containment leakage limit" is being moved to ITS 5.5.12, Primary Containment Leakage Rate Testing Program. This change is purely administrative. Any technical changes are discussed in 5.5.12.

Primary containment structural integrity requirements in CTS 3/4.6.1.5 are presented in ITS SR 3.6.1.1.1 as inherent to containment operability. CTS 3.6.1.5 requires maintaining primary containment structural integrity at a level consistent with the acceptance criteria of CTS 4.6.1.5.1. CTS 4.6.1.5.1 contains details which are also found in 10 CFR Part 50, Appendix J. Duplicating details of the regulations within the TS is unnecessary because the licensee must comply with the details regardless of whether they are repeated in TS. Thus, these details may be eliminated from the CTS. In addition, the structural integrity reporting requirement in CTS 4.6.1.5.2 is a duplication of information required by 10 CFR 50.73 and 10 CFR Part 50, Appendix J. Appendix J requires reporting degradation that is not serious in the integrated leak rate test (ILRT) report. But if the principal safety barrier, i.e., the primary containment, is seriously degraded, a 30-day report is required by 10 CFR 50.73. Since the special reporting requirement of CTS

4.6.1.5.2 duplicates these requirements, it is unnecessary and eliminated from the CTS.

Eliminating the details that are found in Appendix J and eliminating the special reporting requirements that duplicate other regulatory requirements are purely administrative changes because the regulatory requirements cited remain applicable.

CTS 3.6.2.1.b and CTS 4.6.2.1.d present the drywell-to-suppression-chamber bypass leakage limit of ≤ 10% of the acceptable $A/\sqrt{k}$ design value of 0.05 ft^2 (which is 0.005 ft^2) as a condition of operability for the suppression chamber. Because the suppression chamber must function properly to ensure primary containment operability, these drywell-to-suppression-chamber bypass leakage LCO and surveillance requirements are presented in ITS SR 3.6.1.1.2 as a surveillance to directly support primary containment operability. This is appropriate because maintaining this bypass leakage within limits is essential for the primary containment to perform its pressure suppression function and to ensure that the primary containment design pressure is not exceeded. This is an administrative change because it only clarifies that the existing bypass leakage limit is a condition that directly supports primary containment operability.

Finally, CTS SR 4.6.2.1.d specifies that if any 1.5 or 5 psi drywell-to-suppression-chamber leak testing limits are exceeded, then the leak testing schedule shall be reviewed by the NRC. Corresponding ITS SR 3.6.1.1.2 contains the surveillance requirements for the drywell-to-suppression-chamber leak testing, but omits the provision for NRC review of the schedule. This provision is deleted because the ITS SR retains the CTS requirement for additional testing (i.e., half the normal test interval) following failure of two consecutive tests. Since the CTS already contain an approved test schedule in the event a test fails, requiring the licensee to obtain NRC review of the same or an alternative test schedule is unnecessary.

3.6.1.2 Primary Containment Air Lock

The requirements of CTS 3/4.6.1.3 for the primary containment air lock are presented in ITS 3.6.1.2 to conform to the format of the STS.

CTS 3/4.6.1.3 repeats details for air lock leakage surveillances found in 10 CFR Part 50, Appendix J. Repeating these details of the regulations within the TS is unnecessary because the licensee is required to comply with the details of Appendix J (except for approved exemptions) regardless of whether the details are contained in the TS. Appendix J only requires that the overall leakage rate (0.05 L_a), the door leakage rate (0.025 L_a), test pressures, and test intervals be in TS. Thus, these limits, which are specified in CTS 3.6.1.3.c and 4.6.1.3.b, are presented in ITS 5.5.12, which is referenced by ITS SR 3.6.1.2.1. This is a purely administrative change.

The following provisions of ITS 3.6.1.2 are meant to clarify the intent of the CTS primary containment air lock requirements:

(a) Appendix J acceptance criteria for the overall containment leakage are not met because of air lock leakage results, Actions Note 2 clarifies that the primary containment is inoperable.

(b) In the event an air lock is inoperable (for reasons other than an inoperable door or interlock mechanism), Required Action C.1 ensures that the primary containment overall leakage is evaluated against the Appendix J acceptance criteria.

(c) Note 1 to ITS SR 3.6.1.2.1 clarifies the overall air lock leakage test acceptance criteria by stating that "an inoperable air lock door does not invalidate the previous successful performance of the overall air lock leakage test." Even though the overall test could not be satisfied with an inoperable door, the note in effect provides an exception to SR 3.0.1. (ITS SR 3.0.1 would normally require declaring the LCO not met and entering ITS Action C (CTS Action c)). Therefore, this is acceptable because with only one door known to be inoperable, the barrel and the other operable door provide a sufficient containment barrier.

(d) Note 2 to ITS SR 3.6.1.2.1 ensures that the primary containment overall leakage is evaluated against the Appendix J acceptance criteria every time the air lock leakage test is performed.

These clarifications are purely administrative changes because they are consistent with the intent of the action and surveillance requirements of CTS 3/4.6.1.3.

A note is added to Actions b and a of CTS 3.6.1.3 (Note 1 in corresponding Actions A and B of ITS 3.6.1.2). The note clarifies that in the event both doors in the air lock are inoperable (corresponding to ITS Condition C), then the required actions for Conditions A and B are not applicable. This is because there is no "operable" door in the airlock that can be closed to meet those action requirements. ITS Action C only requires closing a door, not an operable door. This clarification is a purely administrative change.

CTS 3.6.1.3, Actions a.1 and b.1, require operators to "return the interlock to service" or "restore the inoperable air lock door to OPERABLE status," respectively. The format of ITS 3.6.1.2 actions follow the format of the STS by not including restore to operable status options because it is always acceptable to exit a required action by restoring equipment to within the LCO limits. Not requiring this action is an editorial change to adopt the STS format and is acceptable.

CTS 3.6.1.3, Action b.2 allows operation to continue with a primary containment air lock door inoperable only until performance of the next required overall air lock leakage test. The requirement for performing the overall air lock leakage test is a requirement of 10 CFR Part 50 Appendix J (as described in the Primary Containment Leakage Rate Testing Program in Section 5.5 of the proposed Technical Specifications). This requirement is embodied in proposed SR 3.6.1.2.1. It is possible that the test would not be able to be performed with an inoperable air lock door, and a plant shutdown

would be required due to the inability to perform the required surveillance. However, this restriction on continued operation need not be specified (as is the case in CTS 3.6.1.3, Action b.2) - it exists inherently as a result of the required Appendix J testing. Once the actions are revised to eliminate the reference to this surveillance restriction (as proposed in the conversion to the STS), the exception to CTS 3.0.4 applicability (CTS 3.6.1.3, Action b.4) is not necessary, since the ITS LCO 3.0.4 allows mode changes provided continued operations are allowed in the ITS actions. In addition, Actions a.4 and b.4 of CTS 3/4.6.1.3 state that the provisions of CTS 3.0.4 are not applicable to Action a or b in the event of an inoperable air lock interlock mechanism or airlock door, respectively. Because corresponding Actions B and C of ITS 3.6.1.2 contain action requirements (closing an air lock door) that if met allow unit operation to continue for an unlimited period of time, this CTS allowance is retained under ITS LCO 3.0.4. Changing the presentation of this allowance is purely administrative.

3.6.1.3 Primary Containment Isolation Valves

CTS 3/4.6.3 contains requirements for all PCIVs shown in CTS Table 3.6.3-1. Corresponding ITS 3.6.1.3 does not contain requirements for the suppression-chamber-to-drywell vacuum breakers; these are addressed in ITS 3.6.1.7. This change in the way CTS requirements are presented is purely administrative.

Note 2 to the actions of ITS 3.6.1.3 explicitly states the intent of the CTS that each primary containment penetration flow path be treated independently of the other flow paths when applying the action requirements. This administrative clarification is consistent with ITS Section 1.3, "Completion Times," regarding separate condition entry notes. Notes 3 and 4 to the actions of ITS 3.6.1.3 explicitly specify the intent of the CTS that if an inoperable (or leaking) PCIV makes other systems inoperable or causes the overall containment leakage rate to exceed the specified acceptance criteria, then the TS action requirements for the affected systems or the primary containment must be followed. Adding these notes is an administrative change because no new requirements or allowances result from it.

CTS 3.6.3, Action a.1, CTS 3.4.7, Action a.1.a), and CTS 3.6.3, Action b.1, require operators to "restore the inoperable valve(s) to OPERABLE status" or "the inoperable valve is returned to OPERABLE status," respectively. The format of ITS 3.6.1.3 actions follow the format of the STS by not including restore to operable status options because it is always acceptable to exit a required action by restoring equipment to within the LCO limits. Not requiring this action is an editorial change to adopt the STS format and is acceptable.

Action b of CTS 3.6.3 for reactor instrumentation excess flow check valves (EFCVs) and Action b of CTS 3/4.4.7 for MSIVs specify that the CTS 3.0.4 restriction on changing plant operating conditions (or modes) does not apply in the event of an inoperable EFCV or MSIV. These exceptions to CTS 3.0.4 are allowed on the condition that the other applicable action requirements are

met. These specific exceptions to this restriction are retained in the general language of ITS LCO 3.0.4. Changing the presentation of these exceptions to LCO 3.0.4 is purely administrative.

Action b of CTS 3.6.3 also contains a specific exception to CTS 3.0.3 in the event one or more EFCVs are inoperable. This exception is not necessary and is eliminated because Action b already contains a shutdown action requirement in the event the other action requirements for the inoperable EFCVs are not met. Eliminating a redundant requirement is a purely administrative change.

CTS 3/4.4.7 for main steam isolation valves and CTS 3/4.6.1.8 for the drywell and suppression chamber purge system valves cease to exist as separate specifications, but the requirements they contain are presented in ITS 3.6.1.3 along with almost all the other PCIV requirements in the CTS. This rearrangement of CTS requirements is purely administrative.

Note * to CTS 3.6.1.2.c identifies this LCO condition as an exemption to Appendix J of 10 CFR Part 50 regarding the minimum test pressure of 25.0 psig for leak testing a main steam isolation valve. This kind of detail is unnecessary in the TS and is omitted from the ITS in corresponding SR 3.6.1.3.11. Eliminating this information from the CTS does not alter the validity of the referenced exemption to Appendix J. Thus this change is purely administrative.

CTS 3.6.1.8, Action b, and CTS 4.6.1.8.1 specify leak testing requirements for purge valves with resilient material seals. These requirements are omitted from ITS 3.6.1.3 because the purge valves with resilient seals have been replaced with valves that do not have resilient material seals. Therefore, since these CTS requirements no longer apply to any of the purge valves at WNP-2, deleting these requirements is a purely administrative change.

3.6.1.3 - L.10 - now CLB) CTS 4.6.1.2 requires performing primary containment leak rate testing in accordance with CTS 6.8.4.f, "Primary Containment Leak Rate Program." This includes testing to verify that CTS 3.6.1.2.c for MSIV leakage and CTS 3.6.1.2.d for hydrostatically tested isolation valve leakage are met (i.e., that the leak rates are within the specified limits). CTS 6.8.4.f requires testing as required by Appendix J, Option B, as modified by approved exemptions. Appendix J allows Type B and C isolation valves to be tested at an interval no greater than 24 months with no extensions allowed. This frequency is also intended to allow scheduling these valves at each refueling outage. These two test requirements are retained as ITS SR 3.6.1.3.11 and SR 3.6.1.3.12, respectively; the program requirement is retained as ITS 5.5.12. ITS 5.5.12 contains an explicit statement clarifying that the 25% surveillance interval extension allowed by ITS SR 3.0.2 does not apply to the PCIV leak testing under the program. Reformatting and clarifying CTS requirements are a purely administrative changes.

3.6.1.4 Drywell Air Temperature

There are no administrative changes to CTS associated with 3.6.1.4.

3.6.1.5 RHR Drywell Spray

In the event both drywell spray loops are inoperable and both RHR subsystems are also inoperable, it may not be possible to cool down the unit to Mode 4 in the time specified by Action b of CTS 3/4.6.2.2. In recognition of this situation, Note * to Action b requires that reactor coolant temperature be maintained "as low as practical by use of alternate heat removal methods." It is not necessary to state this requirement in the ITS. Corresponding Action C of ITS 3.6.1.5, to shut down to Mode 4, will remain applicable and must be completed regardless of the decay heat removal capability that is available. That is, the licensee is expected to reduce temperature as much as possible with the available decay heat removal capability.

CTS 4.6.2.2.a requires verifying that each manual, power-operated, or automatic valve in the flow path for the drywell spray mode of the RHR system that is not locked, sealed, or otherwise secured in position is in its correct position. The intent of this surveillance is clarified in corresponding ITS SR 3.6.1.5.1 by adding "or can be aligned to the correct position." This clarification is consistent with the staff's existing interpretation for systems that are manually actuated, such as the drywell spray mode of the RHR system. Clarifying the intent of an existing requirement is an administrative change.

3.6.1.6 Reactor Building-to-Suppression-Chamber Vacuum Breakers

The actions of ITS 3.6.1.6 are prefaced by a new note: "Separate Condition entry is allowed for each line." Because this change only clarifies the intent of the action requirements of CTS 3/4.6.4.2 and is consistent with ITS Section 1.3 regarding the use of such notes, it is administrative and acceptable.

In the event one of the two vacuum breakers in a line is open, Action b of CTS 3.6.4.2 requires verifying the other vacuum breaker in the same line is closed within 2 hours. However, Action b does not cover the situation in which both vacuum breakers in a line are open; thus CTS 3.0.3 would require an immediate shutdown. Corresponding Action B of ITS 3.6.1.3 allows 1 hour to close at least one vacuum breaker in the line before Action E requires a unit shutdown. Because CTS 3.0.3 includes a 1-hour delay before the unit shutdown must commence, the ITS action requirement is equivalent to the CTS action requirement. Thus, this change is administrative and acceptable.

The CTS 4.6.4.2 requirement to verify each vacuum breaker is closed is retained as ITS SR 3.6.1.6.1 with two additional notes to clarify the intent of the CTS. A vacuum breaker is not required to be closed (a) when performing the functional test (SR 3.6.1.6.2) and the setpoint verification (SR 3.6.1.6.3) for the affected vacuum breaker and (b) during vacuum breaker actuation. Clarifying the intent of a CTS surveillance is an administrative change.

3.6.1.7 Suppression Chamber-to-Drywell Vacuum Breakers

ITS LCO 3.6.1.7 clarifies corresponding CTS 3.6.4.1 by stating that all nine suppression chamber-to-drywell vacuum breakers (that is, all nine lines each containing a single two-disk vacuum breaker) must be closed "except when performing their intended function" (to open to relieve vacuum). A note with a clarification is also added to corresponding ITS SR 3.6.1.7.1; vacuum breakers do not have to be closed when open for performing required surveillances (e.g., SR 3.6.1.7.2 and SR 3.6.1.7.3). This clarification of the intent of the CTS requirements is acceptable because the operability requirements for the vacuum breakers remain the same. Therefore, this change is administrative.

In the event one or two of the nine suppression chamber-to-drywell vacuum breaker lines are inoperable for opening (i.e., one or both disks in each vacuum breaker line are inoperable for opening), Action a of CTS 3.6.4.1 requires verifying that both disks are closed in each affected vacuum breaker line ("both vacuum breakers of each pair") within 2 hours. This action requirement is eliminated because it corresponds to a condition that does not conflict with the LCO requirements of CTS 3.6.4.1. Even with two vacuum breakers inoperable for opening, the LCO is met; thus no corresponding action requirements need to be specified in the TS. Consistent with CTS 3.6.4.1, ITS LCO 3.6.1.7 only requires seven of the nine vacuum breaker lines to be operable for opening, but also requires that all nine be closed. The action requirement to verify the vacuum breaker lines are closed is unnecessary because the LCO requires that they be closed; if a vacuum breaker disk is discovered open, the vacuum breaker line is inoperable and the appropriate action requirements associated with the LCO must be performed (close the open vacuum breaker disk within 2 hours). Eliminating Action a is acceptable because it removes a duplication of the other LCO and action requirements of CTS 3/4.6.4.1 that are retained in ITS 3.6.1.7. Therefore, this change is administrative.

In the event one disk of a single suppression chamber-to-drywell vacuum breaker line is open, Action c of CTS 3.6.4.1 requires verifying the other disk in the line is closed within 2 hours, and closing the open disk within 72 hours. These action requirements are retained in corresponding Actions B and C of ITS 3.6.1.7 with the following administrative changes:

(a) Action B, for one open disk, omits the specific action to verify the other disk closed. Were the other disk found open, Action C would apply and require the disk to be closed within 2 hours. This is acceptable because the LCO, which requires all vacuum breakers (both disks) to be closed, must be continuously met.

(b) The note to Action B states that separate condition entry for each suppression chamber-to-drywell vacuum breaker line is allowed. This note is consistent with the directions given in ITS Section 1.3, "Completion Times," for use of such notes. This proposed allowance is acceptable

because operation with two or more of the nine vacuum breakers with an open disk does not jeopardize the isolation function of the vacuum breakers.

3.6.1.8 Main Steam Isolation Valve Leakage Control (MSLC) System

There are no administrative changes to CTS associated with 3.6.1.8.

3.6.2.1 Suppression Pool Average Temperature

Although this is not explicitly stated in the LCO, the 90°F and 105°F limits on suppression pool average temperature (with and without testing that adds heat to the suppression pool) only apply when the power level of the reactor is > 1% rated thermal power (RTP). This is shown by current LCO 3.6.2.1.a.2.b which states that 110°F is the limit when ≤ 1% RTP. Thus, the ITS clarifies the LCO for these two temperature limits by specifying that they apply when reactor power is > 1% RTP (ITS LCOs 3.6.2.1.a and b). In addition, the associated action requirements are modified to require power to be decreased to ≤ 1% RTP (Action B of ITS 3.6.2.1) only in the event the temperature limits are not met. These changes are administrative because they merely clarify the intent of the existing LCO and action requirements.

CTS 3.6.2.1.b, Action e, and 4.6.2.1.d, relating to the drywell-to-suppression chamber bypass leakage limit, are being moved to ITS 3.6.1.1 in accordance with the format of the STS. Evaluations of any technical changes are addressed in the ITS 3.6.1.1 evaluation. This is an acceptable administrative change.

3.6.2.2 Suppression Pool Water Level

CTS 3.5.3.b, Action b, and 4.5.3.2, relating to the suppression pool level requirements while in Modes 4 and 5, are being moved to ITS 3.5.2 in accordance with the format of the STS. Evaluations of any technical changes are addressed in the ITS 3.5.2 evaluation. This is an acceptable administrative change.

3.6.2.3 Residual Heat Removal (RHR) Suppression Pool Cooling

In the event both suppression pool cooling loops are inoperable, it may not be possible to cool down the unit to Mode 4 in the time specified by Action b of CTS 3/4.6.2.3. In recognition of this situation, Note * to Action b requires that reactor coolant temperature be maintained "as low as practical by use of alternate heat removal methods." It is not necessary to state this requirement in the ITS. Corresponding Action B of ITS 3.6.2.3, to shut down to Mode 4, will remain applicable and must be completed regardless of the decay heat removal capability that is available. That is, the licensee is expected to reduce temperature as much as possible with the available decay heat removal capability.

CTS 4.6.2.3.a requires verifying that each manual, power-operated, or automatic valve in the flow path for the suppression pool cooling mode of the RHR system that is not locked, sealed, or otherwise secured in position is in its correct position. The intent of this surveillance is clarified in corresponding ITS SR 3.6.2.3.1 by adding "or can be aligned to the correct position." This clarification is consistent with the staff's existing interpretation for systems that are manually actuated, such as the suppression pool cooling mode of the RHR system. Clarifying the intent of an existing requirement is an administrative change.

3.6.3.1 Primary Containment Hydrogen Recombiners

CTS 4.6.6.1.c requires demonstrating the hydrogen recombiner system is operable (a) by measuring the system leakage rate as part of the integrated leakage rate test (ILRT), or (b) by measuring the leakage rate of the system outside of the containment isolation valves at P_a and including the measured leakage as part of the leakage determined in accordance with the ILRT. This surveillance is deleted because it is duplicative of testing already required by Appendix J to 10 CFR Part 50 and ITS SR 3.6.1.1.1. Omitting this duplicative surveillance from corresponding ITS 3.6.3.1 is thus an administrative change.

3.6.3.2 Primary Containment Atmosphere Mixing System

There are no administrative changes associated with 3.6.3.2.

3.6.3.3 Primary Containment Oxygen Concentration

The applicability of CTS 3/4.6.6.2 is

> Mode 1 during the time period (a) within 24 hours after thermal power is > 15% of RTP following startup, to (b) within 24 hours prior to reducing thermal power to < 15% of RTP before a scheduled unit shutdown.

The action of CTS 3/4.6.6.2 allows 24 hours to restore oxygen concentration to within the limit. Otherwise, a unit shutdown to Mode 2 is required. These action requirements are not consistent with the CTS applicability because the LCO does not apply below 15% RTP. Thus, corresponding Action B of ITS 3.6.3.3 only requires reducing thermal power to ≤ 15% of RTP. Because the intent of the CTS action is only to require exiting the applicability of the LCO, this change is administrative and acceptable.

CTS 4.6.6.2 requires verifying oxygen concentration within limits "within 24 hours after THERMAL POWER is greater than 15% of RATED THERMAL POWER," in addition to every 7 days. Corresponding ITS SR 3.6.3.3.1 only specifies the 7-day frequency because the first frequency is redundant to CTS 4.0.4 (corresponding to ITS SR 3.0.4); which requires surveillances to be performed prior to entering the applicability of an LCO. Since this specification is not applicable until 24 hours after thermal power is > 15% of RTP following startup, performance of the surveillance as currently required is ensured. Therefore, deleting this redundant frequency is a purely administrative change.

3.6.4.1 Secondary Containment

The requirement of CTS 3.6.5.1 to maintain secondary containment integrity is replaced by the requirement of ITS 3.6.4.1 for secondary containment to be operable. The ITS words better convey the meaning intended by the CTS definition "secondary containment integrity" (which is no longer used). This administrative change is acceptable because ITS 3.6.4.1, 3.6.4.2, and 3.6.4.3 retain all the requirements encompassed by the CTS definition and by the other CTS related to secondary containment systems.

The requirement of CTS 4.6.5.1.b.2 to verify that one door in each access opening is closed is changed in corresponding ITS SR 3.6.4.1.3 to require each inner door or each outer door to be closed. The WNP-2 design includes more than two doors on some of the secondary containment access openings. The current WNP-2 interpretation of this requirement is that all inner doors or all outer doors must be closed, whenever an access opening has more than two doors. This change is a clarification of the CTS requirement and is consistent with plant practice. Thus it is purely administrative.

CTS 4.6.5.1.b.3, relating to the position of secondary containment isolation valves, is being moved to ITS 3.6.4.2 in accordance with the format of the STS. Evaluations of any technical changes are addressed in the ITS 3.6.4.2 evaluation. This is an acceptable administrative change.

3.6.4.2 Secondary Containment Isolation Valves

Note 2 to the actions of ITS 3.6.4.2 states that separate condition entry is allowed for each penetration flow path. This is consistent with the intent of the action requirements of CTS 3/4.6.5.2 for inoperable SCIVs. It is also consistent with the guidance in ITS Section 1.3, "Completion Times," for the use of such action notes. This clarification of the intent of the CTS action requirements is thus purely administrative.

Note 3 to the actions of ITS 3.6.4.2 requires entering "applicable Conditions and Required Actions for systems made inoperable by SCIVs." This note simply clarifies paragraph d of the actions of CTS 3/4.6.5.2. Paragraph d waives the mode entry restrictions of CTS 3.0.4 for an isolated inoperable SCIV provided the associated system, if applicable, is declared inoperable and the appropriate action requirements for that system are performed. This exception to CTS 3.0.4 is presented as a general exception in ITS LCO 3.0.4. Clarifying the existing requirements in the STS format is a purely administrative change.

CTS 3.6.5.2, Action a, requires operators to "restore the inoperable valves to OPERABLE satus." The format of ITS 3.6.4.2 actions follows the format of the STS by not including restore to operable status options because it is always acceptable to exit a required action by restoring equipment to within the LCO limits. Not requiring this action is an editorial change to adopt the STS format and is acceptable.

3.6.4.3 Standby Gas Treatment System

Action D of ITS 3.4.6.3 is a new action requirement that directs entry into LCO 3.0.3 if both SGT subsystems are inoperable in Mode 1, 2, or 3. This clarifies the intent of the action requirements of CTS 3/4.6.5.3 that CTS 3.0.3 (ITS LCO 3.0.3) must be entered with both SGT subsystems inoperable if the unit is in Mode 1, 2, or 3. It makes no difference whether or not irradiated fuel is being handled in the secondary containment. This change removes the potential for confusion regarding the required action in the event both SGT subsystems are inoperable when operating in Mode 1, 2, or 3 and simultaneously handling irradiated fuel assemblies in the secondary containment. Since Action D is equivalent to the CTS action requirements, this change is purely administrative.

CTS 4.6.5.3.a, the SGT system 10-hour duration flow test, specifies the heater status during the test as operable, while corresponding ITS SR 3.6.4.3.1 requires the heaters to be operating. This terminology change clarifies that this surveillance must be performed with the heaters operating (i.e., cycling on and off as needed to maintain proper temperature). Clarifying the intent of the current requirement is a purely administrative change.

The details of the following SGT filter testing requirements are presented in ITS 5.5.7, Ventilation Filter Testing Program (VFTP) so as to conform to the format of the STS: 4.6.5.3 b, 4.6.5.3.c, 4.6.5.3.d.1, 4.6.5.3.d.4, 4.6.5.3.e, and 4.6.5.3.f

See Section 5.0 ("Administrative Controls") of Part III of this safety evaluation regarding any changes to these SGT filter test details. The CTS requirement to perform this testing is presented in ITS SR 3.6.4.3.2. This surveillance makes clear that SGT system operability depends upon successful completion of the VFTP tests. This is a change in the way these CTS surveillance requirements are presented and is purely administrative.

The technical content of CTS SR 4.6.5.3.d.2, to verify that the SGT subsystem filter train starts and isolation dampers open on a test signal, is divided into two surveillances, in conformance with the format of the STS. ITS SR 3.3.6.2.4 tests the instrumentation of the SGT subsystem actuation, which is the majority of the current surveillance. ITS SR 3.6.4.3.3, the SGT subsystem functional test, ensures the SGT system will start on a simulated or actual initiation signal. Thus, these two surveillances overlap, ensuring the entire system is properly tested. This change is purely administrative because the new presentation does not change the CTS requirements.

Conclusion

The preceding changes result in limits that are unchanged from the current requirements cited. In some cases, these changes result in a clearer

presentation of the intent of current requirements. Accordingly, these changes are purely administrative. Therefore, they are acceptable.

b. Less Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 3.6, "Containment Systems," proposed a number of less restrictive requirements than are allowed by CTS Section 3/4.6. These requirements are the following:

3.6.1.1 Primary Containment

Table 3.6.3-1 identified in CTS 3.6.1.2.b lists all primary containment penetrations and isolation valves. This list is design information that is not needed in the TS. Thus, it is removed from the TS consistent with Generic Letter 91-08 and placed in the Licensee Controlled Specifications (LCS). Moving the list of penetrations and valves to a plant controlled document is acceptable because ITS 3.6.1.1 will continue to ensure that PCIVs meet the leak testing requirements.

CTS 4.6.2.1.d.1 specifies performing a drywell-to-suppression-chamber bypass leak test on an 18-month interval, or a 9-month interval if the test fails twice in a row. In practice, WNP-2 performs the 18-month interval surveillances annually while the plant is shut down. This results in frequent testing, with a resultant increase in cost and personnel exposure, but no comparable increase in reliability or safety. In corresponding ITS SR 3.6.1.1.2, the surveillance interval is increased to 24 months, or a 12 month interval if the test fails twice in a row. This change limits the amount of surveillance testing during each maintenance and refueling outage. This change is acceptable for the reasons given in paragraphh (10) "Surveillance Interval Extension from 18 to 24 Months" in the general discussion of less restrictive requirements at the beginning of Part III of this safety evaluation.

CTS SR 4.6.2.1.d also specifies a 5 psi drywell-to-suppression-chamber leak testing requirement for the first refueling outage with subsequent testing if the leakage is too high. In its submittal, the licensee stated that the first two 5 psi leak tests have been completed and the leakage results have been such that the CTS 5 psi tests are no longer required. Therefore, this specific surveillance requirement is unnecessary and has been omitted from the ITS. This change is acceptable.

3.6.1.2 Primary Containment Air Lock

In the event the interlock mechanism is inoperable, Actions a.1 and c of CTS 3/4.6.1.3 specify "maintaining" at least one operable air lock door closed and either returning the interlock to service within 24 hours or locking the operable door closed. Corresponding Action B.1 of ITS 3.6.1.2 specifies "verifying" the operable door closed within 1 hour and locking it closed within 24 hours. If the air lock is inoperable (except as a result of an inoperable door or interlock mechanism), Action c specifies "maintaining" at least one air lock door closed. Corresponding Required Action C.2 of ITS

3.6.1.2 specifies "verifying" a door is closed within 1 hour. In addition, ITS Actions B.1 and C.2 include a 1-hour time limit consistent with the primary containment LCO to verify that the door is closed. The change clarifies the intent of the CTS action requirement and provides a reasonable period of time to perform the verification. This is acceptable.

As a condition of operability for the primary containment air lock, CTS 3.6.1.3.b requires that both doors be closed except when the air lock is being used for normal transit entry and exit through the containment. Explicitly specifying this condition in the LCO is unnecessary because the air lock interlock mechanism prevents both doors being opened at the same time. The operability of this interlock ensures one air lock door shall be closed "when the air lock is being used for normal transit entry and exit through the containment." An operable interlock (in accordance with ITS SR 3.6.1.2.2) is explicitly required for air lock Operability. The requirement for both doors to normally remain closed is moved to the Bases for ITS 3.6.1.2. Removing this air lock operability condition from the TS is acceptable because with only one door closed, the safety design of the containment and the air lock still provide a sufficiently leaktight barrier for postulated events. Changes to the Bases will be adequately controlled by the provisions of the ITS 5.5.10, "Technical Specifications (TS) Bases Control Program."

Note 1 to the actions of ITS 3.6.1.2 is a new allowance for entry through a closed or locked operable air lock door for the purpose of making repairs. This allowance applies even if one door and the interlock are inoperable. Because this provision could allow the primary containment boundary to be compromised for brief time periods if the inner door is the inoperable door, its use for making air lock repairs is conditioned upon implementing strict administrative controls. As detailed in the Bases, these controls consist of a dedicated individual assigned to ensure (a) that the door is opened only for the period of time required to gain entry into or exit from the air lock and (b) that any operable door is relocked prior to the departure of the dedicated individual.

This allowance is also acceptable for the following reasons:

- Use of this allowance is restricted to the purpose of making repairs to an inoperable door or air lock. Repairs are directed towards reestablishing two operable closed doors in the air lock, which is clearly the most desirable plant condition for the air lock. The CTS action requirements, the same as the ITS action requirements, allow operation for an unlimited period of time with only one operable door locked closed. By not allowing access to make repairs, however, the CTS may prevent restoring both doors to operable status until the unit shuts down. Operation with both doors operable is a safer condition than operation with a single door operable.

- The overall air lock leakage test must be performed every 6 months. If the inoperable door could not be repaired, this test could not be

performed and the plant would have to shut down. Eliminating the requirement to shut down the unit to make repairs avoids the risk of a transient that could challenge safety systems.

- The probability of an event that could pressurize the primary containment during the short time in which the containment boundary is compromised is low.

In addition to the above general allowance for entry and exit through the air lock to make repairs to air lock components, Note 2 to Action A (one air lock door inoperable) of ITS 3.6.1.2 allows entry and exit during a 7-day period for reasons other than to repair the air lock. This new allowance may be needed for other maintenance and inspections necessary to support continued unit operation, and is acceptable for the same reasons given above for the allowance to conduct repairs.

Once per shift, if the shield door is open, Actions a.2 and b.2 of CTS 3/4.6.1.3 require verifying that at least one operable air lock door is locked closed. This verification is also required prior to each closing of the shield door. Corresponding Required Actions B.3 and A.3 of ITS 3.6.1.2 only require verification of a locked closed door every 31 days, but do not depend on the position of the shield door.

The CTS action requirements depend on the position of the shield door because the door affords the only access to the air lock. If closed, it precludes access to the air lock. However, with the shield door open, access to the air lock door locking device will still be administratively controlled in accordance with plant procedures currently in place for controlling access to and through the air lock. These administrative controls have proven adequate to ensure the locked door will not be inadvertently opened. In addition, relaxing the frequency of the periodic verification from shiftly to monthly is appropriate because it is consistent with other CTS action requirements that require verification of primary containment penetration isolation (e.g., PCIVs). Therefore, this change is acceptable.

The 184-day frequency specified by CTS 4.6.1.3.a.1 for the test of the containment airlock interlock mechanism is relaxed to a 24-month frequency in ITS SR 3.6.1.2.2. Typically, the interlock is installed after each refueling outage and verified operable with this surveillance and is not manipulated until the next refueling outage. Further, if the need for maintenance should arise when the interlock is required, the performance of the interlock surveillance would be required prior to declaring the interlock to be operable again. In addition, when passing through an air lock, procedures call for first verifying that one door is completely shut and that the door seals are pressurized before attempting to open the other door. Therefore, the air lock is not challenged except during actual testing of the air lock. The staff reviewed operating experience with air lock interlocks from the early 1970's to 1995 and found that very few events have occurred in which an inoperable air lock interlock was found as a result of this interlock mechanism surveillance. The mechanism appears to be very reliable. Events in which both air locks have been open simultaneously during a mode of operation that required containment integrity were the result of human error, not failure of the interlock mechanism and would not have been detectable through more frequent testing of the interlock mechanism. Therefore, the staff finds the 24-month frequency for this surveillance acceptable.

CTS 4.6.1.3.a.2 requires demonstrating the operability of the primary containment air lock interlock "following maintenance that could affect the interlock mechanism." This explicit post-maintenance testing requirement is eliminated because it is inherent to restoring a component to operable status, as addressed in paragraph (5) under the general discussion of less restrictive requirements at the beginning of Part III of this safety evaluation.

3.6.1.3 Primary Containment Isolation Valves

Table 3.6.3-1 of CTS 3.6.3 lists all primary containment penetrations and isolation valves. This list is design information that is not needed in the TS. Thus it and references to it are removed from the TS consistent with Generic Letter 91-08 and placed in the LCS. Moving the list of penetrations and valves to a plant- controlled document is acceptable because ITS 3.6.1.3 will continue to ensure that PCIVs meet the leak testing requirements.

The requirements in CTS 4.6.3.5.b on the replacement charges for explosive valves are maintenance details that do not need to be in the TS to ensure the operability of the traversing in-core probe (TIP) system explosive isolation valves. The requirements of ITS 3.6.1.3, SR 3.6.1.3.4, and SR 3.6.1.3.9 are adequate to ensure the operability of these valves. Thus, these details may be and are moved to the Bases for ITS 3.6.1.3.

Note ** specifies an exception to CTS 4.6.1.1.b, the monthly surveillance to verify the proper isolation of primary containment penetrations that cannot be automatically closed as required. This note excepts valves, blind flanges, and deactivated automatic valves which are within the primary containment or other areas administratively controlled to prohibit access for reasons of personnel safety. The note describes in detail what constitutes proper isolation: each valve or flange shall be "locked, sealed, or otherwise secured in the closed position (1½ inch and smaller valves connected to vents, drains or test connections must be closed but need not be sealed)." These procedural details do not need to be in TS to ensure proper isolation of the affected penetration flow paths, and are eliminated.

The combined leakage rate limit and the test pressure of the PCIVs in hydrostatically tested lines, specified in CTS 3.6.1.2.d and associated Action d, are moved to the Bases for corresponding ITS SR 3.6.1.3.12. These limits do not need to be stated in the TS because leakage from these valves is (a) not included in the overall Type A leakage limits, and (b) not assumed in any design basis calculations relating to offsite dose releases. The requirements of SR 3.6.1.3.12 to "verify combined leakage rate through hydrostatically tested lines that penetrate the primary containment is within limits in accordance with the Primary Containment Leakage Rate Testing Program" are

adequate to ensure the leakage tests are conducted at the proper pressure and the leakage rates are within the limit. Therefore, moving these limits to the Bases is acceptable.

The Frequencies for performing the following PCIV surveillances are relaxed from 18 months to 24 months to accommodate a change in the WNP-2 maintenance cycle from 12 months to 24 months.

CTS	ITS	Description
4.6.3.2	SR 3.6.1.3.7	Verification that each PCIV closes on a containment isolation actuation signal
4.6.3.4	SR 3.6.1.3.8	Demonstration that each excess flow check valve (EFCV) closes in the event of an instrument line break condition
4.6.3.5.b	SR 3.6.1.3.9	Test of explosive squib from each shear isolation valve of the traversing incore probe (TIP) system

These changes are acceptable for the reasons given in paragraph (10) "Surveillance Interval Extension from 18 to 24 Months" in the general discussion of less restrictive requirements at the beginning of Part III of this safety evaluation.

In the event a drywell or suppression chamber purge supply or exhaust butterfly isolation valve is open for other than inerting, deinerting, or pressure control, Action a of CTS 3/4.6.1.8 requires closing the valve within 1 hour. Previously, these purge valves were not qualified to close automatically under accident conditions. Thus the 1-hour time allowed to close an open purge valve was appropriate. However, the licensee stated in its submittal that these valves have subsequently been qualified. As a result, closure within 4 hours is now appropriate. Accordingly, corresponding Action A of ITS 3.6.1.3 specifies closing the open purge valve within 4 hours. This change is acceptable because these valves are fully qualified to close under accident conditions and because the 4-hour completion time is consistent with the time allowed to close other inoperable PCIVs, except MSIVs.

In addition, the CTS repeats most of the requirements, provisions, and actions for MSIVs in CTS 3/4.4.7; however, the restoration time for MSIVs is 8 hours in CTS 3.4.7, Action a, while only 4 hours in CTS 3.6.3, Action a. The ITS incorporates the MSIV requirements and associated restoration times into PCIV ITS 3.6.1.3, and resolves the conflict by adopting the 8 hour allowance of CTS 3.4.7.

In the event a PCIV is discovered to be inoperable, Actions a.2 and a.3 of CTS 3.6.3 require isolating the affected penetration "by use of at least one deactivated automatic valve secured in the isolated position," or "by use of at least one closed manual valve or blind flange" within 4 hours. Similarly, in the event of an inoperable MSIV, Action a.1.b) of CTS 3.4.7 requires isolating the affected main steam line "by use of a deactivated MSIV in the closed position" within 8 hours. In addition to these methods for isolating a penetration flow path or a main steam line, corresponding Required Actions A.1 and B.1 of ITS 3.6.1.3 also allow isolation of the penetration using a check valve with flow secured. Many penetrations are designed with check valves as acceptable isolation barriers. With forward flow in the line secured, a check valve is essentially equivalent to a closed manual valve. For those penetrations designed with check valves as acceptable isolation devices, this proposed change provides an equivalent level of safety. For penetrations not designed with check valves for isolation, the proposed change does not affect the requirements to isolate with a closed deactivated automatic valve or closed manual valve. This change is acceptable because check valves designed to remain closed when forward flow is secured are acceptable isolation devices and thus may be used to satisfy the isolation action requirement.

In the event both PCIVs in a penetration or both MSIVs in a main steam line are inoperable, Action a of CTS 3.6.3 and Action a.2 of CTS 3.4.7 require an immediate unit shutdown because the action requirement to maintain a PCIV or MSIV operable in the affected line could not be met. Corresponding Action B of ITS 3.6.1.3 directly addresses these conditions and allows an hour to restore one of the valves to operable status before requiring a unit shutdown per Action F. This additional hour is acceptable because (a) the likelihood of an event requiring automatic containment isolation to occur during the additional time is not significant, (b) it is consistent with the existing time allowed for other conditions that render the primary containment inoperable, and (c) it makes the ITS action requirements for the various containment boundary degradations consistent.

In the event a reactor instrumentation line excess flow check valve (EFCV) is discovered to be inoperable, Action b of CTS 3.6.3 allows 4 hours to isolate the instrument line. Corresponding Required Action C.1 of ITS 3.6.1.3 (second completion time) extends this time to 12 hours. The instrument lines contain orifices and are approximately 1 inch in diameter. Thus, the limiting event would still be within the bounds of the safety analysis. This additional time is thus acceptable because (a) the instrument line design ensures that a break in the line remains bounded by the safety analysis, (b) the likelihood of an instrument line break during this time is not significant, (c) it may avoid a forced unit shutdown with the attendant potential of a unit transient that could challenge safety systems.

In the event of an inoperable PCIV, Note * to Actions a.2 and a.3 of CTS 3.6.3 (to isolate the affected penetration) specifies that "valves closed to satisfy these requirements may be reopened on an intermittent basis under administrative control." This provision is retained in actions Note 1 of ITS 3.6.1.3, and added to Note 2 of SR 3.6.1.3.2, the 31-day verification of isolations outside primary containment, and in Note 2 of SR 3.6.1.3.3, the verification of isolations inside primary containment prior to unit entry into Mode 2 or 3. The note in each SR means the surveillances are considered satisfied with the affected penetration unisolated provided the PCIVs are open under administrative controls per actions Note 1. This allowance is less restrictive than the allowance given in CTS Note * because it applies to all isolated penetration flow paths, not only the flow paths addressed by CTS Actions a.2, a.3, and surveillances. Surveillances, repairs, and routine evolutions may require opening closed primary containment penetrations on an intermittent basis. Thus, broadening this allowance is reasonable. It is acceptable because the specified administrative actions, which are described in detail in the Bases, will enable the penetration to be quickly isolated by a dedicated operator if an event requiring the primary containment function occurs.

CTS 4.3.6.1 specifies post-maintenance testing for PCIVs. Such testing requirements are unnecessary in the TS because the definition of operability ensures that appropriate testing is accomplished following maintenance on TS-required components. Thus this surveillance is eliminated.

CTS 4.6.3.2, functional testing of PCIVs, is retained as ITS SR 3.6.1.3.7 with two less restrictive changes:

(a) The restriction to only perform PCIV functional testing during Mode 4 or Mode 5 is eliminated because some PCIVs may be tested in other than Mode 4 or 5 without jeopardizing safe operation of the unit. Controlling unit conditions to perform a test is a matter for surveillance procedures and schedules, not the TS. As addressed in Generic Letter 91-04, removing this restriction from TS is consistent with most other surveillances that do not dictate plant conditions for their performance. Eliminating this procedural restriction for testing PCIVs is acceptable because such details are unnecessary in the TS to ensure the testing is accomplished safely.

(b) An actual containment isolation signal in addition to a test signal may be used to satisfy the testing of the automatic closing of each PCIV. The operability of a PCIV is adequately demonstrated in either case since the PCIV itself cannot discriminate between "actual" or "test" signals. Therefore, this additional flexibility in meeting PCIV functional testing requirements is acceptable.

CTS 4.6.3.4 requires each excess flow check valve (EFCV) to check flow at > 10 psid differential pressure for hydraulic service valves and > 15 psid differential pressure for pneumatic service valves. The requirement to check flow along with the differential pressure limit is eliminated. Corresponding ITS SR 3.6.1.3.8 only requires the EFCVs to close on an actual or simulated instrument line break signal.

The requirements for the EFCVs are contained in 10 CFR Part 50, Appendix A, General Design Criteria (GDC) 55 and 56, and Regulatory Guide 1.11, which state that there should be a high degree of assurance that the EFCVs will close or be closed if an instrument line outside containment is lost during normal reactor operation or under accident conditions. The current differential pressure limits for the EFCVs are the manufacturer's design capabilities. During normal operation, the hydraulic service EFCVs would experience full reactor pressure of 1035 psig. During the conditions of a design basis loss-of-coolant accident, primary containment pressure of up to

35 psig would be available to close the pneumatic service EFCVs. Thus, deleting the design values is appropriate because they are well bounded by the differential pressures the EFCVs are expected to see during operational and accident conditions. In place of the design values, the ITS Bases for SR 3.6.1.3.8 state the actual test conditions for the two types of EFCVs (simulated reactor pressure from 85 psig to 110 psig for the hydraulic and simulated containment pressure of 35 psig for the pneumatic).

The requirement to "check flow" is also deleted. The instrument line break analysis in the WNP-2 FSAR assumes that (a) both the EFCV and the manual block valve fail to close, and (b) the accident is terminated by cooling down the unit. Since the actual leakage is not an assumption of the accident analysis (the leakage is assumed to be the maximum allowed through the broken line), the leakage limit to check flow is not necessary to ensure the validity of the accident analysis. Therefore, deleting the check-flow requirement is acceptable.

CTS 3.6.1.8 allows opening drywell or suppression chamber purge supply or exhaust butterfly isolation valves during Modes 1, 2, and 3 only for inerting, deinerting, and pressure control of primary containment. In addition, it limits purging through the standby gas treatment (SGT) system to ≤ 90 hours per 365 days; CTS 4.6.1.8.2 requires verifying this limit has not been exceeded prior to purging through the SGT system. This time limit is based on past engineering judgement and early plant operating experience, not on any analytical requirement. The corresponding requirement in the Note of ITS SR 3.6.1.3.1 contains a revised limit for opening the purge valves. In addition to inerting, deinerting, and pressure control, the Note allows the valves to be open for ALARA or air quality considerations for personnel entry, and for surveillances that require the valves to be open. Thus, use of the system will continue to be minimized and limited to safety-related reasons. In its submittal, the licensee stated that WNP-2 operating history indicates that these valves are only opened for the specified reasons and for cumulative time periods that are generally less than the currently allowed cumulative times. This change is thus acceptable because (a) the CTS time limit has never been and is not expected to be exceeded and thus is a superfluous restriction having no practical effect upon unit operation, and (2) if called upon to close, these valves, which are fully qualified to close in the required time under accident conditions, are expected to close.

3.6.1.4 Drywell Air Temperature

Details of the methods for performing the drywell average air temperature surveillance, given in CTS 4.6.1.7, are moved to the Bases for corresponding ITS SR 3.6.1.4.1. These details are not necessary to ensure that the drywell average air temperature is maintained within limits. The requirements of ITS 3.6.1.4 and SR 3.6.1.4.1 are adequate to ensure the drywell average air temperature is maintained within the limits.

3.6.1.5 RHR Drywell Spray

CTS 3.6.2.2 describes some of the conditions that must be satisfied for establishing the operability of the drywell spray mode of the RHR system. These conditions (that the drywell spray function shall have two "independent" loops, each with pumps and flow path) are moved to the Bases for ITS 3.6.1.5. This change is acceptable because the ITS definition of operability is adequate to ensure that all conditions necessary for establishing the operability of a system are met.

CTS 4.6.2.2.c contains procedural details for verifying that each drywell spray nozzle is unobstructed ("by performance of an air or smoke flow test"). Such details are not needed to ensure that the surveillance is performed properly, and are therefore moved to the Bases for corresponding ITS SR 3.6.1.5.2.

The surveillance interval for the drywell spray nozzle obstruction surveillance (CTS 4.6.2.2.c) is extended from 5 years to 10 years in corresponding ITS SR 3.6,1.5.2. This change is acceptable because (a) the nozzles are passive components, (b) industry operating experience shows few, if any, occurrences of nozzles becoming obstructed, and (c) obstruction of the RHR drywell spray nozzles is not a precursor to any accident.

3.6.1.6 Reactor Building-to-Suppression Chamber Vacuum Breakers

CTS 3.6.4.2 states one of the conditions that must be met for the operability of the reactor building-to-suppression-chamber vacuum breakers; they must be closed. This condition is moved to the Bases for ITS 3.6.1.6. The requirement that the vacuum breakers be closed is explicitly stated by ITS SR 3.6.1.6.1 and does not need repeating in the LCO statement. This change is acceptable because the ITS definition of operability is adequate to ensure that all conditions necessary for establishing the operability of a system are met.

CTS 4.6.4.2.b.2.b requires a "visual inspection" of each reactor building-to-suppression chamber vacuum breaker every 18 months. This explicit preventive maintenance requirement is eliminated from the TS. This is acceptable because the remaining requirements for cycling and setpoint verification in ITS SR 3.6.1.6.2 and SR 3.6.1.6.3 are sufficient to ensure the operability of the vacuum breakers. Licensee maintenance practices, which include this visual inspection, are adequate to maintain the vacuum breakers in accordance with the manufacturer's recommendations.

The frequency of the setpoint verification surveillance for the reactor building-to-suppression chamber vacuum breakers, CTS 4.6.4.2.b.2.a, is decreased from once per 18 months to once per 24 months in corresponding ITS SR 3.6.1.6.3. This change is acceptable for the reasons given in paragraph (10) "Surveillance Interval Extension from 18 to 24 Months" in the general discussion of less restrictive requirements at the beginning of Part III of this safety evaluation.

In the event one of the two reactor building-to-suppression-chamber vacuum breakers in a line is inoperable for opening and known to be closed, Action a of CTS 3/4.6.4.2 requires restoring the vacuum breaker to operable status within 72 hours. However, since Action a does not explicitly address two vacuum breakers inoperable in the same line, CTS 3.0.3 requires a unit shutdown to commence within one hour if both vacuum breakers in the same line are inoperable for opening and known to be closed. In this situation, corresponding Action C of ITS 3.6.1.6 specifies a 72-hour completion time to restore all vacuum breakers in the line to operable status. This is acceptable because the line is inoperable regardless of whether one or both vacuum breakers cannot be opened and the line's pressure equalization function must still be restored to operable status within 72 hours.

If more than one line is inoperable for opening because one or both vacuum breakers in each affected line are closed and cannot be opened, CTS 3.0.3 applies and requires a unit shutdown to commence within one hour. This action requirement is retained in Actions D and E of ITS 3.6.1.6. This change is an administrative reformatting of the current action requirements.

The requirements of CTS 3.6.4.2 (Action c and Surveillances 4.6.4.2.b.1.b) and 4.6.4.2.b.2.c) regarding position indication instrumentation for the reactor building-to-suppression-chamber vacuum breakers do not relate directly to the operability of the vacuum breakers. Therefore, these requirements are eliminated from the ITS. This is acceptable because control of the availability of, and necessary compensatory activities for the unavailability of, indications and monitoring instruments are adequately addressed by plant operational procedures and policies. In addition, vacuum breaker position must be known to satisfy the ITS SR 3.6.1.6.1, SR 3.6.1.6.2, and SR 3.6.1.3.3 for the vacuum breakers. If position indication is not available and vacuum breaker position cannot be determined, then these surveillances cannot be satisfied and the appropriate action requirements must be taken. As a result, the requirements for the vacuum breaker position indication are adequately addressed by the requirements of ITS 3.6.1.6 and the associated surveillances.

CTS 4.6.4.2.b.3, the vacuum breaker actuation instrumentation surveillances, are deleted from the ITS. The requirement of ITS SR 3.6.1.6.3 to ensure the vacuum breakers are full open at ≤ 0.5 psid is sufficient. Vacuum breaker actuation instrumentation is required to be operable to satisfy the setpoint verification surveillance requirement (ITS SR 3.6.1.6.3) for the vacuum breakers. If the vacuum breaker actuation instrumentation is inoperable, then the surveillance requirement cannot be satisfied and the appropriate actions must be taken for inoperable vacuum breakers in accordance with the actions of ITS 3.6.1.6. As a result, the requirements for the vacuum breaker actuation instrumentation are adequately addressed by the requirements of ITS 3.6.1.6 and SR 3.6.1.6.3 and are deleted from the ITS.

The reactor building-to-suppression-chamber vacuum breaker surveillance test intervals for CTS 4.6.4.2.a (position verification) and 4.6.4.2.b.1.a (cycling test) are extended from 7 and 31 days to 14 and 92 days, respectively. A frequency of 14 days for the position verification is acceptable because (a) the position of most other safety-related valves, including those that affect primary containment, are verified once per 31 days, and (b) operating history shows that the reactor building-to-suppression-chamber vacuum breakers are normally found in their correct position. A frequency of 92 days for the functional test requirement (cycling the vacuum breakers) is acceptable because (a) these vacuum breakers like many other PCIVs that are tested on a 92-day frequency under the IST program are located in the secondary containment, which is not a harsh environment, and (b) an historical review by the licensee of the surveillance data from the past four years found no failures of a vacuum breaker to cycle. In addition, since the vacuum breakers are PCIVs and covered by the IST program, the frequency is stated as "in accordance with the Inservice Testing Program."

3.6.1.7 Suppression Chamber-to-Drywell Vacuum Breakers

CTS 3.6.4.1 provides details comprising the design of and how many suppression chamber-to-drywell vacuum breakers are installed. This information has been moved to the Bases for ITS 3.6.1.7. This change is acceptable because the ITS definition of operability is adequate to ensure that all conditions necessary for establishing the operability of these vacuum breakers are met. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

The test interval for CTS 4.6.4.1.b.3.a, suppression chamber-to-drywell vacuum breaker open setpoint verification, is increased from 18 months to 24 months in ITS SR 3.6.1.7.3. This change is acceptable for the reasons given in paragraph (10) "Surveillance Interval Extension from 18 to 24 Months" in the general discussion of less restrictive requirements at the beginning of Part III of this safety evaluation.

CTS 3.6.4.1 Action d, 4.6.4.1.b.2 and 4.6.4.1.b.3.b for suppression chamber-to-drywell vacuum breaker position indication instrumentation are removed from the CTS because this instrumentation does not relate directly to the respective system operability. Control of the availability of, and necessary compensatory activities for the unavailability of, indications and monitoring instruments are addressed by plant operational procedures and policies. In addition, vacuum breaker position must be known to satisfy the ITS SR 3.6.1.7.1, SR 3.6.1.7.2, and SR 3.6.1.7.3 for the vacuum breakers. If position indication is not available and vacuum breaker position cannot be determined, then the surveillances cannot be satisfied and the appropriate actions must be taken for inoperable vacuum breakers in accordance with ITS 3.6.1.7. As a result, the requirements for the vacuum breaker position indication are adequately addressed by the requirements of ITS 3.6.1.7. Therefore, removing them from the TS is acceptable.

CTS 4.6.4.1.a requires verifying that the suppression chamber-to-drywell vacuum breakers are closed once per 7 days. This frequency is relaxed to 14 days in corresponding ITS SR 3.6.1.7.1. The 14-day frequency is acceptable because other indications of vacuum breaker status are available to operations personnel and because operating experience with the 7-day verification supports a longer interval between position verifications. This frequency is also reasonable because the positions of nearly all safety-related valves,

including those that affect primary containment, are required to be verified by TS on a 31-day frequency.

The requirement of CTS 4.6.4.1.b.1 to cycle the vacuum breakers after an SRV lift is revised from 2 hours after the lift to 12 hours after the lift in corresponding ITS SR 3.6.1.7.2. The current 2-hour limit was based upon verifying that the increase in the suppression chamber air space humidity postulated to accompany an SRV lift had not rendered the vacuum breakers inoperable. However, the operability of a vacuum breaker is not likely to be affected by an SRV lift because all steam discharged is condensed in the suppression pool, preventing a significant increase in the humidity of the suppression chamber air space. In addition, this change is consistent with the recommendation in Generic Letter 93-05, item 8.4. Because of the negligible effect of an SRV lift on vacuum breaker operability, this change is not safety significant and is therefore acceptable.

3.6.1.8 Main Steam Isolation Valve Leakage Control (MSLC) System

CTS 3.6.1.4 specifies that two independent main steam isolation valve leakage control (MSLC) system subsystems shall be operable. ITS 3.6.1.8 omits the design detail that the subsystems are independent. Details relating to system design are moved to the Bases for ITS 3.6.1.4. This change is acceptable because the TS need not include this system design detail to ensure the operability of the MSLC system.

CTS 4.6.1.4.a.1, 4.6.1.4.a.2, and 4.6.1.4.c contain details for performing these MSLC system surveillances. These procedural details are moved to the Bases for corresponding ITS SR 3.6.1.8.1, SR 3.6.1.8.2, and 3.6.1.8.3. This change is acceptable because the requirements retained in ITS 3.6.8.1 for these surveillances are sufficient to ensure the operability of the MSLC system.

CTS 4.6.1.4.b requires demonstrating each MSLC system subsystem is operable by cycling each depressurizing valve and steam isolation valve through at least one complete cycle of full travel during each shutdown in Mode 4 if not performed within the previous 92 days. This surveillance is eliminated because cycling of these valves in accordance with the Inservice Test (IST) program will continue to be required by ITS 5.5.6, which implements 10 CFR 50.55a. Compliance with the requirements of 10 CFR 50.55a for the testing of ASME Code Class 1, 2, and 3 valves in accordance with Section XI of the ASME Code is also required by the WNP-2 Operating License. This change is acceptable because these IST requirements are sufficient to demonstrate the operability of valves associated with the MSLC system.

CTS 4.6.1.4.d specifies verifying the operability of flow, pressure, and temperature instrumentation for the MSLC system by performance of a channel function test every 31 days and a channel calibration every 18 months in order to demonstrate the operability of each MSLC system subsystem. These instrumentation surveillances are eliminated because the instrumentation is provided only for indication and thus does not relate directly to MSLC system operability. Control of the availability of and compensatory activities for

the unavailability of indication and monitoring instrumentation are adequately addressed by plant operational procedures and policies. This change is acceptable because ITS SR 3.6.1.8.3, the MSLC system functional test, will verify every 18 months that this instrumentation functions properly.

A new action requirement in the event both MSLC subsystems are inoperable is specified in ITS 3.6.1.8. Action B requires restoring one of the two subsystems to operable status within 7 days. Currently a unit shutdown per CTS 3.0.3 would be required for this condition because CTS 3/4.6.1.4 contains no corresponding action requirement. The MSLC system is judged to be of low safety significance since the MSIVs are required to meet specific leakage criteria and the system serves to filter only a small portion of the complete primary containment leakage following an accident. Several studies have documented the minimal impact of increased unfiltered primary containment leakage; among these are NUREG-1273, "Technical Findings and Regulatory Analysis for Generic Safety Issue II.E.4.3, Containment Integrity Check," and NUREG/CR-3539, "Impact of Containment Building Leakage on LWR Accident Risk." These documents indicate that leakage rate increases significantly in excess of the allowed MSIV leakage rates would not result in significant increase in risk to the public. Therefore, a 7-day completion time in the event both subsystems are inoperable is acceptable.

CTS 4.6.1.4.c contains procedural details, such as required flow, for performing the functional test of the MSLC system. In addition to moving these details to the Bases of corresponding ITS SR 3.6.1.8.3, the dilution flow corresponding to at least -17" H_2O at the suction blower is being changed from 30 cfm to 30 ± 6 cfm. The licensee indicates that measurement of flow rate is not precise enough to consistently measure 30 cfm; thus specifying a range of acceptable flows is more appropriate. Flow values from 24 to 36 cfm provide adequate margin to create sufficient vacuum to maintain proper operation of the MSLC system and are sufficient to maintain adequate margin to preserve blower operation given worst case conditions of flow, temperature, and humidity. The proposed band is adequate to meet the design requirements for leakage accommodation and blower fan cooling. Additionally, the minimum flow value of 24 cfm has enough margin above the design required flow so that degrading conditions will be recognized and corrective actions initiated before the flow can degrade below the design requirements.

The MSLC functions to limit leakage through the main steam isolation valves (MSIV) such that offsite doses do not exceed 10 CFR Part 100 limits in the event of the most limiting recirculation line break. The system employs blowers to maintain a negative pressure in the steam lines relative to atmospheric pressure to ensure that MSIV leakage will pass through blowers and into the standby gas treatment (SGT) system prior to release to the atmosphere. Dilution air from the reactor building is the major component of flow to the blower suction, and helps decrease the temperature of the MSIV leakage before it passes to the SGT system. The licensee's analysis indicates that the proposed values for "acceptable" dilution flow will maintain, with adequate margin, sufficient vacuum and adequate flow for proper operation of the MSLC system. As stated in the Bases, ITS SR 3.6.1.8.3 will verify that the blowers develop the required flow rate and vacuum. Because the requirement for the MSLC system functional test is retained in SR 3.6.1.8.3 and the proposed "acceptable" dilution flow values, as stated in the associated Bases, are sufficient to ensure the operability of the system, this change is acceptable.

3.6.2.1 Suppression Pool Average Temperature

In the event suppression pool average temperature is > 110°F, Action b.2.b of CTS 3/4.6.2.1 requires operating an RHR suppression pool cooling subsystem to reduce suppression pool average temperature within limits. This procedural detail is omitted from corresponding Action D of ITS 3.6.2.1. If temperature is not recovered within the specified time, a unit shutdown is required. Startup would then be prevented by ITS LCO 3.0.4 until temperature is within limit. Omitting these details from the CTS is acceptable because they are not necessary to ensure the unit is placed in a safe condition if suppression pool temperature is not reduced to within the limit within the specified completion time.

Actions c and d of CTS 3.6.2.1 address inoperable suppression pool water temperature instrumentation channels, and CTS 4.6.2.1.c requires verifying the operability of this instrumentation. This instrumentation does not relate directly to the operability of the suppression pool. Control of the availability of, and necessary compensatory activities for the unavailability of, indication and monitoring instrumentation are addressed by plant operational procedures and policies. Suppression pool temperature instrumentation is required to be operable to satisfy the suppression pool temperature verification surveillance, ITS SR 3.6.2.1.1. If the suppression pool temperature instrumentation is inoperable, then the surveillance cannot be satisfied and the appropriate actions must be taken for suppression pool temperature not within limits in accordance with the actions of ITS 3.6.2.1. As a result, the requirements for the suppression pool temperature instrumentation are adequately addressed by the action and surveillance requirements of ITS 3.6.2.1. Therefore, deleting these specific action and surveillance requirements from the CTS is acceptable.

When suppression pool temperature is ≥ 90°F, CTS 4.6.2.1.b.2.a requires verifying the temperature is ≤ 110°F once per hour, and in the event temperature remains above 90°F for more than 24 hours, CTS 4.6.2.1.b.2.b requires verifying thermal power is ≤ 1% RTP once per hour. (After 24 hours with temperature > 90°F, Action b.2.a of CTS 3/4.6.2.1 requires placing the unit in Mode 3 within 12 hours.) This requirement to verify power level hourly is deleted. The operator is inherently required to know current power level at all times. Therefore, because there is minimal significance to removing the hourly power level verification requirement, this change is acceptable.

In addition, CTS 4.6.2.1.b.3 requires a 30 minute verification, after a scram with suppression pool temperature ≥ 90°F, that the temperature is ≤ 120°F. This requirement is presented in ITS 3.6.2.2, Required Action D.2 and has been changed to only require the verification if temperature is ≥ 110°F. Following a scram, the unit is ≤ 1% RTP, so the LCO limit is 110°F, not 90°F.

Therefore, this requirement will only be performed when the LCO is not met, i.e., ≥ 110°F.

3.6.2.2 Suppression Pool Water Level

CTS 3.6.2.1 states the suppression pool water volumes which correspond to the level limits. These volumes are design details that do not need to be in the LCO to ensure the level limits are met. Thus, they are moved to the Bases of corresponding ITS 3.6.2.2. The level limits are retained in the LCO because suppression pool level indication in feet is information that is readily available to the operator. The correct volume limits corresponding to the level limits (which are the actual limits assumed in the safety analysis) have been used in the Bases. Specifying limits that the operators can readily verify by control room indication and placing the corresponding water volumes in the Bases is acceptable because the CTS limit on suppression pool level is not changed.

In the event suppression pool water level is outside limits, Action a of CTS 3.6.2.1 and Action a of CTS 3.5.3 both allow 1 hour to restore level to within limit. An unanticipated change in suppression pool level would require addressing the cause and aligning the appropriate system to raise or lower the pool level. These activities may require longer than 1 hour to accomplish. Thus, this time is increased to 2 hours in corresponding Action A of ITS 3.6.2.2. This change is acceptable because (a) 2 hours is usually a sufficient time to correct the level, (b) the probability of an event requiring the safety function of the system is low, and (c) the risks associated with a unit shutdown will be avoided.

3.6.2.3 Residual Heat Removal (RHR) Suppression Pool Cooling

CTS 3.6.2.3 specifies operability criteria for suppression pool cooling. These operability criteria are moved to the Bases for ITS LCO 3.6.2.3. Details relating to system operability (in this case the suppression pool cooling function is designed as two "independent" loops, each with pumps and flow path) do not need stating in the LCO because the definition of operability must be satisfied regardless of the operability information stated in an LCO. Thus, this change is acceptable.

The 72-hour completion time of Action a of CTS 3.6.2.3 to restore one RHR suppression pool cooling subsystem to operable status is extended to 7 days in corresponding Action A of ITS 3.6.2.3. This is acceptable because of the redundant RHR suppression pool cooling capabilities afforded by the operable subsystem and the low probability of a design basis accident during this period.

The suppression pool cooling water flow rate specified in CTS 4.6.2.3.b is reduced from 7450 gpm to 7100 gpm in corresponding ITS SR 3.6.2.3.2. The LCO specification of 7100 gpm is acceptable because it exceeds the value assumed in the suppression pool cooling analysis in the FSAR (the RHR heat exchanger flow value assumed in the containment analyses is 7067 gpm). This change is also acceptable because the test acceptance criteria in the actual

surveillance procedures allow for flow instrument error, instrument drift, and postulated pump degradation during surveillance intervals. These criteria ensure that subsequent plant operation is within analyzed bounds.

3.6.3.1 Primary Containment Hydrogen Recombiners

The fact that the two hydrogen recombiner subsystems are independent is a design detail in CTS 3.6.6.1 that is moved to the Bases for ITS LCO 3.6.3.1. Details of the methods for performing the hydrogen recombiner surveillances in CTS 4.6.6.1.b.2, 4.6.6.1.b.3, and 4.6.6.1.b.4 are moved to the Bases for ITS 3.6.3.1. These details are not necessary to ensure the operability of the primary containment hydrogen recombiners. The requirements of ITS LCO 3.6.3.1, SR 3.6.3.1.1, SR 3.6.3.1.2, and SR 3.6.3.1.3 are adequate to ensure the primary containment hydrogen recombiners are maintained operable.

CTS 4.6.6.1.b.1 requires demonstrating at least once per 18 months that each hydrogen recombiner subsystem is operable by performing a channel calibration of all recombiner operating instrumentation and control circuits. This surveillance is eliminated from the TS because control of the availability of, and necessary compensatory activities for the unavailability of, indication instruments, monitoring instruments, and alarms are addressed by plant operational procedures and policies. In addition, the system functional test required by ITS SR 3.6.3.1.1 will ensure that necessary controls function properly. Therefore, this change is acceptable.

The test interval for the following hydrogen recombiner surveillances is increased from 18 months to 24 months.

CTS	ITS	Description
4.6.6.1.b.2	SR 3.6.3.1.3	Resistance to ground test for each heater phase
4.6.6.1.b.3	SR 3.6.3.1.1	System functional test
4.6.6.1.b.4	SR 3.6.3.1.2	Visual examination

This change is acceptable for the reasons given in paragraph (10) "Surveillance Interval Extension from 18 to 24 Months" in the general discussion of less restrictive requirements at the beginning of Part III of this safety evaluation.

In the event one hydrogen recombiner is inoperable, the action requirements of CTS 3.6.6.1 require restoring the recombiner to operable status within 30 days. This requirement is modified in corresponding Action A of ITS 3.6.3.1 by the addition of a note which says the mode-entry restrictions of ITS LCO 3.0.4 do not apply. This LCO 3.0.4 exception does not have a significant impact on safety and is acceptable because (a) an operable recombiner remains available in this condition and at least one other hydrogen control method is available to back up the remaining recombiner, and (b) the hydrogen recombiners do not impact normal operation of the plant in any way and, hence, would not add any initiators for plant transients during startup or Mode changes.

In the event both hydrogen recombiners are inoperable, the action requirements of the CTS would require a unit shutdown per CTS 3.0.3. Action B of ITS 3.6.3.1 is added to permit unit operation for 7 days provided the hydrogen and oxygen control function is maintained. WNP-2 uses the nitrogen inerting and purge system, which is designed to control hydrogen in a post-LOCA environment, to maintain the hydrogen control function in accordance with this action requirement. However, because redundancy for the hydrogen control function would be reduced with both recombiners inoperable, a completion time of 7 days is proposed to restore at least one of the recombiners to operable status before requiring a shutdown. Action B is acceptable because (a) the hydrogen and oxygen control function is required to be maintained, and (b) allowing time to restore a recombiner to operable status may avoid the risk of a transient during a unit shutdown.

The CTS require two hydrogen recombiner functional tests. One test, CTS 4.6.6.1.b.3, is conducted every 18 months and is a complete check of the recombiners, while a second, CTS 4.6.6.1.a, is conducted every 6 months and checks the heatup capability of the recombiners. This second test is eliminated on the recommendation of Generic Letter 93-05, item 8.5. This change is acceptable because of (a) the redundancy provided for the hydrogen control function, (b) the hydrogen recombiner system's high reliability, and (c) the delayed nature of the requirements for the system following a DBA. In addition, the 18-month functional test adequately confirms system operability; thus deleting the 6-month functional test does not have a significant impact on safety.

3.6.3.2 Primary Containment Atmosphere Mixing System

There are no less restrictive requirements for the primary containment atmosphere mixing system because ITS 3.6.3.2 is an entirely new specification.

3.6.3.3 Primary Containment Oxygen Concentration

There are no requirements in ITS 3.6.3.3 for the primary containment oxygen concentration that are less restrictive than the requirements given in CTS 3/4.6.6.2.

3.6.4.1 Secondary Containment

The requirement of CTS 4.6.5.1.b.1 to verify at least once per 31 days that all secondary containment blowout panels are closed and sealed is eliminated. The blowout panels are passive devices installed as part of the walls of the secondary containment; they are not manipulated during plant operation or used for personnel or equipment access. A blowout panel that is not closed or sealed will prevent maintaining the required negative pressure in the secondary containment. Thus the daily verification of secondary containment vacuum, CTS 4.6.5.1.a (ITS SR 3.6.4.1.1), would fail. Action to restore secondary containment operability would identify the inoperable blowout panel.

Therefore, the monthly surveillance to check the blowout panels is not necessary to ensure secondary containment operability, and eliminating it from the TS is acceptable.

The test interval for the following secondary containment surveillances is increased from 18 months to 24 months.

CTS	ITS	Description
4.6.5.1.c.1	SR 3.6.4.1.4	Draw down test using one standby gas treatment (SGT) subsystem.
4.6.5.1.c.2	SR 3.6.4.1.5	Demonstration of capability to maintain secondary containment vacuum with one SGT subsystem

This change is acceptable for the reasons given in paragraph (10) "Surveillance Interval Extension from 18 to 24 Months" in the general discussion of less restrictive requirements at the beginning of Part III of this safety evaluation.

3.6.4.2 Secondary Containment Isolation Valves

The list of secondary containment isolation dampers, with their isolation times, in CTS Table 3.6.5.2-1 is removed from the CTS and placed in the LCS consistent with Generic Letter 91-08. The listing of valves which are subject to the secondary containment isolation valve specification are related to design and thus are not necessary to ensure the secondary containment isolation valves are maintained operable. The requirements of ITS 3.6.4.2 are adequate to ensure each required SCIV, including each isolation damper, is maintained operable. In conjunction with this change, the name of the isolation dampers is changed to "secondary containment isolation valves."

The test interval for CTS 4.6.5.2.b, the SCIV automatic actuation surveillance, is increased from 18 months to 24 months in corresponding ITS SR 3.6.4.2.3. This change is acceptable for the reasons given in paragraph (10) "Surveillance Interval Extension from 18 to 24 Months" in the general discussion of less restrictive requirements at the beginning of Part III of this safety evaluation.

An allowance is added in Note 1 to the actions of ITS 3.6.4.2 and in Note 2 of ITS SR 3.6.4.2.1 to intermittently open, under administrative controls, SCIVs that are required to be closed. Opening secondary containment penetrations on a intermittent basis is necessary for many of the same reasons as for primary containment penetrations, and the potential impact on offsite dose consequences is less significant. This change is acceptable because (a) the administrative controls will ensure that SCIVs are opened for no longer than necessary and will be closed promptly if an event requiring the secondary containment function occurs, and (2) the potential impact of safety is less than for PCIVs, which have the same allowance.

In the event both valves in a penetration are inoperable, the action requirements of CTS 3/4.6.5.2 would require an immediate shutdown because the requirement to maintain one isolation valve operable would not be met. Corresponding Action B of ITS 3.6.4.2 relaxes this requirement by allowing 4 hours to restore an SCIV to operable status or to isolate the penetration flow path before requiring a unit shutdown to commence. The 4-hour completion time is consistent with the existing time allowed for conditions when the secondary containment is inoperable. The proposed change will also provide consistency in actions for these various secondary containment degradations. Thus the impact of this change on safety is small and the change is, therefore, acceptable.

CTS 4.6.5.2.a is removed from the CTS because it requires post-maintenance testing of SCIVs. This kind of provision is unnecessary in TS because the operability of an SCIV must be established following any maintenance that rendered the SCIV inoperable. This is normally done by performing the appropriate surveillances as required by ITS SR 3.0.1. Therefore, this change is acceptable.

ITS SR 3.6.4.2.3, the functional test of each SCIV, omits the corresponding CTS 4.6.5.2.b requirement to perform the surveillance only during Mode 4 or 5. This restriction is not appropriate for all SCIVs because some SCIVS can be adequately tested during Modes 1, 2, and 3 without jeopardizing safe operation of the plant. The control of plant conditions appropriate to perform the test is an issue for procedures and scheduling, and has been determined by to be unnecessary as a TS restriction, as discussed in Generic Letter 91-04. Therefore, this change is acceptable.

CTS 4.6.5.2.b specifies performing the functional test of the automatic SCIVs using a simulated ("test") containment isolation signal. Corresponding ITS SR 3.6.4.2.3 also allows taking credit for an SCIV isolation on an actual isolation. This allows satisfactory automatic SCIV isolations for other than intentional surveillance testing to fulfill the SCIV functional test requirement. This change is acceptable because operability is adequately demonstrated in either case, the SCIV being incapable of discriminating between "actual" and "simulated" signals.

A note is added to CTS 3.6.5.1 and CTS 4.6.5.1.b.3 in corresponding Required Action A.2 of ITS 3.6.4.2 and SR 3.6.4.2.1, to allow administrative controls to be used to verify secondary containment isolation device position when the valves are in high radiation areas. The isolation devices are initially verified to be in the proper position and access to them is restricted during operation because of the high levels of radiation in the area. Therefore, the probability of misalignment of the isolation devices is acceptably small. For this reason, adding this note is acceptable.

3.6.4.3 Standby Gas Treatment System

The fact that the two standby gas treatment (SGT) subsystems are independent is a design detail in CTS 3.6.5.3 that is moved to the Bases for ITS LCO 3.6.4.3. In CTS 4.6.5.3.a, details about the methods for performing the SGT subsystem 31-day operational test (by initiating, from the control room, flow through the HEPA filters and charcoal absorbers) are moved to the Bases of ITS SR 3.6.4.3.1. The requirements of ITS LCO 3.6.4.3 and the associated surveillances are adequate to ensure the SGT subsystems are maintained operable.

The test interval for the following SGT system surveillances is increased from 18 months to 24 months.

CTS	ITS	Description
4.6.5.3.d.2	SR 3.6.4.3.3	SGT automatic actuation
4.6.5.3.d.3	SR 3.6.4.3.4	SGT filter cooling recirculation operational test

This change is acceptable for the reasons given in paragraph (10) "Surveillance Interval Extension from 18 to 24 Months" in the general discussion of less restrictive requirements at the beginning of Part III of this safety evaluation.

If at the end of 7 days, an inoperable SGT subsystem is not restored to operable status, Action a.2 of CTS 3.6.5.3 requires suspending the handling of irradiated fuel assemblies in secondary containment, core alterations, and operations with a potential for draining the reactor vessel (OPDRVs). New Required Action C.1 of ITS 3.6.4.2 allows placing the operable SGT subsystem in operation as an alternative to these actions. This enables these activities to continue. This change is acceptable because (a) one SGT subsystem is sufficient for any accident requiring the secondary containment and SGT functions if not in Modes 1, 2, or 3 and (b) the chance that the operable subsystem will be unable to perform its intended function is significantly reduced if it is already in operation when called upon to function.

CTS 4.6.5.3.d.2 specifies performing the functional test of each SGT subsystem using a simulated ("test") initiation signal. Corresponding ITS SR 3.6.4.3.3 also allows taking credit for an automatic actuation on an actual signal. This allows satisfactory automatic SGT system actuations for other than intentional surveillance testing to fulfill the SGT subsystem automatic actuation test requirement. This is acceptable because operability is adequately demonstrated in either case, the SGT system itself (filter train and isolation dampers) being unable to discriminate between "actual" and "simulated" signals.

CTS 3.4.6.1.6, Drywell and Suppression Chamber Internal Pressure, has been deleted. The CTS is based on the initial assumption of 0.75 psig in the safety analysis, and is required in Modes 1, 2, and 3. A recent GE evaluation (GE-NE-208-17-0993) shows that an initial drywell pressure of 2.0 psig is acceptable for ensuring containment pressure design limits are not exceeded. This initial pressure was utilized in determining a new P_a, and was submitted to the NRC to support the WNP-2 power uprate amendment (WNP-2 letter G02-93-

180, dated July 9, 1993). This CTS is not needed since the RPS high drywell pressure scram will trip the unit prior to exceeding 2.0 psig (the allowable value is 1.88 psig, with a trip setpoint of 1.68 psig), effectively placing the unit in Mode 3. While the RPS trip is not required in Mode 3, the Emergency Operating Procedures (EOPs) will govern actions if the drywell pressure exceeds 1.68 psig (effectively bounding the 2.0 psig limit). The EOPs will require entry into the RPV control and primary containment control actions. These actions require steps to be taken to reduce primary containment pressure to less than 1.68 psig. The negative pressure limit (-1.0 psig) is essentially controlled by the proper operation of the reactor building-to-suppression chamber and the suppression chamber-to-drywell vacuum breakers. These vacuum breakers are designed to ensure the negative pressure design limit of the primary containment is not exceeded, and are designed to open at -0.5 psid. Thus, the internal pressure cannot exceed the current -1.0 psig limit (which is also in CTS to preclude the negative pressure design limit of the primary containment from being exceeded) under normal circumstances (i.e., non-accident conditions). Since the vacuum breakers and their setpoints are required by ITS during Modes 1, 2, and 3 (ITS 3.6.1.6 and ITS 3.6.1.7), the negative pressure limit part of the CTS LCO is also not needed.

Conclusion

These less restrictive requirements have been found to be acceptable because they of the plant. As discussed in the evaluation format section and summarized in Table 1, to the extent that these less restrictive requirements involve the relocation of matters from the CTS to licensee-controlled documents, they are not otherwise required to be in the TS under 10 CFR 50.36 and they are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to public health and safety. The TS requirements that remain are consistent with current licensing practices, operating experience and plant accident and transient analyses, and provide reasonable assurance that public health and safety will be protected.

c. More Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 3.6, "Containment Systems," proposed a number of more restrictive requirements than are allowed by CTS. These requirements are the following:

3.6.1.1 Primary Containment

In the event the containment leakage rate or the drywell-to-suppression-chamber bypass leakage rate is discovered to be outside the specified limits, CTS 3.6.1.2 and Action e of CTS 3.6.2.1, respectively, restrict heating up the reactor coolant system above 200°F, but allow a startup and control rod withdrawal from cold conditions (e.g., ≤ 200°F). However, should leakage above limits be discovered during operation, the existing action requirements do not specifically require a unit shutdown, and so permit operation to continue while the leak rates are corrected. In the ITS presentation, if containment leakage, including bypass leakage, is discovered to be outside

limits, the primary containment is declared inoperable because ITS SR 3.6.1.1.1 or SR 3.6.1.1.2 would not be met. The actions of ITS 3.6.1.1 then require commencing a shutdown to a cold condition (Mode 4) if the leakage is not corrected within one hour. Because of this additional limitation to continued operation, ITS LCO 3.0.4 will not allow a reactor startup to commence with containment leakages outside limits. Thus, ITS LCO 3.6.1.1 and the associated action requirements for containment and bypass leakage rates beyond limits will ensure that the reactor is established and maintained in a cold shutdown, all-rods-in, condition until the leakage is corrected. This change is acceptable.

By incorporating the primary containment structural integrity requirements of CTS 3/4.6.1.5 into ITS 3.6.1.1 as part of primary containment operability, the specified time to restore the primary containment structural integrity (i.e., to restore it to operable status) is decreased from 24 hours to 1 hour in Required Action A.1 of ITS 3.6.1.1. This allowed time to restore compliance before requiring a plant shutdown brings the allowed time for restoration for a loss of containment structural integrity into agreement with the time allowed for a loss of containment operability. Therefore, this change is acceptable.

3.6.1.2 Primary Containment Air Lock

The ITS contain no requirements for the primary containment air lock that are more restrictive than requirements in the CTS.

3.6.1.3 Primary Containment Isolation Valves

The applicability of CTS 3/4.6.3 (and the other CTS requirements related to PCIVs) is Modes 1, 2, and 3. The applicability of ITS 3.6.1.3 contains the additional condition —

> When associated instrumentation is required to be OPERABLE per LCO 3.3.6.1, "Primary Containment Isolation Instrumentation."

This condition effectively adds Mode 4 and Mode 5 requirements to the RHR shutdown cooling system isolation valves. Action requirements appropriate for these PCIVs in Modes 4 and 5 are added as Action F of ITS 3.6.1.3, in the event the valves cannot be isolated or restored within the current 4-hour limit. This additional applicability and the associated action requirements are more restrictive than the CTS because in Mode 4 or 5 the CTS specify no restrictions. The additional Mode 4 and 5 requirements are appropriate for these PCIVs, therefore, this change is acceptable.

In the event an MSIV leakage rate is discovered to exceed 11.5 standard cubic feet or the combined leakage rate for all ECCS and RCIC PCIVs in hydrostatically tested lines which penetrate the primary containment is discovered to exceed 1 gpm times the number of such valves when the unit is shutdown with reactor coolant system (RCS) temperature ≤ 200°F, Actions c and d of CTS 3/4.6.1.2 require restoring the leakage rate to within the limit "prior to increasing reactor coolant system temperature above 200°F." These action requirements contain no restriction on control rod withdrawal and unit startup when RCS temperature is ≤ 200°F. The actions of CTS 3.6.1.2 also do not require a unit shutdown in the event the excessive leakage rate is discovered when the unit is in Mode 1, 2, or 3. Actions D and E of corresponding ITS 3.6.1.3 contain additional requirements to shutdown the unit in the event of PCIV leakage if not corrected within 8 hours for a main steam line isolation valve, or within 4 hours for the other PCIVs noted above. Because of this additional limitation on continued operation, ITS LCO 3.0.4 will not allow a reactor startup to commence with PCIV leakages outside limits. These more restrictive requirements are acceptable because they will ensure that the reactor is established and maintained in a cold shutdown, all-rods-in, condition until the MSIV or PCIV leakage is corrected.

ITS 3.6.1.3 contains two new surveillances for PCIVs. SR 3.6.1.3.1 verifies the 24 and 30 inch purge valves are closed every 31 days; SR 3.6.1.3.10 ensures the secondary containment bypass leakage is within limits at a frequency in accordance with ITS 5.5.12, "Primary Containment Leakage Rate Testing Program." These changes are appropriate enhancements to verify primary containment leakage is within limits, and are acceptable.

3.6.1.4 Drywell Air Temperature

The ITS contain no requirements for the drywell air temperature that are more restrictive than the requirements in the CTS.

3.6.1.5 RHR Drywell Spray

The ITS contain no requirements for the drywell spray function that are more restrictive than the requirements in the CTS.

3.6.1.6 Reactor Building-to-Suppression Chamber Vacuum Breakers

The ITS contain no requirements for the reactor building-to-suppression chamber vacuum breakers that are more restrictive than the requirements in the CTS.

3.6.1.7 Suppression Chamber-to-Drywell Vacuum Breakers

In the event one or more required suppression chamber-to-drywell vacuum breakers are inoperable for opening, Action b of CTS 3/4.6.4.1 allows 72 hours to restore 7 vacuum breakers to operable status (for opening). This action requirement is split in the ITS. Corresponding Action A of ITS 3.6.1.7 addresses only the condition of one required vacuum breaker inoperable for opening. For this condition, the ITS, like the CTS, allow 72 hours to restore the vacuum breaker to operable status. The condition of more than one vacuum breaker inoperable for opening is addressed by ITS LCO 3.0.3 because ITS 3.6.1.7 contains no actions for this condition. ITS LCO 3.0.3, which requires an immediate unit shutdown, is more restrictive than the CTS allowance of 72 hours. This is acceptable.

3.6.1.8 Main Steam Isolation Valve Leakage Control (MSLC) System

The ITS contain no requirements for the main steam isolation valve leakage control system that are more restrictive than the requirements in the CTS.

3.6.2.1 Suppression Pool Average Temperature

CTS 3.6.2.1.a.2.c specifies maintaining suppression chamber water temperature less than 120°F with the MSIVs closed following a scram. Corresponding Action D of ITS 3.6.2.1 specifies maintaining the water temperature less than 120°F regardless of the MSIV position. This is appropriate because significant heat can still be added to the suppression pool regardless of MSIV position. Even with MSIVs open, there may be no heat rejection from the containment, as in the case of a loss of condenser vacuum. Applying the actions regardless of the status of the MSIVs does not introduce any operation that is unanalyzed. For human factors reasons, this CTS LCO requirement is also presented in the action requirements of ITS 3.6.2.1.

The applicability of CTS 3/4.6.2.1 for the 120°F limit is Modes 1, 2, and 3, but the CTS action requirement for when temperature exceeds 120°F only requires a depressurization to < 200 psig, which is still Mode 3. In Action E of ITS 3.6.2.1, when temperature exceeds 120°F, not only is the reactor vessel required to be depressurized to < 200 psig, but the unit must also be placed in Mode 4 within 36 hours. This more restrictive requirement is appropriate and is acceptable.

3.6.2.2 Suppression Pool Water Level

The ITS contain no requirements for suppression pool water level that are more restrictive than the requirements in the CTS.

3.6.2.3 Residual Heat Removal (RHR) Suppression Pool Cooling

The ITS contain no requirements for the RHR suppression pool cooling system that are more restrictive than the requirements in the CTS.

3.6.3.1 Primary Containment Hydrogen Recombiners

The ITS contain no requirements for the primary containment hydrogen recombiners that are more restrictive than the requirements in the CTS.

3.6.3.2 Containment Atmosphere Mixing System

A new specification requiring two primary containment atmosphere mixing subsystems (head area return fans) to be operable is being added. Appropriate actions and a surveillance requirement are also added, consistent with the STS. This is an additional restriction on plant operation to ensure the primary containment atmosphere is properly mixed as assumed in the design basis accident analysis, and is acceptable.

3.6.3.3 Primary Containment Oxygen Concentration

The ITS contain no requirements for primary containment oxygen concentration that are more restrictive than the requirements in the CTS.

3.6.4.1 Secondary Containment

CTS 4.6.5.1.c.1 and 4.6.5.1.c.2 require that one SGT subsystem be tested every 18 months in the containment timed drawdown test and in the negative pressure maintenance test of the secondary containment. However, the CTS do not preclude using the same SGT subsystem each time these surveillances are performed. Corresponding ITS SR 3.6.4.1.4 and SR 3.6.4.1.5 require that both subsystems be tested in the course of 48 months (on a staggered test basis). This is an additional restriction on plant operation that will ensure both subsystems routinely demonstrate the SGT system support function for secondary containment, and is acceptable.

3.6.4.2 Secondary Containment Isolation Valves

The ITS contain no requirements for secondary containment isolation valves that are more restrictive than the requirements in the CTS.

3.6.4.3 Standby Gas Treatment System

The ITS contain no requirements for the SGT system that are more restrictive than the requirements in the CTS.

Conclusion

These more restrictive requirements strengthen the CTS. Therefore, these more restrictive requirements are acceptable.

d. Significant Deviations from STS

The licensee, in electing to adopt the specifications of STS Section 3.6, "Containment Systems," proposed the following differences between the ITS and the STS.

General

Certain details and references to Appendix J to 10 CFR Part 50 in a number of surveillances in STS 3.6.1.1, 3.6.1.2, and 3.6.1.3 are replaced by references to ITS 5.5.12, "Primary Containment Leakage Rate Testing Program." These differences are acceptable because WNP-2 has previously adopted Option B to Appendix J and the ITS specifications are consistent with staff guidance for implementing Option B.

The drywell pressure specification, STS 3.6.1.4, is not adopted. The current WNP-2 drywell and suppression chamber internal pressure specification is based on the initial assumption of 0.75 psig in the safety analysis, and is required in Modes 1, 2, and 3. A recent GE evaluation (GE-NE-208-17-0993) shows that

an initial drywell pressure of 2.0 psig is acceptable for ensuring containment pressure design limits are not exceeded. This initial pressure was used in determining a new P_a, and has been approved by the NRC to support the WNP-2 power uprate amendment (NRC letter from J.W. Clifford to J.V. Parrish, "Issuance of Amendment 137 for the Washington Public Power Supply System Nuclear Project No. 2," dated May 2, 1995). This specification is not needed since the reactor protection system (RPS) high drywell pressure scram will trip the unit prior to exceeding 2.0 psig (the allowable value is 1.88 psig, with a trip setpoint of 1.68 psig), effectively placing the unit in Mode 3. While the RPS trip is not required in Mode 3, the Emergency Operating Procedures (EOPs) will govern actions if the drywell pressure exceeds 1.68 psig (effectively bounding the 2.0 psig limit). The EOPs will require entry into the reactor pressure vessel (RPV) control and primary containment control actions. These actions require steps to be taken to reduce drywell pressure to less than 1.68 psig. The negative pressure limit (-1.0 psig) is controlled by the proper operation of the reactor building-to-suppression-chamber and the suppression chamber-to-drywell vacuum breakers. These vacuum breakers are designed to ensure the negative pressure design limit of the primary containment is not exceeded and to open at -0.5 psid. Thus, the internal pressure cannot exceed the current -1.0 psig limit (which is also in the TS to preclude the negative pressure design limit of the drywell from being exceeded) under normal circumstances (i.e., nonaccident conditions). Since the vacuum breakers and their setpoints are required by the TS during Modes 1, 2, and 3 (ITS 3.6.1.6 and 3.6.1.7), the negative pressure limit part of the LCO is also not needed.

The WNP-2 design does not include the low-low set function of the safety/relief valves. Therefore, STS 3.6.1.6 is not adopted.

The WNP-2 design does not include penetration valve leakage control system, suppression pool makeup system, hydrogen ignitors, drywell purge system, or a drywell internal to primary containment. Therefore, the associated specifications are not included.

3.6.1.1 Primary Containment

The ITS language more accurately describes the way WNP-2 performs the surveillance for drywell-to-suppression-chamber bypass leakage, SR 3.6.1.1.2. Since this deviation from the STS is consistent with the CTS, it is acceptable.

3.6.1.2 Primary Containment Air Lock

The requirements in NUREG-1433 for primary containment air lock match the WNP-2 design more closely than do those in NUREG-1434. In particular, the WNP-2 design, like the BWR/4 design, only includes one primary containment air lock.

The word "primary" is added to clarify that the primary containment is addressed in Note 2 to Action B. This editorial change clarifies the intent of Note 2 to Action B of ITS 3.6.1.2 and is acceptable.

STS SR 3.6.1.2.3 requires testing the air lock interlock mechanism on a 184-day frequency. ITS SR 3.6.1.2.2 specifies a frequency of 24 months. This difference is acceptable for the reasons given in Section 3.6.b of Part III of this safety evaluation.

3.6.1.3 Primary Containment Isolation Valves

Certain requirements in NUREG-1433 for primary containment isolation valves match the WNP-2 design more closely than do those in NUREG-1434. At WNP-2, the drywell is part of the primary containment, the primary containment is inerted while operating, and WNP-2 includes reactor building-to-suppression chamber vacuum breakers, EFCVs, and TIPs, similar to the BWR/4 design.

Note 4 to the actions of Specification 3.6.1.3 requires entering the primary containment specification "in Modes 1, 2, and 3" when PCIV leakage exceeds overall containment leakage rate acceptance criteria. Note 4 to the actions of ITS 3.6.1.3 omits the mode restriction for this note. This difference is acceptable because no PCIV leakage tests are required in modes other than Modes 1, 2, and 3 for WNP-2 (i.e., no PCIVs that have specific leakage limits are required to be operable in modes other than Modes 1, 2, and 3. Similar notes restricting the applicability of STS SR 3.6.1.3.2, SR 3.6.1.3.9, and SR 3.6.1.3.11 are omitted from corresponding ITS SR 3.6.1.3.1, SR 3.6.1.3.10, and SR 3.6.1.3.12.

All valve leakage sources have been identified in the action statements of ITS 3.6.1.3.

STS 3.6.1.3, Required Action C.2, has a once-per-31-day completion time for verifying that the affected penetration flow path is isolated for the condition of one or more penetration flow paths with one PCIV inoperable in penetrations with only one PCIV. ITS Required Action C.1 only requires this monthly verification "for isolation devices outside primary containment." This difference is acceptable because it is consistent with STS Required Action A.2 (for the same condition in penetrations with two PCIVs).

The time to restore MSIV leakage to within limits has been changed to 8 hours in ITS Required Action D.1, consistent with the time provided to restore an inoperable MSIV (for reasons other than leakage) in Action A.

Action E of STS 3.6.1.3, SR 3.6.1.3.1, SR 3.6.1.3.7, and SR 3.6.1.3 applies to purge valves with resilient seals. These requirements are not adopted because WNP-2 purge valves do not have resilient seals. These valves are treated the same as other PCIVs.

3.6.1.4 Drywell Air Temperature

ITS 3.6.1.4 contains no significant differences from corresponding STS 3.6.1.5.

3.6.1.5 RHR Drywell Spray

The WNP-2 design does not include an automatically actuated RHR drywell spray system. Therefore, the note to SR 3.6.1.7.1 is not adopted in corresponding ITS SR 3.6.1.5.1. In addition, STS SR 3.6.1.7.3 is also not adopted. Since the system is manually initiated, the phrase "or can be aligned to the correct position" has been added to the valve position check surveillance (ITS SR 3.6.1.5.1), consistent with other manual system valve position checks.

The WNP-2 design also does not include an accurate means of measuring drywell spray flow, nor is an actual value assumed in the safety analysis (it is assumed to be turned on). Therefore, STS SR 3.6.1.7.2 is also not adopted.

3.6.1.6 Reactor Building-to-Suppression Chamber Vacuum Breakers

Since the WNP-2 design is similar to the BWR/4 design, ITS 3.6.1.6, which is consistent with NUREG-1433 STS 3.6.1.7, specifies the Frequency of SR 3.6.1.6.2, the vacuum breaker functional test, as "in accordance with the inservice test program," which is the same frequency of 92 days as stated in STS SR 3.6.1.7.2.

3.6.1.7 Suppression-Chamber-to-Drywell Vacuum Breakers

The WNP-2 design for the suppression-chamber-to-drywell vacuum breakers has two disks per vacuum breaker. With either disk closed, the isolation capability of the line is maintained. Therefore, the actions of ITS 3.6.1.7 differ from the actions of corresponding NUREG-1433 STS 3.6.1.8 in reflecting this design. In particular, Action B of Specification 3.6.1.8 of NUREG-1433 for the condition of "One suppression chamber-to-drywell vacuum breaker not closed" is replaced by Actions B and C of ITS 3.6.1.7.

In the event one of the two disks of a vacuum breaker are not closed, the vacuum breaker can still perform its isolation and vacuum relief functions, but is degraded. Thus the time allowed in ITS Action B to close the open vacuum breaker disk is 72 hours. In addition, because a vacuum breaker line with one disk not closed is still capable of performing its required functions, each vacuum breaker line in this condition can be treated separately. Thus ITS Condition B contains a note to allow separate condition entry for each vacuum breaker, and Condition B is stated as "One or more suppression chamber-to-drywell vacuum breakers with one disk not closed." These changes are consistent with the Action A of Specification 3.6.1.7 of NUREG-1433, which allows 72 hours for one or more lines with one of the two vacuum breakers in each line not closed.

In the event both disks of a vacuum breaker are not closed, the vacuum breaker is inoperable and must be closed within a short time. In addition, with more than one line open, the containment pressure suppression function cannot be accomplished. Thus separate condition entry for each line is not allowed. Two hours are allowed to close one of the two disks. ITS Action C is consistent with Action B of Specification 3.6.1.8 of NUREG-1433, which allows two hours to close an open suppression-chamber-to-drywell vacuum breaker.

These differences are acceptable because they are consistent with the WNP-2 design and the action requirements for similar levels of degradation addressed in NUREG-1433.

ITS SR 3.6.1.7.1, to verify each vacuum breaker is closed, and SR 3.6.1.7.2, the vacuum breaker functional test, do not include the second frequency of STS SR 3.6.1.8.1 and the third frequency of STS SR 3.6.1.8.2 of NUREG-1433, respectively. The licensee is not adopting these frequencies because they are not required by the CTS.

The second frequency to NUREG-1433 SR 3.6.1.8.1 (ITS SR 3.6.1.7.1) requires the vacuum breakers to be verified closed after they may have been opened (within 2 hours of any discharge of steam to the suppression chamber from the SR/Vs or any operation that causes the drywell-to-suppression-chamber differential pressure to be reduced by ≥ 0.5 psid). This frequency is not needed because surveillances must be continually met as required by ITS SR 3.0.1. Thus, if the vacuum breakers open for any reason (other than during surveillances), the surveillance are not met, and appropriate action requirements must be taken.

STS SR 3.6.1.8.1 ensures that the vacuum breakers do not inadvertently remain open if they have actuated during plant operation. Verifying that the vacuum breakers are closed helps to preclude the possibility of suppression pool bypass leakage in excess of that assumed in design basis LOCA analyses. Probabilistic risk assessments (PRAs) and operational experience have shown that the most credible creation of such a bypass pathway is through a stuck-open vacuum breaker.

The licensee's proposal not to adopt the surveillance was discussed at a meeting between the NRC staff and WNP-2 on June 27, 1996, in Rockville, MD. On the basis of the discussion, the staff decided not to require the licensee to adopt the surveillance as part of the STS conversion, but to pursue, on a generic basis, adoption of the surveillance by all applicable BWRs. In developing this position, the staff reasoned that the surveillance is not currently part of the CTS, that there is a similar although less frequent (biweekly) surveillance to verify the valves are closed, and control room indication of valve position should alert operators if a valve is incorrectly in an open position. Based on these considerations, the staff finds the proposed deviation from the STS acceptable.

The third frequency of NUREG-1433 SR 3.6.1.8.2 (ITS SR 3.6.1.7.2) requires a functional test of the vacuum breakers (i.e., cycle the vacuum breakers) within 12 hours after the vacuum breakers have cycled. Since the vacuum breakers are designed to operate and assumed to function after a LOCA blowdown, their operation as designed after a lesser steam release or change in internal pressure should not raise concerns regarding immediate operability of the vacuum breakers. In addition, the WNP-2 design includes two disks per vacuum breaker; thus, if one disk sticks open during an operation, the other closed disk would still ensure isolation capability is maintained. Therefore, this frequency, which is not in the CTS, is not adopted.

STS SR 3.6.1.6.2 ensures vacuum breakers are capable of performing their intended function after being challenged by events that could cause the breakers to open, such as SRV discharge, cooling cycles, or inadvertent drywell spray actuation. BWR operating experience has shown that a credible potential exists for vacuum breakers not to function or reseat properly following such events.

The licensee's proposal not to adopt the surveillance was discussed at a meeting between the NRC staff and WNP-2 on June 27, 1996, in Rockville, MD. On the basis of the discussion at the meeting, the staff decided not to require the licensee to adopt the surveillance as part of the STS conversion, but to pursue, on a generic basis, adoption of the surveillance by all affected BWRs. In deciding this, the staff reasoned that the surveillance is not currently part of the licensee's CTS and there is a similar although less frequent (monthly) surveillance to verify valve operability. Based on the these considerations, the staff finds the proposed deviation from the STS acceptable.

3.6.2.1 Suppression Pool Average Temperature

The temperature limits in STS LCO 3.6.2.1 of NUREG-1433 are based on power level as indicated on Range 7 of the intermediate range monitors (IRMs). Corresponding ITS LCO 3.6.2.1 bases the temperature limits on percentage of thermal power. Thermal power in the range of 1% rated thermal power (RTP) is not readily quantified with much accuracy. While Range 7 on IRMs approximates 1% RTP, this power level can also be approximated by using SRMs and even by determining the point of adding heat. The licensee wants to maintain these acceptable options in plant procedures, keeping the CTS requirement of 1% RTP. ITS 3.6.2.1 therefore reflects the 1% RTP requirement. This difference is acceptable because it is consistent with the intent of STS and the CTS.

3.6.3.1 Primary Containment Hydrogen Recombiners

The WNP-2 design includes oxygen as well as hydrogen control in the drywell. Thus ITS 3.6.3.1, Required Action B.1, requires verifying that the hydrogen and oxygen control function is maintained in the event both hydrogen recombiners are inoperable. This difference from STS 3.6.3.1 is acceptable because it is based on WNP-2 design and the CTS.

3.6.3.2 Primary Containment Atmosphere Mixing System

Since WNP-2 design for containment atmosphere mixing is similar to the BWR/4 design, these ITS were based on NUREG-1433.

3.6.3.3 Primary Containment Oxygen Concentration

Since the WNP-2 design for interting is similar to the BWR/4 design, these ITS were based on NUREG-1433.

Conclusion

The preceding differences in the ITS from Section 3.6 of NUREG-1434 are consistent with the WNP-2 design and existing requirements and commitments or with proposed changes found to be acceptable by the staff as discussed elsewhere in this safety evaluation. Therefore, these differences are acceptable.

e. Relocated Specifications

In accordance with the criteria in the Final Policy Statement, the licensee has proposed to entirely remove the following containment system specifications from CTS Section 3/4.6 and place them in the FSAR/LCS.

3/4.6.2.2 Suppression Pool Spray

The requirements for the suppression pool spray mode of the RHR system in CTS 3/4.6.2.2 are relocated to the LCS. The suppression pool spray is not credited in any DBA (i.e., it is not needed to function to mitigate the consequences of any design basis accidents). Although this mode of RHR is utilized in the emergency operating procedures, the licensee stated in its submittal that it determined suppression pool spray to be non-risk-significant. Changes to the LCS will be controlled by 10 CFR 50.59.

Suppression pool spray is needed in BWRs to cool bypass steam that has leaked from the drywell to the suppression chamber. Instead of being condensed in the suppression pool, this bypass steam pressurizes the suppression chamber, thereby increasing the backpressure of the wetwell and resulting in peak containment pressures in excess of the design limit if not mitigated. The purpose of the suppression pool spray surveillance proposed for removal is to confirm operability and detect incipient failure of the spray pump.

With regard to suppression chamber bypass leakage, an analysis is summarized in Chapter 6.2.1 of the WNP-2 Final Safety Analysis Report (FSAR). For large breaks (greater than 0.122 m^2 (0.4 ft^2)), the reactor is expected to naturally and rapidly depressurize; therefore, the transient would be rapidly terminated and neither the suppression chamber nor drywell sprays would be needed for longer term bypass leakage and pressure control. However, for break sizes less than 0.122 m^2 (0.4 ft^2), depressurization does not automatically occur. The FSAR analysis considers a small break in the recirculation line to be the limiting case for bypass leakage, and further assumes that the drywell sprays are actuated at 206.8 kPa gage (30 psig) containment pressure and that the bypass leakage is .015 m^2 (.05 ft^2). After initiation of the drywell sprays, the plant is cooled down at a rate of 100°F per hour. Under these assumptions, containment design pressure is not exceeded.

In conclusion, the staff finds the proposed change acceptable; wetwell sprays are not necessary for the mitigation of the suppression chamber bypass leakage and are not credited in the analysis of suppression pool dynamic loads.

Conclusion

The current specifications described above are not required to be in the TS under 10 CFR 50.36, and 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. Further, they do not fall under any of the four criteria in the Final Policy Statement. In addition, the staff finds that sufficient regulatory controls exist under 10 CFR 50.59 to maintain the effectiveness of the provisions in these specifications. Accordingly, these current specifications may be removed from the CTS and placed in the LCS.

3.7 Plant Systems

The licensee has proposed administrative and technical changes to the CTS to bring them into conformance with STS Section 3.7, "Plant Systems." The changes are discussed in the order of the specifications in STS Section 3.7 The corresponding ITS Section 3.7 specification titles are listed in italics before each discussion.

a. Administrative Changes

The CTS specifications that have been retained in ITS Section 3.7 have been reworded to conform to the STS presentation. The following changes are the most significant.

3.7.1 Standby Service Water (SW) System and Ultimate Heat Sink (UHS)

CTS 3.7.1.1, Action a.2, has Footnote **, which requires that if as a result of the loss of both standby service water subsystems the plant is unable to attain cold shutdown, then reactor coolant temperature is to be maintained as low as practical by alternate heat removal methods. ITS 3.7.1, Required Action C, does not contain this requirement. The CTS footnote unnecessarily duplicates ITS 3.4.10, which require verification that an alternate decay heat removal is available but put no additional restrictions on operating the plant. Both the CTS action and the ITS action require efforts to "maintain reactor coolant temperature as low as practical." If conditions prevent attaining Mode 4, the actions remain in effect, essentially requiring continuing efforts to reach Mode 4. Therefore, omitting the footnote, but adopting the STS results in the same requirements is acceptable.

CTS 4.7.1.1.a demonstrates the operability of the standby service water system by verifying valve position. ITS 3.7.1.3 verifies the correct valve position of the manual, power-operated, and automatic valves in the flow path. The ITS has a note clarifying that the isolation of single components supported by the standby service water system does not make the standby service water system inoperable. The CTS allows operation, consistent with the position stated in the ITS note. Therefore, this addition to the CTS results in the same requirements and is acceptable.

CTS 3.7.1.3, action d requirement, to reduce the average sediment level to ≤ 0.1 feet when the average sediment level is ≥ 0.5 feet but ≤ 1 feet has been changed to < 0.5 ft. The CTS requirement is for the average sediment level to be maintained ≤ 0.5 ft. Therefore when action taken to reduce sediment buildup results in a sediment level ≤ 0.5 ft, the LCO is met and performing further work to meet the action is not required in accordance with current LCO 3.0.2. Therefore, this change retains CTS requirements and is acceptable.

3.7.2 High Pressure Core Spray (HPCS) Standby Service Water (SW)

CTS 4.7.1.2.a demonstrates operability of the high pressure core spray service water system by verifying valve position. ITS SR 3.7.2.1 verifies the correct valve position of the manual, power-operated, and automatic valves in the flow path. The ITS has an additional note clarifying that the isolation of single components supported by the high pressure core spray service water system does not make the high pressure core spray service water system inoperable. The CTS allows operation, consistent with the position stated in the ITS note. Therefore, this addition to the CTS results in the same requirements and is acceptable.

3.7.3 Control Room Emergency Filtration (CREF) System

CTS 3.7.2, Action b.2, specifies that with both control room emergency filter trains inoperable, operations are to be suspended that have a potential for draining the reactor vessel (OPDRV). The intent of this action is to immediately comply with the TS requirement. ITS 3.7.3, Required Action E.3, requires plant personnel to immediately initiate action to suspend operations with a potential for draining the reactor vessel. The CTS action of "immediately suspending operations with a potential for draining the reactor vessel" may not be possible for certain plant conditions. If the immediate requirement is not met, then noncompliance with the TS exists, requiring a Licensee Event Report (LER) in accordance with 10 CFR 50.72. ITS Required Action E.3 conveys the intent of this action. This required action, as stated in the Bases, requires best efforts to suspend operations with the potential for draining the reactor vessel must continue until suspended. This change clarifies the distinction between immediate suspension and immediate initiation of suspension of activities and is acceptable.

CTS Action b.2, for both control room emergency filtrations trains inoperable, requires operators to immediately "suspend operations with a potential for draining the reactor vessel." The required "immediate" action may not be possible for all plant conditions and therefore during such conditions, the existing ACTION results in "non-compliance with the Technical Specifications" and a requirement for an LER. ITS 3.7.3 Action Requirement C.2.3 more appropriately presents the intent of the requirement. With the ITS proposed action, a requirement to immediately initiate action to suspend OPDRVs is imposed. Included in this action is the requirement, as stated in the Bases, that best efforts to suspend OPDRVs must continue until they are suspended. The intent of the CTS actions are consistent with the STS and the proposed changes are acceptable.

CTS 3.7.2 does not include specific requirements for the inoperability of both control room emergency filtration subsystems in Modes 1, 2, and 3. ITS 3.7.3, Required Action D, directs entry into ITS 3.0.3, a controlled plant shutdown, for this condition. This provides the correct action in Mode 1, 2, or 3, when the control room emergency filtration subsystems are required to ensure control room operators do not receive doses in excess of 5 rem in the event of a design basis accident (DBA). Since this action is the same as the CTS action, this change is administrative and acceptable.

CTS 4.7.2.a verifies each control room emergency filtration system is operable by verifying control room temperature is within limits, and is being moved to ITS 3.7.4. This reformatting of CTS requirements is consistent with the STS. This change is administrative and acceptable.

CTS 4.7.2.b verifies the control room emergency filtration system heaters are operable. ITS SR 3.7.3.1 verifies the same heaters are in operation. The ITS therefore revises the SR for the control room emergency filtration system heaters from "OPERABLE" to "operating." The heaters must operate, by periodically cycling properly when required to reduce moisture from the absorbers and the high efficiency particulate air (HEPA) filters. The TS change does not change operating practices. Therefore, verifying heater operation ensures the heaters are operable. Since the ITS requirements result in the same limits as the CTS limits, this change is acceptable.

CTS 4.7.2.c and d specify testing requirements for the control room ventilation filters. The ITS moves these requirements to ITS 5.5.7, "Ventilation Filter Testing Program," in the Administrative Controls chapter. ITS SR 3.7.3.2 is added to clarify that the tests of the ventilation filter testing program must also be completed and passed to establish operability of the CREF system. This reformatting of CTS requirements is consistent with the STS. This change is administrative and acceptable.

CTS 4.7.2.e.2 ensures proper control room emergency ventilation system actuation from the pressurization mode actuation test signals (Drywell Pressure—High, Reactor Vessel Water Level—Low, Level 2, and Reactor Building Exhaust Plenum—High Radiation). The ITS divides this actuation testing requirement into two surveillances, SR 3.7.3.3 (verifying actuation on actual or simulated initiation signal) and SR 3.3.7.1.4 (a logic system functional test). ITS SR 3.3.7.1.4 covers most of this instrumentation testing. Further, the system functional test, SR 3.7.3.4, verifies system performance without requiring actuation testing. These requirements provide testing for the entire system with proper overlap. Since the ITS result in the same CTS requirements for testing, this change is acceptable.

3.7.6 Main Turbine Bypass System

CTS 3.7.9 requires the main turbine bypass system to be operable in "OPERATIONAL CONDITION 1 when the thermal power at ≥ 25% of RATED THERMAL POWER." ITS 3.7.6 changes the applicability requirement to when "THERMAL POWER is ≥ 25%." Relating the applicability to thermal power in the ITS encompasses the mode statement in the CTS because the plant is always operating in Mode 1 when thermal power is at or above 25% rated thermal power. Therefore, stating both conditions in the applicability is not necessary. Therefore, the ITS results in the same requirements and is acceptable.

CTS 4.7.9.b.3 relates the requirement to demonstrate the turbine bypass system response time is within limits to valve position, as "to a valve position equivalent to 80% of rated bypass flow." The ITS moves this requirement to the ITS 1.0 definition of turbine bypass system response time. The reformatting is consistent with the STS format. This change is administrative and is acceptable.

3.7.7 Spent Fuel Storage Pool

CTS 3.9.9 requires the spent fuel pool water level to be within limits "whenever irradiated fuel assemblies are in the spent fuel storage pool." ITS 3.7.7 requires pool water level limits only "during movement of irradiated fuel assemblies in the spent fuel storage pool." This changes the applicability of maintaining a ≥ 22 foot water cover from any time the pool is in use to conditions when irradiated fuel assemblies are being moved within the spent fuel storage pool. The ITS Bases contains a note that allows completion of fuel movement after finding the water level below the specified limit. The bounding design basis fuel handling accident assumes dropping an irradiated fuel assembly onto an array of irradiated fuel assemblies seated within the reactor pressure vessel. Once fuel movement ceases, as required by the CTS action and ITS Required Action A.1, a fuel handling accident in the spent fuel storage pool cannot occur and continued operation with the spent fuel pool water level not within limits is allowed. Both the CTS and the ITS require suspension of fuel movement. Thus, with fuel movement suspended, ITS 3.7.7 is no longer applicable. Therefore, this change is administrative.

Since these requirements result in the same limits as the current requirements, the changes are purely administrative and are therefore acceptable.

b. Less Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 3.7, proposed a number of requirements that are less restrictive than those in the CTS. Several of these changes affected more than one specification and so were submitted as generic changes. The following changes are the most significant.

3.7.1 Standby Service Water (SW) System and Ultimate Heat Sink (UHS)

CTS 3.7.1.1 and CTS 3.7.1.3 specify details relating to components that make up the standby service water system and the ultimate heat sink, respectively. ITS 3.7.1 requires the Division 1 and 2 standby service water and the ultimate heat sink to be operable. The ITS moves the CTS details on system design and operability to the ITS Bases. Including system details in the ITS is not necessary. The definition of operability as related to the requirements of Specification 3.7.1 and the associated SRs are adequate to ensure the standby service water system and the ultimate heat sink are maintained operable. Changes to the Bases are controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0. Removal of these operational details to the ITS Bases is consistent with the STS, and is acceptable.

CTS 3.7.1.1 and CTS 3.7.1.3 apply to Operational Modes 1, 2, 3, 4, 5, and *. In Modes 4 and 5, those portions of the standby service water system required to support equipment required to be operable elsewhere in the CTS must also be operable. ITS 3.7.1 applies only to Modes 1, 2, and 3. The ITS moves the CTS requirements for the standby service water and ultimate heat sink systems in Modes 4 and 5 to the ITS Bases for the supported systems. Since this system and the ultimate heat sink are support systems for other required equipment, each with its own specifications, the definition of equipment operability provides assurance the supported system can perform its required support function. Changes to the Bases are controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0. Removal of these operational details to the ITS Bases is consistent with the STS, and is acceptable.

CTS 4.7.1.1.b verifies every 18 months that an actuation test signal properly actuates each automatic valve servicing safety-related equipment on a service water actuation test signal. ITS SR 3.7.1.5 verifies every 24 months that an actual or simulated initiation signal properly actuates each standby service water subsystem. This change is acceptable for the reasons given in paragraph (10) "Surveilance Interval Extension from 18 to 24 months" in the general discussion of less restrictive requirements at the beginning of Part III of this safety evaluation.

CTS 4.7.1.1.b verifies every 18 months "during shutdown" that an actuation test signal properly actuates each automatic valve servicing safety-related equipment. ITS SR 3.7.1.5 verifies the proper actuation of each standby service water subsystem on an actual or simulated initiation signal every 24 months. The ITS does not specify the "during shutdown" requirement. Requirements prohibiting testing during power operations, as provided in CTS 4.7.1.1.b, may not apply to all conditions of plant operation. Therefore, specifying plant shutdown in the TS for conducting the test is unnecessary and is adequately controlled in procedures. This is acceptable.

CTS 4.7.1.1.b requires an actuation test to verify that a signal properly actuates automatic valve servicing safety-related equipment. ITS 3.7.1, SR 3.7.1.5, verifies the proper actuation of each standby service water subsystem on an actual or simulated initiation signal. The ITS adds the phrase "actual or," referring to the actuation test signal. This allows automatic actuations or simulated actuations to fulfill the SR. During plant operations either signal type will verify equipment operability since the standby service water subsystem cannot differentiate between an "actual" or "test" signal. Since either of the actuation signals confirms satisfactory operation of the standby service water system, this change is acceptable.

3.7.2 High Pressure Core Spray (HPCS) Standby Service Water (SW)

CTS 3.7.1.2 specifies the components that make up the HPCS service water system. ITS 3.7.2 requires the high pressure core spray service water system to be operable. The ITS moves the CTS details on system design and operability to the ITS Bases. Including system details in the ITS is not necessary. The definition of operability as related to the requirements of Specification 3.7.2 and the associated SRs are adequate to ensure the HPCS service water system is maintained operable. Changes to the Bases are controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0. Removal of these operational details to the ITS Bases is consistent with the STS, and is acceptable.

CTS 3.7.1.2 requires the HPCS service water system to be operable when the diesel generator is required to be operable, whereas ITS 3.7.2 includes requirements for Modes 1, 2, and 3 but deletes the operability requirements associated with the diesel generator (DG) during nonoperating or shutdown operations. Thus requirements for operability in Modes 4 and 5 are relocated to the Bases of the supported systems. Since HPCS service water is a support system for the Division 3 DG and for other required equipment, the definition of equipment operability for the Division 3 diesel generator and other supported equipment provides adequate assurance that the supported system can perform its required support function. Changes to the Bases are controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0. The provisions of equipment operability as stated in the ITS are consistent with the STS, and are acceptable.

CTS 4.7.1.2.b verifies that an actuation test signal properly actuates each automatic valve servicing safety-related equipment on a service water actuation signal every 18 months. ITS SR 3.7.2.2 verifies the proper actuation of the HPCS SW System on an actual or simulated signal every 24 months. This change is acceptable for the reason given in paragraph (10) "Surveillance Interval Extension from 18 to 24 Months" in the general discussion of the less restrictive requirements at the beginning of Part III of this safety evaluation.

CTS 4.7.1.2.b verifies every 18 months "during shutdown" that an actuation test signal properly actuates automatic valves servicing safety-related equipment. ITS 3.7.2, SR 3.7.2.2 verifies proper actuation of the HPCS SW system once every 24 months. The ITS does not specify the "during shutdown" requirement. Requirements prohibiting testing during power operations as provided in CTS 4.7.1.2.b may not apply to all conditions of plant operation. Therefore, specifying plant shutdown in the TS for conducting the test is unnecessary and is adequately controlled in procedures. This is acceptable.

CTS 4.7.1.2.b requires an actuation test to verify that a signal properly actuates automatic valves servicing safety-related equipment. ITS SR 3.7.2.2 verifies the proper actuation of each HPCS service water system on an actual or simulated initiation signal. The ITS adds the phrase "actual or," referring to the actuation test signal. This allows automatic actuations or simulated actuations to fulfill the SR. During plant operations either signal

type will verify equipment operability since the HPCS service water system cannot differentiate between an "actual" or "test" signal. Since either of the actuation signals confirms satisfactory operation of the HPCS service water system, this change is acceptable.

3.7.3 Control Room Emergency Filtration (CREF) System

CTS 3.7.2 requires two operable "independent" control room emergency filtration system trains. ITS 3.7.3 requires two control room emergency filtration subsystems. The ITS moves the CTS details on system independence to the ITS Bases. Including system details in the ITS is not necessary. The definition of operability as related to the requirements of Specification 3.7.3 and the associated SRs are adequate to ensure the control room emergency filtration system trains are maintained operable. Changes to the Bases are controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0. Removal of these operational details to the ITS Bases is consistent with the STS, and is acceptable.

CTS 4.7.2.b requires performance of the SR "by initiating from the control room, flow through the HEPA filters and charcoal absorbers." The ITS moves this detail to ITS Bases 3.7.3. This detail is not necessary for assuring the operability of the control room emergency filtration system trains. Specification 3.7.3 and the associated SRs are adequate to ensure the control room emergency filtration system trains are maintained operable. Changes to the Bases are controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0. Removal of these operational details to the ITS Bases is consistent with the STS, and is acceptable.

CTS 4.7.2.e.2 verifies that on a proper initiation signal, certain control room emergency filtration system actions take place every 18 months. ITS SR 3.7.3.3 and SR 3.7.3.4 performs these same verifications every 24 months. This change is acceptable for the reasons given in paragraph (10) "Surveillance Interval Extension from 18 to 24 Months" in the general discussion of the less restrictive requirements at the beginning of Part III of this safety evaluation.

CTS 3.7.2 requires the control room emergency filtration system to be operable in all operational conditions and when handling irradiated fuel in secondary containment. ITS 3.7.3 applies in Modes 1, 2, and 3 and during movement of irradiated fuel assemblies in secondary containment, during core alterations, and during operations with a potential for draining the reactor vessel. The ITS do not require the CREF to be operable during Modes 4 and 5 unless core alterations or operations with a potential for draining the reactor vessel are being conducted because these are the only operations outside of power operations that could require control room isolation. Pressure and temperature limitations in these modes reduce the probability and consequences of a design basis accident. Therefore, this change is acceptable.

In addition, ITS Required Actions C.2.1, C.2.2, and C.2.3, include the option to exit the LCO applicability by immediately suspending the movement of irradiated fuel assemblies in secondary containment, core alterations, and

operations with a potential for draining the reactor vessel if appropriate compensatory measures are incomplete before the action to restore the CREF system expires. Adequate protective action is provided by either performing Required Action C.1 or exiting the applicability for the condition. This change is therefore also acceptable.

CTS 4.7.2.b requires a start and heater operational test of each CREF subsystem on a staggered test basis. ITS SR 3.7.3.1 does not require staggered testing. The CTS requirement to perform testing on a staggered basis is an unnecessary requirement for verifying the CREF subsystems heaters are operable because the monthly CTS test frequency is unchanged in the ITS, because these tests are independent, and because appropriate actions are required in the ITS for multiple inoperable subsystems. This change does not affect the safe operation of the plant and is therefore acceptable.

CTS 4.7.2.e.2 requires testing each CREF subsystem to verify that the subsystem will maintain control room pressure at 1/8 inch positive pressure. ITS 3.7.3.4 requires testing each CREF subsystem on a staggered test basis to show that the control room pressure remains at ≥ 1/8 inch positive pressure. The control room pressure test requirement is a test of the integrity of the control room structure, and as such this operability requirement can be confirmed using either subsystem to perform the test. Because ITS SR 3.7.3.3 verifies CREF subsystem actuation and therefore proper subsystem operation, the control room structure test needs only to be verified using one subsystem as required by ITS 3.7.3.4. To ensure no undetected subsystem failures will result in failure to meet control room structure system integrity requirements, SR 3.7.3.4 requires alternating the CREF subsystems used to perform the test "on a STAGGERED TEST BASIS." The changes to CTS testing are acceptable because the combination of testing required by ITS SR 3.7.3.3 and 3.7.3.4 provides adequate assurance of CREF operability.

CTS 3.7.2.e.2 requires an actuation test to verify that each CREF subsystem actuates on three pressurization mode actuation test signals. ITS SR 3.7.3.3 verifies proper actuation of each CREF subsystem on an actual or simulated initiation signal. The ITS adds the phrase "actual or," referring to the actuation test signal. This allows automatic actuations or simulated actuations to fulfill the SR. During plant operations either signal type will verify equipment operability since the standby service water subsystem cannot differentiate between an "actual" or "test" signal. Since either of the actuation signals confirm satisfactory operation of the CREF subsystem, this change is acceptable.

3.7.4 Control Room Air Conditioning (AC) System

CTS 4.7.2.a requires that the control room emergency filtration system train be demonstrated to be operable once every 12 hours by verifying the control room air temperature is ≤ 85°F. The temperature limit requirement is deleted in ITS 3.7.4, "Control Room Air Conditioning (AC) System."

The control room air conditioning system consists of two 100% capacity air conditioning subsystems. The two subsystems share a common outside air intake system and a common duct distribution system within the control room. Each subsystem consists of a control room recirculation fan, an air filter, water cooling coils, and the associated ductwork and dampers. Two cooling coils are in each subsystem, with the air flow through both coils. One cooling coil is non-safety-related, and uses radwaste chilled water during normal operation. The second cooling coil is safety-related for emergency chilled water or service water during emergency operations. During normal operation, one subsystem distributes chilled and filtered air to the control room. Electronic controllers regulate the temperature and humidity in the control room. The controllers modulate chilled water flow from the radwaste building chilled water system to the normal operation cooling coil. An ambient temperature of ≤ 78°F is maintained in the control room in this mode of operation, well below the 85°F limit.

With emergency chilled water or service water supplied to the emergency operation cooling coils, the control room air conditioning maintains ambient temperature low enough to ensure that critical equipment remains operable. The environmental qualification temperature for control room equipment is 104°F. When emergency chilled water is supplied to the cooling coils, the control room temperature is maintained at ≤ 85°F. This ensures equipment operability while providing cooling capacity for personnel comfort. When service water is supplied to the cooling coils the control room temperature is maintained at ≤ 104°F, a temperature that is sufficient for maintaining equipment operability.

The ability of the control room air conditioning system to maintain control room temperature within limits, as specified in CTS 3/4.7.2 is an implicit assumption of the safety analysis in FSAR Chapter 6, "Engineered Safety Features," and Chapter 15, "Accident Analyses." The assumption that the CREF system operates in the pressurization mode also implies maintaining the control room temperature so that safety-related control room equipment remains operable. The CTS 4.7.2.a control room temperature limit is a limit related to personnel comfort. This temperature is not an assumption for design basis accidents at WNP-2. Operability of the CREF system does not depend on the control room air conditioning system. Because the control room air temperature is normally < 78°F and staff are continuously present in the control room, control room personnel will easily detect temperature increases and take corrective action before any equipment temperature limits are reached.

3.7.5 Main Condenser Offgas

CTS 3/4.11.2.7 defines gross activity of the nobles gases as "beta and/or gamma" activity and specifies that radioactivity limits shall be determined to be met "by performing an isotopic analysis of a representative sample of gases taken at discharge (prior to dilution and/or discharge) of the main condenser air" after an increase in radioactivity, "as indicated by the condenser air ejector noble gas activity monitor." ITS 3.7.5 requires that the gross gamma activity rate of the noble gases sampled at the main condenser air ejector be

≤ 332 mCi/second after 30-minutes decay. The ITS moves details about the radioactivity, the methods for performing the surveillance, and the methods for determining when an increase has occurred to the ITS Bases. Including system details in the ITS is not necessary for determining if the main condenser offgas activity is within limits. ITS 3.7.5 and SR 3.7.5.1 ensure the main condenser offgas activity rate remains within limits. Changes to the Bases are controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0. Removal of these operational details to the ITS Bases is consistent with the STS, and is acceptable.

CTS 4.11.2.7.1 requires monitoring the radioactivity rate of the noble gases at the main condenser air ejector. ITS 3.7.5 requires a gross gamma activity limit of ≤ 332 mCi/second after 30-minutes decay of the noble gases at the main condenser air ejector. The ITS moves the CTS 4.11.2.7 to the Offsite Dose Calculation Manual (ODCM). The CTS requirement is not necessary to ensure that main condenser offgas activity rate is within limits. ITS SR 3.7.5.1 ensures the main condenser offgas activity rate is within limits. The ODCM contains requirements on monitoring the main condenser air ejector activity release rate. The provisions of the ODCM control process, described in ITS 5.5.1, control changes to the ODCM. Because the ODCM control process controls changes to monitoring the radioactivity rate of the noble gases at the main condenser air ejector, and because the requirement for monitoring gross activity limits remains in the ITS, moving design details and requirements to the ODCM is acceptable.

3.7.6 Main Turbine Bypass System

CTS 4.7.9.b requires the main turbine bypass system to be demonstrated to be operable every 18 months by performance of a system functional test and channel calibration test. The SR also specifies criteria for successfully meeting the testing requirement. ITS 3.7.6 requires the main turbine bypass system to be operable. The ITS moves details to the ITS Bases. Including system details in the ITS is not necessary because ITS 3.7.6 and SRs 3.7.6.1, 3.7.6.2 and 3.7.6.3 ensure the main turbine bypass system is operable. Changes to the Bases are controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0. Removal of these operational details to the ITS Bases is consistent with the STS, and is acceptable.

CTS 4.7.9.b.3 requires demonstration that the main turbine bypass system response time requirement is "less than or equal to 300 milliseconds." ITS SR 3.7.6.3 requires response time testing; however, the response time limit is moved to the LCS. Main turbine system response time is an integral part of the main turbine bypass system operability requirements. As such, ITS 3.7.6 and associated SR 3.7.6.3 ensure the response time of the main turbine bypass system is within limits and the main turbine bypass system is operable. The provisions of 10 CFR 50.59 control changes to the LCS and the response time stated therein. Because the LCS controls the details and requirements of the SR under 10 CFR 50.59, the operability of the main turbine bypass system is ensured without the additional detail in the ITS; therefore, moving the limit to the LCS is acceptable.

CTS 4.7.9.b requires performance of a system functional test, channel calibration, and turbine bypass system response time test every 18 months. ITS SR 3.7.6.2 and SR 3.7.6.3 performs these tests every 24 months. This change is acceptable for the reasons given in paragraph (10) "Surveillance Interval Extension from 18 months to 24 months" in the general discussion of the less restrictive requirements at the beginning of Part III of this safety evaluation.

CTS 3.7.9 requires the main turbine bypass system to be operable. In addition to that requirement, ITS 3.7.6 provides the option of applying the minimum critical power ratio (MCPR) limits of ITS 3.3.2 if the main turbine bypass system becomes inoperable. The main turbine bypass system ensures that the MCPR safety limits are maintained during a feedwater transient. Therefore, ITS 3.7.6 provides an option permitting application of a MCPR penalty instead of maintaining the main turbine bypass system operable. The MCPR penalty, specified in the Core Operating Limits Report, is similar to other MCPR penalties (such as if the end-of-cycle recirculation pump trip (EOC-RPT) is inoperable). In addition, the ITS increases the time to restore the main turbine bypass system to operable status or the time to apply the MCPR main turbine bypass system inoperable limit to satisfy the requirements of the ITS 3.7.6 from 1 hour in the CTS to 2 hours, consistent with the time provided in CTS 3.2.3 to restore a MCPR limit. Therefore adopting the MCPR penalty in place of an operable main turbine bypass system is acceptable.

CTS SR 4.7.9.a requires cycling each turbine bypass valve at least once per 7 days. ITS SR 3.7.6.1 tests one complete cycle of each main turbine bypass valve every 31 days. The ITS changes the frequency for cycling the main turbine bypass valves from 7 days to 31 days. A report on the historical maintenance and surveillance data shows no turbine bypass valve failures. The licensee's evaluation of these data shows the effect on safety due to the extended surveillance interval is small. The licensee states that testing the valves less frequently decreases the core damage frequency by decreasing the potential for a turbine or plant trip. This decrease in operational risk more than offsets the increase in core damage frequency due to reduced valve reliability as a result of testing the valves less frequently. In addition, the licensee states that Westinghouse (the turbine vendor), General Electric (the bypass valve vendor), and Control Components, Inc. (the vendor for bypass valve internals) support the interval extension. The licensee states these vendors agree that the increased surveillance interval decreases wear and tear on the valves with no significant increase in the probability that the valves will fail to open when required. The NSSS vendor (GE) supports a 31-day bypass valve test for GE design valves, stating that a 31-day frequency does not increase any NSSS safety concerns. Therefore, the change will not have a significant impact on safety and is acceptable.

3.7.7 Spent Fuel Storage Pool

The action associated with CTS 3.9.9 for the spent fuel storage pool water limits not met suspends "crane operations with loads." The requirement to suspend crane operations is moved to the LCS/FSAR. The movement of loads other than fuel assemblies has administrative controls based on the heavy

loads analysis for the individual load. The bounding design basis fuel handling accident assumes dropping an irradiated fuel assembly onto an array of irradiated fuel assemblies seated within the reactor pressure vessel. The FSAR/LCS describes the load analysis methodology and crane operation controls. The provisions of 10 CFR 50.59 control the changes to the FSAR/LCS. Since the provisions of 10 CFR 50.59 control future changes to fuel movement activity whenever the spent fuel water levels limits are not met, these CTS requirements will be adequately controlled. Therefore, the changes are acceptable.

The action associated with CTS 3.9.9 clearly notes that suspension of the movement of fuel assemblies and crane operations with loads occurs "after placing the fuel assemblies and crane load in a safe condition." The ITS moves this information to the ITS Bases. The instruction to place fuel assemblies in a safe condition before suspending fuel movement is not necessary for establishing actions that ensure that minimum water level in the spent fuel pool meets the assumptions of iodine decontamination factors following a fuel handling accident. ITS Required Action A.1 prevents a spent fuel handling accident from occurring by suspending the movement of irradiated fuel assemblies in the spent fuel storage pool. Changes to the Bases are controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0. Removal of these operational details to the ITS Bases is consistent with the STS, and is acceptable.

Conclusion

These less restrictive requirements are acceptable because they will not affect the safe operation of the plant. As discussed in the evaluation format section and summarized in Table 1, to the extent that these less restrictive requirements involve the relocation of matters from the CTS to licensee-controlled documents, they are not otherwise required to be in the TS under 10 CFR 50.36 and they are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to public health and safety. The TS requirements that remain are consistent with current licensing practices, operating experience, and plant accident and transient analyses, and provide reasonable assurance that public health and safety will be protected.

c. More Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 3.7, proposed a number of requirements that are more restrictive than those in the CTS. The following changes are the most significant.

3.7.1 Standby Service Water (SW) System and Ultimate Heat Sink (UHS)

CTS 3.7.1.1, Action a.2, allows 8 hours to restore one of the inoperable subsystems if both standby service water subsystems are inoperable. For the same condition, ITS 3.7.1, Required Action C, requires a controlled shutdown from Mode 1, 2, or 3 to Mode 3 within 12 hours and to Mode 4 within 36 hours. The ITS does not include the CTS 8-hour repair time period before a shutdown

is required. With both standby service water subsystems inoperable, all low pressure ECCS subsystems and diesel generators are inoperable. Taking the associated required actions of these safety systems requires an immediate shutdown. This change is consistent with the STS. In addition, the ITS actions result in restrictions to plant operations that are acceptable corrective actions for the condition where the plant no longer has standby service water subsystems operable.

CTS 3.7.1.3.c requires a maximum average sediment depth on the floors of the spray ponds of "less than or equal to 0.5 feet." ITS 3:7.1.4, requires a verification that the average sediment depth in each UHS spray pond is < 0.5 feet. The ITS changes the limit from ≤ 0.5 feet to < 0.5 feet, which is consistent with the licensing basis analysis assumptions. This change is more restrictive on plant operations since sediment level of exactly 0.5 feet requires correction (ITS 3.7.1, Required Action A.1). Additionally, the CTS "maximum average sediment depth" becomes "average sediment depth" in the ITS. Taken together with the calculated average, these two changes are incrementally neutral and are acceptable.

3.7.2 High Pressure Core Spray (HPCS) Standby Service Water (SW)

The CTS 3.7.1.2 action associated with an inoperable high pressure core spray (HPCS) service water system requires the associated diesel generator to be declared inoperable. This requirement results in a 72-hour allowed outage time for the HPCS diesel generator before HPCS is declared inoperable according to CTS 3.8.1.1. ITS 3.7.2, Required Action A.1, declares the HPCS inoperable immediately because the HPCS service water system provides cooling not only to the HPCS diesel generator but also to the HPCS pump and room cooler. Thus, the current 72-hour repair allowed outage time for the HPCS diesel generator before declaring the HPCS inoperable is eliminated. This restriction on plant operation is acceptable.

3.7.4 Control Room Air Conditioning (AC) System

The CTS has no specific requirements for operability of the control room air conditioning system; rather, the control room temperature is verified to be ≤ 85°F every 12 hours by CTS 4.7.2.a. ITS 3.7.4 requires the control room air conditioning system to be operable; however, control room temperature limits are not specified. The design function of the control room air conditioning system is to ensure the control room remains habitable in a post-design basis accident environment. To meet the single failure criterion for assumed accident scenarios, ITS 3.7.4 requires two operable subsystems in Modes 1, 2, and 3 during movement of irradiated fuel assemblies in the secondary containment, during core alterations, and during operations with the potential for draining the reactor vessel. The ITS also adds appropriate required actions and SR 3.7.4.1. This change is consistent with the STS and is more restrictive on plant operations. The additional requirements are appropriate and acceptable.

3.7.5 Main Condenser Offgas

CTS 3.11.2.7 specifies the applicability for radioactive effluents measured at the main condenser as "During main condenser offgas treatment system operation as specified in Section 3.3.7.12." The CTS places the plant in Hot Standby (Mode 2) if CTS 3.11.2.7 is not met. ITS 3.7.5 changes the applicability to "MODE 1" and "MODES 2 and 3 with any steam line not isolated and steam jet air ejector (SJAE) in operation." The ITS requires the plant to exit the applicability for ITS 3.7.5 by isolating all main steam lines (Required Action B.1) or the SJAE (Required Action B.2) in 12 hours. To perform these two required actions, the unit must be in Mode 2, consistent with CTS requirements. Alternately, placing the plant in Mode 3 in 12 hours and Mode 4 in 36 hours (Required Actions B.3.1 and B.3.2) is more restrictive than the CTS requirements.. These changes provide appropriate operational limits and are acceptable.

CTS 4.11.2.7.2.b requires the determination of the gross activity rate from the main condenser air ejector within 4 hours following an increase "of greater than 50%" in the nominal steady-state fission gas release from the primary coolant. ITS SR 3.7.5.1 requires the same surveillance following an increase of "≥ 50%." The ITS changes the amount of increase from "greater than 50%" to include an increase equivalent to 50%. The difference between the requirements is negligible, considering that measurement of the nominal steady-state fission gas release from the primary coolant contains an uncorrectable measurement error. The change increases the range of releases requiring action, but the increase is small and is not expected to entail additional surveillances. Therefore, this change is acceptable.

Conclusion

These more restrictive requirements strengthen the CTS and are therefore acceptable.

d. Significant Deviations from STS

None.

e. Relocated Specifications

In accordance with the criteria in the Final Policy Statement, the licensee has proposed to entirely remove the following containment system specifications from the CTS and place them in licensee-controlled documents.

CTS 3/4.7.4	Snubbers
CTS 3/4.7.5	Sealed Source Contamination
CTS 3/4.7.8	Area Temperature Monitoring

CTS 3.7.4, "Snubbers," states that all mechanical and hydraulic snubbers shall be operable. Snubbers are passive devices used for supporting piping systems, and the associated TS action statement only requires that an inoperable snubber be replaced or repaired within 72 hours. The CTS surveillance

requirement for snubbers is that they be periodically examined under the inservice inspection program. The requirements of CTS 3/4.7.4 that all snubbers are to be operable do not identify a parameter that is an initial condition assumption for a design basis accident (DBA) or transient, do not identify a significant abnormal degradation of the reactor coolant pressure boundary, and do not form part of the primary success path which functions or actuates to mitigate a design basis accident or transient. Therefore, the requirements specified in the CTS have been relocated to the LCS and will be controlled in accordance with 10 CFR 50.59.

CTS 3.7.5, "Sealed Source Contamination," requires that sealed sources containing radioactive material shall be free of a specified removable contamination. The associated action statement requires that if the removable contamination exceeds limitations, the sealed source shall be either decontaminated or disposed of. The limitations expressed in this TS do not impact reactor operation, do not identify a parameter which is an initial condition assumption for a design basis accident or transient, do not identify a significant abnormal degradation of the reactor coolant pressure boundary, and do not mitigate a design basis event. Therefore, the requirements specified in the CTS have been relocated to the LCS and will be controlled in accordance with 10 CFR 50.59.

CTS 3/4.7.8, "Area Temperature Monitoring," specifies temperature limits for various rooms and areas inside containment. The areas covered are the control room, the auxiliary electric equipment rooms, the primary containment (drywell), the high pressure core spray room, the low pressure core spray room, the residual heat removal system room, the reactor core isolation cooling rooms, the primary containment beneath the reactor pressure vessel, and the switchgear rooms. The limitations expressed in this TS do not impact reactor operation, do not identify a parameter which is an initial condition assumption for a design basis accident or transient, do not identify a significant abnormal degradation of the reactor coolant pressure boundary, and do not mitigate a design basis event. Therefore, the requirements specified in the CTS have been relocated to the LCS and will be controlled in accordance with 10 CFR 50.59.

Conclusion

These current specifications are not required to be in the TS under 10 CFR 50.36 and do not meet any of the four criteria in the Final Policy Statement. They are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to the public health and safety. In addition, the staff finds that sufficient regulatory controls exist under 10 CFR 50.59 to maintain the effect of the provisions in these specifications. Accordingly, these current specifications may be removed from the CTS and placed in the LCS/FSAR.

3.8 Electrical Power Systems

In accordance with the guidance in the Final Policy Statement, the licensee has proposed administrative and technical changes to the CTS to bring them into conformance with STS Section 3.8 specifications. For each category of change, the discussions generally follow the presentation order of the individual specifications within STS Section 3.8. As appropriate, the ITS Section 3.8 specifications are listed in italics before the applicable discussions.

a. Administrative Changes

The specifications of CTS Section 3/4.8 that have been retained in corresponding improved TS Section 3.8, have been reworded to conform to the STS presentation. In particular, the most significant administrative changes that were made are as follows.

3.8.1 AC Sources—Operating

The requirements of CTS 3/4.8.1.1 are presented in ITS 3.8.1, 3.8.3, and 5.5.9 in accordance with the format of the STS.

The requirements of CTS 3.8.1.1.b.1, diesel generator [DG] fuel day tank minimum volume, and CTS 3.8.1.1.b.3, fuel transfer system capability are moved to ITS SR 3.8.1.4 and SR 3.8.1.6, respectively. Changing the location of these requirements within the TS is purely administrative.

CTS 3.8.1.1.b.2, 4.8.1.1.2.a.2, 4.8.1.1.2.a.7, 4.8.1.1.2.b.2, 4.8.1.1.2.c, 4.8.1.1.2.d, and 4.8.1.1.2.g, relating to fuel oil storage tank, air receiver, and fuel oil property requirements, are being moved to ITS 3.8.3 in accordance with the format of the STS. Evaluations of any technical changes are addressed in the ITS 3.8.3 evaluation. This is an acceptable administrative change.

In the event DG-3 is inoperable, Action c of CTS 3.8.1.1 requires restoring DG-3 to operable status within 72 hours or declaring the HPCS inoperable and taking the action specified in CTS 3/4.5.1 for an inoperable HPCS system. This action requirement is retained in applicability note and Action B of ITS 3.8.1. The note states that if the HPCS System is inoperable, the Division 3 AC electrical power sources are not required to be operable. As explained in the associated Bases for the note, in the event HPCS is required and DG-3 is inoperable, HPCS must be declared inoperable (requiring entry into ITS 3.5.1) or DG-3 must be restored to operable status within 72 hours. This change in presentation to conform to the STS format does not change the current action requirement. It is therefore purely administrative.

In ITS 3.8.1, the Action D Note, for the condition of one required offsite circuit inoperable and one required DG inoperable, is needed in order to retain the action requirement of CTS 3/4.8.3.1 in the event a required electrical power distribution subsystem is deenergized (i.e., inoperable). Without this note, ITS LCO 3.0.6 would only require taking the actions of the AC sources specification. Because this note ensures that the existing requirement to enter the distribution system specification for deenergized distribution subsystems is followed, it is merely an administrative change in presentation and is therefore acceptable.

CTS 3.8.1.1 contains no specific action requirements when three or more AC sources (any combination of required offsite sources and diesel generators) are inoperable; thus CTS 3.0.3 would apply and require an immediate unit shutdown. Corresponding Action G of ITS 3.8.1 requires immediate entry into ITS LCO 3.0.3, which is equivalent. Therefore, this change is administrative.

CTS 4.8.1.1.1.b and 4.8.1.1.2.e require performing the 18-month surveillances for the offsite power circuits and diesel generators during shutdown. This restriction is retained in the following notes to each corresponding ITS surveillance as follows:

- SRs 3.8.1.8, 3.8.1.9, 3.8.1.10, 3.8.1.12, and 3.8.1.14 cannot be performed while in MODES 1 and 2.
- SRs 3.8.1.11, 3.8.1.13, 3.8.1.16, 3.8.1.17, 3.8.1.18, and 3.8.1.19 cannot be performed while in Modes 1, 2, and 3.

These notes clarify the intent of this restriction. Thus this change is administrative. Additionally, each note clearly presents allowance of current practice to take credit for unplanned events for the surveillance, provided the event produces the necessary data.

Note * to CTS 4.8.1.1.2.a.4, the monthly diesel generator start test, allows the start to be preceded by an "engine prelube period and/or other warmup procedures recommended by the manufacturer so that mechanical stress and wear on the diesel engine is minimized." Corresponding Note 1 of ITS SR 3.8.1.2 retains this allowance, stating that "all DG starts may be preceded by an engine prelube period and followed by a warmup period prior to loading." In addition, Note 2 has been added to explicitly state the current practice, which follows the manufacturer's recommendation for gradual acceleration to synchronous speed for testing. This administrative change is acceptable. Note that the provision of Note 2 is not permitted for a timed diesel start to meet ITS SR 3.8.1.7, the 184-day start from ambient conditions. This is consistent with the current Note * and is thus also an administrative change.

CTS 4.8.1.1.2.a.4 requires testing of the diesel generator to assure the capability of the diesel to start and accelerate to at least 900 rpm (60 Hz). ITS SR 3.8.1.2 only requires verifying that each diesel generator starts and achieves steady state operation at a frequency ≥ 58.8 Hz and ≤ 61.2 Hz; it does not specify the engine speed limit. This is acceptable because the engine is mechanically coupled to the generator; thus it is redundant to specify both speed and frequency—they are equivalent. Specifying only the frequency is acceptable because achieving the specified frequency is an adequate indication of proper operation of the diesel engine governor. This change is administrative because the CTS speed/frequency limit is retained.

During the load rejection test of the single largest load, CTS 4.8.1.1.2.e.2 specifies maintaining the diesel generator engine speed "≤ 75% of the difference between nominal speed and the overspeed trip setpoint or 15% above nominal, whichever is less." Corresponding ITS SR 3.8.1.9 specifies a diesel generator speed limit in terms of frequency following the load rejection that is the most limiting of these two limits: ≤ 66.75 Hz (75% of the difference between nominal frequency of 60 Hz and the overspeed trip setpoint of 69 Hz). The explanation of the value of the limit is moved to the Bases for SR 3.8.1.9. This change in presentation of the CTS limit is administrative because the CTS requirement is retained.

CTS 4.8.1.1.2.e.8 verifies an auto-start signal will restart the diesel generator within 5 minutes after a 24-hour run test is completed. Note * to this surveillance also permits performing the hot restart test following 1 hour of operation at the specified load or until operating temperature has stabilized. Specifically requiring the hot restart test following the 24-hour run test is deleted from corresponding ITS SR 3.8.1.14. The provision of Note * is retained as Note 1 in ITS SR 3.8.1.15, which verifies the automatic restart capability of a hot diesel generator. Note 1 specifically requires the restart surveillance within 5 minutes of shutting down the diesel generator after one or more hours of operation at the full diesel generator load rating. As stated by CTS Note *, it is acceptable to perform the test after a ≥ 1 hour run at a load equivalent to the continuous rating of the diesel generator, or until operating temperature has stabilized. Therefore, since the CTS already allows testing the hot restart capability in this manner, this change is administrative and acceptable.

3.8.2 AC Sources—Shutdown

The LCO requirements supporting diesel generator operability in CTS 3.8.1.2.b.1 (minimum volume in the diesel fuel day tanks) and CTS 3.8.1.2.b.3 (which requires operable fuel transfer pump) are retained in ITS SR 3.8.2.1 (verification of day tank volume and fuel oil transfer system operability), which requires meeting ITS SR 3.8.1.4 and SR 3.8.1.6. This change is administrative because it does not modify the existing technical requirements.

CTS 3.8.1.2.b.2, relating to fuel oil storage tank requirements, is being moved to ITS 3.8.3 in accordance with the format of the STS. Evaluations of any technical changes are addressed in the ITS 3.8.3 evaluation. This is an acceptable administrative change.

Action A of ITS 3.8.2 contains a new note specifying entry into the applicable conditions and required actions of ITS 3.8.8 when any required division is deenergized as a result of an inoperable offsite power source. This note is necessary in the ITS presentation because the provisions of ITS LCO 3.0.6 would otherwise require following only the action requirements of ITS 3.8.2. However, in the event of an inoperable offsite power source, it may also be necessary to follow appropriate distribution system action requirements because the AC source action requirements are not sufficiently conservative (for example, RHR-SDC could be inoperable). Corresponding Action a of CTS 3.8.1.2 does not contain this note because in the CTS the operators would know to also enter the distribution system action requirements for busses that become deenergized. Because this note is necessary to maintain the existing electrical power source and distribution system action requirements, it is an acceptable administrative change.

In the event DG-3 is inoperable, Action b of CTS 3.8.1.2 requires declaring the HPCS system inoperable and taking the action required by CTS 3.5.2 and 3.5.3. Because under the ITS format declaring the HPCS system inoperable will require entering the Actions of the ECCS specification (ITS 3.5.2), corresponding Action C of ITS 3.8.2 omits the unnecessary statement requiring the actions of the ECCS specification to be taken. The existing requirement is retained; therefore, this is an administrative change in presentation.

CTS 4.8.1.2, as it relates to fuel oil and air receiver requirements, is being moved to ITS 3.8.3 in accordance with the format of the STS. Evaluations of any technical changes are addressed in the ITS 3.8.3 evaluation. This is an acceptable administrative change.

For clarity, an exception to performing CTS 4.8.1.1.1.b (ITS SR 3.8.1.8, verification of automatic and manual transfer capability between normal and alternate offsite power sources) and CTS 4.8.1.1.2.f (ITS SR 3.8.1.20, simultaneous start of the diesel generators) is added. These surveillances are currently not required since they ensure that all the offsite circuits and DGs are operable (and only one circuit and no more than two DGs are required in MODES 4 and 5 and while handling irradiated fuel assemblies in the secondary containment). Adding this explicit exception in ITS SR 3.8.2.1 does not change the current requirements for performing these surveillances and is thus a purely administrative change.

3.8.3 Diesel Fuel Oil, Lube Oil, and Starting Air

The requirements for diesel generator fuel oil in CTS 3.8.1.1.b.2 and 3.8.1.2.b.2 (minimum amount of fuel oil in the fuel oil storage system for each diesel generator) and CTS 4.8.1.1.2.a.2 (verification of the minimum amount of fuel in each fuel storage tank for each diesel generator) are presented in ITS SR 3.8.3.1. The requirements for the minimum air start receiver pressure for each diesel generator in CTS 4.8.1.1.2.a.7 (230 psig for DG-1 and DG-2 and 200 psig for DG-3) are presented in ITS SR 3.8.3.4, which verifies every 31 days that each diesel generator air start receiver pressure is ≥ 230 psig for DG-1 and DG-2, and ≥ 223 psig (higher than now required) for DG-3. The requirements for sampling and testing of the diesel fuel oil in CTS 4.8.1.1.2.b.2, 4.8.1.1.2.c, and 4.8.1.1.2.d are presented in ITS SR 3.8.3.3 (requires monitoring the fuel oil properties under the diesel fuel oil testing program) and SR 3.8.3.5 (check for and removal of accumulated water from each diesel fuel oil in each fuel oil storage tank). ITS LCO 3.8.3 requires fuel oil storage and starting air when associated DG is required to be operable. This covers the current Modes 1, 2, 3, 4, and 5 and fuel handling LCO applicability requirements. Moving these requirements to ITS 3.8.3 is an administrative change in presentation.

CTS 3.8.1.1.b.2 and 3.8.1.2.b.2 require a minimum amount of fuel oil in storage for each diesel generator. These requirements are presented in ITS SR 3.8.3.1, which requires verifying that each fuel oil storage tank contains ≥ 55,500 gallons for DG-1, ≥ 55,500 gallons for DG-2, and ≥ 33,000 gallons for DG-3. Moving these fuel volume storage requirements to the surveillances is an administrative change in presentation.

The requirements of CTS 4.8.1.1.2.c and 4.8.1.1.2.d for sampling diesel fuel oil are presented in ITS SR 3.8.3.3, which requires fuel oil testing, and ITS 5.5.9, "Diesel Fuel Oil Testing Program," which contains the test details. The ITS presentation makes it clear that meeting the diesel fuel oil testing program requirements is necessary for DG operability. This change in presentation is administrative because it maintains the current fuel oil testing requirements.

3.8.4 DC Sources—Operating

CTS 4.8.2.1.a.1, 4.8.2.1.b.1, 4.8.1.b.3, and Table 4.8.2.1-1, relating to the battery cell parameter limits, are being moved to ITS 3.8.6 in accordance with the format of the STS. Evaluations of any technical changes are addressed in the ITS 3.8.6 evaluation. This is an acceptable administrative change.

In the event either the Division 3 battery or its charger is inoperable, Action b of CTS 3.8.2.1 requires declaring the HPCS system inoperable and taking the action required by CTS 3.5.1. Because under the ITS format declaring the HPCS system inoperable will require entering the Actions of the ECCS specification (ITS 3.5.1), corresponding Action B of ITS 3.8.4 omits this unnecessary statement requiring the actions of the ECCS specification to be taken. The existing requirement is retained; therefore this is an administrative change in presentation.

The requirements of CTS 4.8.2.1.d to perform the battery capacity (battery service) test and CTS 4.8.2.1.e to perform the battery performance discharge test during shutdown are retained in corresponding ITS SR 3.8.4.7 and SR 3.8.4.8 with a note prohibiting performance of these surveillances while in MODE 1, 2, or 3. This is an administrative change because the notes are equivalent to the existing restrictions.

3.8.5 DC Sources—Shutdown

In the event either the Division 3 battery or its charger is inoperable, Action b of CTS 3.8.2.2 requires declaring the HPCS system inoperable and taking the action required by CTS 3.5.2 and 3.5.3. Because under the ITS format declaring the HPCS system inoperable will require entering the actions of the appropriate ECCS specifications (ITS 3.5.2), corresponding Action A of ITS 3.8.5 omits this unnecessary statement requiring the actions of the ECCS specification to be taken. Instead, Required Action A.1 specifies declaring affected required features inoperable; for an inoperable Division 3 DC source, the affected feature would be the HPCS system. The existing requirement is retained; therefore this is an administrative change in presentation.

3.8.6 Battery Cell Parameters

The requirements of CTS 3.8.2.1 and 3.8.2.2 for battery cell parameters are presented in new specification ITS 3.8.6 in accordance with the format of the STS. Reorganizing the battery cell parameter requirements is an administrative change in presentation.

In the event battery cell parameters are outside the limits of CTS Table 4.8.2.1-1, Notes 1, 2, and 3 to this table specify action requirements. The actions note of ITS 3.8.6 clarifies the intent of the CTS that these action requirements apply separately to each battery. This clarification of the CTS intent is an administrative change.

In the event battery average electrolyte temperature is ≤ 60°F, the intent of the actions of CTS 3/4.8.2.2 is to declare the affected battery inoperable because CTS 4.8.2.1.b.3, which requires the average temperature to be > 60°F, would not be met. This CTS surveillance is retained as ITS SR 3.8.6.3 and the intended action requirement is retained explicitly in Action B of ITS 3.8.6. Action B requires immediately declaring the battery inoperable when the average electrolyte temperature is not within limit. Thus, failure of the surveillance will result in an inoperable battery. In addition, when the Category A or B limits are not restored within the time provided in CTS Table 4.8.2.1-1, Notes 1 and 2, there is no specific requirement to declare the battery inoperable. However, since this is obviously the intent, ITS Action B requires immediately declaring the battery inoperable. This change is administrative because it simply clarifies the intent of the CTS action requirements.

3.8.7 Distribution Systems—Operating

In the event a Division 3 AC or DC distribution system is deenergized (inoperable), Actions a.2 and b.2, respectively, of CTS 3.8.3.1 require declaring the HPCS system inoperable and entering the action requirements of the ECCS specification CTS 3.5.1. Because under the ITS format declaring the HPCS system inoperable will require entering the actions of the ECCS specification (ITS 3.5.1), corresponding Action E of ITS 3.8.7 omits this unnecessary statement requiring the actions of the ECCS specification to be taken. Because the existing requirement is retained, this is an administrative change in presentation.

The CTS requires entry in CTS 3.0.3 when three or more distribution subsystems are inoperable. The format of the ITS would allow multiple conditions to be simultaneously entered. With three or more distribution subsystems inoperable, the distribution subsystems cannot perform their required function. However, the ITS actions would allow entry into all applicable conditions and not require an immediate LCO 3.0.3 entry. To preserve the existing intent of the CTS, a specific action has been provided (ITS Action F) requiring entry into ITS 3.0.3 when three or more distribution subsystems are inoperable. Because the existing CTS requirements are retained, this is an administrative change in presentation.

3.8.8 Distribution Systems—Shutdown

In the event a Division 3 AC or DC distribution system is deenergized (inoperable), Actions a.2 and b.2, respectively, of CTS 3.8.3.2 require declaring the HPCS system inoperable and entering the action requirements of ECCS specifications CTS 3.5.2 and 3.5.3. Because declaring the HPCS system inoperable will require entering the Actions of the ECCS and RCIC

specifications (ITS 3.5.2), corresponding Action A of ITS 3.8.8 omits this unnecessary statement requiring the actions of the ECCS specification to be taken. Because the existing requirement is retained, this is an administrative change in presentation.

CTS 3.8.4.4, Reactor Protection System Electric Power Monitoring, is being moved to ITS 3.3.8.2 in accordance with the format of the STS. Evaluations of any technical changes are addressed in the ITS 3.3.8.2 evaluation. This is an acceptable administrative change.

Conclusion

The preceding changes to CTS Section 3/4.8 result in limits that are unchanged from the current requirements cited. In some cases, these changes result in a clearer presentation of the intent of current requirements. Accordingly, these changes are purely administrative. Therefore, they are acceptable.

b. Less Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 3.8, "Electrical Power Systems," proposed a number of less restrictive requirements than are allowed by CTS Section 3/4.8. These requirements are the following.

3.8.1 AC Sources—Operating

CTS 3.8.1.1.a describes the required offsite circuits as "physically independent" and CTS 3.8.1.1.b describes the diesel generators as "separate and independent." These design details do not need to be stated incorresponding ITS LCO 3.8.1.a and LCO 3.8.1.b to ensure the operability of the AC power sources. These details are thus moved to the Bases for ITS 3.8.1.

CTS 4.8.1.1.2.e.7 requires verifying that a simulated ECCS actuation signal automatically bypasses diesel generator automatic trips except (a) engine overspeed, (b) generator differential current, (c) incomplete starting sequence, and (d) emergency manual stop. Corresponding ITS SR 3.8.1.13 omits the exception to the emergency manual stop function. This is acceptable because the emergency manual stop is not an automatic diesel generator trip, but trips the diesel fuel racks on a manual signal. Other auto signals also trip the racks.

The diesel generator accelerated test frequency requirements of CTS Table 4.8.1.1.2-1 are moved unchanged to the LCS/FSAR, while the ITS retain the CTS 31-day frequency requirement. Generic Letter 94-01, "Removal of Accelerated Testing and Special Reporting Requirements for Diesel Generators," allows licensees to request removal of provisions for DG accelerated testing from the TS, provided certain conditions stated in the generic letter are met. In its submittal, the licensee committed to meet those conditions before making any changes to the current schedule (which is more restrictive than the STS schedule). In particular, in accordance with the generic letter, the licensee has committed to implement a maintenance program for monitoring and

maintaining emergency diesel generator performance in accordance with the provisions of the maintenance rule and consistent with the guidance of Regulatory Guide 1.160, within 90 days of issuance of the license amendment that removes the accelerated testing and special reporting requirements for emergency diesel generators from the TS (i.e., the amendment approving the ITS). Based on this commitment, this change is acceptable.

CTS 4.8.1.1.2.a.4 gives four specific diesel generator start signals for starting tests—manual, simulated loss of offsite power, an emergency safety feature (ESF) actuation test signal, and a simulated loss of offsite power with an ESF actuation test signal. Corresponding ITS SR 3.8.1.2 and 3.8.1.7 do not list the various diesel generator start signals because which signal is used is a matter for procedures and does not contribute to verifying the capability of the DG to start. This change is acceptable because the other DG test requirements that are retained in ITS 3.8.1 are adequate to ensure the operability of the diesel generators.

In addition, the explicit requirement of CTS 4.8.1.1.2.a.6 to verify alignment of the diesel generators to provide standby power to the associated emergency busses is deleted. The definition of operability ensures the diesel generator remains aligned to provide standby power when needed. Thus, removal of this surveillance from the CTS is acceptable.

The preventive maintenance requirement of CTS 4.8.1.1.2.e.1 to inspect the DGs in accordance with procedures prepared in accordance with the manufacturer's recommendations is removed from the CTS. This is acceptable because (a) performance of this requirement does not have an immediate impact on DG operability, and (b) DG operability is ensured by the other surveillances retained in ITS 3.8.1.

The specific kilowatt value of the single largest post-accident load for the single load rejection surveillance specified in CTS 4.8.1.1.2.e.2 for each DG is omitted from corresponding ITS 3.8.1.9, but is moved to the associated Bases. Including this design detail in ITS 3.8.1 is not necessary to ensure the operability of the DGs. This change is acceptable because the requirements of ITS LCO 3.8.1 and the associated surveillances (including SR 3.8.1.9) for the diesel generators are adequate to ensure the diesel generators are maintained operable.

CTS 4.8.1.1.2.e.9 specifies the maximum auto-connected loads for the 2000-hour rating of the diesel generators as 4650 kW for DG-1 and DG-2 and 2850 kW for DG-3. This surveillance is deleted because the value of the maximum auto connected loads for each DG is adequately described in the electrical system design information in the FSAR. ITS SR 3.8.1.11.c will continue to verify the diesel generator auto-start capacity from the standby condition and the automatic connection of the shutdown loads.

The requirements in CTS 4.8.1.1.2.e.4.a)2) (loss of offsite power (LOSP) test) and 4.8.1.1.2.e.6.a)2) (LOSP in conjunction with an ECCS actuation signal) that the auto-connected loads be energized "through the load sequencer" for Division 1 and 2 and that the autoconnected loads be energized "within 30 seconds" for Division 3 are moved to the Bases discussion of the DG loading logic. These loads are designed to be connected only through the loading logic; thus if they are not energized, the SR has failed, and the associated DG is considered inoperable. Therefore, this design detail does not need to be stated in the surveillances to ensure the operability of the diesel generators. The DG requirements of ITS LCO 3.8.1 and the associated surveillances are adequate to ensure the operability of the DGs.

In addition, the 30-second requirement for Division 3 in CTS 4.8.1.1.2.e.6.b)2) is based upon the HPCS system response time requirement, not the actual loading of DG-3. The HPCS system response time is already required by LCO 3.5.1, "ECCS-Operating," and does not need to be repeated in the AC sources specification.

The manner in which the DG is started for the DG 24-hour run surveillance (CTS 4.8.1.1.2.e.8 and ITS SR 3.8.1.14) is deleted. Since this test can be performed after either a slow start or a fast start, the manner in which the DG is started does not affect the test. Deleting this procedural detail from the CTS is acceptable because it is not needed to demonstrate the capability of the DG to run loaded for 24 hours. In addition, the CTS requirement to maintain voltage and frequency may also be deleted because they must be within limits to ensure the loads are maintained within the necessary limits.

The surveillance to verify that the DG lockout features prevent DG starting only when required (CTS 4.8.1.1.e.13) is deleted from the CTS because the LOCA, LOSP, and LOCA/LOSP DG surveillances (ITS SR 3.8.1.11, SR 3.8.1.12, and SR 3.8.1.19) will detect if a DG lockout feature incorrectly prevents the DG from operating. Failure of a lockout feature to properly lock out a DG is not a concern for meeting the accident analysis assumptions, since the DG would already be inoperable (the lockout feature prevents the DG from starting on an accident signal). Therefore, removal of this surveillance from the CTS has no effect on DG operability and is acceptable.

The 18-month frequencies of the surveillances in CTS 4.8.1.1 (CTS 4.8.1.1.b, 4.8.1.1.2.e.2, 4.8.1.1.2.e.3, 4.8.1.1.2.e.4, 4.8.1.1.2.e.5, 4.8.1.1.2.e.6, 4.8.1.1.2.e.7, 4.8.1.1.2.e.8, 4.8.1.1.2.e.10, 4.8.1.1.2.e.11, and 4.8.1.1.2.e.12) retained in ITS 3.8.1 are changed to 24 months. These changes are acceptable for the reasons given in paragraph (10) "Surveillance Interval Extension from 18 to 24 Months" in the general discussion of less restrictive requirements at the beginning of Part III of this safety evaluation.

The action requirements of CTS 3/4.8.1.1 require performing the DG start test (CTS 4.8.1.1.2.a.4) on the remaining operable DGs within 4 hours and once per 8 hours thereafter in the event—

- one offsite circuit or one DG (DG-1 or DG-2) is inoperable (Action a)
- One offsite circuit and one DG (DG-1 or DG-2) are inoperable (Action b)
- DG-3 is inoperable (Action c)
- Two offsite circuits are inoperable (Action e)

In addition, in the event DG-1 and DG-2 are inoperable, Action f requires a start test of DG-3 within 2 hours and once per 8 hours thereafter. In the corresponding action requirements of ITS 3.8.1, the DG start test performance requirement is deleted for cases involving inoperable offsite circuits and is retained as an optional action requirement for those involving inoperable DGs. These changes are acceptable because the normal DG surveillance schedule gives adequate assurance of the operability of the remaining DGs. In addition, the wear and tear of additional DG starts and the potential decrease in DG reliability are avoided, as addressed in Generic Letter 84-15. Starting the DGs without loading them is contrary to manufacturer recommendations. Thus, the DGs would be connected to offsite sources and nonvital loads following the start test. Disturbances in these loads can adversely affect DG reliability, as stated in NRC Information Notice 84-69, which cautions against operating DGs tied to offsite power when the unit's AC sources are abnormally degraded or threatened.

For cases involving inoperable DGs, Action B (one DG inoperable) of ITS 3.8.1 allows 24 hours to either (a) determine the operable DGs are not inoperable due to common cause failure, or (b) perform the DG start test (ITS SR 3.8.1.2) on the operable DGs. If a common failure mode cannot be ruled out, then the start test provides adequate assurance that the other DGs are not affected by the same mode of failure as the inoperable DGs, and are still operable. Relaxing the time to complete these actions from 2 or 4 hours to 24 hours is reasonable to allow sufficient time to address common cause failure. If a common cause failure mode can be ruled out, an unnecessary DG start can be avoided, thus reducing engine wear. The DGs are generally independent; once the common failure is ruled out either by testing or by evaluation an additional DG failure is unlikely to occur before other action requirements shut down the unit. Thus deleting the 8-hour periodic performance requirement for these actions is also acceptable.

In the event an offsite circuit and a DG (DG-1 or DG-2) are concurrently inoperable, Action b of CTS 3.8.1.1 specifies restoring all AC sources to operable status within 72 hours from the time the first AC source was discovered to be inoperable. Thus, if a second AC source is discovered to be inoperable just prior to restoring the operability of the first AC source near the expiration of the 72-hour completion time, little or no time would be left to restore the operability of the second AC source before a unit shutdown would be required. The action requirements of ITS 3.8.1 address this situation by specifying an extension of the 72-hour completion time of up to 6 days from discovery of failure to meet the LCO (the time the first AC source was discovered to be inoperable). While these simultaneous inoperabilities are expected to occur very infrequently, operating experience has shown that AC source inoperabilities are usually corrected within the specified allowed outage time (≤ 72 hours). This new allowance is acceptable because of (a) the small probability of an event during the repair of the subsequent inoperability, (b) the likelihood of restoring the second AC source to operable status and thus avoiding the risk of a transient associated with a unit shutdown, and (c) the 6-day limit on continuous operation with the AC sources LCO not met (twice the normal completion time).

In the event two offsite circuits are concurrently inoperable or two DGs (DG-1 and DG-2) are concurrently inoperable, Action e and Action f, respectively, of CTS 3.8.1.1 require restoring both AC sources to operable status within 72 hours from the time the first AC source was discovered to be inoperable. Thus, the situation described above could also occur in this context. ITS Section 1.3, "Completion Time," allows an extension of the specified completion time (72 hours in this case) for one inoperable redundant subsystem or component (AC source) by up to 24 hours, not to exceed the specified completion time (in this case 72-hours) from the time the second subsystem or component (AC source) was discovered to be inoperable. In addition, this completion time extension may be used only once, for the second discovery of an inoperable subsystem or component (AC source), but not for a third or subsequent discovery (even if the same subsystem (AC source) is involved). This allowance is acceptable for the reasons given above.

In the event a DG is inoperable, Action d of CTS 3.8.1.1 requires a cross-train check (verification that required systems, subsystems, trains, components, and devices that depend on the remaining operable DG(s) as a source of emergency power are operable) within 2 hours. If a discovered inoperability cannot be corrected before the 2-hour period expires, a unit shutdown is required. Corresponding Required Action B.2 of ITS 3.8.1 requires this cross-train check with the statement "Declare required feature(s), supported by the inoperable DG, inoperable when the redundant required feature(s) are inoperable." This declaration of inoperability is required within "4 hours of discovery of Condition B (one inoperable DG) concurrent with inoperability of redundant required feature(s)." This less restrictive ITS action requirement is acceptable because (a) it allows the operator a total of 4 hours, which is a more reasonable time period to evaluate and repair any discovered inoperabilities, and avoids the risk of a transient associated with a unit shutdown, (b) the probability that a design basis accident will occur during the 4 hour period is small, and (c) other required AC sources are still operable. In addition, if both DG-1 and DG-2 are inoperable, Action E of ITS 3.8.1 allows only 2 hours to restore one of the DGs to operable status before a unit shutdown is required; thus in this case, the ITS action requirements are as restrictive as the CTS requirements.

As noted previously, ITS Required Action B.2 provides an allowance to avoid an immediate forced shutdown when a DG is inoperable at the same time as a required "feature" (i.e., system, subsystem, component) inoperability in the redundant train or division. By allowing "features" associated with the inoperable diesel generator to be declared inoperable, the appropriate actions in the associated specifications can be taken in lieu of the shutdown action specified in ITS 3.8.1. Certain combinations of inoperable components may allow for satisfactory compensatory actions or may have been justified for some allowed restoration time. For these combinations, the risk of a transient associated with a unit shutdown may be avoided, allowing the performance of more appropriate action requirements previously established for these circumstances. However, in most cases, the associated specifications require a unit shutdown if both redundant subsystems are declared inoperable. Therefore, this allowance to declare required features inoperable is acceptable.

The DG surveillances CTS 4.8.1.1.2.a.1, a.3, a.4 and a.5 must be performed on a staggered test basis. This requirement is deleted from the corresponding DG surveillances in the ITS. Several studies show staggered testing has negligible impact on component reliability. These analytical and subjective analyses show that staggered testing (a) is operationally difficult, (b) has negligible impact on component reliability, (c) has no impact on failure frequency, (d) introduces additional stress on components such as diesel generators, potentially causing increased component failure rates and component wearout, (e) reduces redundancy during testing, and (f) increases the likelihood of human error by increasing testing intervals. Therefore, eliminating the staggered testing requirements for the DGs is acceptable.

CTS 4.8.1.1.2.a.1 and 4.8.1.1.2.a.3 require verifying the diesel generator day tank level and the operability of the fuel transfer pump (storage system to the day tank), respectively, at the same frequency that each DG is required to be tested at (every 31 days or every 7 days, according to the failure history of the associated diesel generator). As noted previously, requirements for accelerated testing based on DG failure history are removed from the CTS. Thus, corresponding ITS SR 3.8.1.4, for day tank level, only specifies the 31-day frequency. This is acceptable because DG failures have no impact on the day tank's ability to perform its intended function; the day tank holds more than 3 hours worth of fuel oil above the day tank level limit. Similarly, ITS SR 3.8.1.6 for the fuel oil transfer system specifies a 92-day frequency in place of the 31-day frequency. This is acceptable because DG failures have no impact on the auto-start setpoint of the fuel oil transfer pump, and the 92-day frequency for the fuel oil transfer system is consistent with ASME Section XI requirements for similar pumps.

The allowance in the monthly DG start surveillance (CTS 4.8.1.1.2.a.4, Note *, and ITS SR 3.8.1.2, Note 1) to conduct an engine prelube prior to starting the DG is added to the following other DG surveillances:

CTS	ITS	Description
4.8.1.1.2.a.4	SR 3.8.1.7	Ambient start test
4.8.1.1.2.e.4	SR 3.8.1.11	LOSP start test
4.8.1.1.2.e.5	SR 3.8.1.12	ECCS start test
4.8.1.1.2.e.8	SR 3.8.1.15	Hot restart test
4.8.1.1.2.e.6	SR 3.8.1.19	LOSP-ECCS start test
4.8.1.1.2.f	SR 3.8.1.20	Simultaneous start test

DG starts without prior engine prelube create unnecessary engine wear, thereby reducing overall reliability. The engine prelube does not result in an enhanced start performance that could mask the engine's inability to start in accident conditions without a prelube. Therefore, adding this allowance is acceptable.

CTS 4.8.1.1.2.a.4 (DG monthly start test) and 4.8.1.1.2.e.5 (ECCS start test) contain both upper and lower voltage and frequency limits that must be achieved within the specified time limits following a DG start signal. The upper voltage and frequency limits are omitted from corresponding ITS SR

3.8.1.7 and SR 3.8.1.12. Once steady state conditions are reached, the minimum and maximum voltage and frequency limits must be maintained. The tests in question are those that automatically start the DG but do not tie it to a bus. When called upon, the DG must start and tie within the specified time limits. Once the minimum voltage and frequency limits are met, the DG can tie to the bus. When a test is performed that does not tie the DG to the bus, a voltage or frequency overshoot can occur since no loads are connected (the loading tends to minimize the overshoot). This overshoot could raise the voltage or frequency above the upper limit of the band when the time limit expires. An overshoot condition does not indicate an inoperable DG, provided that steady state voltage and frequency are maintained. The steady state voltage and frequency limits have not been changed because verification that the minimum voltage and frequency limits are met within the proper time is sufficient to ensure the DG can perform its design function. Therefore, this change is acceptable.

The load requirements of CTS 4.8.1.1.2.a.5, the 1-hour DG load test, are relaxed to ensure that exceeding the DG's continuous rating is not routinely required. The new load range is 90%-100% of the continuous rating for the DGs. This change is acceptable because (a) Regulatory Guide 1.9, Revision 3, recommends a load range of 90%-100%, (b) corresponding ITS SR 3.8.1.3 still provides assurance that the DGs will carry normal loads, and (c) the 24-hour run test (ITS SR 3.8.1.14) will continue to ensure that the DGs can carry the rated load.

The load requirements of the note to CTS 4.8.1.1.2.e.8 (ITS SR 3.8.1.15), the hot restart test, are also changed to conform to this load value (the minimum value). This change is acceptable because (a) routine overloading of the DG for this test is precluded and (b) the lower value will still ensure the DG is at operating temperatures.

In addition, a note is added to surveillances stating that momentary transients outside the load range do not invalidate the surveillance. This is to account for momentarily changing bus loads and precludes reperformance of the surveillance solely because the load is outside the load range as a result of momentary transients. This practice is acceptable because demonstration of the DG's load carrying capability continues to be adequately tested. Momentary transients in of themselves do not render a DG inoperable, and these transients are short compared to the duration of a surveillance test.

CTS 4.8.1.1.2.a.5 (1-hour DG load test) requires DG synchronization and loading in ≤ 60 seconds. Corresponding ITS SR 3.8.1.3 has a note specifically allowing the gradual loading of the diesel generator for this test. Deleting the 60 second requirement for attaining full load is acceptable because (a) the DG manufacturer recommends the gradual increase of the load for this testing, and (b) the starting, loading, and subsequent full load operation, as well as the automatic start and loading tests required by other DG surveillances, provide adequate assurance of the capability of each diesel generator to accept accident loads without the 60-second manual loading requirement.

CTS 4.8.1.1.2.b.1 requires checking the diesel generator fuel oil day tanks for any accumulated free water, and draining the water, every 31 days and whenever the DG operates for more than 1 hour. Corresponding ITS SR 3.8.1.5 omits the frequency of whenever the DG operates for greater than one hour. Water condensation within fuel oil tanks is a time-dependent process, not dependent on the transfer of fuel oil during DG operation. Furthermore, the fuel oil storage tank is kept free of accumulated water in accordance with CTS 4.8.1.1.2.b.2 (ITS SR 3.8.3.5). Thus, checking for and removing accumulated water at the normal 31-day interval of the monthly DG 1-hour load test is sufficient. Therefore, this change is acceptable.

A new note has been added to CTS 4.8.1.1.2.e.8, the 24-hour run test, (ITS 3.8.1.14) stating that momentary transients outside the load range do not invalidate the surveillance. This is to account for momentarily changing bus loads and precludes reperformance of the surveillance solely due to the load being outside the load range as a result of momentary transients. This practice is acceptable because demonstration of the DG load carrying capability continues to be adequately tested because momentary transients are short duration events when compared to the duration of a surveillance test.

CTS 4.8.1.1.2.e.8, the DG hot restart test, requires verifying that the DG starts on a simulated LOSP signal, energizes the emergency busses with permanently connected loads and the autoconnected shutdown loads, and operates for ≥ 5 minutes. Corresponding ITS SR 3.8.1.15, like the monthly start test, does not specify how the DG is started, and omits the loading requirements. These omissions are acceptable because (a) the DG's ability to start on a LOSP signal is adequately demonstrated by ITS 3.8.1.11, and its ability to power loads while "hot" is demonstrated during the 24-hour run (ITS SR 3.8.1.14), and (b) automatic loading is an unnecessary repetition of other SRs which confirm the DG's ability to accept sequenced loads. This change allows greater flexibility in scheduling DG testing but does not compromise any necessary demonstration of DG capability.

The phrase "actual or," in reference to the loss of offsite power (LOSP) signal or the ECCS actuation signal, as applicable, is added to the following surveillances:

CTS	ITS	Description
4.8.1.1.2.e.4	SR 3.8.1.11	LOSP start test
4.8.1.1.2.e.5	SR 3.8.1.12	ECCS start test
4.8.1.1.2.e.7	SR 3.8.1.13	Automatic DG trip bypass verification
4.8.1.1.2.e.11	SR 3.8.1.17	ECCS actuation signal override of DG test mode
4.8.1.1.2.e.6	SR 3.8.1.19	LOSP-ECCS start test

This allows satisfactory LOSP or ECCS actuations for other than surveillance purposes to be used to fulfill the surveillance requirement. Operability is adequately demonstrated in either case since the DG cannot discriminate between "actual" or "simulated" signals. Therefore, this change is acceptable.

CTS 4.8.1.1.2.f requires a simultaneous start of each DG at least once every ten years or "after any modifications that could affect diesel generator interdependence." Corresponding ITS SR 3.8.1.20 omits the post-modification test requirement. Any time repair, maintenance, or replacement of a component potentially affects the operability of a system or component, appropriate post-maintenance testing is required to demonstrate the operability of the affected system or component. This includes meeting the specified surveillances for the component, according to ITS SR 3.0.1. Therefore, because post-maintenance surveillance requirements are implicit requirements in the ITS, this change is acceptable.

In the simultaneous DG start test, CTS 4.8.1.1.2.f requires the DGs to achieve a minimum frequency of 60 Hz. ITS SR 3.8.1.20 requires a minimum frequency of 58.8 Hz. With this change of the minimum achieved frequency, all DG tests that confirm frequency will require the same minimum of 58.8 Hz. This is acceptable because it meets the recommendations of Regulatory Guide 1.9, Revision 3.

CTS 4.8.1.1.3 requires reporting all valid and nonvalid DG failures to the NRC in a special report. The report must include the information recommended by Position C.3.b of Regulatory Guide 1.108. The report requires additional information if the failure rate for the last 100 valid tests is ≥ 7 per diesel generator. This reporting requirement is deleted in accordance with the guidance of Generic Letter 94-01. Generic Letter 94-01 allows the removal of diesel generator failure reporting requirements because they are redundant to the reporting requirements of 10 CFR 50.72 and 50.73, which require notifying and reporting certain diesel generator failures to the NRC. Also, this change does not impact the safe operation of the plant because the report submittal follows the diesel generator failure and the report does not require NRC approval. Therefore, this deletion is acceptable.

The following DG surveillances that specify DG starting time limits are revised with new updated time limits.

CTS	ITS	Description
4.8.1.1.2.a.4	SR 3.8.1.7	Ambient start test
4.8.1.1.2.e.4	SR 3.8.1.11	LOSP start test
4.8.1.1.2.e.5	SR 3.8.1.12	ECCS start test
4.8.1.1.2.e.6	SR 3.8.1.19	LOSP-ECCS start test
4.8.1.1.2.f	SR 3.8.1.20	Simultaneous start test

The start times for DG-1 and DG-2 to achieve rated voltage and frequency, or to load connection, are increased from 10 seconds to 15 seconds. The start time for DG-3 is increased from 13 to 15 seconds for other than a loss-of-offsite-power start signal by itself. For a loss-of-offsite-power start signal by itself, the DG-3 start time is increased from 13 to 18 seconds. These changes are based on the relaxed response times assumed for emergency core cooling system (ECCS) parameters in the 10 CFR 50.46 and 10 CFR Part 50, Appendix K analyses (the SAFER/GESTR-LOCA analysis) performed in support of the WNP-2 power uprate approved by the NRC in Amendment No. 137, dated May 2,

1995. This analysis, NEDC-32115P, Revision 2, assumes the following ECCS response times (as shown in Table 4-3 of the analysis):

- HPCS - 37 seconds (15 seconds DG start time, 19 seconds valve stroke time, and 3 seconds instrument response time)
- LPCS - 42 seconds (15 seconds DG start time, 24 seconds valve stroke time, and 3 seconds instrument response time)
- LPCI - 46 seconds (15 seconds DG start time, 28 seconds valve stroke time, and 3 seconds instrument response time)

The relaxation of the DG start times is the result of a change in the plant design basis. Since the DG start and loading times assumed in the current NRC approved design basis SAFER/GESTR-LOCA analysis are unchanged, there will be no effect on the capability of the DGs to support equipment required to mitigate the consequences of the design basis event (i.e., a large break LOCA coincident with a loss of offsite power). Furthermore, these changes will not reduce the effectiveness of the surveillances to demonstrate DG operability, detect equipment degradation, or assure reliability since the surveillances continue to satisfy the recommendations of Regulatory Guide 1.9, "Selection of Diesel Generator Set Capacity for Standby Power Supplies," March 10, 1971, and Regulatory Guide 1.108, "Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants," Revision 1, August 1977, which are the bases for the CTS DG surveillances. Moreover, these changes will not affect current commitments related to DG reliability and the maintenance rule. These commitments are designed to identify and correct equipment deficiencies and degradation and so maintain DG operability and reliability.

The stated increases in the start times and loading times (if applicable) for all three DGs are acceptable based on the above and on the results of the NRC-approved SAFER/GESTR-LOCA analysis.

3.8.2 AC Sources—Shutdown

In the event the one required offsite circuit or DG (DG-1 or DG-2) is inoperable, Action a of CTS 3/4.8.1.2 requires, among other things, suspending "crane operations over the spent fuel storage pool when fuel assemblies are stored therein." This requirement is omitted from the action requirements of corresponding ITS 3.8.2 because crane operation over the spent fuel storage pool is not directly affected by the loss of safety-related power sources. Movement of loads other than fuel assemblies is administratively controlled in accordance with the WNP-2 heavy loads analyses and the design of the reactor building crane as described in FSAR Section 9.1.4.2.2. As discussed in FSAR Section 15.7.4.2.1, from a radiological point of view, the bounding design basis fuel handling accident assumes an irradiated fuel assembly is dropped onto an array of irradiated fuel assemblies seated within the RPV. The movement of other loads over irradiated fuel assemblies is administratively controlled based on available analysis for the individual load. In addition, CTS 3.9.7, which contains crane travel limitations over the spent fuel storage pool, is relocated to the LCS. Thus, crane operation over the spent fuel storage pool following a loss of one or both required AC power sources will be adequately addressed in plant procedures and the LCS. Therefore, this change is acceptable. Changes to the LCS will be controlled in accordance with 10 CFR 50.59.

CTS 4.8.1.2 requires meeting all of the surveillances specified in CTS 4.8.1.1.1, 4.8.1.1.2 (except 4.8.1.1.2.a.3), and 4.8.1.1.3 in Modes 4 and 5 and when handling irradiated fuel in the secondary containment. This means that the surveillances listed in the first column below are applicable. The corresponding surveillances required by the ITS during these operational conditions are given in the second column (if required by other than SR 3.8.2.1, italic type is used). Surveillances that do not have to be performed are in bold type. In addition, the three surveillances marked by an asterisk are not applicable.

CTS	ITS		Description
4.8.1.1.1.a	SR 3.8.1.1		Offsite circuit alignment verification
4.8.1.1.1.b	SR 3.8.1.8	*	Auto and manual bus transfer test
4.8.1.1.2.a.1	SR 3.8.1.4		DG day tank fuel oil volume check
4.8.1.1.2.a.2	*SR 3.8.3.1*		*DG storage tank fuel oil volume check*
4.8.1.1.2.a.3	SR 3.8.1.6		Fuel oil transfer system test
4.8.1.1.2.a.4	SR 3.8.1.2		DG start test
	SR 3.8.1.7		DG ambient start test
4.8.1.1.2.a.5	SR 3.8.1.3		DG 1-hour load test
4.8.1.1.2.a.6	-		Deleted (see Section 3.8.b)
4.8.1.1.2.a.7	*SR 3.8.3.4*		*Air receiver check*
4.8.1.1.2.b.1	SR 3.8.1.5		DG fuel oil day tank water check
4.8.1.1.2.b.2	*SR 3.8.3.5*		*DG Fuel oil storage tank water check*
4.8.1.1.2.c	*SR 3.8.3.3*		*Fuel oil testing per ITS 5.5.9*
4.8.1.1.2.d	*SR 3.8.3.3*		*Fuel oil testing per ITS 5.5.9*
4.8.1.1.2.e.1	-		Deleted (see Section 3.8.b)
4.8.1.1.2.e.2	**SR 3.8.1.9**		**DG single largest load rejection**
4.8.1.1.2.e.3	**SR 3.8.1.10**		**DG full load rejection**
4.8.1.1.2.e.4	**SR 3.8.1.11**		**DG LOSP start test**
4.8.1.1.2.e.5	**SR 3.8.1.12**		**DG ECCS start test**
4.8.1.1.2.e.6	**SR 3.8.1.19**		**DG LOSP-ECCS start test**
4.8.1.1.2.e.7	**SR 3.8.1.13**		**DG automatic trip bypass test**
4.8.1.1.2.e.8	**SR 3.8.1.14**		**DG 24-hour full load run**
	SR 3.8.1.15		**DG hot restart test**
4.8.1.1.2.e.9	-		Deleted (see Section 3.8.b)
4.8.1.1.2.e.10	**SR 3.8.1.16**		**Test of capability to transfer emergency loads from the DG to an offsite circuit**

CTS	ITS		Description
4.8.1.1.2.e.11	SR 3.8.1.17	*	ECCS actuation signal override of DG test mode
4.8.1.1.2.e.12	SR 3.8.1.18		Load sequence timing verification
4.8.1.1.2.e.13	-		Deleted (see Section 3.8.b)
4.8.1.1.2.f	SR 3.8.1.20	*	DG simultaneous start test
4.8.1.1.2.g	-		Deleted (see Section 3.8.b)
4.8.1.1.3	-		Deleted (see Section 3.8.b)

Many of the currently required surveillances involve tests that would require the DG to be paralleled to offsite power. This requirement places the plant in a condition in which the only required DG and the only required offsite circuit are connected, presenting a significant risk of a single fault resulting in a station blackout. Therefore, surveillances such as these are excepted from performance requirements by the note to ITS SR 3.8.2.1. This note does not allow an exception to the requirement for the DG to be capable of performing the particular function; just to the requirement to demonstrate it while that source of power is being relied on to support meeting the LCO. This change is acceptable because it avoids the risk associated with connecting the only required onsite and offsite AC power sources during shutdown conditions while retaining the requirement that the excepted surveillances be met.

The three surveillances marked by an asterisk are not applicable and do not have to be current during shutdown conditions. SR 3.8.1.8 is not required because only one offsite circuit is required to be operable; thus the capability to transfer between required offsite sources is not necessary. SR 3.8.1.17 is not required because the operable DG is not required to undergo periods of being synchronized to the offsite circuit during shutdown conditions to demonstrate compliance with analysis assumptions; thus the capability of an ECCS actuation signal to override the DG operating in test mode is not necessary. SR 3.8.1.20 is not required because DG starting independence is not required with the DG(s) not required to be operable. Therefore, deleting the requirement that these surveillances be met during shutdown conditions is acceptable.

CTS 4.8.1.2 requires meeting CTS 4.8.1.1.2 in Modes 4 and 5 when handling irradiated fuel in the secondary containment. CTS 4.8.1.1.3 requires reporting all valid and non-valid DG failures to the NRC in a special report. The report must include the information recommended by Position C.3.b of Regulatory Guide 1.108. The report requires additional information if the failure rate for the last 100 valid tests is ≥ 7 per diesel generator. This reporting requirement is deleted in accordance with the guidance of Generic Letter 94-01. Generic Letter 94-01 allows the removal of diesel generator failure reporting requirements because they are redundant to the reporting requirements of 10 CFR 50.72 and 50.73, which require notifying and reporting certain diesel generator failures to the NRC. Also, this change does not impact the safe operation of the plant because report submittal follows diesel generator failure and the report does not require NRC approval. Therefore, this deletion is acceptable.

3.8.3 Diesel, Fuel Oil, Lube Oil, and Starting Air

The preventive maintenance requirements of CTS 4.8.1.1.2.g to drain and clean the diesel fuel oil storage tanks and to conduct a pressure test of the fuel oil system, are removed from the CTS. This is acceptable because these preventive maintenance requirements do not directly support fuel oil system operability.

In the event the limits on fuel oil volume, fuel oil property limits, or starting air pressure are not satisfied, the action requirements for an inoperable DG in CTS 3/4.8.1.1 allow 72 hours to correct the condition before a unit shutdown is required. However, the specified volume, pressure and property limits are actually greater than the volume, pressure and property values necessary to ensure DG operability. Therefore, certain relaxations in these parameters are warranted to allow more time for correcting the out-of-limit condition. Thus, in the event one of these parameters is outside the specified limit but within the necessary limit, the actions of ITS 3.8.3 allow 48 hours to restore fuel oil inventory in the storage tanks (Action A), 7 days to restore fuel oil total particulates to within limits (Action C), 30 days to restore other fuel oil properties to within limits (Action D), and 48 hours to restore starting air pressure (Action E). These allowances are acceptable because the 48 hour limits are actually more limiting than the previous limits and during the extended restoration periods for these parameters, the diesel generator would still be capable of performing its intended function and because unnecessary unit shutdown transients may be avoided by this incremental increase in repair times without adversely affecting safe operation of the plant.

CTS 4.8.1.1.2.a.2 and 4.8.1.1.2.a.7, require verifying respectively, the inventory of the fuel oil in each DG fuel oil storage tank and the air pressure in each DG air start receiver at the frequency specified in CTS Table 4.8.1.1.2-1 (31 days or 7 days, dependent on the diesel failure rate). More frequent DG testing resulting from DG failures caused by noncompliance with these SRs have no impact on the ability of these supporting systems to perform their intended function. Thus, more frequent testing is unwarranted and is omitted from corresponding ITS SR 3.8.3.1 for the storage tank inventory and SR 3.8.3.4 for the air receiver pressure. This change is acceptable because the 31-day frequency is adequate to ensure the operability of these DG support functions. Also, the more frequent testing requirement for DGs has been removed from the CTS.

CTS 4.8.1.1.2.a and 4.8.1.1.2.a.7 are required to be performed on a staggered test basis. This requirement is deleted from corresponding surveillances in the ITS. Several studies show staggered testing has negligible impact on component reliability. These analytical and subjective analyses show staggered testing (a) is operationally difficult, (b) has negligible impact on component reliability, (c) has no impact on failure frequency, (d) introduces additional stress on components such as diesel generators, potentially causing increased component failure rates and component wearout, (e) results in reduced redundancy during testing, and (f) increases the likelihood of human error by increasing testing intervals. Therefore, eliminating the staggered testing requirements for these surveillances is acceptable.

The frequency of CTS 4.8.1.1.2.b.2, to check for accumulated water in the bottom of the fuel oil storage tanks, is relaxed from 31 days to 92 days in corresponding ITS SR 3.8.3.5. This is acceptable at WNP-2 because the bottom of the tanks are approximately 40 feet above the ground water table; thus ground water will not leak into the tanks. This is consistent with the recommendation of Regulatory Guide 1.137 that water accumulation be checked every 92 days, provided the ground water table is lower than the bottom of the storage tanks (a 31-day frequency is recommended if the ground water table is above the bottom of the storage tanks). This change is also acceptable because (a) as stated in the licensee's submittal, no accumulated water has been found by this surveillance for the past 3 years (a total of 116 surveillances), and (b) a filter polisher unit has been installed that will further decrease the potential for accumulated water in the storage tanks.

3.8.4 DC Sources—Operating

CTS 3.8.2.1 contains a detailed listing of DC electrical power sources, including component numbers, that are required to be operable. These design details are moved to the Bases for corresponding ITS LCO 3.8.4. ITS LCO 3.8.4 simply requires that the Division 1, Division 2, and Division 3 DC electrical power subsystems be operable. This is acceptable because these design details are adequately addressed by other requirements in the FSAR and do not need to be included in the TS to ensure the operability of the DC sources.

The 24-volt batteries (BO-1A, BO-1B, BO-2A, and BO-2B) and their associated chargers are required to be operable by CTS 3.8.2.1. These LCO requirements are moved to the LCS. The 24-volt batteries and their associated chargers are the power sources for the intermediate range monitor (IRM) and the source range monitor (SRM). These monitors are only needed during a plant startup and their operability is required by ITS Section 3.3, "Instrumentation." This change is acceptable because the safety function of the 24-volt batteries and their associated battery chargers is adequately ensured by applying the definition of operability to the IRM and SRM.

CTS 4.8.2.1.c.4, the battery charger capacity test, specifies a load of at least 200 amperes for the 125-VDC battery chargers and at least 400 amperes for the 250-VDC battery chargers. Corresponding ITS SR 3.8.4.6 omits the load details, only specifying that the test be accomplished at "the required load." The details of the loading profiles and the 100% load ratings are moved to the Bases for ITS SR 3.8.4.6. In addition, the 100% load ratings (200 amperes for the 125-VDC battery chargers and 400 amperes for the 250-VDC battery chargers) are also described in the FSAR. This is appropriate because as the licensee stated in its submittal, the battery charger vendor recommends load tests of the battery chargers at three distinct loads, not just a test at the 100% rating (as currently specified). In addition, the requirements of ITS LCO 3.8.4 and ITS SR 3.8.4.6 are adequate to ensure the battery chargers are operable. This change is acceptable because the details of the load profiles are not necessary to ensure the operability of the battery chargers.

CTS 4.8.2.1.d is retained as ITS SR 3.8.4.7 with certain details concerning the nature and duration of the service test omitted. These details, such as design load, the 2-hour length of the test, and the minimum voltage that must be maintained to ensure operability of the supported emergency DC loads, are moved to the FSAR. ITS SR 3.8.4.7 requires verifying that each battery can supply the design duty cycle. This change is acceptable because the requirement for performance of the service test implies that the test duration must be consistent with the plant-specific licensed service duration.

CTS 4.8.2.1.f defines when battery degradation is indicated in order to trigger a decrease in the test interval of the battery performance discharge test (CTS 4.8.2.1.e) from 60 months to 18 months (this is changed to 12 months in the ITS). The definition of degradation is moved to the Bases for the second frequency of corresponding ITS SR 3.8.4.8. This information is not necessary for performance of SR 3.8.4.8 because it is only used to determine when the surveillance is required. Changes to this information will be controlled in accordance with ITS 5.5.10, "TS Bases Control Program." Therefore, this change is acceptable.

The frequencies of CTS 4.8.2.1.c.4 and 4.8.2.1.d.1, to verify the capacity of the battery chargers and the batteries, respectively, are relaxed from 18 months to 24 months in corresponding ITS SR 3.8.4.6 and SR 3.8.4.7. These changes are acceptable for the reasons given in paragraph (10) "Surveillance Interval Extension from 18 to 24 Months" in the general discussion of less restrictive requirements at the beginning of Part III of this safety evaluation.

Action C of ITS 3.8.4 is added to the DC sources action requirements to clarify the appropriate action in the event the 250 volt electrical power subsystem is inoperable (only Division 1 has a 250 volt subsystem). As such, Action C requires immediately declaring the associated supported features inoperable. The 250 volt battery and charger provide power through a solid state inverter to various reactor core isolation cooling (RCIC), residual heat removal (RHR) system and reactor water cleanup (RWCU) system PCIVs, and to non-TS equipment such as plant controls, instrumentation, and computer and communication equipment. Therefore, the 250 volt electrical power subsystem only supports two TS-related functions. Although the resulting allowed outage times are greater than the CTS 2-hour time allowed to restore the subsystem to operable status, this change is acceptable because the specifications for the RCIC (ITS 3.5.3) and RCIC, RHR and RWCU PCIVs (ITS 3.6.1.3) will ensure the appropriate actions are taken.

The battery terminal float voltages for the 250 volt and 125 volt batteries are required to be $\geq$ 258 volts and $\geq$ 129 volts respectively by CTS 4.8.2.1.a.2, 4.8.2.1.c.4, and 4.8.2.1.c.4.3. In corresponding ITS SR 3.8.4.1 and SR 3.8.4.6, respectively, these values are changed to $\geq$ 252 volts and $\geq$ 126 volts. This change is acceptable because the licensee has replaced the previous station batteries with new batteries and the proposed change is consistent with the design of the new 250 and 125 volt batteries, which utilize 116 cells and 58 cells respectively, and with the battery manufacturer's technical manuals, which recommend that the battery cells be maintained at 2.17 volts per cell while on float charge.

The requirement to perform CTS 4.8.2.1.b (verification of no visible corrosion at either terminals or connectors, or connection resistance of less than 250 x 10E-6 ohms) within 7 days after a specified battery discharge or overcharge, is deleted. Deleting this performance-based requirement is acceptable because battery resistance does not degrade significantly during discharge or overcharging, since corrosion rates and connection resistance are not immediately and significantly affected by a severe discharge or overcharge condition.

The "clean" and "tight" criteria for the cell-to-cell and terminal connections of the batteries specified in CTS 4.8.2.1.c.2 (battery corrosion inspection) are deleted. Corresponding ITS SR 3.8.4.4 only requires that visible corrosion be removed and that the connections be coated with anti-corrosion material. The "clean" criterion is deleted because it is redundant to the "free of corrosion" requirement of CTS 4.8.2.1.b.2 (ITS SR 3.8.4.2). The "tight" criterion is deleted because it may require torquing the connecting bolts to confirm tightness, which can lead to overstressing the bolted connection. The torque on the connection may be assumed to be appropriate if the connection satisfies the resistance requirements of CTS 4.8.2.1.c.3 (ITS SR 3.8.4.5). Therefore, this change is acceptable.

CTS 4.8.2.1.c.4.3 requires a 4-hour load test of the station battery chargers. ITS SR 3.8.4.6 reduces the duration of the load test to 1.5 hours and performs the test by loading the chargers to at least 50% full load for 30 minutes, at least 75% full load for 30 minutes, and at least 100% full load for 30 minutes. The proposed change is acceptable because the duration of the load test is sufficient to determine charger operability and should detect any problems normally detected by the longer 4-hour load test. The proposed test duration is sufficient to allow the temperature of the charger components to stabilize, and the step load changes during the test are intended to better verify proper operation of all charger components.

CTS 4.8.2.1.d and 4.8.2.1.e are required to be performed while shutdown. The notes associated with ITS SR 3.8.4.7 and SR 3.8.4.8 have been modified to allow credit to be taken for unplanned events that satisfy the requirements of the associated SR. These notes are required to clarify that should circumstances occur during operation which result in an unplanned event which results in performance of the surveillance requirements, credit may be taken for the SR. This is acceptable because data obtained during the normal performance of each surveillance will provide the necessary information and the acceptance criteria must be satisfied before credit can be taken for the unplanned event.

CTS 4.8.2.1.e and 4.8.2.1.f require a battery performance discharge test, and permit performing this test in lieu of the service test (CTS 4.8.2.1.d and ITS SR 3.8.4.7) when performed at its specified 60-month interval. This provision is revised in Note 1 to ITS SR 3.8.4.7 to allow only a "modified" performance discharge test to satisfy the service test requirement. Accordingly,

corresponding ITS SR 3.8.4.8 contains the option to perform a modified performance discharge test in lieu of the currently required performance discharge test. The modified performance discharge test is a simulated duty cycle consisting of just two rates: a 1-minute discharge at the 1-minute rate published for the battery or the largest current load duty cycle load, followed by the test rate employed for the performance test. A small portion of the battery ampere-hour capacity is removed during the high rate 1-minute discharge. Since the ampere-hours removed by a rated 1-minute discharge represent a very small portion of the battery capacity, the test rate can be changed to the 1-minute rate for the performance test without compromising the results of the performance discharge test.

CTS 4.8.2.1.e states the battery performance discharge test may be substituted for the battery service test once in a 60-month period. ITS SR 3.8.4.7 retains this provision as Note 1, but only allows the "modified" performance discharge test, SR 3.8.4.8, as a substitute for the battery service test once per 60 months. This change only clarifies the existing allowance, which is consistent with Institute of Electrical and Electronics Engineers (IEEE) Standard 450 1987 (IEEE-450). In addition, this existing provision is acceptable, because the modified battery performance discharge test is a more severe test of battery capacity than the battery service test.

CTS 4.8.2.1.f requires performing the battery discharge test once per 18 months if the battery shows signs of degradation or has reached 85% of the service life expected for the application. However, if the battery has reached 85% of the expected life with capacity ≥ 100% of the manufacturer's rating, a longer test interval is justified. Thus, a 24-month frequency for corresponding ITS SR 3.8.4.8 is specified for a battery in the situation described. This change is acceptable.

3.8.5 DC Sources—Shutdown

CTS 3.8.2.2 contains a detailed listing of DC electrical power sources, including component numbers, that are required to be operable. These design details are moved to the Bases for corresponding ITS LCO 3.8.5. ITS LCO 3.8.5 simply requires the Division 1, Division 2, and Division 3 DC electrical power subsystems to be operable as required to support the electrical power distribution subsystems required by ITS 3.8.8 for shutdown conditions. This is acceptable because these design details are adequately addressed by other requirements in the LCS/FSAR and controlled by 10 CFR 50.59, and do not need to be included in the TS to ensure the operability of the DC sources.

For the reasons given in discussion 3.8.b of ITS 3.8.4 above, the explicit requirements for the ±24-volt batteries and battery chargers are removed from CTS 3/4.8.2.2. This change is acceptable.

CTS 4.8.2.2 requires demonstrating that at least the required battery and battery charger are operable per the surveillance requirements of CTS 4.8.2.1, with no exceptions. Corresponding ITS SR 3.8.5.1 requires the same surveillances to be met during shutdown conditions (SR 3.8.4.1, 3.8.4.2, 3.8.4.3, 3.8.4.4, 3.8.4.5, 3.8.4.6, 3.8.4.7, and 3.8.4.8). However, a note to

SR 3.8.5.1 states that SR 3.8.4.7 and 3.8.4.8 are not required to be performed. Performance of either of these surveillances (the battery service test or the battery performance test) on the only required operable battery may render that battery inoperable, and would present a significant safety risk were an event to occur during the test. This note does not except the requirement for the battery to be capable of meeting the test criteria of the surveillance; it only excepts the requirement to demonstrate that capability while that battery is being relied on to meet the LCO. Therefore, this Note is acceptable.

3.8.6 Battery Cell Parameters

As addressed in subsection 3.8.b, LCO 3.8.4, LA.2, the requirement for the ± 24-volt battery parameters are removed from CTS 3/4.8.2.1 and 3/4.8.2.2.

CTS 4.8.2.1.b.3, for determining each battery's average electrolyte temperature, is based on IEEE-450, which recommends measuring representative cells for determining the average electrolyte temperature. Application of this recommendation to the batteries at WNP-2 is explicitly stated in CTS 4.8.2.1.b.3 (i.e., 10 cells for the 125 volt batteries and 20 cells for the 250 volt battery). These procedural details relating to the plant-specific determination of "representative" are moved to the Bases for corresponding ITS SR 3.8.6.3. This change is acceptable because the requirements retained in ITS 3.8.6 are adequate to ensure battery cell average electrolyte temperature is properly determined and maintained > 60°F.

Every 92 days and within 7 days after a battery discharge or overcharge, CTS 4.8.2.1.b.3 requires verifying the average electrolyte temperature of selected battery cells is > 60°F. Corresponding ITS SR 3.8.6.3 omits the within-7-days frequency. This is reasonable because battery electrolyte temperature generally increases with severe discharging and overcharging. Thus, not monitoring for a temperature decrease is acceptable.

The limits on the cell electrolyte level in CTS Table 4.8.2.1-1 are retained in ITS Table 3.8.6-1 with the addition of Note a to allow a temporary increase above the specified maximum level during and following an equalizing charge, provided the electrolyte is not overflowing. The level excursion is due to gas generation during the equalizing charge. The level returns to normal within 3 days of completing of the equalizing charge (reestablishing the float charge). This note is based on the guidance in Appendix A of IEEE Standard 450, 1987, which recognizes the high level condition that may accompany an equalizing charge as temporary. The exception to the high level limit specified in Note a is acceptable because a high electrolyte level caused by an equalizing charge is temporary and self-correcting and has no effect on battery operability.

Note b to CTS Table 4.8.2.1-1 allows the substitution of a battery charging current of less than 2 amperes when on float charge for the specific gravity measurements of Category A (pilot cells) and Category B, second column (each connected cell). Corresponding Note c to ITS Table 3.8.6-1 also allows use of charging current for Category B limits on each connected cell. A battery

charge affects all connected cells, and the charging current is an accurate indication of battery state following a charge that is directly related to specific gravity. In extending this allowance, the ITS also limits use of charging current to 7 days, after which specific gravity must be measured to verify the specific gravity of all cells are within limits in order to satisfy ITS SR 3.8.6.1 and SR 3.8.6.2. Because of the 7-day limit and the fact that the float charge current for a freshly charged battery is an accurate indication of the cell strength, this change is acceptable.

Notes 1, 2, and 3 of CTS Table 4.8.2.1-1 specify action requirements for battery cell parameters not within limits. These requirements are relaxed as follows:

In the event any Category A battery cell parameters are outside the limits, Note 1 states the battery may be considered operable provided that within 24 hours all Category B parameters are verified to be within their allowable values (Category C limits in the ITS), and all Category A and B parameters are restored to within limits within the next 6 days. Corresponding Required Action A.3 of ITS 3.8.6 relaxes the restoration time to 31 days.

In the event any Category B parameters are outside the limits, the battery may be considered operable provided the Category B parameters are within their allowable values (Category C limits in the ITS) and provided the Category B parameters are restored to within limits within 7 days. Corresponding Required Action A.3 of ITS 3.8.6 relaxes the restoration time to 31 days.

Taken together, these two changes can be viewed as a single Completion Time increase from 7 days to 31 days. This change is acceptable because (a) enough battery capacity exists to perform its intended function, as long as the battery meets the Category C limits, (b) Required Action A.2 requires verifying that the battery meets the Category C limits every 7 days in addition to the currently required verification within the initial 24 hours, and (c) it is consistent with the IEEE battery working group recommendations in a letter from B.M. Radimer (IEEE) to S.K. Aggarwal (NRC), dated August 2, 1988.

3.8.7 Distribution Systems—Operating

CTS 3.8.3.1 contains a detailed list of buses, motor control centers (MCCs), power panels and distribution panels contained in the Division 1, 2, and 3 subsystems of the AC and DC electrical power distribution systems at WNP-2. In addition, it requires tie breakers between redundant buses to be open for the buses to be operable. These details are moved to the Bases for ITS 3.8.7. Including system design details in an LCO statement is not necessary because the definition of operability is sufficient.

As addressed in Section 3.8.b (ITS 3.8.4) of this safety evaluation, requirements for the ±24-volt DC electrical power sources in CTS 3/4.8.2) and distribution system in CTS 3/4.8.3 are removed from the CTS.

CTS 4.8.3.1 requires energization checks "on the busses/MCCs/panels." Details of the methods for performing the surveillance (on the busses/MCCs/panels) to verify the required distribution systems are operable are moved to the Bases. These details are not necessary to ensure the operability of the distribution systems. The requirements of ITS 3.8.7 and SR 3.8.7.1 are adequate to ensure the required distribution systems are maintained operable. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5.0 of the ITS.

Action D of ITS 3.8.7 is added to the DC electrical power distribution system action requirements of CTS 3.8.3.1 to clarify the appropriate action in the event the 250 volt electrical power distribution subsystem is inoperable (deenergized) (only Division 1 has a 250 volt subsystem). Accordingly, Action D requires immediately declaring the associated supported features inoperable. The 250 volt subsystem supports through a solid state inverter, various reactor core isolation cooling (RCIC) system, and residual heat removal (RHR) system and reactor water cleanup (RWCU) system PCIVs, and non-TS equipment such as plant controls, instrumentation, and computer and communication equipment through a solid state inverter. Therefore, the 250 volt subsystem only supports two TS-related functions. Although the resulting allowed outage times are greater than the CTS 2-hour time allowed to restore the subsystem to operable status, this change is acceptable because the specifications for the RCIC (ITS 3.5.3), and RCIC, RHR and RWCU PCIVs (ITS 3.6.1.3) will ensure the appropriate actions are taken.

CTS 4.8.3.1 verifies energization of electrical power distribution system buses, motor control centers (MCCs), and panels by two methods-circuit breaker alignment and the presence of voltage on the bus, MCC, or panel. Corresponding ITS SR 3.8.7.1 verifies energization by two methods-circuit breaker alignment and indicated power availability. The surveillance removes the requirement to verify the subsystem voltages, requiring power availability indication instead. Voltage indication is not available on all AC and DC buses. By requiring verification of indicated power availability, the surveillance more accurately states the intent of the CTS requirement to verify voltage and also permits flexibility in ascertaining the availability of power on the required AC and DC buses, MCCs, and panels. For example, the licensee currently verifies proper power availability on a bus with no voltage indication by verifying a load powered from the bus is operating or verifying the absence of a low voltage alarm on the bus. This change is acceptable because the effectiveness of the CTS surveillance to verify the LCO is met is not affected by the additional flexibility afforded by the ITS surveillance.

3.8.8 Distribution Systems—Shutdown

CTS 3.8.3.2 contains a detailed list of buses, motor control centers (MCCs), power panels, and distribution panels contained in the Division 1, 2, and 3 subsystems of the AC and DC electrical power distribution systems at WNP-2. In addition, it requires tie breakers between redundant buses to be open for the buses to be operable. These details are moved to the Bases for ITS 3.8.7. This change is acceptable for the reasons given in Section 3.8.7 (ITS 3.8.7) of this safety evaluation.

CTS 4.8.3.2 requires energization checks "on the buses/MCCs/panels." Details of the methods for performing the surveillance (on the buses/MCCs/panels) to verify the required distribution systems are operable are moved to the Bases. These details are not necessary to ensure the operability of the distribution systems. The requirements of ITS 3.8.8 and SR 3.8.8.1 are adequate to ensure the required distribution systems are maintained operable. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in Chapter 5.0 of the ITS.

Like CTS 4.8.3.1, CTS 4.8.3.2 verifies energization by two methods - circuit breaker alignment and the presence of voltage on the bus, MCC, or panel. This is revised in ITS SR 3.8.8.1, which has language identical to that of ITS SR 3.8.7.1. This change is acceptable for the reasons given in Section 3.8.b (ITS 3.8.7) of this safety evaluation.

Conclusion

These less restrictive requirements are acceptable because they will not affect the safe operation of the plant. As discussed in the evaluation format section and summarized in Table 1, to the extent that these less restrictive requirements involve the relocation of matters from the CTS to licensee-controlled documents, they are not otherwise required to be in the TS under 10 CFR 50.36 and they are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to public health and safety. The TS requirements that remain are consistent with current licensing practices, operating experience and plant accident and transient analyses, and provide reasonable assurance that public health and safety will be protected.

c. More Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 3.8, "Electrical Power Systems," proposed a number of more restrictive requirements than are allowed by CTS Section 3/4.8. These requirements are the following.

3.8.1 AC Sources—Operating

Actions a and c of CTS 3/4.8.1.1 together allow DG-3 and either DG-1 or DG-2 to be concurrently inoperable for 72 hours (the individual allowed outage times) before requiring a unit shutdown, provided within 2 hours a loss-of-function condition is verified not to exist (i.e., provided Action d is met). In ITS 3.8.1, and Required Action E.1 (in the event DG-3 and another DG are inoperable) reduce the time to repair one of the two inoperable DGs to 24 hours before requiring a unit shutdown (per Action E).

In the event a DG is inoperable, Action d of CTS 3/4.8.1.1 requires verifying within 2 hours (4 hours in corresponding Required Action B.2 of ITS 3.8.1) that "all required systems, subsystems, trains, components, and devices that depend on the remaining operable DGs as a source of emergency power are also operable (a no-loss-of-function check). The ITS add similar action requirements if an offsite circuit is inoperable (Required Action A.2) and if two required offsite circuits are inoperable (Required Action C.1).

Required Action A.2 requires declaring required features with no offsite power available inoperable within 24 hours of discovering no offsite power to one division concurrent with inoperability of redundant required features.

Required Action C.1 requires declaring required features inoperable within 12 hours of discovering two inoperable required offsite circuits concurrent with inoperability of redundant required features.

These additional requirements are acceptable because they limit the time that offsite power is not available to one of the two redundant systems and ensure that all necessary supported systems are operable to respond to a DBA or transient.

In the event DG-1 and DG-2 are inoperable, Action f of CTS 3.8.1 allows 2 hours to verify correct breaker alignment and indicated power availability for each offsite circuit (CTS 4.8.1.1.1.a). The corresponding action requirement in ITS 3.8.1 (Required Action A.1) only allows 1 hour to perform corresponding SR 3.8.1.1. This is acceptable because 1 hour is sufficient time to perform this verification and because it falls within the 2-hour period allowed by ITS Required Action E.1 to restore one of the DGs to operable status in the event DG-1 and DG-2 are inoperable.

In the following DG surveillances, the frequency range criterion is changed from 60 ± 3.0 Hz to 60 ± 1.2 Hz. This is acceptable because it is consistent with Regulatory Guide 1.9, Revision 3. In addition, the upper voltage limit is reduced from 4580 V to 4400 V. This is acceptable because it will ensure that when a bus is lightly loaded, the maximum voltage rating of components powered by the bus will not be exceeded.

CTS	ITS	Description
4.8.1.1.2.a.4	SR 3.8.1.2	DG standby start test
	SR 3.8.1.7	DG ambient start test
4.8.1.1.2.a.5	SR 3.8.1.3	DG 1-hour load test
4.8.1.1.2.e.4	SR 3.8.1.11	DG LOSP start test
4.8.1.1.2.e.5	SR 3.8.1.12	DG ECCS start test
4.8.1.1.2.e.6	SR 3.8.1.19	DG LOSP-ECCS start test
4.8.1.1.2.e.8	SR 3.8.1.15	DG hot restart test
4.8.1.1.2.f	SR 3.8.1.20	DG simultaneous start test

Two notes are added to CTS 4.8.1.1.2.a.5, the DG 1-hour load test, in corresponding ITS SR 3.8.1.3. Note 3 precludes performing this surveillance on more than one DG at a time, and Note 4 requires performing this surveillance immediately following the successful performance of SR 3.8.1.2 or SR 3.8.1.7 (the DG start test). These notes are acceptable because they conform to the intent of the CTS and current DG testing practice at WNP-2.

They are more restrictive than the CTS, which (a) do not prohibit testing more than one DG at a time and (b) do not require performing the 1-hour load test in conjunction with the DG start test.

Limits on the operating power factor are added to the following DG surveillances:

CTS	ITS	Description
4.8.1.1.2.e.2	SR 3.8.1.9 Note 2	Single load rejection test
4.8.1.1.2.e.3	SR 3.8.1.10 Note 2	Full load rejection test
4.8.1.1.2.e.8	SR 3.8.1.14 Note 3	24-hour full load run

The improved standard technical specifications require that during performance of these surveillance requirements the emergency diesel generators (EDG) be operated at a power factor ≤ (.9) to ensure that the EDG is tested under load conditions that are as close to design basis conditions as possible. This power factor is chosen to be representative of the actual design basis inductive loading that the EDG would experience. The licensee proposed that the power factor values be included in the bases section rather than the TS because if a specific power factor value is included in the TS and the grid conditions do not permit to operate at that value, the licensee will be in violation of its TS. If the offsite electrical power distribution system voltage happens to be high at the time these surveillances are performed, increased excitation will be necessary for the EDG to match system voltage when synchronizing to the associated ESF bus. Once tied to the ESF bus, it may not be possible to increase EDG excitation sufficiently to meet the required reactive load value that ensures the power factor value is met without exceeding the EDG excitation system ratings. This reduces the margin available to adjust the kilovolt-amperes reactive (KVAR) loading on the EDG when operating in parallel with the grid to the required power factor before the maximum current limits, of its excitation system are reached.

Further, if the EDG is operating at or near the limits of the excitation system during a test run and a transient or swing in grid reactive load flow occurs, the capabilities of the EDG excitation system will be challenged. Therefore, to ensure that the EDG is not placed in an unsafe condition during these surveillances, the licensee proposed to put a note in the TS in recognition that under these conditions the power factor value does not have to be met when the EDG is tied to the grid and that the power factor will be maintained as close to the value as practicable. It is concluded that running the EDGs at a power factor as close to the accident load power factor as practicable with the excitation current greater than or equal to 90% of the continuous current rating of the EDG static exciters at rated load will adequately detect failures or weaknesses in the regulator and excitor components or field windings due to reactive loading without exceeding excitation system limits. Therefore, we find the licensee's proposed changes to be acceptable.

In addition to these power factor limits, a note is added to SR 3.8.1.14 to clarify that a momentary transient that as a result of which the power factor is not met does not invalidate the 24-hour full load run.

CTS 4.8.1.1.2.e.4.b requires a loss-of-offsite power (LOSP) start test for DG-3. However, this surveillance requirement does not require energizing the "auto-connected" shutdown loads, only the "permanently-connected" loads, within the specified time limit. Similarly, for the LOSP-ECCS combined start test for DG-3, CTS 4.8.1.1.2.e.6.b only requires DG-3 to energize the permanently-connected and auto loads; however, in this case, no time limit is specified for permanent loads. A requirement to energize the auto-connected loads, with no time limit is added in corresponding ITS SR 3.8.1.11. In addition, a requirement to energize the permanently-connected loads within 15 seconds is added in SR 3.8.1.19. These additional requirements are acceptable because they ensure that Division 3 auto-connected loads, such as the HPCS service water pump, will be energized from DG-3 in the event of a LOSP or a LOSP with an ECCS actuation signal.

In CTS 4.8.1.1.2.e.5, the DG ECCS start surveillance (loading not required) allows the steady state output voltage for DG-1 and DG-2 to be as low as 3740 V (420 volts below the nominal value of 4160 V). The minimum voltage to be achieved in this test is increased to 3910 V in the corresponding ITS surveillance (ITS SR 3.8.1.12). This change is acceptable because the new value is consistent with the DG output breaker closure permissive voltage.

DG tests requiring the DG-1 or DG-2 to be connected to the bus retain the current value.

CTS 4.8.1.1.2.e.5, the DG ECCS start test, does not require verifying (a) that permanently connected loads remain energized from the offsite power system, or (b) that emergency loads are auto-connected to the offsite power system. These two requirements are added in corresponding ITS SR 3.8.1.12. These verifications are necessary because separate load timers auto-connect some of the emergency loads to the offsite power system. Therefore, adding them in SR 3.8.1.12 is acceptable.

CTS 4.8.1.1.2.f, the simultaneous start test of all three DGs, does not specify an acceptance criterion for minimum DG output voltage. This criterion is added in corresponding ITS SR 3.8.1.20, as with the other DG start tests where loading is not required. This change is acceptable because the minimum generated voltage criterion ensures the generator voltage regulator, field, stator and other diesel generator components are functioning properly with no interdependence.

3.8.2 AC Sources—Shutdown

CTS 3.8.1.2.a requires one operable circuit between the offsite transmission network and the onsite Class 1E distribution system. This LCO is stated more precisely in ITS LCO 3.8.2.a, which adds the qualification that the operable offsite circuit must be supplying the onsite Class 1E electrical power distribution subsystems required by ITS 3.8.8. This change is acceptable

because (a) to be operable, a distribution subsystem must be energized from an operable power source, and (b) it ensures the single circuit is performing a vital function. With the circuit supplying power to all necessary loads, if one or more required load centers, MCCs, buses, or panels do not receive power from an operable offsite circuit, that circuit is inoperable (and so is the associated deenergized distribution subsystem).

In the event the required offsite circuit is inoperable, the ITS contain an option to the CTS action requirements. This new requirement, to "declare affected features with no offsite power inoperable" (Required Action A.1), is appropriate because it may not be necessary to suspend all core alterations, irradiated fuel handling, and operations with the potential for draining the reactor vessel. Declaring all required equipment without offsite power inoperable and taking the action requirements of the associated specifications ensures conservative actions are taken. Therefore, Required Action A.1 is acceptable.

CTS 3.8.1.2.b requires either DG-1 or DG-2 to be operable, but does not specify power availability to any given loads. Corresponding ITS LCO 3.8.2 adds the qualification that the operable DG must be capable of supplying the electrical power distribution subsystems required by ITS 3.8.8. This added restriction is acceptable because it ensures the DG can perform a vital function, and is consistent with current operating practices.

In the event the required offsite circuit and/or the required DG (DG-1 or DG-2) are inoperable during MODE 5 with water level less than 22 feet above the reactor pressure vessel (RPV) flange, Action a of CTS 3.8.1.2 requires immediately initiating corrective action to restore the required power sources to operable status "as soon as practical." Corresponding Required Actions A.2.4 and B.4 of ITS 3.8.2 require immediately initiating action to restore the required power source to operable status in Modes 4 and 5 and during movement of irradiated fuel assemblies, regardless of whether water level is less than 22 feet above the RPV flange. This change is acceptable because requiring action to continue until the required AC power sources are restored to operable status minimizes the time that the required plant safety systems may be without sufficient electrical power during shutdown conditions and during movement of irradiated fuel assemblies in secondary containment.

3.8.3 Diesel, Fuel Oil, Lube Oil, and Starting Air

New requirements for diesel lube oil inventory and appropriate action and surveillance requirements are added to the CTS in ITS LCO 3.8.3, Action B and Surveillance Requirement 3.8.3.2 to ensure a 7-day supply of lube oil for each diesel generator.

The air start receiver pressure for DG-3 of ≥ 200 psig in CTS 4.8.1.1.2.a.7 is increased to ≥ 223 psig in corresponding ITS SR 3.8.3.4. The current licensing basis requires that the air receiver for DG-3 have sufficient capacity for three successive start attempts without recharging. Recent

calculations by the licensee found that the minimum air receiver pressure needed to meet this requirement is 223 psig. Therefore, this change is acceptable.

CTS 4.8.1.1.2.b.2 requires initiating the procedure for pumping off accumulated water within 48 hours of detection of accumulated water at the bottom of a diesel fuel oil storage tank below the transfer pump. This specific time limit for initiating action to remove the water is omitted from corresponding ITS SR 3.8.3.5, which simply includes removing any water as part of checking for water. This change to the preventive maintenance requirement is acceptable because any detected water is removed as part of the surveillance; if the water is not removed, the surveillance is failed and the associated DG is inoperable. Deferring the removal of any accumulated water is no longer permitted.

3.8.4 DC Sources—Operating

CTS 4.8.2.1.f requires the battery performance discharge test every 18 months if the battery shows degradation or has reached 85% of its service life. The second frequency of corresponding ITS SR 3.8.4.8 requires this test every 12 months when a battery either (a) shows degradation or (b) has reached 85% of expected life with capacity < 100% of the manufacturer's rating.

In addition, the frequencies of CTS 4.8.2.1.c.1 (ITS SR 3.8.4.3), CTS 4.8.2.1.c.2 (ITS SR 3.8.4.4), and CTS 4.8.2.1.c.3 (ITS SR 3.8.4.5) are all changed from 18 months to 12 months.

The 12-month frequency is more restrictive and is acceptable because (a) it is the licensee's current practice and (b) it is consistent with the recommendations of IEEE-450.

3.8.5 DC Sources—Shutdown

CTS 3.8.2.2 requires Division 1 or Division 2 DC power sources to be operable during operation in Modes 4 and 5 and when handling irradiated fuel in secondary containment (it also requires the Division 3 DC power source to be operable during these conditions whenever the high pressure core spray system is required to be operable). However, this LCO does not specify what loads the required operable DC source must power. ITS 3.8.5 specifies that the sources necessary to supply DC power to all electrical power distribution subsystems required operable by ITS 3.8.8 must be operable. This added restriction is acceptable because it ensures the required operable power source is supplying the required loads, even if as a result both the Division 1 and Division 2 sources are required to be operable, and because it is consistent with current operating practices.

In conjunction with this added restriction in ITS LCO 3.8.5, Action a of CTS 3.8.2.2 is revised to address one or more inoperable DC sources (Action A of ITS 3.8.5). Since the DC source operability requirements in ITS LCO 3.8.5 direct that power be supplied to all necessary loads, if one or more required DC loads do not have the required DC power, the DC source is inoperable. In

this event, it is not always necessary to suspend all core alterations, irradiated fuel handling, and operations with the potential for draining the reactor vessel (OPDRV); another appropriate action may be to immediately declare all required equipment without the necessary DC power inoperable and perform the specified action requirements of the associated specifications. Therefore, this more restrictive option, specified by Required Action A.1, is acceptable.

In the event the required DC sources are not operable, plant conditions are conservatively restricted by following the CTS 3.8.2.2 action requirements to suspend core alterations, irradiated fuel handling in secondary containment, and OPDRVs (retained in ITS 3.8.5 Required Actions A.2.1, A.2.2, and A.2.3). However, continued operation in Mode 4 or 5 without the necessary DC sources is not desirable. Therefore, a Required Action A.2.4, to immediately initiate action to restore the required DC sources to operable status, is added to the action requirements. These actions are not needed if the new optional action requirement (Required Action A.1) to immediately declare affected DC loads (required features) inoperable is taken.

In lieu of declaring the HPCS system inoperable and taking the actions of the appropriate specification (CTS 3.8.2.2, Action b, and ITS 3.8.5, Required Action A.1), new action requirements are specified in the event the Division 3 DC source is inoperable, consistent with the required actions for inoperable Division 1 and 2 DC sources. These action requirements (Required Actions A.2.1, A.2.2, A.2.3, and A.2.4) require immediately suspension of core alterations, handling of irradiated fuel assemblies in the secondary containment, and OPDRVs, and initiation of action to restore the inoperable DC source to operable status. These action requirements are more restrictive than the current requirements because the Action a of CTS 3.5.2 only requires suspending OPDRVs within 4 hours, and if applicable, Action b of CTS 3.5.3 requires suspending core alterations as well as OPDRVs, but specifies no time limit. The new requirements will ensure operation in an undesirable condition is minimized and are, therefore, acceptable.

3.8.6 Battery Cell Parameters

Note c to CTS Table 4.8.2.1-1 allows correcting the Category B (first column) cell float voltage for the average electrolyte temperature. This allowance is omitted from corresponding ITS Table 3.8.6-1, following the recommendations of IEEE Standard 450, 1987. Appendix C3 of this standard discusses the relation between cell voltage and temperature. Temperature differences show the need for an equalizing charge. Further, the warmer cell has a lower cell voltage for the same float current. Temperature-corrected voltages only apply when the warmer cell is below 2.13 volts, while the Category B limits are $\geq$ 2.13 volts. Temperature compensated voltage does not apply to a cell that is above the Category B cell voltage limit. Thus, elimination of this allowance is acceptable.

Note b to CTS Table 4.8.2.1-1 allows substituting a battery charging current of less than 2 amperes on the float charge for measuring the specific gravity of pilot cells for Category A specific gravity limits and of each connected

cell for Category B specific gravity allowable values. Note c of ITS Table 3.8.6-1 limits the time that charging current may be used to 7 days and requires specific gravity measurements of each connected cell within 7 days of the completion of the battery charge. These changes are acceptable for the reasons given in Section 3.8.b of this safety evaluation because they avoid excessive reliance on charging limit.

A new requirement has been added (proposed Required Action A.1) for when a Category A or B limit is not met. It requires a check within 1 hour that the pilot cell electrolyte level and float voltage are within the Category C limits (current Category B allowable values). This change is acceptable because it ensures that if the pilot cell is exceeding Category C limits, the battery will be declared inoperable immediately.

3.8.7 Distribution Systems—Operating

CTS 3.8.3.1, Actions a.1 and b.1, require the restoration of the deenergized AC distribution subsystems to operable status within 8 hours and the restoration of the deenergized DC distribution subsystems within 2 hours, respectively. ITS 3.8.7, Required Actions A.1 (Division 1 or 2 AC) and B.1 (Division 1 or 2 125 volt DC) retain these action requirements but also specify a 16-hour limit on unit operation with LCO 3.8.7.a (Division 1 and 2 AC subsystems) and/or LCO 3.8.7.b (Division 1 and 2 125 volt DC subsystems) not met. For instance, if a Division 1 AC distribution subsystem is inoperable while a Division 2 125 volt DC bus is inoperable, and the Division 1 subsystem is later restored, the initial inoperability may already have existed for up to 8 hours. In this situation, up to 10 hours could elapse since the subsystem initially failed (8 hours for the AC distribution subsystem and 2 hours for the DC distribution subsystem). Continuing the example, a Division 1 AC distribution subsystem could again become inoperable followed by a restoration of the Division 2 125 volt DC distribution subsystem to operable status. To prevent these alternating inoperabilities from continuing indefinitely, an appropriate restriction is placed in the action requirements: "16 hours from discovery of failure to meet LCO 3.8.7.a or b."

3.8.8 Distribution Systems—Shutdown

CTS 3.8.3.2 requires one AC and DC power distribution subsystem (divisions) and Division 3 if HPCS is required, to be energized during shutdown and when handling irradiated fuel in the secondary containment. ITS LCO 3.8.8 requires the "necessary portions of the Division 1, Division 2, and Division 3 AC and DC electrical power distribution subsystems" to be operable "to support equipment required to be operable." This change is acceptable because it ensures the needed sources of power are available.

In the event one or more required AC or DC subsystems are inoperable, ITS Required Action A.1 specifies declaring associated supported required features inoperable, as an option to the action requirements of CTS 3.8.3.2. If one or more required loads do not have the required power because of an inoperable bus, that distribution subsystem is inoperable. In this case, it is not always necessary to suspend all core alterations, irradiated fuel handling,

and operations with the potential for draining the reactor vessel; another appropriate action may be to immediately declare all required equipment without the necessary power inoperable and taking the applicable action requirements of the associated specifications for the affected equipment. Therefore, this more restrictive option is acceptable.

In the event the required AC or DC distribution subsystems are inoperable, plant conditions are conservatively restricted by following the actions a.1 and b.1 of CTS 3.8.3.2 to suspend core alterations, irradiated fuel handling in secondary containment, and OPDRVs (retained in Required Actions A.2.1, A.2.2, and A.2.3 of ITS 3.8.8). However, continued operation in Mode 4 or 5 without the necessary distribution subsystems is not desirable. Therefore, Required Action A.2.4, to immediately initiate action to restore the required subsystems to operable status, is added to the action requirements. In addition, Required Action A.2.5 is added to immediately declare associated shutdown cooling subsystems inoperable and not in operation. This allows taking the actions for inoperable distribution systems without requiring actions for each inoperable supported component (as would be necessary if the option of Required Action A.1, previously discussed, were taken). This is acceptable because it ensures that (a) proper measures are taken in response to the loss of shutdown cooling and (b) power will be restored to the shutdown cooling systems that are without required power as soon as possible.

In lieu of declaring the HPCS system inoperable and taking the actions of the appropriate specification (CTS 3.8.3.2, Actions a.2 and b.2, and ITS 3.8.8, Required Action A.1), new action requirements are specified in the event one or more Division 3 AC and/or DC power distribution subsystems are inoperable, consistent with the required actions for inoperable Division 1 and 2 AC and DC distribution subsystems. These action requirements (Required Actions A.2.1, A.2.2, and A.2.3) immediately require suspension of core alterations, handling of irradiated fuel assemblies in the secondary containment, and OPDRVS. These action requirements are more restrictive than the current requirements because the Action a of CTS 3.5.2 only requires suspending OPDRVs within 4 hours, and if applicable, Action b of CTS 3.5.3 requires suspending core alterations as well as OPDRVs, but specifies no time limit. These action requirements are acceptable because they minimize the time that the plant would remain in an undesirable condition.

Conclusion

These more restrictive requirements strengthen the CTS. Therefore, these more restrictive requirements are acceptable.

d. Significant Deviations from STS

The licensee, in electing to adopt the specifications of STS Section 3.8, "Electrical Power Systems," proposed the following differences between the ITS and the STS. Note that STS 3.8.7 and STS 3.8.8 for inverters are not adopted because they are not part of the WNP-2 design.

3.8.1 AC Sources—Operating

In accordance with the reviewer's note in the STS, Action F of STS 3.8.1, for an inoperable automatic load sequencer, and the associated operability requirements in STS LCO 3.8.1.c are omitted from ITS 3.8.1.

STS 3.8.1, Required Action A.3 (for an inoperable offsite circuit) requires restoring the required offsite circuit to operable status within 24 hours from discovery of two divisions with no offsite power. ITS 3.8.1, Required Action A.3, omits this conditional completion time because in the WNP-2 design the loss of one offsite circuit will result in at most, one division losing offsite power. When two divisions are without offsite power, both offsite circuits would have to be inoperable; thus Action C would apply, which requires one of the circuits to be restored within 24 hours. Therefore, the 24-hour completion time of STS Required Action A.3 is not needed.

Note 1 to STS SR 3.8.1.2 ("Performance of SR 3.8.1.7 satisfies this SR.") is omitted from ITS SR 3.8.1.2 because it is unnecessary to state this allowance in this case when for most SRs in the STS where this allowance is acceptable, it is not explicitly stated. Omitting this note is acceptable because it avoids confusion regarding when such an allowance is not permitted.

The frequency for several SRs in STS 3.8.1 refers to the Table 3.8.1-1 which contains accelerated test schedules for the DGs. The CTS accelerated test requirements for the DGs are moved to the FSAR, as addressed in Section 3.8.b (ITS 3.8.1) of this safety evaluation and the reviewer's note on page 3.8-19 of NUREG-1434; thus the corresponding ITS SRs only specify the nominal 31-day frequency, and STS Table 3.8.1-1 is omitted.

STS SRs 3.8.1.7, 12, 15, and 20, timed DG starts without loading, contain upper and lower voltage and frequency limits that must be met within the specified time limits. ITS SRs 3.8.1.7, 12, 15, and 20 require achieving only the lower values of these voltage and frequency limits within the specified times. This difference is acceptable for reasons given in Section 3.8.b (ITS 3.8.1) of this safety evaluation.

STS SR 3.8.1.9, SR 3.8.1.10, and SR 3.8.1.14 contain power factor limits that must be met during these DG load rejection and run tests. The corresponding ITS SRs require performing these tests at a power factor as close to the accident load power factor as practicable but do not contain a value for the limit; rather the value is given in the associated ITS Bases. This difference is acceptable because the intent of the power factor limit is still satisfied.

STS SR 3.8.1.9, the DG single load rejection test, states a load value ≥ the single largest post-accident load for each DG. ITS SR 3.8.1.9 omits these load values because they are not contained in Revision 1 to NUREG-1430, -1431, -1432, and -1433, but are stated in the associated Bases. This difference is acceptable because these load values in SR 3.8.1.9 were erroneously retained in Revision 1 to NUREG-1434. The ITS states the correct load values and the actual loads in the Bases for SR 3.8.1.9.

STS SR 3.8.1.9, the DG single load rejection test, requires the DG to achieve voltage and frequency within specified limits within a specified time following the load rejection (in addition to the transient upper frequency limit). ITS SR 3.8.1.9 omits these additional criteria because the CTS do not specify them and response time is not assumed in any accident analysis.

3.8.2 AC Sources—Shutdown

STS LCO 3.8.2.c requires supplying the Division 3 onsite Class 1E electrical power distribution subsystem from the offsite circuit that is not being used to supply Division 1 and/or Division 2 subsystems. This specific requirement is omitted in ITS LCO 3.8.2.c because the WNP-2 design only provides for one offsite circuit to the Division 3 onsite Class 1E electrical power distribution subsystem. This offsite circuit is common to one of the offsite circuits powering Division 1 and 2. Therefore, this statement has been deleted and the offsite circuit requirement for Division 3 is now covered by ITS LCO 3.8.2.a. Due to this deletion, Condition A of the STS 3.8.2 ACTIONS is reworded to specifically state that it covers an inoperable offsite circuit, instead of referencing LCO item a. In addition, for clarity, Conditions B and C of STS 3.8.2 are reworded to specifically state that they cover an inoperable Division 1 or 2 DG and a Division 3 DG, respectively. These differences are acceptable because they are based on the WNP-2 electrical system design and are consistent with the CTS.

The note in the required action for Condition A of STS 3.8.2 requires entering the applicable condition and required actions of the shutdown electrical power distribution specification (STS 3.8.10, ITS 3.8.8), "with one" required division deenergized as a result of Condition A (required Division 1 or Division 2 offsite circuit inoperable). This note in Action A of ITS 3.8.2 requires entering the action requirements of ITS 3.8.8 "when any" required division "is" deenergized as a result of Condition A (required offsite circuit—Division 1, 2, or 3) inoperable. As applied to WNP-2, the STS language could be misinterpreted to mean that the shutdown electrical distribution specification is entered when only one division is deenergized. This difference is acceptable because (a) it is consistent with the intent of the STS note, and (b) it will ensure that ITS 3.8.8 is entered when one or more required divisions are deenergized.

3.8.4 DC Sources—Operating

ITS 3.8.4 and ITS 3.8.7 contain a separate action for the 250 VDC power source and distribution subsystems, respectively, because the STS do not account for this WNP-2 design feature. These differences are acceptable for the reasons given in Section 3.8.b (ITS 3.8.4) and 3.8.b (ITS 3.8.7) of this safety evaluation.

ITS SR 3.8.4.3 adds the following phrase in single quotation marks to STS SR 3.8.4.3: Verify battery cells, cell plates, and racks show no visual indication of physical damage or abnormal deterioration "that degrades battery performance." This difference is acceptable because it only clarifies the intent of the STS.

STS SR 3.8.4.6, the battery charger load test, contains a note that states the surveillance shall not be performed in Mode 1, 2, or 3. Due to the WNP-2 design (spare 100% charger for the Division 1 and 2 batteries), individual battery chargers can be tested without compromising compliance with the Division 1 and 2 requirements of the LCO. The Division 3 battery would only affect the HPCS system, which is allowed to be inoperable for 14 days in accordance with ITS 3.5.1. Therefore, the mode restriction is not needed (and is not currently specified in the CTS). In addition, since the test can be performed without compromising the Division 1 and 2 DC loads, SR 3.8.4.6 is not excepted from performance when the unit is shut down (per the note to STS SR 3.8.5.1). Therefore, this difference from the STS is acceptable.

STS SR 3.8.4.6 and corresponding CTS 4.8.2.1.c.4 state the required loads in amperes for testing the battery chargers. ITS SR 3.8.4.6 moves the description of the required loads to the Bases for this surveillance. This allows flexibility for any changes to the loads in the future, controlled by 10 CFR 50.59 and is, therefore, acceptable.

3.8.5 DC Sources—Shutdown

As stated previously, ITS SR 3.8.5.1 does not specify the performance exception for the battery charger surveillance, SR 3.8.4.6, during shutdown conditions, that is specified in STS SR 3.8.5.1. This is acceptable for the reason stated in section 3.8.4 above.

3.8.7 Distribution Systems—Operating
3.8.8 Distribution Systems—Shutdown

STS SR 3.8.9.1 and SR 3.8.10.1 require verifying correct breaker alignments "and voltage" to required AC and DC electrical power distribution subsystems. Corresponding ITS SR 3.8.7.1 and 3.8.8.1 replace "voltage" with "indicated power availability." This difference is acceptable for reasons given in Section 3.8.b (ITS 3.8.7) of this safety evaluation.

Conclusion

The preceding differences from STS Section 3.8 are consistent with the WNP-2 design and existing requirements and commitments or proposed changes found to be acceptable as discussed elsewhere in this evaluation. Therefore, these differences are acceptable.

e. Relocated Specifications

In accordance with the criteria in the Final Policy Statement, the licensee has proposed to entirely remove the following electrical power systems specifications from CTS Section 3/4.8.4 and place them in the FSAR or LCS.

<u>CTS 3/4.8.4.1, A.C. Circuits Inside Primary Containment</u>. During operation in Modes 1, 2, and 3, CTS 3/4.8.4.1 requires, as a minimum, the following AC circuits inside primary containment to be deenergized: circuits supplied by breakers 2AR and 8AR, of MCC E-MC-8C, by panel E-LP-6BAG, by panel E-LP-3DAG,

and by breakers in cubicles 2BL, 1D, and 2CR of MC-3DA. These AC circuits primarily supply lighting, utility outlets, and convenience power outlets inside primary containment during plant shutdown conditions. These AC circuits are deenergized during plant operation to prevent the chance of an electrical fault during an accident that could potentially lead to degradation of the primary containment electrical penetration associated with the faulted circuit. However, these circuits do not participate in plant safety actions, and have no impact on plant safety systems, and their failure will not degrade any Class 1E circuits. Thus, the CTS 3/4.8.4.1 requirement to maintain those circuits and verify daily that they are deenergized when the plant is in Modes 1, 2, and 3, does not satisfy the criteria of 10 CFR 50.36(c)(2)(ii) for inclusion in the TS as an LCO. Therefore, relocating these requirements to the LCS, changes to which are governed by the provisions of 10 CFR 50.59, is acceptable.

<u>CTS 3/4.8.4.2 Primary Containment Penetration Conductor Overcurrent Protective Devices</u>. The primary containment penetration conductor overcurrent protective devices protect the circuit conductors against damage or failure; however, they are not considered in any design basis accident or transient. These protective devices are used to automatically open control and/or power circuits whenever load conditions exceed preset current demands in order to prevent damage to the circuit conductors from overcurrent heating effects. All penetrations are provided with primary and backup electrical protection against short circuits. If the primary protective device failed to isolate the faulty circuit, the upper level backup protective device would isolate the circuit and prevent loss of the redundant power source. These protective devices also ensure the pressure integrity of the containment penetration through which the circuit passes. With failure of the device, it is postulated that the wire insulation would degrade, creating a containment leak path. However, containment penetration degradation should be identified during containment leak rate tests performed in accordance with Appendix J to of 10 CFR Part 50. In addition, containment leakage is not a process variable and is not considered as part of the primary success path. Therefore, the requirements specified in CTS 3/4.8.4.2 do not satisfy the criteria of 10 CFR 50.36(c)(2)(ii) for inclusion in the TS as an LCO, and relocating these requirements to the LCS, for which changes are governed by the provisions of 10 CFR 50.59, is acceptable.

<u>CTS 3/4.8.4.3 Motor-Operated Valves Thermal Overload Protection</u>. The thermal overload protection devices prevent damage to motor-operated valves (MOVs) if overloaded, thereby maintaining the capability of the motor operator to open and close the valve once the cause of the overload condition is corrected or removed. However, no credit is given for thermal overload protection in any design basis accident (DBA) or transient. The function of the thermal overload protection devices is to prevent damage to the motor operator of a valve in the event the motor is overloaded. This is not part of the primary success path for mitigating any DBA or transient. In addition, the thermal overload protection devices are not used to detect degradation of the reactor coolant pressure boundary. Thus, the requirements specified in CTS 3/4.8.4.3 for MOV thermal overload protection do not satisfy the criteria of 10 CFR 50.36(c)(2)(ii) for inclusion in the TS as an LCO. Therefore, relocating

these requirements to the LCS, changes to which are governed by the provisions of 10 CFR 50.59, is acceptable.

Conclusion

The current specifications described in the preceding material are not required to be in the TS under 10 CFR 50.36, and 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. Further, they do not fall under any of the four criteria in 10 CFR 50.36(c)(2)(ii). In addition, the staff finds that sufficient regulatory controls exist under 10 CFR 50.59 to maintain the effectiveness of the provisions in these specifications. Accordingly, these current specifications may be removed from the CTS and placed in the LCS.

3.9 Refueling Operations

The licensee has proposed administrative and technical changes to the CTS to bring them into conformance with STS Section 3.9, "Refueling Operations." The changes are discussed in the order of the specifications in STS Section 3.9. The corresponding ITS Section 3.9 specification titles are listed in italics before each discussion.

a. Administrative Changes

The CTS specifications that have been retained in ITS Section 3.9 have been reworded to conform to the STS presentation. The following changes are the most significant.

3.9.1 Refueling Equipment Interlock

CTS 3.9.1.b prohibits core alterations if the refueling interlocks are inoperable, and CTS 3.9.1, Action c, requires suspending core alterations. CTS 4.9.1.2 requires interlock functional tests every seven days during core alterations. The ITS rewords these requirements in ITS 3.9.1. The Applicability addresses fuel movement, which is the only core alteration that is applicable to the interlocks required by ITS 3.9.1 (the only other possible Core Alterations involve control rod withdrawal, addressed in ITS 3.9.2). This nomenclature change is purely administrative, conforms to the STS, and is acceptable.

CTS 3.9.1.b.4 requires mode switch refuel position interlocks for the service platform hoist to be operable. The ITS deletes this requirement as the service platform hoist is not installed at WNP-2. Further, there are no plans to install a service platform hoist. Including this requirement for the service platform hoist in the CTS was inadvertent and occurred during the original WNP-2 licensing. As this change deletes requirements for equipment that is not installed, the change is purely administrative and is acceptable.

The applicability for CTS 3.9.1 covers any operation in Mode 5. ITS 3.9.1 applies during in-vessel fuel movement with equipment associated with the refueling equipment interlocks. In-vessel fuel movements are the only

operations that require the interlocks. Thus, the ITS changes the applicability to specify this explicitly. In addition, the ITS applicability is consistent with CTS 3.9.1, Action c, which only suspends core alterations for equipment with inoperable interlocks. This change is purely administrative, since it ensures that the actions and applicability match. The change is therefore acceptable.

Footnote * to the CTS 3.9.1 applicability refers to special test exceptions in CTS 3.10.1 and 3.10.3. The ITS format dispenses with cross-references, and ITS 3.0.7 employs none in prescribing how the ITS special operations are to be used. Therefore, the CTS reference to special test exceptions serves no purpose. This change is purely administrative and is acceptable.

Footnote # to the CTS 3.9.1 applicability requires the plant to be in Operational Condition 5 if the reactor vessel contains fuel with the vessel head closure bolts less than fully tensioned or with the head removed. This requirement is an explicit part of the definition of Mode 5, as set forth in CTS Table 1.2 and ITS Table 1.1-1. Accordingly, ITS 3.9.1 omits the definition. Since there is no change in requirements, the deletion of the footnote is a purely administrative change and is acceptable.

3.9.2 Refuel Position One-Rod-Out Interlock

CTS 3.9.1 applies in Mode 5 with the reactor mode switch in the shutdown or refuel position. The ITS deletes this explicit requirement. The requirement that the reactor mode switch be in the shutdown or refuel position is an explicit part of the definition of Mode 5, as set forth in CTS Table 1.2 and ITS Table 1.1-1. Accordingly, ITS 3.9.2 omits the definition. Since there is no change in requirements, the deletion of the footnote is a purely administrative change and is acceptable.

The applicability for CTS 3.9.1 specifies refueling interlock requirements for all operations in Mode 5. CTS 3.9.1.a specifies that, when the reactor mode switch is locked in the Refuel position, a control rod shall not be withdrawn unless the Refuel position one-rod-out interlock is operable. ITS 3.9.2 specifies requirements for the one-rod-out interlock and applies in Mode 5 with the reactor mode switch in the Refuel position and any control rod withdrawn. Thus, the ITS applicability reflects the CTS requirements for the one-rod-out interlock. This change is purely administrative, since it ensures that the actions and applicability match. The change is therefore acceptable.

CTS 3.9.1 Applicability footnote * refers to special test exceptions in CTS 3.10.1 and 3.10.3. The ITS format does not provide cross references. ITS 3.0.7 prescribes the use of the ITS Special Operations without references. This change is purely administrative and is acceptable.

CTS 3.9.1 Applicability footnote # requires being in Mode 5 if the reactor vessel contains fuel with the vessel head closure bolts less than fully tensioned or with the head removed. This footnote is an explicit part of the definition of Mode 5, as defined in CTS Table 1.2 and ITS Table 1.1-1. As such, ITS 3.9.2 does not repeat the definition. Since there is no change in requirements, the deletion of the footnote is purely administrative and is acceptable.

3.9.3 Control Rod Position

CTS 3.9.3 has footnotes referencing CTS 3.9.10.1 or 3.9.10.2 and Special Test Exception 3.10.3. The ITS format dispenses with cross-references, and ITS 3.0.7 employs none in prescribing how the ITS special operations are to be used. Therefore, the CTS reference to special test exceptions serves no purpose. This is purely administrative and is acceptable.

3.9.4 Control Rod Position Indication

CTS 3.1.3.7 provides requirements for control rod position indication. ITS 3.9.4 adds a note to the actions, allowing separate condition entry for each required channel. This change gives explicit instructions for applying the actions. With ITS 1.3, "Completion Times," the note provides direction consistent with the intent of the current action for an inoperable control rod position indication instrumentation channel. This change provides more explicit guidance and preserves the current CTS requirements. The change is thus purely administrative and acceptable.

Footnote * to the CTS 3.1.3.7 applicability refers to controls rods removed per CTS 3.9.10.1 and 3.9.10.2. The ITS format dispenses with cross-references, and ITS 3.0.7 employs none in prescribing how the ITS special operations are to be used. Therefore, the CTS reference to these exceptions serves no purpose. This change is purely administrative and is acceptable.

3.9.5 Control Rod OPERABILITY-Refueling

CTS 3.1.3.5 provides requirements for control rod scram accumulators. ITS 3.9.5 requires each withdrawn control rod to be operable, without specifically calling out scram accumulators in the LCO. The ITS requirements for the accumulators are consistent with the CTS requirements, since CTS 3.1.3.5 only requires that scram accumulators be operable in Mode 5 with the associated, control rod withdrawn (addressed in Footnote *). The ITS Bases describe control rod operability as including accumulator operability. The accumulator requirement is also contained in ITS SR 3.9.5.2. This SR requires an accumulator pressure of ≥ 940 psig for the scram accumulator of each withdrawn control rod. Accordingly, this change is purely administrative and is acceptable.

CTS 3.1.3.5, Action b.1, details disarming a control rod directional control valve associated with an inoperable scram accumulator in Mode 5. The ITS deletes the requirement of disarming the directional control valves. During Mode 5 with an accumulator associated with a withdrawn control rod inoperable, CTS 3.1.3.5, Action b.1, and ITS 3.9.5, Required Action A.1, both require insertion of the inoperable control rod. Once fully inserted, there is no operability requirement on a control rod accumulator (CTS Footnote * and ITS 3.9.5 Applicability). Thus, consistent with both CTS 3.0.2 and ITS 3.0.2, no further actions apply to an inoperable control rod scram accumulator.

Therefore, the deletion of the action to disarm the associated directional control valves is purely administrative and is acceptable.

CTS 3.1.3.5, Action b , Footnote *, notes that the action does not apply to control rods removed per specification 3.9.10.1 or 3.9.10.2. The ITS format dispenses with cross-references, and ITS 3.0.7 employs none in prescribing how the ITS special operations are to be used. Therefore, the CTS reference to special test exceptions serves no functional purpose. This change is purely administrative and is acceptable.

CTS 4.1.3.5.a allows not verifying the scram accumulator pressure if an inserted control rod is disarmed or scrammed. ITS Surveillance Requirement 3.9.5.2 does not have this allowance. Stating both the conditions allowing an exception to performing the accumulator surveillance and equivalent actions for an inoperable accumulator is not necessary. If the accumulator is inoperable, CTS 4.0.3 and ITS SR 3.0.1 state that surveillances are not required. Therefore, this deletion is purely administrative and is acceptable.

3.9.6 Reactor Pressure Vessel (RPV) Water Level—Irradiated Fuel

No significant administrative changes to the CTS are associated with ITS 3.9.6.

3.9.7 Reactor Pressure Vessel (RPV) Water Level—New Fuel or Control Rods

No significant administrative changes to the CTS are associated with ITS 3.9.7.

3.9.8 Residual Heat Removal (RHR)—High Water Level

CTS 3.9.11.1, Action a, requires stopping all operations that increase the reactor decay heat load if no residual heat removal loop is operable in the cooling mode. ITS 3.9.8, Required Action B.1, suspends loading irradiated fuel assemblies into the reactor pressure vessel for the same condition. Loading irradiated fuel into the reactor pressure vessel is the only practical method of increasing reactor decay heat load. Movement of a single control rod is the only other type of positive reactivity change. Control rod motion does not increase heat load. The ITS requirement is the same as the CTS requirement. Therefore, the change is purely administrative and is acceptable.

CTS 3.9.11.1, Action a, requires establishing secondary containment integrity if no residual heat removal loop is operable in the cooling mode. ITS 3.9.8, Required Action B.2, restores secondary containment for the same condition. ITS 3.9.8, Required Action B.3, restores standby gas treatment for the same condition. ITS 3.9.8, Required Action B.4, restores required secondary containment flow path isolation for the same condition. Together, the ITS required actions for Condition B accomplish the essential elements of containment integrity. Therefore, the change is a presentation preference that follows the STS format, is purely administrative and is acceptable.

3.9.9 Residual Heat Removal (RHR)—Low Water Level

No significant administrative changes to the CTS are associated with ITS 3.9.9.

Conclusion

These changes to the CTS are administrative. They clarify, reorganize, or reformat the current specifications. None of these changes alters the limits in the current requirements. Accordingly, these changes are acceptable.

b. Less Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 3.9, proposed a number of requirements less restrictive than those in the CTS. The following changes are the most significant.

3.9.1 Refueling Equipment Interlock

CTS 4.9.1.2 requires interlock functional tests in the 24-hour period before core alterations. ITS SR 3.9.1.1 deletes this explicit requirement. The normal 7-day surveillance frequency for the component tests ensures operability of the required reactor mode switch refuel position interlocks. Accordingly, the ITS deletes the requirement for performing this surveillance "within 24 hours prior to the start of" use of the component. If the surveillance has not been performed within the specified interval, use of the component is not allowed since ITS SR 3.0.1 requires that a surveillance be met within the specified frequency while in the applicable mode or condition. ITS SR 3.0.1 also states that if the surveillance is not met, the LCO is not met and the actions of the LCO must then be taken. If this SR is not performed within the specified frequency before entering the applicable condition, then as soon as the applicable condition is entered, the LCO would not be met. The actions for the LCO require immediate action to be taken to exit the applicability of the LCO. This effectively ensures that the applicability of the LCO is not entered with the surveillance not current, therefore, this change is acceptable.

CTS 4.9.1.3 demonstrates the operability of the refuel position interlock any time repair, maintenance, or component replacement could affect operability. ITS 3.9.1 deletes this explicit requirement. Any time repair, maintenance, or component replacement could affect system or component operability, post-maintenance testing demonstrates operability of that system or component. After restoring a component that caused failure of a surveillance requirement, ITS SR 3.0.1 requires performing the appropriate surveillance (in this case, ITS SR 3.9.1.1) to demonstrate the operability of the affected components. Therefore, explicit post-maintenance surveillance testing is not necessary. ITS SR 3.0.1 prevents entry into the applicable specified condition without performing this post-maintenance testing except where allowed as discussed in the Bases for ITS SR 3.0.1. As both the CTS and the ITS requirements ensure demonstration of satisfactory operation following repair, maintenance or component replacement, this change is acceptable.

3.9.2 Refuel Position One-Rod-Out Interlock

CTS 3.9.1 specifies the reactor mode switch, for refueling operations, shall be operable and locked in the shutdown or refuel position. ITS 3.9.2 requires operable refueling equipment interlocks. Further, CTS 3.9.1, Action a, ensures the reactor mode switch is in either the shutdown or refuel positions, and CTS 4.9.1.1 specifies when to verify the mode switch position (Shutdown or Refuel, as specified) and gives locking provisions. ITS 3.9.2 has no corresponding requirements for the shutdown position. ITS Table 1.1-1 controls movement of the reactor mode switch from the shutdown position. With the reactor mode switch in positions other than Refuel and Shutdown, the unit enters some other mode with the associated compliance for that mode and ITS 3.0.4. Since a control rod cannot be withdrawn with the reactor mode switch in shutdown, the mode switch cannot be placed in the shutdown position for ITS 3.9.2; that would exit the applicability. Therefore, the requirement to lock the mode switch in shutdown is not included in ITS 3.9.2. This change is acceptable.

When the reactor mode switch is not locked in Shutdown or Refuel, CTS 3.9.1, Action a, prohibits core alterations and requires the locking of the mode switch in the shutdown or refuel position. With the one-rod-out interlock inoperable, Action b requires locking the mode switch in the shutdown position. With the one-rod-out interlock inoperable, the ITS actions (Required Actions A.1 and A.2) immediately suspend control rod withdrawal and begin action to insert all insertable control rods in core cells containing one or more fuel assemblies. These actions compensate for an inoperable one-rod-out interlock and protect against potential reactivity excursions. Therefore, this change is acceptable.

CTS 4.9.1.1 ensures the reactor mode switch is locked in the refuel position within 2 hours of beginning core alterations or resuming core alterations if the mode switch was unlocked. CTS 4.9.1.2 requires reactor mode switch interlock functional tests in the 24-hour period before withdrawing control rods. The ITS deletes these explicit requirements. The normal 12-hour surveillance frequency of SR 3.9.1.1 provides adequate verification of the reactor mode switch position and the normal 7-day surveillance frequency of SR 3.9.1.2 ensures operability of the refuel position one-rod-out interlock. If the surveillance has not been performed within the specified interval, use of the component is not allowed since ITS SR 3.0.1 requires a surveillance be met within the specified frequency while in the applicable mode or condition. ITS SR 3.0.1 also states that failure to meet the surveillance constitutes failure to meet the LCO; the actions of the LCO must then be taken. If this SR is not performed within the specified frequency before entering the applicable condition, then as soon as the applicable condition is entered, the LCO would not be met. The actions for the LCO require immediate action to be taken to exit the applicability of the LCO. This effectively ensures that the applicability of the LCO is not entered with the surveillance not current. Therefore, this change is acceptable.

CTS 4.9.1.2 requires a functional test of the refuel position one-rod-out interlock every 7 days during control rod withdrawal. ITS 3.9.2 provides requirements for the refuel position one-rod-out interlock and is applicable in Mode 5 with the reactor mode switch in the refuel position and any control rod withdrawn. ITS SR 3.9.2.2 adds a note for the channel functional tests allowing 1 hour after any control rod withdrawal to perform the required surveillance. To test the one-rod-out interlock, the operator must withdraw a control rod. However, ITS SR 3.0.1 requires a surveillance to be met within the specified frequency while in the applicable mode or condition. This ensures that the applicability of the LCO is not entered with the surveillance not current. Without the note in ITS SR 3.9.2.2, ITS SR 3.0.1 would require immediate action due to LCO 3.9.2 not being met as soon as the applicability were entered (i.e., as soon as a control rod were withdrawn). Therefore, an allowance is provided in the ITS to enter the applicability for a short time to provide adequate time to perform the required surveillance. The 1-hour allowance is adequate, considering the procedural controls on control rod withdrawals and the indications available in the control room to alert the operators to control rods that are not fully inserted. Because the ITS performs the surveillance in a reasonable time after achieving the conditions necessary for performance (i.e., control rod withdrawal), this change is acceptable.

3.9.3 Control Rod Position

CTS 3.9.3 applies during core alterations in Operational Condition 5. With any control rod withdrawn, the action requires suspending all other core alterations with the exception of allowing withdrawal of one control rod under the control of the reactor mode switch refuel position one-rod-out interlock. ITS 3.9.3 requires all control rods fully inserted when loading fuel assemblies into the reactor core. The ITS changes the applicability of the requirement for the full insertion of all control rods to "when loading fuel assemblies into the core." This change is consistent with the accident analysis. The analysis of the control rod removal error during refueling assumes the insertion of all control rods, but only during fuel loading, not unloading or other core alterations. A fuel unloading error (incorrect bundle withdrawn) cannot increase the reactivity of the core or cause inadvertent criticality. Therefore, the ITS limits the applicability specifically to loading fuel assemblies into the core. Consistent with accident analysis assumptions, the ITS actions and ITS SR 3.9.3.1 also reflect this change. As the accident analysis bounds these changes, they are acceptable.

CTS 4.9.3 verifies the insertion of all control rods within 2 hours before core alterations or withdrawing one control rod under control of the reactor mode switch refuel position one-rod-out interlock. ITS 3.9.3 deletes these requirements. The normal 12-hour surveillance frequency ensures that all control rods are verified to be inserted. If the surveillance has not been performed within the specified interval, use of the component is not allowed since ITS SR 3.0.1 requires a surveillance be met within the specified frequency while in the applicable mode or condition. ITS SR 3.0.1 also states that failure to meet the surveillance constitutes failure to meet the LCO; the actions of the LCO must then be taken. If this SR is not performed within the specified frequency before entering the applicable condition, then as soon as the applicable condition is entered, the LCO would not be met. The actions for the LCO require immediate action to be taken to exit the applicability of the LCO. This effectively ensures that the applicability of the LCO is not entered with the surveillance not current. Therefore, this change is acceptable.

3.9.4 Control Rod Position Indication

CTS 3.1.3.7 requires the "control rod position indication system" to be operable in Mode 5 and CTS 4.1.3.7 specifies surveillances for the control rod position indication system. ITS 3.9.4 requires each control rod "full-in" position indication channel to be operable in Mode 5 but deletes the CTS position indication requirement for Mode 5 because there is no need for indication other than the full-in position indication.

The requirements of ITS 3.9.4 for the full-in position indication for each control rod to be operable are consistent with the refueling interlock (ITS 3.9.1) and the one-rod-out interlock (ITS 3.9.2) operability requirements. Since only one control rod can be withdrawn while in Mode 5 and the position of the control rod is not a factor in any accident or transient in this condition, TS requirements on the precise position of the control rods are unnecessary. ITS 3.9.4 addresses the critical safety issue of whether or not the control rod is fully inserted.

The ITS also changes the surveillance requirements for consistency with the LCO which only requires the full-in indicator to be operable. ITS SR 3.9.4.1 requires verifying, each time a control rod is withdrawn from the full-in position, that the full-in indication displays correctly (that is, no full-in indication with a withdrawn control rod). The CTS surveillances to verify the position of the control rod every 24 hours (CTS 4.1.3.7.a) and to confirm that the control rod position changes during exercise tests (CTS 4.1.3.7.b) and the full-out indicator functions during rod coupling checks (CTS 4.1.3.7.c) have been deleted. CTS 4.1.3.7.a is not necessary since only the full-in position indication is needed, as described above. CTS 4.1.3.7.b has been deleted since it is only required when performing CTS 4.1.3.1.2 and CTS 4.1.3.1.2 is not required in Mode 5. CTS 4.1.3.7.c has been deleted since it is only required when performing CTS 4.1.3.6.b and the Mode 5 requirement for this SR is also being deleted in the ITS. Because these requirements are not needed in Mode 5, the above changes are acceptable.

3.9.5 Control Rod OPERABILITY—Refueling

CTS 4.1.3.5.b.1 requires channel functional tests of the control rod scram accumulator leak detector channels, channel calibrations of the accumulator pressure detectors, and verification of the alarm setpoints. The scram accumulator leak detectors, pressure detectors, and associated alarm do not directly support accumulator operability. Therefore, the requirements and surveillances associated with these detectors and alarms are being moved to the FSAR/LCS. Indication-only instrumentation, test equipment, and alarms are usually not required to be operable to support the operability of a system or component. Thus, the STS generally contain no operability requirements for indication-only equipment. The availability of such indication instruments, monitoring instruments, and alarms, and necessary compensatory activities if they are not available, are more appropriately specified in the FSAR/LCS. Changes to the FSAR/LCS will be controlled by the provisions of 10 CFR 50.59.

CTS 4.1.3.5.b.2 requires measuring and recording the time, up to 10 minutes, that the individual accumulator check valves maintain the associated accumulator pressure above the accumulator alarm setpoint with no control rod drive pump operating. ITS 3.9.5 does not contain this requirement. There are no accident or transient analytical assumptions for maintaining the scram accumulator pressure with the check valves should no control rod drive pump operate. With no operating control rod drive pump, the ITS requires insertion of the withdrawn control rod as soon as the associated accumulator pressure decreases to < 940 psig. In addition, the refueling interlocks permit only one withdrawn control rod. The accident analysis assumes one control rod stuck fully out of the core. Thus, even with a withdrawn control rod that cannot insert, analysis confirms the reactor will remain subcritical. As a result, the ITS deletes the CTS 4.1.3.5.b.2 requirement to verify the capability of the accumulator check valves to maintain accumulator pressure above the alarm setpoint with no control rod drive pump running. As the CTS alarm setpoint is not a value that establishes any known or required safety analysis limit, this less restrictive change is acceptable.

3.9.6 Reactor Pressure Vessel (RPV) Water Level—Irradiated Fuel

The action for CTS 3.9.8 requires placing all fuel assemblies in a safe condition before suspending fuel handling if the reactor pressure vessel water level is low. The ITS moves this requirement to the ITS 3.9.6 Bases because it does not specify actions to prevent a fuel handling accident. ITS 3.9.6, Required Action A.1, provides the proper actions to preclude a fuel handling accident. The provisions of the Bases Control Program, described in ITS Chapter 5.0, will control changes to these details, therefore, this change is acceptable.

CTS 4.9.8 requires the determination of the reactor pressure vessel water level in the 2 hours before handling irradiated fuel assemblies and every 24 hours while handling fuel assemblies within the reactor pressure vessel. ITS 3.9.6 requires this surveillance every 24 hours while moving irradiated fuel within the reactor pressure vessel. The ITS deletes the requirement to do this surveillance "within 2 hours prior to the start of" handling fuel assemblies. The normal 24-hour surveillance frequency provides assurance of the correct water level. If the surveillance has not been performed within the specified interval, use of the component is not allowed since ITS SR 3.0.1 requires a surveillance be met within the specified frequency while in the applicable mode or condition. ITS SR 3.0.1 also states that failure to meet the surveillance constitutes failure to meet the LCO; the actions of the LCO must then be taken. If this SR is not performed within the specified frequency before entering the applicable condition, then as soon as the applicable condition is entered, the LCO would not be met. The actions for the LCO require immediate action to be taken to exit the applicability of the

LCO. This effectively ensures that the applicability of the LCO is not entered with the surveillance not current. Therefore, this change is acceptable.

3.9.7 Reactor Pressure Vessel (RPV) Water Level—New Fuel or Control Rods

The action for CTS 3.9.8 requires placing all fuel assemblies and control rods in a safe condition before suspending fuel handling or control rod movement if the reactor pressure vessel water level is low. The ITS moves this requirement to the ITS 3.9.7 Bases because it does not specify actions to prevent a fuel handling accident. ITS 3.9.7, Required Action A.1, provides the proper actions to preclude a fuel handling accident. The provisions of the Bases Control Program, described in ITS Chapter 5.0, will control changes to these details. Therefore, this change is acceptable.

CTS 3.9.8 requires at least 22 feet of water over the top of the reactor vessel flange when handling fuel assemblies or control rods. ITS 3.9.6 addresses the reactor pressure vessel level when moving irradiated fuel assemblies within the reactor pressure vessel and ITS 3.9.7 addresses the reactor pressure vessel level when moving new fuel assemblies or handling control rods when irradiated fuel assemblies are within the reactor pressure vessel. The ITS changes follow the format of the STS. In ITS 3.9.7, the required water level is from the top of irradiated fuel assemblies seated within the reactor pressure vessel, rather than from the top of the reactor pressure vessel flange, as in CTS 3.9.8. The basis for changing the referenced water level is to require enough water to retain iodine fission product activity should a fuel handling accident occur. The fuel handling accident is postulated to release fission products at the top of the irradiated fuel seated within the reactor pressure vessel when a new fuel assembly or control rod damages the irradiated fuel. If the new fuel assembly or control rod drops on the reactor pressure vessel flange, it would not create a release of fission products since these components (new fuel assembly or control rod) do not contain fission products. Therefore, the lower water level still ensures meeting the assumed iodine retention factors. In addition, the number of irradiated fuel pins damaged in dropping a new fuel assembly or control rod is less than assumed in dropping an irradiated fuel assembly. Thus, the amount of fission products released is less under ITS 3.9.7. The present fuel handling accident analysis bounds the postulated accidents for this change, and the change conforms to the STS. Therefore, this less restrictive change is acceptable.

CTS 4.9.8 requires the determination of the reactor pressure vessel water level in the 2 hours before handling irradiated fuel assemblies and every 24 hours while handling fuel assemblies within the reactor pressure vessel. ITS 3.9.7 requires this surveillance every 24 hours while moving new fuel assemblies or control rods within the reactor pressure vessel with irradiated fuel assemblies in the reactor pressure vessel. The ITS deletes the requirement to do this surveillance "within 2 hours prior to the start of" handling fuel assemblies. The normal 24-hour surveillance frequency provides assurance of the correct water level. If the surveillance has not been performed within the specified interval, use of the component is not allowed since ITS SR 3.0.1 requires a surveillance be met within the specified frequency while in the applicable mode or condition. ITS SR 3.0.1 also states that failure to meet the surveillance constitutes failure to meet the LCO; the actions of the LCO must then be taken. If this SR is not performed within the specified frequency before entering the applicable condition, then as soon as the applicable condition is entered, the LCO would not be met. The actions for the LCO require immediate action to be taken to exit the applicability of the LCO. This effectively ensures that the applicability of the LCO is not entered with the surveillance not current. This change conforms to the STS and is acceptable.

3.9.8 Residual Heat Removal (RHR)—High Water Level

CTS 3.9.11.1.a and 3.9.11.1.b specify the minimum required residual heat removal shutdown cooling mode loop equipment. ITS LCO 3.9.8 does not provide these details. Operability is defined in ITS Chapter 1.0. The details about what makes up an operable residual heat removal shutdown cooling subsystem are being moved to the Bases. It is not necessary to include these details in the TS to ensure system operability because the definition of operability in the ITS provides equivalent requirements. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0. CTS 4.9.11.1 verifies at least one shutdown cooling mode loop is in operation and circulating reactor coolant. ITS 3.9.8 does not verify that the residual heat removal system is circulating reactor coolant. In the ITS, this method of verifying operation of the residual heat removal shutdown cooling subsystem (circulating reactor coolant) is being moved to the Bases. Inclusion of this detail in TS is not necessary for ensuring the residual heat removal shutdown cooling subsystem is in operation. ITS SR 3.9.8.1 verifies operation of a residual heat removal shutdown cooling subsystem. The provisions of the Bases Control Program, described in Chapter 5.0 of the ITS, will control changes to these details.

3.9.9 Residual Heat Removal (RHR)—Low Water Level

CTS 3.9.11.1, Action a, allows 4 hours to establish secondary containment integrity if no residual heat removal loop is operable in the cooling mode. ITS 3.9.8, Required Actions B.2, B.3, and B.4, do not allow 4 hours when secondary containment integrity could be violated, even if secondary containment is intact. ITS 3.9.8 presents the intent of the action properly in Required Actions B.2, B.3, and B.4. These required actions impose the more conservative requirement of initiating action to establish and maintain the secondary containment boundary immediately, with no explicit completion time for these actions specified. This change removes the delay in implementing the necessary actions allowed by the CTS without imposing a TS violation if the actions cannot be completed within a certain time. Since there is no difference in the intent of the actions, this change is acceptable.

CTS 3.9.11.2.a and 3.9.11.2.b specify the minimum required residual heat removal shutdown cooling mode loop equipment. These details are moved to the Bases for ITS 3.9.9. Operability is defined in Chapter 1.0, and it is not necessary to include these details in the TS to ensure system operability.

Changes to the Bases will be controlled by the provisions of the Bases Control Program described in ITS Chapter 5.0.

CTS 4.9.11.2 verifies at least one shutdown cooling mode loop is in operation and circulating reactor coolant. ITS 3.9.9 does not verify that reactor coolant is circulating through the residual heat removal system. In the ITS, this detail of the method of verifying operation of the residual heat removal shutdown cooling subsystem is moved to the Bases. This detail is not necessary for ensuring the residual heat removal shutdown cooling subsystem is in operation. ITS SR 3.9.9.1 verifies operation of a residual heat removal shutdown cooling subsystem. The provisions of the Bases Control Program, described in Chapter 5.0 of the ITS, will control changes to these details.

Conclusion

These less restrictive requirements are acceptable because they will not affect the safe operation of the plant. As discussed in the evaluation format section and summarized in Table 1, to the extent that these less restrictive requirements involve the relocation of matters from the CTS to licensee-controlled documents, they are not otherwise required to be in the TS under 10 CFR 50.36 and they are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to public health and safety. The TS requirements that remain are consistent with current licensing practices, operating experience, and plant accident and transient analyses, and provide reasonable assurance that public health and safety will be protected.

c. More Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 3.9, proposed a number of more restrictive requirements than are required by the CTS. These requirements are described in the following.

3.9.1 Refueling Equipment Interlock

No more restrictive requirements are associated with ITS 3.9.1.

3.9.2 Refuel Position One-Rod-Out Interlock

No more restrictive requirements are associated with ITS 3.9.2.

3.9.3 Control Rod Position

No more restrictive requirements are associated with ITS 3.9.3.

3.9.4 Control Rod Position Indication

In Mode 5, CTS 3.1.3.7, Action b, requires moving any control rod with inoperable position indication to a position with operable position indication or, alternatively, inserting the control rod. ITS 3.9.4, Action A, provides requirements for inoperable control rod position indication channels.

Required Action A.1.1 suspends all in-vessel fuel movement. Required Actions A.1.2 and A.1.3 dictate stopping rod withdrawal, initiate action to fully insert control rod, and do not permit further control rod withdrawal. Optionally, Required Actions A.2.1 and A.2.2, require operators to initiate action to fully insert and disarm the control rod associated with the inoperable full-in position indication. Finally, the ITS completion time specifies immediate action. CTS 3.1.3.7, Action b, does not specify a completion time for the action. ITS Required Actions A.1.1 and A.1.2 prevent additional core reactivity changes while actions are being taken to insert the control rod with the inoperable position indication channel. The alternative ITS Required Actions (A.2.1 and A.2.2) require immediate initiation of insertion of the control rod associated with the inoperable position indication channel and disarming of the associated fully inserted control rod drive. These required actions ensure the control rod associated with the inoperable position channel will not be withdrawn, thus preventing inadvertent withdrawal of two control rods because of control rod position indication channel failure. As the ITS require additional actions to prevent inadvertent reactivity additions, this change is more restrictive and is acceptable.

3.9.5 Control Rod OPERABILITY—Refueling

CTS 3.1.3.5 requires all control rod scram accumulators to be operable in Mode 5, but the CTS do not require control rods to be operable in Mode 5. ITS 3.9.5 requires each withdrawn control rod to be operable, and also requires insertion capability for each withdrawn control rod. Action A requires initiation of full insertion of any inoperable withdrawn control rod. ITS SR 3.9.5.1 verifies each withdrawn control rod can insert at least one notch. These additional restrictions on the control rods during Mode 5 provide additional assurance of control rod operability when needed. The change is therefore acceptable.

3.9.6 Reactor Pressure Vessel (RPV) Water Level—Irradiated Fuel

No more restrictive requirements are associated with ITS 3.9.6.

3.9.7 Reactor Pressure Vessel (RPV)

No more restrictive requirements are associated with ITS 3.9.7.

3.9.8 Residual Heat Removal (RHR)—High Water Level

No more restrictive requirements are associated with ITS 3.9.8.

3.9.9 Residual Heat Removal (RHR)—Low Water Level

CTS 3.9.11.1, Action a, allows 4 hours to establish secondary containment integrity if no residual heat removal loop is operable in the cooling mode. ITS 3.9.8, Required Actions B.2, B.3, and B.4, do not allow 4 hours when secondary containment integrity could be violated, even if secondary containment is intact. ITS 3.9.8 presents the intent of the action properly in Required Actions B.2, B.3, and B.4. These required actions impose the more conservative requirement of initiating action to establish and maintain the secondary containment boundary immediately, with no explicit completion time for these actions specified. This change removes the delay in implementing the necessary actions allowed by the CTS without imposing a TS violation if the actions cannot be completed within a certain time. Since there is no difference in the intent of the actions, this change is purely administrative and is acceptable.

CTS 3.9.11.2 specifies requirements for the shutdown cooling mode of the RHR system, including actions if the LCO is not met. Action a requires that operators demonstrate the operability of at least one alternative method of decay heat removal for each inoperable RHR shutdown cooling mode loop. CTS 3.9.11.2 has no additional action if Action a is not completed. ITS 3.9.9 adds Action B. If ITS Action A (CTS Action a) is not successful in establishing an alternate method of decay heat removal, Action B requires the following actions:

(a) restore secondary containment to operable status (Required Action B.1); and

(b) restore one standby gas treatment subsystem to operable status (Required Action B.2); and

(c) restore isolation capability in each required secondary containment penetration flow path not isolated (Required Action B.3).

These requirements ensure the integrity of the secondary containment boundary if loss of shutdown cooling should result in releasing fission products. Therefore, these additional requirements are acceptable.

Conclusion

These more restrictive requirements strengthen the CTS and are therefore acceptable.

d. Deviations from the STS

The licensee, in electing to adopt the specifications of STS Section 3.9, proposed a number of deviations from the STS. The following deviations are the most significant.

STS SR 3.9.1.1 specifies performance of a channel functional test of the refueling interlocks, namely, the all-rods-in, refuel platform position interlock and the refuel platform main hoist, fuel loaded interlocks. ITS SR 3.9.1.1 specifies the current licensing basis for the WNP-2 refueling equipment interlocks which includes interlocks in addition to those in the STS.

STS 3.9.4 requires one control rod full-in position indication channel for each control rod to be operable. ITS 3.9.4 requires each control rod full-in position indication channel to be operable. The WNP-2 design includes more

than one full-in position indication channel; therefore, the wording has been changed to reflect this design.

STS 3.9.1 specifies that the refueling equipment interlocks shall be operable and is applicable during in-vessel fuel movement with equipment associated with the interlocks. The WNP-2 current licensing basis requires that the interlocks associated with the refuel position be operable when the reactor mode switch is in the refuel position, not in the shutdown position. Interlocks associated with other reactor mode switch positions are not required to be operable to satisfy ITS 3.9.1. Therefore, to avoid confusion, the LCO and applicability in ITS 3.9.1 have been modified to state that the refueling interlocks are those associated with the refuel position and that the requirements of ITS 3.9.1 are applicable when the reactor mode switch is in the refuel position. This difference is consistent with the intent of the STS, but provides further clarification.

Conclusion

These deviations from STS Section 3.9 are consistent with the WNP-2 design and with existing requirements and commitments, or with proposed changes found acceptable, as discussed elsewhere in this evaluation. Therefore, these differences are acceptable.

e. Relocated Requirements

In accordance with the criteria in the Final Policy Statement, the licensee has proposed to entirely remove the following containment system specifications from the CTS and place them in licensee-controlled documents.

3.9.4 Decay Time

CTS 3/4.9.4 requires a 24-hour subcritical decay time before moving irradiated fuel in the reactor pressure vessel. Before moving fuel in the reactor vessel, certain operational steps must be completed. These steps include containment entry, removal of drywell head, removal of vessel head, and removal of vessel internals. The 24-hour decay time following subcriticality will always be met for a refueling outage because of the time needed to perform these operational steps. Therefore, although CTS 3/4.9.4 meets Criterion 2 of 10 CFR 50.36(c)(2)(ii), it is not necessary to retain this requirement in the TS, and the requirement in CTS 3/4.9.4 is being relocated to the FSAR/LCS and will be controlled in accordance with 10 CFR 50.59. The relocation will have no impact on plant safety. This change conforms to the STS and is acceptable.

3.9.5 Communications

Communication between the control room and refueling floor personnel is maintained to ensure that refueling personnel can be promptly informed of significant changes in the plant status or core reactivity condition during refueling. The communications allow for coordination of activities that require interaction between the control room and refueling floor personnel

(such as the insertion of a control rod before loading fuel). However, the refueling system design accident or transient response does not take credit for communications, and is designed to ensure safe refueling operations. Therefore, the requirements specified in CTS 3.9.5 will be relocated to the FSAR/LCS and controlled in accordance with 10 CFR 50.59. These CTS requirements do not meet any of the criteria of 10 CFR 50.36 for inclusion in TS, and this change conforms to the STS. Therefore, this relocation is acceptable.

3.9.6 Refueling Platform

Refueling platform operability ensures that appropriate controls are in place for handling of radioactive components and core internals. Although interlocks are designed to prevent damage to these components, the interlocks are not assumed to function to mitigate the consequences of a design basis accident or transient. Therefore, the requirements specified in CTS 3/4.9.6 will be relocated to the LCS and controlled in accordance with 10 CFR 50.59. These requirements do not meet any of the criteria of 10 CFR 50.36 for inclusion in TS, and this change conforms to the STS. Therefore, this relocation is acceptable.

3.9.7 Crane Travel—Spent Fuel Storage Pool

The crane travel limits are provided by physical design and administrative controls, and are not process variables which are monitored and controlled by the operator; neither are they components which are part of the primary success path to mitigate a design basis accident. Therefore, the requirements specified in CTS 3.9.7 will be relocated to the LCS and controlled in accordance with 10 CFR 50.59. This change conforms to the STS and is acceptable.

Conclusion

These current specifications are not required to be in the TS under 10 CFR 50.36 and except as noted in section 3.9.4 above, do not meet any of the four criteria in the Final Policy Statement. They are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to public health and safety. In addition, the staff finds that sufficient regulatory controls exist under the regulations cited above to maintain the effect of the provisions in these specifications. Accordingly, these current specifications may be removed from the CTS and placed in the licensee-controlled documents cited above.

3.10 SPECIAL OPERATIONS

The licensee has proposed administrative and technical changes to the CTS to bring them into conformance with STS Section 3.10, "Special Operations." The changes are discussed in the order of the specifications in STS Section 3.10. The corresponding ITS Section 3.10 specification titles are listed in italics before each discussion.

a. Administrative Changes

The CTS specifications that have been retained in ITS Section 3.10 have been reworded to conform to the STS presentation. The following changes are the most significant.

3.10.1 Inservice Leak and Hydrostatic Testing Operation

CTS 3.10.7 requires meeting the following Mode 3 LCOs when conducting inservice leak or hydrostatic testing: LCO 3.1.3.8, "Control Rod Drive Housing Support," and LCO 3.8.4.3, "Motor-Operated Valves Thermal Overload Protection." The ITS deletes these CTS requirements. Removing these requirements from ITS 3.10.1 is acceptable because the referenced LCOs have been removed. Technical issues associated with these LCOs are discussed in Sections 3.1 and 3.8 of this safety evaluation.

CTS 3.4.9.1 contains Note ##, which allows removing RHR shutdown cooling from operation during hydrostatic testing. ITS 3.4.10 does not have this note, and the requirements have been moved to ITS 3.10.1. ITS 3.10.1 specifies that during inservice leak and hydrostatic testing, "operations are not considered to be in Mode 3" and therefore the note for Mode 3 is not needed. This change is acceptable.

The ITS 3.10.1 actions add two notes to clarify the requirements in CTS 3.10.7. The first note allows separate condition entry for each requirement of the LCO. The second note, added to Required Action A.1, specifies that if the required actions require entering Mode 4, average reactor coolant temperature must be reduced to ≤ 200°F. Since these notes are clarifications, this is an acceptable administrative change.

3.10.3 Single Control Rod Withdrawal—Hot Shutdown

CTS SR 4.9.1.2 and 4.9.1.3 require testing the refuel position one-rod-out interlock. ITS SR 3.10.3.1 is a generic requirement to perform the SRs for the required LCOs. Since the ITS SR incorporates surveillance requirements equivalent to the CTS surveillance requirement, this is an acceptable administrative change.

3.10.4 Single Control Rod Withdrawal—Cold Shutdown

CTS 3.9.10.1 allows removing one control rod and/or associated rod drive mechanism provided certain requirements are met. The CTS also states these requirements must be met until a control rod and/or associated control rod drive mechanism are reinstalled and the control rod is fully inserted in the core. CTS SR 4.9.10.1 also contains the statement about reinstallation of the control rod and/or the associated mechanism. ITS 3.10.4 deletes this statement. The deletion is editorial since LCO requirements apply until the conditions under which they are required no longer exist. This administrative change is acceptable.

CTS 3.9.10.1.b allows removing one control rod and/or associated rod drive mechanism provided source range monitors are operable. CTS SR 4.9.10.1.b requires verifying that this requirement is met. ITS 3.10.4 does not include the requirement that source range monitors are operable. The ITS Mode 4 requirements for SRM operability and surveillance testing are required to be met without explicit reference to them. ITS 3.10.4 does not modify the normal requirements, and therefore, ITS 3.3.1.2 "Source Range Monitor Instrumentation," must also be met during this special operation. Deleting this requirement removes a redundant requirement and therefore is an administrative change. This change is acceptable.

CTS 3.9.10.1.c includes statements which clarify an exception to the current shutdown margin requirements, which require additional shutdown margin for immoveable control rods. ITS 3.10.4.c.2 does not include this clarification but states that the withdrawn rod is "assumed to be the highest worth control rod." In the ITS definition of shutdown margin, the "highest worth control rod" is assumed to be fully withdrawn. Since the rod need only be considered once in the SDM calculations, this rod need not also be considered as a stuck rod and the additional words are unnecessary and therefore deleted from the ITS. This administrative change is acceptable.

CTS 3.9.10.1.d allows the option of removing the four fuel assemblies surrounding the control rod or drive mechanism which is to be removed, instead of disarming the control rods in a five-by-five array. ITS 3.10.4.c.2 does not provide this option, since it is physically impossible during Mode 4. This administrative change is acceptable.

ITS 3.10.4 adds four new notes to clarify the actions and surveillance requirement sections. The note in the actions section clarifies the requirements to enter the applicable condition of the affected specification and applies to each of the affected specifications. Required Action A.1, Note 1, clarifies that if an affected specification's actions require fully inserting all insertable control rods, the reactor mode switch must be placed in the shutdown position. Required Action A.1, Note 2, clarifies that this required action is only applicable if the requirement not met is an LCO. The ITS SR 3.10.4.2 note clarifies that if ITS SR 3.10.4.1 is satisfied for ITS 3.10.4.c.1 requirements, then ITS SR 3.10.4.2 need not be performed. These clarifications are acceptable administrative changes.

CTS surveillance requirements 4.9.1.2 and 4.9.1.3 require testing the refuel position one-rod-out interlock listed in CTS 3.9.1.a. ITS SR 3.10.4.1 is a generic requirement to perform the SRs for the required LCOs contained in LCO 3.10.4. Since the ITS SR incorporates the CTS surveillance requirement, this is an acceptable administrative change.

3.10.5 Single Control Rod Drive Removal—Refueling

CTS 3.9.10.1 allows removing one control rod and/or associated rod drive mechanism provided certain requirements are met. The CTS states these requirements must be met until a control rod and/or associated control rod drive mechanism are reinstalled and the control rod is fully inserted in the

core. CTS SR 4.9.10.1 contains the statement addressing reinstallation of the control and/or the associated mechanisms. ITS 3.10.5 omits this statement. The deletion is editorial since LCO requirements apply until the conditions under which they are required no longer exist. This administrative change is acceptable.

CTS 3.9.10.1.b allows removing one control rod and/or associated rod drive mechanism provided source range monitors are operable. CTS SR 4.9.10.1.b requires verifying that this requirement is met. ITS 3.10.5 does not include the requirement that source range monitors (SRMs) are operable. The ITS Mode 5 requirements for SRM operability and surveillance testing must be met, though they are not explicitly referred to. ITS 3.10.5 does not modify the normal requirements, and therefore, ITS 3.3.1.2 must also be met during this special operation. Deleting this requirement removes a redundant requirement and therefore is an administrative change. This change is acceptable.

CTS 3.9.10.1.c includes statements which clarify an exception to the current shutdown margin requirements, which require additional shutdown margin for immoveable control rods. ITS 3.10.5.c does not include this clarification but states that the withdrawn rod is "assumed to be the highest worth control rod." In the ITS definition of shutdown margin, the "highest worth control rod" is assumed to be fully withdrawn. Since the rod need only be considered once in the SDM calculations, this rod need not also be considered as a stuck rod and the additional words are unnecessary and are deleted from the ITS. This administrative change is acceptable.

CTS 3.9.10.1.d allows the option of removing the four fuel assemblies surrounding the control rod or drive mechanism to be removed, instead of disarming the control rods in a five-by-five array. ITS 3.10.5.b does not provide this option. During Mode 5, multiple control rods can only be removed if the requirements of ITS LCO 3.10.6 (CTS LCO 3.9.10.2) are followed. Since this LCO controls a single control rod removal, all other control rods must be fully inserted regardless of the status of the surrounding fuel assemblies. This administrative change is acceptable.

The CTS 3.9.10.1 applicability specifies that this LCO applies during Modes 4 and 5. ITS 3.10.4 addressed the changes for Mode 4. The ITS 3.10.5 applicability addresses the changes for Mode 5 and adds the words "with LCO 3.9.5 not met." The Mode 5 applicability addition ("with LCO 3.9.5 not met") clarifies the intent of CTS 3.9.10.1, which says "the associated control rod drive mechanism may be removed from...the reactor pressure vessel...." When the control rod drive mechanism is removed as specified in CTS 3.9.10.1, ITS LCO 3.9.5, which requires all withdrawn control rods to be operable, is not met. Since this applicability clarifies the intent of the CTS, this change is considered administrative. This change is acceptable.

The CTS 3.9.10.1 action requires suspending the removal of a drive mechanism and initiating action to satisfy the LCO requirements, if the LCO requirements are not met. The ITS 3.10.5 actions require suspending the removal of a drive mechanism but also provides an option of fully inserting all control rods or initiating action to meet the LCO requirement. This alternative required action takes the Unit outside the applicability of ITS LCO 3.10.5. This is an administrative change, since leaving the applicability is always an option. This change is therefore acceptable.

3.10.6 Multiple Control Rod Withdrawal—Refueling

CTS 3.9.10.2 allows removing any number of control rods and/or associated rod drive mechanisms provided certain requirements are met. The CTS also states that these requirements must be met until all control rods and/or associated control rod drive mechanisms are reinstalled and all control rods fully inserted in the core. CTS SR 4.9.10.2.1 also contains this statement addressing reinstalling the control rods and/or the associated mechanisms. ITS 3.10.6 omits this statement. The omission is editorial since the requirements apply until conditions under which they are required to apply no longer exist. This administrative change is acceptable.

CTS 3.9.10.2.b allows removing any number of control rods and/or associated rod drive mechanisms provided source range monitors are operable. CTS SR 4.9.10.2.1.b requires verifying that this requirement is met. ITS 3.10.6 does not specifically include the source range monitor operability requirement. The CTS Mode 5 requirements for SRM operability and surveillance testing ensure operability without the explicit reference. ITS 3.10.6 does not modify the normal requirements, and therefore, ITS 3.3.1.2, "Source Range Monitor Instrumentation," must also be met during this special operation. Deleting this requirement removes a redundant requirement and therefore is an administrative change. This change is acceptable.

CTS 3.9.10.2.c allows removing any number of control rods and/or associated rod drive mechanisms provided the shutdown margin requirements of CTS 3.1.1 are satisfied. CTS SR 4.9.10.2.1.c requires verifying that this requirement is met. ITS 3.10.6 does not specifically include the statement that shutdown margin requirements be satisfied. ITS 3.10.6 does not modify the normal requirements, and therefore, ITS 3.1.1 must also be met during this special operation. Deleting this requirement removes a redundant requirement and therefore is an administrative change. This change is acceptable.

The CTS 3.9.10.2 applicability specifies that this LCO applies during Mode 5. The ITS 3.10.6 applicability specifies that this LCO applies during Mode 5 and adds the words "with LCO 3.9.3, LCO 3.9.4, or LCO 3.9.5 not met," an explicit statement of applicability that conforms to the LCO, which permits more than one control to be withdrawn or inoperable. These changes are strictly administrative and do not modify the requirements.

The CTS 3.9.10.2 action requires suspending the removal of the control rods and/or drive mechanisms and initiating action to satisfy the LCO requirements, if the LCO requirements are not met. ITS 3.10.6 actions require suspending the removal of the drive mechanism, but allow the option of initiating action to fully insert all control rods in core cells with one or more fuel assemblies or initiating action to meet the LCO requirement. This alternative required action takes the plant outside the applicability of ITS LCO 3.10.6.

This is an administrative change, since leaving the applicability is always an option. This change is therefore acceptable.

3.10.7 Control Rod Testing—Operating

CTS 3.10.2 allows suspending the constraints imposed by the rod sequence control system (RSCS) during special testing performance provided the rod worth minimizer is operable. ITS 3.10.7 allows suspending the requirements of LCO 3.1.6, "Rod Pattern Control" during special testing, provided the banked position withdrawal sequence is changed or the rod worth minimizer bypassed, requirements of control rod block instrumentation are suspended, and the rod sequence is verified by a second operator. The ITS deletes the CTS 3/4.1.4.2 RSCS requirements. Changes to CTS 3/4.1.4.2 are discussed in Section 3.1 of this safety evaluation. Reference to the RSCS is removed from ITS 3.10.7 since the RSCS requirements are no longer included in ITS Section 3.1. This change is acceptable.

CTS 3.10.2 allows suspending the constraints imposed by the rod sequence control system (RSCS) during special testing provided the rod worth minimizer (RWM) is operable. ITS 3.10.7 allows suspending the requirements of LCO 3.1.6, "Rod Pattern Control," during special testing, provided the banked position withdrawal sequence (BPWS) is changed or the RWM bypassed, requirements of control rod block instrumentation are suspended, and the rod sequence is verified by a second operator. These requirements specify that when the test sequence deviates from normal requirements, the RWM be either bypassed or reprogrammed with the new sequence. These options meet the intent of the requirement that the RWM be "OPERABLE per Specifications 3.1.4.1," since CTS 3.1.4.1 allows continued control rod withdrawal with the RWM bypassed. These requirements are consistent with the ITS 3.3.2.1 required actions with the RWM inoperable. This change is acceptable.

The CTS 3.10.2 applicability specifies that this LCO applies during Modes 1 and 2. The ITS 3.10.7 applicability specifies that this LCO applies during Modes 1 and 2 and adds a statement "with LCO 3.1.6 not met." In performing the ITS 3.10.7 control rod tests, it will not be possible to comply with the requirements of the BPWS specified in ITS 3.1.6. The applicability has been revised to clarify actual applicable conditions for the proposed LCO. This change is strictly administrative and does not modify the requirements.

The CTS 3.10.2 action requires suspending the test and exception to the BPWS requirements if the LCO requirements are not met (by requiring the RSCS to be operable, which suspends the exception to the LCO). ITS 3.10.7, Required Action A.1, requires suspension of the test and suspends the exception to ITS 3.1.6. The ITS required action is equivalent to the CTS action; therefore this is an administrative change. This change is acceptable.

ITS 3.10.7 adds two new notes to clarify the surveillance requirement section. ITS SR 3.10.7.1 note clarifies that if ITS SR 3.10.7.2 is satisfied, performing ITS SR 3.10.7.1 is not required. The ITS SR 3.10.7.2 note clarifies that if ITS SR 3.10.7.1 is satisfied, performance of ITS SR 3.10.7.2 is not required. This is allowed since LCO 3.10.7.a, which is verified by SR

3.10.7.2, is one option and LCO 3.10.7.b, which is verified by SR 3.10.7.1, is the other option. These changes are clarifications and are therefore acceptable administrative changes.

CTS 3.10.2.d lists the startup test program as one of the special tests for which this LCO exception is applied. ITS 3.10.7 also omits the startup test program reference. The startup test program has been completed at WNP-2; therefore the exception is no longer needed and this LCO can be deleted. This is an administrative change and is acceptable.

3.10.8 SDM Test—Refueling

CTS 3.10.3 allows suspending the provisions of CTS 3.9.1 and 3.9.3 to permit the reactor mode switch to be in the startup position and allow more than one control rod be withdrawn for shutdown margin demonstration if certain requirements are satisfied. ITS 3.10.8 does not refer to suspending these LCOs. The exception to CTS 3.9.1 is not needed since the requirement to lock the reactor mode switch in refuel at all times while in Mode 5 has been deleted. The exception to CTS 3.9.3 cannot be used because CTS 3.10.3 precludes all other core alterations from taking place. Deleting these two exceptions is administrative since the requirements of CTS 3.9.1 no longer exist and the reference to CTS 3.9.3 does not change previous restrictions. This change is acceptable.

CTS 3.10.3 allows suspending the provisions of CTS 3.9.1, CTS 3.9.3, and Table 1.2 to permit the reactor mode switch to be in the startup position and allow withdrawing more than one control rod for shutdown margin demonstration provided certain requirements are met, including that the source range monitors are operable. CTS SR 4.10.3.a requires verifying that this requirement is met. ITS 3.10.8 does not specifically include the requirement that source range monitors be operable. The current Mode 5 requirements for SRM operability and surveillance testing ensure the requirements are met without explicit reference to them. ITS 3.10.8 does not modify the normal requirements, and therefore, ITS 3.3.1.2, "Source Range Monitor Instrumentation," must also be met during this special operation. Deleting the requirement removes a redundant requirement and therefore is an administrative change. This change is acceptable.

CTS 3.3.1, "RPS Instrumentation," requires operability of average power range monitors (APRMs) in Mode 5. ITS 3.3.1.1 "RPS Instrumentation" deletes APRM requirements in Mode 5. CTS 3.10.3, "Shutdown Margin Demonstration," does not include APRM requirements. ITS 3.10.8 "Shutdown Margin Test-Refueling," and SR 3.10.8.1 include APRM requirements. Since the APRM requirements contained in CTS 3.3.1 are moved to ITS 3.10.8 for shutdown margin test, this is an administrative change. This change is acceptable.

CTS 3.1.3.6 "Control Rod Drive Coupling" requires all control rods coupled in Mode 5. ITS 3.1.3 "Control Rod operability" deletes control rod coupling requirements in Mode 5. CTS 3.10.3 "Shutdown Margin Demonstration" does not include control rod coupling requirements. ITS 3.10.8 "Shutdown Margin Test-Refueling," Actions Condition A, and SR 3.10.8.5 include control rod coupling requirements. Since the control rod coupling requirements contained in CTS 3.3.1 are moved to ITS 3.10.8 for shutdown margin testing, this is an administrative change. This change is acceptable.

The CTS 3.10.3 applicability specifies that this LCO applies in Mode 5 during shutdown margin demonstrations. The ITS 3.10.8 applicability specifies that this LCO applies during Mode 5 and adds the words "with the reactor mode switch in startup/hot standby position." The applicability has been revised to clarify actual applicable conditions for the proposed LCO. This change is strictly administrative and does not modify the requirements.

ITS 3.10.8 adds two new notes to clarify the surveillance requirement section. The ITS SE 3.10.8.2 note clarifies that if ITS SE 3.10.8.3 is satisfied, performing ITS SE 3.10.8.2 is not required. The ITS SE 3.10.8.3 note clarifies that if ITS SE 3.10.8.2 is satisfied, performing ITS SE 3.10.8.3 is not required. This is allowed since LCO 3.10.8.b.1, which is verified by SR 3.10.8.2, is one option and LCO 3.10.8.b.2, which is verified by SR 3.10.8.3, is the other option. Since these changes are clarifications, they are acceptable administrative changes.

CTS 3.1.3.5, "Control Rod Scram Accumulators," Action b.2, describes the actions required in Mode 5 "with more than one withdrawn control rod with the associated scram accumulator inoperable or no control rod drive pump operating." ITS 3.9.5, "Control Rod OPERABILITY-Refueling," provides required actions for inoperable withdrawn control rods in Mode 5; SR 3.9.5.2 requires verifying accumulator pressure; and accumulator operability is an element of control rod operability. Since the requirements remain the same, these changes are administrative and acceptable.

3/4.10.1 Primary Containment Integrity

CTS 3.10.1 allows exceptions during low power physics tests. The ITS deletes these exceptions since all low power physics tests are complete. This LCO is no longer relevant to the plant and its deletion is therefore an acceptable administrative change.

3/4.10.4 Recirculation Loops

CTS 3.10.4 allows exceptions during low power physics tests and the startup test program. The ITS deletes these exceptions since all low power physics tests and the startup test program are complete. This LCO is no longer relevant to the plant and its deletion is therefore an acceptable administrative change.

3/4.10.5 Oxygen Concentration

CTS 3.10.5 allows exceptions during the Startup Test Program. The ITS deletes these exceptions since the Startup Test Program is complete. This LCO is no longer relevant to the plant and its deletion is therefore an acceptable administrative change.

3/4.10.6 Training Startups

CTS 3.10.6 allows exceptions during training startups. The ITS deletes these exceptions since training startups are no longer performed. This LCO is no longer relevant to the plant and its deletion is therefore an acceptable administrative change.

Conclusion

These changes to the CTS are administrative. They clarify, reorganize, or reformat the current specifications. None of these changes alters the limits in the current requirements. Accordingly, these changes are acceptable.

b. Less Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 3.10, proposed a number of requirements less restrictive than those in the CTS. The following changes are the most significant.

3.10.1 Inservice Leak and Hydrostatic Testing Operation

CTS 3.10.7 limits the maximum reactor coolant temperature to 212°F during inservice leak and hydrostatic testing. Inservice leak and hydrostatic tests are very controlled evolutions involving strict procedural compliance. ITS 3.10.1 does not contain a limitation on the maximum reactor coolant temperature. Maximum temperature requirements during inservice leak and hydrostatic tests are moved to the LCS/FSAR and will be controlled by the provisions of 10 CFR 50.59. This change is acceptable.

3.10.2 Reactor Mode Switch Interlock Testing

CTS Section 1.0, Table 1.2, Note #, and CTS 4.9.1.2 and 4.9.1.3, Note *, allow placing the reactor mode switch in the run or startup/hot standby position to test the switch interlock functions provided the control rods are verified to remain fully inserted by a second licensed operator or other qualified staff member. ITS SR 3.10.2.1 does not specify a method to verify control rods are inserted, but does require verifying control rods are fully inserted, which is adequate. The method for conducting the SR is now described in the ITS Bases B 3.10.2 and will be controlled by the Basis Control Program in ITS Section 5.0. Describing the method in the Bases is an acceptable less restrictive change.

CTS Section 1.0, Table 1.2, Note #, and CTS 4.9.1.2 and 4.9.1.3, Note *, allow placing the reactor mode switch in the Run or Startup/Hot Standby position to test the switch interlock functions provided a second licensed operator or other qualified staff member verifies that the control rods remain fully inserted. ITS 3.10.2 allows testing, provided all control rods remain fully inserted in core cells containing one or more fuel assemblies. Shutdown margin is sufficient even when the testing is done when control rods are not fully inserted, provided the non-fully-inserted control rods are in cells containing no fuel assemblies. This less restrictive change is acceptable.

CTS Section 1.0, Table 1.2, Note #, and CTS 4.9.1.2 and 4.9.1.3, Note *, allow placing the reactor mode switch in the run or startup/hot standby position to test the switch interlock functions. ITS 3.10.2 allows changing the mode switch position to the refuel position. The same protection is provided for testing with the reactor mode switch in the refuel position as in run or startup/hot standby (i.e., "all control rods remain fully inserted"). If a control rod were inadvertently withdrawn, fewer control rods could be withdrawn with the reactor mode switch in Refuel (because of the one-rod-out interlock) than with the reactor mode switch in one of the other allowed positions. This less restrictive change is acceptable.

3.10.3 Single Control Rod Withdrawal-Hot Shutdown

CTS 3.9.1, Action b, and SR 4.9.1.1 require the reactor mode switch locked in the shutdown or refuel position. ITS 3.10.3 does not require locking the mode switch. Locking the reactor mode switch in Refuel would require additional actions by the operators to return it to the normal position (Shutdown). Also, to exit the LCO, the reactor mode switch needs to be unlocked to move it to the shutdown position; but the action of unlocking the reactor mode switch would result in noncompliance with the LCO. Thus to exit the LCO, the plant must currently violate the LCO requirements. The CTS requirements are deleted for consistency with the STS. Moving the reactor mode switch from the Refuel position is adequately controlled by Table 1.1-1 and ITS 3.10.3. This less restrictive change is acceptable.

3.10.4 Single Control Rod Withdrawal—Cold Shutdown

CTS 3.9.10.1.d and 4.9.10.1.d describe the method for disarming control rods. ITS 3.10.4.c.2 and SR 3.10.4.2 require disarming the control rod but do not describe the methods of disarming. This description is moved to the ITS Bases of B 3.10.4.c.2. Moving the description to the Bases is an acceptable less restrictive change.

CTS 3.9.1.a, 3.9.1 Action b, CTS 3.9.10.1.a, and SRs 4.9.1.1 and 4.9.10.1.a require the reactor mode switch operable and locked in the shutdown or refuel position. ITS 3.10.4 does not require the mode switch locked or specifically state it must be operable. The CTS requirements are deleted consistent with the STS. Locking the reactor mode switch in Refuel would require additional actions by the operators to return it to the normal position (shutdown). Also, to exit the LCO, the reactor mode switch needs to be unlocked to move it to the Shutdown position; but the action of unlocking the reactor mode switch would result in noncompliance with the LCO. Thus to exit the LCO, the plant must currently violate the LCO requirements. Moving the reactor mode switch from the refuel position is adequately controlled by Table 1.1-1 and ITS 3.10.4. Reactor mode switch operability is included as part of the operability of various interlocks, trip functions, and control rod blocks. These less restrictive changes are acceptable.

CTS 3.9.10.1.c and 3.9.10.1.d require satisfying shutdown margin requirements and disarming a control rod five-by-five array before removing one control rod or drive mechanism. ITS 3.10.4.c allows fulfilling these CTS requirements or requires that RPS functions (LCO 3.3.1.1) and control rods (LCO 3.9.5) be operable. These requirements ensure that if an inadvertent criticality occurs, the RPS initiates a scram and inserts withdrawn control rods. The appropriate surveillance requirements have been added to verify implementation of these requirements. This less restrictive change is acceptable.

CTS Section 1.0, Table 1.2, Note ***, allows placing the reactor mode switch in the refuel position to move a single control rod provided the one-rod-out interlock is operable. ITS 3.10.4.b allows the option of requiring operability of the one-rod-out interlock (LCO 3.9.2) and control rod position indication (LCO 3.9.4) or inserting a control rod withdrawal block. Inserting a rod withdrawal block also ensures that no additional rods are withdrawn, similar to the one-rod-out interlock. The appropriate surveillance requirements have been added to verify implementation of these requirements. This less restrictive change is acceptable.

CTS SR 4.9.10.1 requires verifying requirements in the 4 hours before a control rod and/or drive mechanism removal begins and at least once per 24 hours thereafter. The ITS 3.10.4 surveillance requirements do not require verifying the requirements in the 4 hours before removal begins. Special operations conditions and SRs of associated LCOs must be met to enter and remain in the conditions of ITS 3.10.4. This is an acceptable less restrictive change.

3.10.5 Single Control Rod Drive Removal—Refueling

CTS 3.9.10.1.d and 4.9.10.1.d describe the method for disarming control rods. ITS 3.10.5.b and SR 3.10.5.2 require disarming the control rod but do not describe the methods. This description is moved to the ITS Bases. Moving the description to ITS Bases B 3.10.5 is a less restrictive change that is acceptable.

CTS 3.9.10.1.a and SR 4.9.10.1.a require the reactor mode switch operable and locked in the shutdown or refuel position. ITS 3.10.5 does not include the requirement that the mode switch be locked and operable. The CTS requirements are deleted for consistency with the STS. Moving the reactor mode switch from the refuel position is adequately controlled by ITS Table 1.1-1. A reactor mode switch position other than Refuel and Shutdown results in the unit entering some other mode, mandating the associated requirements of that mode and of ITS 3.0.4. Reactor mode switch operability is included as part of the operability of various interlocks, trip functions, and control rod blocks. These less restrictive changes are acceptable.

CTS SR 4.9.10.1 requires verifying requirements in the 4 hours before a control rod and/or drive mechanism removal begins and at least once per 24 hours thereafter. The ITS 3.10.5 surveillance requirements do not require verification in the 4 hours before removal begins. Special operations conditions and SRs of associated LCOs must be met to enter and remain in the conditions of ITS 3.10.5. This is an acceptable less restrictive change.

3.10.6 Multiple Control Rod Withdrawal—Refueling

CTS 3.9.10.2.a and SR 4.9.10.2.1.a require the reactor mode switch operable and locked in the shutdown or refuel position. ITS 3.10.6 does not require locking the mode switch or that it be operable. The CTS requirements are deleted consistent with the STS. Moving the reactor mode switch from the refuel position is adequately controlled by ITS Table 1.1-1. A reactor mode switch position other than Refuel and Shutdown results in the plant entering some other mode, mandating requirements of that mode and ITS 3.0.4. Reactor mode switch operability is included as part of the operability of various interlocks, trip functions, and control rod blocks. These less restrictive changes are acceptable.

CTS SR 4.9.10.2.1 requires verifying LCO requirements are met in the 4 hours before a control rod and/or drive mechanism removal starts and at least once per 24 hours thereafter. The ITS 3.10.6 surveillance requirements do not verify LCO requirements in the 4 hours before a removal begins. Special operations conditions and SRs of associated LCOs must be met to enter and remain in the conditions of ITS 3.10.6. This is an acceptable less restrictive change.

CTS 4.9.10.2.2 requires a functional test of the one-rod-out refueling interlock following replacement of any control rod and/or drive mechanism, if this function had been bypassed. ITS 3.10.6 does not contain this surveillance requirement. Any time the operability of a system or component has been affected by repair, maintenance, or replacement of a component, post-maintenance testing is required to demonstrate operability of the system or component. The CTS explicit post-maintenance surveillance requirements are deleted since they are controlled by plant procedures. This less restrictive change is acceptable.

3.10.8 SDM Test—Refueling

CTS SR 4.10.3.b requires that the rod worth minimizer (RWM) be verified operable or that a second operator verify compliance with shutdown margin procedures "within 30 minutes before and at least once per 12 hours during performance of shutdown margin demonstration." ITS SR 3.10.8.2 requires performing the Mode 2 applicable surveillance requirements for the RWM at a frequency according to the applicable surveillance requirements. The 30-minute RWM surveillance was effectively a "paper-check" since the surveillances required by CTS 3.1.4.1 were verified current, but not actually have to be performed in the 30 minutes preceding the SDM test. The proposed surveillance deletes this 30-minute paper check, but maintains the requirement to actually perform the tests. This paper check is administrative and is generally governed by plant procedures. The surveillance required if the RWM is inoperable has been changed from verifying in the 30 minutes before the SDM test begins that a second licensed operator is present to actually verify the rod movement to be correct every time a rod is moved. In this regard, this check is more restrictive than current requirements. CTS SR 4.10.3.c requires verifying that no core alterations are in progress "within 30 minutes before and at least once per 12 hours during performance of shutdown margin demonstration." ITS SR 3.10.8.4 requires verifying every 12 hours that no other core alterations are in progress, but does not require the verification in the 30-minute period before the SDM test starts. This allows the verification to be performed up to 12 hours before the test starts (as described in proposed SR 3.0.4). The deletion of the 30-minute check is an acceptable less restrictive change.

Conclusion

These less restrictive requirements are acceptable because they will not affect the safe operation of the plant. As discussed in the evaluation format section and summarized in Table 1, to the extent that these less restrictive requirements involve the relocation of matters from the CTS to licensee-controlled documents, they are not otherwise required to be in in the TS under 10 CFR 50.36 and they are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to public health and safety. The TS requirements that remain are consistent with current licensing practices, operating experience, and plant accident and transient analyses, and provide reasonable assurance that public health and safety will be protected.

c. More Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 3.10, proposed a number of requirements that are more restrictive than those in the CTS. The following changes are the most significant.

3.10.2 Reactor Mode Switch Interlock Testing

CTS Section 1.0, Table 1.2, Note #, and CTS 4.9.1.1, Note *, allow placing the reactor mode switch in the run or startup/hot standby position to test the switch interlock functions. ITS 3.10.2 includes actions and surveillance requirements for this situation which do not exist in the CTS notes. This change is acceptable.

3.10.3 Single Control Rod Withdrawal—Hot Shutdown

CTS Section 1.0, Table 1.2, Note ***, allows placing the reactor mode switch in the refuel position to move a single control rod provided the one-rod-out interlock is operable. ITS 3.10.3 allows changing the reactor mode switch position to refuel to move a single control rod; however, it includes more restrictions than provided in the CTS. The change incorporates additional restrictions to address issues such as control rod position indication, full insertion of all other rods, reactor protection system instrumentation operability, control rod operability, disarming control rods, and modifying the SDM limit. In addition, ITS 3.10.3 includes actions and surveillance requirements associated with new LCO requirements which do not exist in the CTS note. These more restrictive changes are acceptable.

3.10.4 Single Control Rod Withdrawal—Cold Shutdown

ITS Required Actions A.2.1 and A.2.2 provide actions in the event LCO requirements are not met and the withdrawn control rod is insertable. Required Action A.2.1 requires initiating action immediately to fully insert all insertable control rods. Required Action A.2.2 requires placing the reactor mode switch in the shutdown position, which precludes withdrawing any control rod. ITS Required Action B.2.1 provides actions in the event LCO requirements are not met and the withdrawn control rod is not insertable. Required Action B.2.1 requires initiating action immediately to fully insert all control rods. These required actions are not in CTS; however, they provide actions to be taken if the LCOs are not met. The addition of required actions is a more restrictive change. This change is acceptable.

ITS 3.10.4.b.1 adds a new requirement to ensure the control rod position indication is operable. The control rod position indication must be operable to support the one-rod-out interlock. This requirement does not exist in the CTS. The addition of this requirement is a more restrictive change. This change is acceptable.

3.10.5 Single Control Rod Drive Removal-Refueling

ITS 3.10.5 adds two requirements (c and d) not contained in the CTS, inserting a control rod withdrawal block and forbidding other core alterations. Inserting the rod block compensates for the inoperable one-rod-out interlock. To ensure no fuel is loaded (since refueling interlocks precludes fuel movement with a withdrawn control rod), no other core alterations may be in progress. These requirements ensure no inadvertent criticality occurs. In addition, SR 3.10.5.3 and SR 3.10.5.5 were added to verify a control rod withdrawal block is inserted and no other core alterations are in progress. These surveillance requirements ensure the requirements of the LCO are met. These changes represent an additional restriction on plant operations. These changes are acceptable.

3.10.6 Multiple Control Rod Withdrawal-Refueling

ITS 3.10.6.c adds an allowance to remove multiple control rods and/or the associated drive mechanisms provided the requirement that the fuel assemblies only be loaded in an approved spiral sequence. ITS also adds Required Action A.2 and SR 3.10.6.3 associated with this new requirement. CTS 3.9.10.2 provides requirements which must be met before removing multiple control rods and/or mechanisms, but does not preclude reloading fuel. This change places additional restrictions on plant operations and is acceptable.

3.10.7 Control Rod Testing—Operating

CTS SR 4.10.2.a.2 requires verifying between 75% rod density and the RSCS low power setpoint that control rods are moved only in the approved rod withdrawal sequence during scram and friction tests. CTS 4.10.2.a requires this verification in the 8 hours before a sequence constraint is bypassed and once per 12 hours thereafter. ITS SR 3.10.7.1 requires verifying that control rod

movement complies with the approved control rod sequence with a frequency of "during control rod movement." The verification is no longer restricted to between 75% rod density and the RSCS low power setpoint since it is appropriate to verify control rod movement at all rod densities below the low power setpoint of the RWM when control rods are bypassed. In addition, verifying conformance by a second licensed operator is a continuous activity as each control rod is withdrawn and should not be limited to any 8- or 12-hour frequency. These more restrictive requirements are acceptable.

3.10.8 SDM Test—Refueling

CTS 3.1.3.5, "Control Rod Scram Accumulators," Action b.2, describes the actions taken in Mode 5 "with more than one withdrawn control rod with the associated scram accumulator inoperable or no control rod drive pump operating." ITS 3.10.8.f requires sufficient control rod drive charging water header pressure available. This ensures scram pressure is available if needed. Also added is an appropriate surveillance requirement, ITS SR 3.10.8.6. This new requirement is more restrictive since a specific drive water pressure is now required. This change is acceptable.

Conclusion

These more restrictive requirements strengthen the CTS and are therefore acceptable.

d. Deviations from the STS

The licensee, in electing to adopt the specifications of STS Section 3.10, proposed a number of deviations from the STS. The following deviation is the most significant.

3.10.7 Control Rod Testing-Operating
3.10.8 SDM Test-Refueling

Like the BWR/4 design, the WNP-2 rod pattern control design does not include a rod action control system, but has a rod worth minimizer (RWM). Therefore, the LCO, actions, and surveillances have been modified to reflect the RWM design, and are consistent with NUREG-1433.

Conclusion

This deviation from STS Section 3.6 is consistent with the WNP-2 design and with existing requirements and commitments, or with proposed changes found to be acceptable, as discussed elsewhere in this evaluation. Therefore, this deviation is acceptable.

e. Relocated Requirements

None.

4.0 DESIGN FEATURES

This section contains the same material as found in the CTS except for those less restrictive changes adopting NUREG-1434, which if altered in accordance with 10 CFR 50.59, would not result in a significant effect on safety (the criteria of 10 CFR 50.36(c)(4) for including an item in the TS as a design feature). In addition, one more restrictive change was adopted in the ITS.

a. Administrative Changes

The CTS specifications that have been retained in ITS Section 4.0 have been reworded to conform to the STS presentation. The following changes are the most significant.

CTS 5.1.1 and 5.1.2 reference Figures 5.1-1 and 5.1-2 for the exclusion area and the low population zone, respectively. The ITS omits these figures, since ITS 4.1.1 and 4.1.2 describe these areas and provide the information pertinent to 10 CFR Part 100 requirements. Therefore, these changes are purely administrative. These changes conform to the STS and are acceptable.

Conclusion

These changes to the CTS are administrative. They clarify, reorganize, or reformat the current specifications. None of these changes alters the limits in the current requirements. Accordingly, these changes are acceptable.

b. Less Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 4.0, proposed a number of requirements that are less restrictive than those in the CTS. The following changes are the most significant.

CTS 5.1.3 includes a boundary for the unrestricted area for radioactive gaseous and liquid effluents. The ITS does not include this same boundary and figure. The specific boundary for the unrestricted area for radioactive gaseous and liquid effluents remains detailed in FSAR Section 2.1.1.3. The requirements for and restrictions on locating the unrestricted areas must conform to regulations in 10 CFR Part 20. Compliance with 10 CFR Part 20 is required by the WNP-2 operating license. Any changes to this design feature must also conform to the requirements of 10 CFR 50.59. If this design feature of the facility were altered in accordance with 10 CFR 50.59 and 10 CFR Part 20, there would not be a significant effect on safety, which is the criterion of 10 CFR 50.36(c)(4) for inclusion as a design feature. Therefore, removing these details from the TS, while maintaining the details in the FSAR, will not impact safe operation of the facility. This change conforms to the STS and is acceptable.

CTS 5.2 provides design features and parameters for the primary and secondary containments. CTS 5.4 provides design features and parameters for the reactor coolant system (RCS). The ITS does not contain these same features. Configurations, design temperatures and pressures, and secondary containment, primary containment, and RCS volumes remain detailed in FSAR Sections 5.1, 5.2, 6.2.1, and 6.2.3. Any changes to these design features and parameters must conform to the requirements of 10 CFR 50.59. Furthermore, design details relating to these features and parameters exist in the ITS to ensure any changes that affect safety require prior NRC review and approval. Since the features with a potential to impact safety are sufficiently addressed by limiting conditions for operation, and changes to other features, if done in accordance with 10 CFR 50.59, would not have a significant effect on safety, the criterion of 10 CFR 50.36(c)(4) for inclusion in the TS as design features are not met. Removing these details from the ITS, while maintaining the detail in the FSAR, does not impact safe plant operation. This change conforms to the STS and is acceptable.

CTS 5.5 specifies the location of the meteorological tower by referencing Figure 5.1-1. The ITS does not include this design feature. The meteorological tower location remains detailed in FSAR Section 2.3.3. Any changes to this design parameter must conform to the requirements of 10 CFR 50.59. Changes to this design feature, if made in accordance with 10 CFR 50.59, will not have a significant effect on safety, and the criterion of 10 CFR 50.36(c)(4) for inclusion in the TS as a design feature are not met. Therefore, removing this detail from the TS, while maintaining the detail in the FSAR, will not impact safe operation of the facility. This change conforms to the STS and is acceptable.

CTS 5.6.2 provides the design level which the spent fuel storage pool is to be maintained to prevent inadvertent draining. CTS 5.6.2 specifies this level as 605 feet 7 inches. ITS 4.3.2 changes this level to 583 feet 1.25 inches. The CTS level is the design level to which the pool can be drained with the fuel pool gates installed. The ITS level is the minimum design level to which the pool can be drained with the gates removed. The gates are removed during refueling outages to transfer fuel between the spent fuel storage pool and the reactor vessel. At the minimum design level, the fuel will remain covered, as required by Regulatory Guide 1.13, "Spent Fuel Storage Facility Design Basis," Revision 1, and as stated in NUREG-0892, "Safety Evaluation Report Related to the Operation of WPPSS Nuclear Project No. 2." This change conforms to the STS and is acceptable.

Conclusion

These less restrictive requirements are acceptable because they will not affect the safe operation of the plant. As discussed in the evaluation format section and summarized in Table 1, to the extent that these less restrictive requirements involve the relocation of matters from the CTS to licensee-controlled documents, they are not otherwise required to be in the TS under 10 CFR 50.36 and they are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to public health and safety. The TS requirements that remain are consistent with current licensing practices, operating experience, and plant accident and transient analyses, and provide reasonable assurance that public health and safety will be protected.

c. More Restrictive Requirements

The licensee, in electing to implement the specifications of STS Section 4.0, proposed one requirement more restrictive than that in the CTS.

ITS 4.3.1.2.b includes a new requirement regarding the nominal distance between fuel bundles in the new fuel storage racks. The CTS does not include this requirement. The ITS specifies the nominal distance between fuel bundles seated in the new fuel storage racks. The new ITS restrictions require NRC approval to modify the new fuel storage rack design. This change is an additional restriction on plant operation; it conforms to the STS and is acceptable.

Conclusion

This more restrictive requirement strengthens the CTS and is therefore acceptable.

d. Deviations From the STS

The licensee, in electing to adopt the specifications of STS Section 4.0, proposed a number of deviations from the STS. The following deviations are the most significant.

STS 4.3.1.1.a provides the choice of specifying either the maximum k_∞ in the normal reactor core configuration at cold conditions or the average U-235 enrichment of the fuel assemblies stored in the spent fuel storage racks. The requirement to specify the k_∞ or the average U-235 enrichment is not included in the ITS. The WNP-2 CTS, like NUREG-1434, include a limit on k_{eff} for the spent fuel storage racks. In order to demonstrate compliance with this requirement, calculations have been performed, as described in the FSAR, to determine the maximum k_{eff} of the racks. These calculations are dependent on the actual U-235 enrichment of the fuel stored in the racks. For ease of demonstrating compliance with the k_{eff} limit for the WNP-2 rack design, a bounding compliance criterion for the k_∞ or U-235 enrichment of each fuel type that can be stored in the spent fuel storage racks has been established such that the k_{eff} limit is still met. Because WNP-2 is required to maintain the $k_{eff} \leq 0.95$, each new fuel assembly loaded into the reactor must be compared to the storage racks bounding compliance criterion (k_∞ or U-235 enrichment). Design reviews for reloads will also verify continued compliance with the bounding enrichment requirements before the new fuel is used. This ensures continued compliance with the current licensing basis k_{eff} limit for the spent fuel storage racks as required.

STS 4.3.1.2.a provides the choice of specifying either the maximum k_∞ in the normal reactor core configuration at cold conditions or the average U-235 enrichment of the fuel assemblies stored in the new fuel storage racks. This requirement is not included in the ITS since it is not contained in the current licensing basis. The current licensing basis, as described in the FSAR, only requires a $k_{eff} \leq 0.95$ if the fuel assemblies in the new fuel storage racks are fully flooded with unborated water.

STS 4.3.3.2 has been deleted since it is not applicable to WNP-2. WNP-2 does not have an upper containment pool.

Conclusion

These deviations from STS Section 4.0 are consistent with the WNP-2 design and with existing requirements and commitments, or with proposed changes found to be acceptable, as discussed elsewhere in this evaluation. Therefore, these deviations are acceptable.

e. Relocated Specifications

None.

5.0 ADMINISTRATIVE CONTROLS

The licensee has proposed administrative and technical changes to the CTS to bring them into conformance with STS Chapter 5.0, "Administrative Controls." The changes are discussed in the order of the specifications in STS Section 5.0. The corresponding ITS Chapter 5.0 specification titles are listed in italics before each discussion.

a. Administrative Changes

The CTS specifications that have been retained in ITS Chapter 5.0 have been reworded to conform to the STS presentation. The following changes are the most significant.

5.1 Responsibility

CTS 6.1.1 defines the Plant Manager's responsibilities. The ITS changes the title to Plant General Manager. Since the same individual who filled the Plant Manager position holds this new position, and the responsibility of the position has not changed, this change is purely administrative and is acceptable.

CTS 6.1.2 states that the Shift Manager shall be responsible for the control room command function. CTS 6.1.2 also contains an annual requirement for the Assistant Managing Director for Operations to issue a management directive to this effect. ITS 5.1.2 provides the responsibilities for the Shift Manager and deletes the annual directive requirement. The ITS state who is responsible for the control room command function. In addition, the FSAR delineates the responsibilities of the Shift Manager. This requirement serves only as a reminder to personnel as to who is in charge. The CTS require no other management directives to remind personnel of a TS requirement, and this requirement does not directly impact safety. Since the responsibility requirement is not changed, deleting the directive requirement is purely administrative. This change conforms to the STS and is acceptable.

5.2 Organization

CTS 6.2.1, "Offsite and Onsite Organizations," and 6.2.2, "Unit Staff," provide the responsibilities for the Plant Manager and Assistant Managing Director for Operations. ITS 5.2.1.b and 5.2.1.c change the titles to match the current titles. The current titles are Plant General Manager and Chief Executive Officer. Since the same individuals who held the Plant Manager and Assistant Managing Director for Operations positions hold these new positions, and the responsibilities of the positions have not changed, this change is purely administrative and is acceptable.

CTS 6.2.2.c specifies that a Health Physics Technician shall be on site when fuel is in the reactor. The ITS requires that an individual qualified to implement radiation protection procedures be on site, but does not give the individual a title. The only individuals currently qualified are Health Physics Technicians. Other individuals considered in the future will have to meet the same qualifications. Therefore, this change is purely administrative and is acceptable.

CTS 6.2.4.1 specifies that the Shift Technical Advisor (STA) shall provide advisory technical support to the Shift Manager. The ITS changes the requirement to state that the STA shall provide support to the operating shift, without specifying to whom the STA provides advisory technical support. Since the Control Room Supervisor (CRS) is in charge of supervising unit operation, the STA also provides advisory technical support to the CRS. To provide a more generic statement as to whom the STA provides advisory technical support, the words "Shift Manager" have been replaced with "operating shift." This includes the Shift Manager and the CRS, both of whom are members of the operating shift. This change is purely administrative and is acceptable.

CTS 6.2.4.1 provides administrative controls for the STA, including qualification requirements for the STA. ITS 5.2.2.g modifies the qualification requirements to reference the Commission's Policy Statement on Engineering Expertise on Shift. Since the policy statement encompasses the current requirements, this change is purely administrative. This change conforms to the STS and is acceptable.

5.3 Unit Staff Qualifications

No significant administrative changes to the CTS are associated with ITS Section 5.3.

5.4 Procedures

CTS 6.8.1.a requires that written procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, be established, implemented, and maintained. CTS 6.8.1.c, 6.8.1.d, and 6.8.1.h requires the same for specific procedures described in Regulatory Guide 1.33. ITS 5.4.1.a retains the requirement in CTS 6.8.1.a but does not specify individual procedures already covered by the Regulatory Guide 1.33 requirement. This is a change in presentation only, and therefore, is a purely administrative change. This change conforms to the STS and is acceptable.

CTS 6.8.1.e and 6.8.1.f require procedures for implementing the Security and Emergency Plans. The ITS does not include these requirements. The regulations in 10 CFR Part 50, Appendix E, and 10 CFR 50.54(p) require procedures to implement the Emergency Plan and the Security Plan, respectively. Since conformance with 10 CFR Chapter I is a license condition, and 10 CFR Chapter I requires implementation of the Emergency Plan and Security Plan, describing these plans in the TS is an unnecessary duplication. This is a change in presentation only and, therefore, is a purely administrative change. This change conforms to the STS and is acceptable.

CTS 6.8.1.i requires procedures for implementing an Offsite Dose Calculation Manual (ODCM). ITS 5.4.1.e requires written procedures for all programs specified in ITS Section 5.5 (including the ODCM). Since the requirements remain, this change is a change in presentation only and, therefore, is a purely administrative change. This change conforms to the STS and is acceptable.

5.5 Programs and Manuals

CTS 6.8.4.d.1 and 6.8.4.d.6 specify limitations on the operability of the radioactive liquid and gaseous monitoring instrumentation. ITS 5.5.4.a changes the wording to "limitations on functional capability," to preclude confusion with the defined term "operability." This is consistent with current practice since the equipment referred to is no longer in the CTS. It was relocated from the TS by Amendment Number 98, dated December 26, 1991. Because the requirements remain the same, this is a purely administrative change. This change conforms to the STS and is acceptable.

CTS 6.8.4.d.2, 6.8.4.d.3, 6.8.4.d.7, 6.14.1.a.2, and 3.11.1.4 include references to 10 CFR Part 20 and requirements therein. The ITS include updates to these references. The ITS conform to the wording of the latest revision to 10 CFR Part 20 and provide the proper references to 10 CFR Part 20. The ITS does not change the technical requirements; therefore this change is purely administrative. These changes do not conform to the current version of the STS, but do conform to the latest draft of the staff's intended changes to the STS, and are acceptable.

CTS 6.14.a contains a cross reference to CTS 6.10.3.n for record retention. This cross reference is not included in the ITS because the ITS format does not utilize cross references. The cross reference is not necessary for ensuring the TS requirements are met. Therefore, this change is purely administrative and is acceptable.

CTS 6.14.b refers to the Plant Manager. ITS 5.5.1.c.2 refers to the Plant General Manager. Since the same individual who filled the Plant Manager position holds this new position, and the responsibility of the position has not changed, this change is purely administrative and is acceptable.

CTS 4.0.5 specifies requirements for inservice testing of ASME Code Class 1, 2, and 3 components. ITS 5.5.6.c, "Inservice Testing Program," adds a statement that the provisions of SR 3.0.3 are applicable to inservice testing activities.

A statement that SR 3.0.3 applies for ITS 5.5.6 maintains allowances for missed surveillances contained in the CTS. SR 3.0.3 is not normally applied to frequencies identified in the Administrative Controls chapter of the TS. Since this change is a clarification required to maintain provisions that would be allowed in the CTS, it is a purely administrative change and is acceptable.

CTS 4.6.5.3.b, c, d.1, d.4, e, and f specify surveillance requirements for testing the filters in the standby gas treatment (SGT) system. CTS 4.7.2.c, d., e.1, f, and g specify surveillance requirements for testing the filters in the control room emergency filtration (CREF) system. The ITS moves these SGT and CREF surveillance requirements to ITS 5.5.7, "Ventilation Filter Testing Program (VFTP)." Thus, ITS 5.5.7 includes a general program statement. Also, the ITS includes a statement of the applicability of SR 3.0.2 and SR 3.0.3 to clarify that the allowances for surveillance frequency extensions do apply, since these SRs are not normally applied to frequencies identified in the ITS Administrative Controls chapter. Since these changes are presentation preferences and clarify provisions allowed in the LCO sections of the TS, they are purely administrative and are acceptable.

CTS 4.6.5.3 and 4.7.2 specify requirements for in-place charcoal adsorber testing of the SGT and CREF systems, which reference Regulatory Positions C.5.a and C.5.d of Regulatory Guide (RG) 1.52, Revision 2, March 1978, respectively. ITS 5.5.7.b references RG 1.52, Revision 2, and ASME N510-1989. The CTS for laboratory testing of the SGT and CREF systems reference the testing criteria of RG 1.52, Revision 2, Section C.6.a. ITS 5.7.7.c references ASTM D3803-1986 for a specific method and relative humidity. The CTS for the flow rate, pressure drop, and heater tests reference ANSI N510-1980. ITS 5.5.7.a through 5.5.7.e reference ASME N510-1989. The new references do not change the current testing requirements or acceptance criteria. Therefore, these changes are purely administrative and are acceptable.

CTS 3.11.1.4 and 3.11.2.6 provide requirements for liquid holdup tanks and explosive gas mixtures. In the ITS, the outside temporary liquid radwaste tank requirements and offgas system hydrogen requirements have been placed in a program described in the proposed Administrative Controls chapter (ITS 5.5.8). As such, a general program statement has been added. In addition, a statement of the applicability of SR 3.0.2 and SR 3.0.3 has been added which maintains allowances for surveillance frequency extensions contained in the ITS. These SRs are not normally applied to frequencies identified in the Administrative Controls chapter of the ITS. Since this change is a presentation preference, clarifying provisions allowed in the LCO sections of the TS, it is purely administrative. This change conforms to the STS and is acceptable.

CTS 4.8.1.1.c and 4.8.1.1.d provide requirements for diesel fuel oil testing. In the ITS, the diesel fuel oil testing requirements have been placed in a program in the Administrative Controls chapter (ITS 5.5.9). As such, a general program statement has been added. Also, a statement of applicability of SR 3.0.2 and SR 3.0.3 has been added to clarify that the allowances for surveillance frequency extensions apply, since these SRs are not normally applied to frequencies identified in the Administrative Controls chapter. Since this change represents a presentation preference and a clarification that maintains provisions in the CTS, it is purely administrative and is acceptable.

CTS 4.6.1.1.a, 3.6.1.2.b, and 3.6.1.2, Actions a and b, provide requirements for primary containment leakage. The limits in 10 CFR Part 50, Appendix J, are $< 0.60\ L_a$ and $< 0.75\ L_a$, not $\leq 0.60\ L_a$ and $\leq 0.75\ L_a$, as stated in these CTS requirements. Therefore, the limits in ITS 5.5.12.a are changed to be consistent with the Appendix J requirements. Since this change correctly reflects the regulatory requirements, which controlled the requirements under the CTS as well, it is purely administrative in nature and is acceptable.

5.6 Reporting Requirements

CTS 6.9.1 requires submitting the subject reports to the Regional Administrator of the Regional Office of the NRC. CTS 6.9.1.6 requires submitting monthly reports to the Director of the NRC Office of Resource Management with a copy to the Regional Administrator. CTS 6.9.3.4 requires submitting the Core Operating Limits Report to the NRC Document Control Desk, with copies to the Regional Administrator and Resident Inspector. ITS Section 5.6 requires submittal of reports in accordance with 10 CFR 50.4. Including report submittal details in the ITS is unnecessary since the regulations control. Further, the ITS report submittal requirements are sufficiently clear without these details. Therefore, this change is purely administrative and is acceptable.

CTS 6.9.1.5.c requires an annual report of events where the specific activity analysis shows the primary coolant exceeded the limits of CTS 3.4.5. The ITS omits this requirement. This reporting requirement is included in the licensee event reporting requirements for fuel cladding failures that exceed expected values or are caused by unexpected factors such as seriously degraded fuel cladding. Since the reporting criteria of 10 CFR 50.73 cover degraded boundaries, any minor differences from the CTS requirements are negligible with regard to safety. For all practical purposes, the CTS reporting requirement duplicates the 10 CFR 50.73 reporting requirement. Therefore, this deletion is purely administrative and is acceptable.

CTS 6.9.3.1 provides requirements for the Core Operating Limits Report (COLR) and CTS 6.9.3.1.a specifies that limits be established for the average planar linear heat generation rates (APLHGRs) for CTS 3.2.1 and 3.4.1. ITS LCO 3.4.1 no longer contains APLHGR limits but merely references the APLHGR LCO (3.2.1). Therefore, this reference to LCO 3.4.1 is not needed.

In addition, ITS 5.6.5.a.4 adds the power-to-flow map for ITS 3.4.1 to the Core Operating Limits Report, since the power-to-flow map for ITS 3.4.1 is being moved to the COLR. Since these are merely referencing changes and do not change requirements, they are purely administrative and are acceptable.

CTS 6.9.1.5.a allows basing the report estimates of dose assignments for various duty functions on pocket dosimeters, thermoluminescent dosimeters, or film badge measurements. WNP-2 now uses electronic dosimeters. Therefore, ITS 5.6.1 specifically adds electronic dosimeter to the list of acceptable methods. In addition, the footnote to CTS 6.9.1.5.a has been modified to reflect the proper references to 10 CFR Part 20. ITS 5.6.1 contains the updated references. Since these changes do not change the current requirements but only add another means of measuring dose and update references, they are purely administrative and are acceptable.

CTS 6.9.3.2 lists the WNP-2 topical reports containing the analytical methods used to determine the core operating limits. The CENPD-300-A report date listed in CTS 6.9.3.2.11 has been changed from May 24, 1996, to July 1996, and the term "P" has been added to the report number. The only difference between the July 1996 report and the May 1996 report is that the July 1996 report has the NRC safety evaluation report accepting the topical report included in it. Therefore, this change is purely administrative and is acceptable.

5.7 High Radiation Area

No significant administrative changes to the CTS are associated with ITS Section 5.7.

Conclusion

These changes to the CTS are administrative. They clarify, reorganize, or reformat the current specifications. None of these changes alters the limits in the current requirements. Accordingly, these changes are acceptable.

b. Less Restrictive Requirements

The licensee, in electing to implement the specifications of STS Chapter 5.0 proposed a number of requirements that are less restrictive than those in the CTS. The following changes are the most significant.

5.1 Responsibility

1. The table notation for CTS 6.2.2, Table 6.2.2-1, specifies that when the Shift Manager leaves the control room while the unit is in Operational Condition 1, 2, or 3, an individual with a valid Senior Reactor Operator license (SRO) other than the STA shall be designated to assume the control command function. The ITS changes this provision to allow the STA to fulfill the control room command function provided the individual has an active SRO license. The CTS excluded the STA because the STA was formerly not a member of the Operations Department. Since the CTS requirement was approved, the Operations Department assumed responsibility for the STA position. Therefore, the STA is appropriately qualified to fulfill the control room command

function provided the STA holds an active SRO license. This change conforms to the STS format and is acceptable.

5.2 Organization

CTS 6.2.1.e specifies that the organization with overall responsibility for the overall quality assurance functions shall report to the Assistant Managing Director, Operations. This requirement is being moved to the Quality Assurance Program description in the FSAR. The TS need not include this level of detail for a specific department. ITS 5.2.1.a adequately addresses the reporting requirements for onsite and offsite organizations, including quality assurance. Changes to the FSAR are controlled by the provisions of 10 CFR 50.59. This change conforms to the STS and is acceptable.

CTS 6.2.2.a specifies a minimum shift crew size and references Table 6.2.2-1 for crew composition. The ITS removes the crew size requirement and deletes the table. FSAR Section 13.1 includes the details of the minimum shift crew requirements in the CTS Table 6.2.2-1. Also, 10 CFR 50.54(k), (l), and (m) contain the minimum shift crew requirements for licensed operators and senior operators, and repeating them in the TS is unnecessary. The ITS transfers the minimum shift crew requirements for nonlicensed plant equipment operators from CTS Table 6.2.2-1 to ITS 5.2.2.a. In addition, ITS 5.1.2 contains requirements for the control room command function, ITS 5.2.2.c contains minimum requirements for licensed reactor operators and senior operators in the control room, and ITS 5.2.2.g contains STA requirements. Moving the details of the minimum shift crew requirements to the FSAR is acceptable considering the controls provided by regulations, the requirements remaining in the ITS, and the 50.59 change control process. This change conforms to the STS and is acceptable.

CTS 6.2.2.c specifies that at least one fully qualified Chemistry Technician shall be on site in Operational Condition 1, 2, or 3. This requirement is being moved to the FSAR. The CTS 3/4.4.4 requirements for reactor coolant system chemistry are being relocated to the Licensee Controlled Specifications (LCS) Manual in accordance with the Commission's Final Policy Statement and 10 CFR 50.36. Therefore, the chemistry personnel requirements, which have no direct impact on plant safety, are also being moved from TS to the FSAR.

In addition, the note to CTS 6.2.2.e specifies that the fire brigade composition may be less than the minimum under certain conditions. This requirement is being moved to the Fire Protection Plan in the FSAR. The fire protection requirements have already been moved to the Fire Protection Plan, in accordance with Generic Letter 88-12, "Removal of Fire Protection Requirements from Technical Specifications." Therefore, it is unnecessary to include the fire brigade provision (to be below the minimum composition requirement for up to 2 hours to accommodate unexpected absence) in the ITS.

Changes to the FSAR and LCS are controlled by the provisions of 10 CFR 50.59. These less restrictive changes conform to the STS and are acceptable.

CTS 6.2.2.d specifies that all core alterations shall be observed and directly supervised by either a licensed senior operator or licensed senior operator limited to fuel handling. This requirement is being moved to the FSAR or the LCS. This requirement is contained in 10 CFR 50.54 (m)(2)(iv) and, therefore, need not be duplicated in the TS. Changes to the FSAR and LCS will be controlled by the provisions of 10 CFR 50.59. This change conforms to the STS and is acceptable.

CTS 6.2.2.f specifies that the Shift Managers and Control Room Supervisors hold a senior operator license and that reactor operators hold either a senior reactor operator license or a reactor operator license. The details of the operator license requirements for these positions is being moved to FSAR Section 13.1. Including this level of detail in the TS is not necessary to ensure plant safety. The minimum shift crew requirements in 10 CFR 50.54 (k), (l), and (m) and the qualification requirements in ITS 5.3, "Unit Staff Requirements," adequately address unit staff qualifications. These changes conform to the STS and are acceptable.

CTS 6.2.3 provides administrative controls for the Nuclear Safety Assurance Division (NSAD). These requirements are being moved to the Quality Assurance Program description in the FSAR. The NSAD performs independent safety reviews. The NSAD provides after-the-fact recommendations to improve safety and is not necessary to safe operation. The NSAD requirements; under the control of the Quality Assurance Program (which implements 10 CFR 50.54 and 10 CFR 50 Appendix B), will be controlled by the provisions of 10 CFR 50.54(a). Therefore, including the NSAD requirements in the ITS is not necessary. This change conforms to the STS and is acceptable.

CTS 6.2.2.e states that the objective shall be to have operating personnel work normal 8-hour days and 40-hour weeks while the unit is operating. ITS 5.2.2.e replaces this with a nominal 40-hour week requirement. The change eliminates reference to an 8-hour day, thereby providing for a more flexible shift schedule with normal shift durations of up to 12 hours. Other provisions of the TS regarding overtime including maximum shift lengths and minimum break time between work periods, remain unchanged. Although the STS specifies the length of the workday, this change does not change the intent of the guidance in Generic Letter 82-16 with regard to the number of hours worked per week, and the remaining requirements will continue to ensure that overtime is not heavily used on a regular basis. This change conforms to the STS and is acceptable.

5.3 Unit Staff Qualifications

CTS 6.3.1 specifies that licensed operators and senior operators shall meet or exceed the minimum qualifications of the supplemental requirements specified in Sections A and C of Enclosure 1 of the March 28, 1980, NRC letter to all licensees. These qualification requirements have been updated to reflect current regulations for licensed operators (i.e., Appendix A and the 1980 NRC letter have been incorporated into the current revision of 10 CFR Part 55). The current regulations are more restrictive than the CTS requirements. However, since regulations already exist, they need not be repeated in the ITS. Therefore, the details of operator qualification requirements are being moved to the FSAR. This change conforms to the STS and is acceptable.

5.4 Procedures

CTS 6.8.2 and 6.8.3 specify that the Plant Operations Committee (POC) shall review, and the Plant Manager approve, each procedure specified in CTS 6.8.1 and changes thereto, including temporary changes. These procedure review and approval details are being moved to the Quality Assurance Program description in the FSAR. The requirements for establishing, maintaining, and implementing procedures related to activities affecting quality are contained in 10 CFR Part 50, Appendix B, Criterion II and Criterion V, ANSI N18.7-1976, and ANSI N45.2-1971. In accordance with these requirements, the Quality Assurance Program description in the FSAR includes adequate detail with respect to the administrative control of procedures related to activities affecting quality and nuclear safety. In addition, changes to the Quality Assurance Program description in the FSAR will be controlled by the provisions of 10 CFR 50.54(a) to ensure that proper reviews affecting safe operation of the plant are performed. This change conforms to the STS and is acceptable.

5.5 Programs and Manuals

CTS 6.8.4.a specifies requirements for primary coolant sources outside containment. ITS 5.5.2 adds a statement that the provisions of ITS 3.0.2 are applicable to the 24-month frequency for performing integrated system leak testing activities for the systems covered by the program. SR 3.0.2 states that the specified frequency for each SR is met if the surveillance is performed within 1.25 times the interval specified in the frequency. This is nearly identical to the allowance in CTS SR 4.0.2, which can be applied to all SRs in the LCO section of the CTS. Therefore, extending the allowance to the SR contained in ITS 5.5.2 maintains consistency with the requirements applied to all other SRs which have been demonstrated to provide operational flexibility without unduly affecting equipment reliability.

CTS 6.8.4.b provides controls for the in-plant radiation monitoring program. The details contained in CTS 6.8.4.b are being removed from the TS and will be retained in Appendix B to the FSAR. This program is required by the WNP-2 commitment to NUREG-0737, Item III.D.3.3, as stated in the FSAR, Appendix B. This program contains controls to ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program is designed to minimize radiation exposure to plant personnel after accidents and has no immediate impact on nuclear safety or the health and safety of the public. The training aspect of the program is accomplished as part of the continual training program for personnel in the cognizant organizations, as well as during the training for those individuals responsible for implementing the radiological emergency planning procedures. Provisions for monitoring and performing maintenance on the sampling and analysis equipment are addressed in chemistry and radiation protection procedures. Changes to the FSAR are controlled by the provisions of 10 CFR 50.59. This change conforms to the STS and is acceptable.

CTS 6.8.4.e provides administrative controls for the Radiological Environmental Monitoring Program. The Radiological Environmental Monitoring Program details in CTS 6.8.4.e are being moved to the Offsite Dose Calculation Manual (ODCM). This program is a redundant verification of the effectiveness

of the effluent monitoring program described in the ODCM and specified in the Administrative Controls chapter of the ITS (ITS 5.5.1). The requirements being moved have no impact on the nuclear safety of the plant. ITS 5.5.1 requires the ODCM to contain the radioactive effluent controls and radiological environmental monitoring activities specified in CTS 6.8.4.e. Changes to the ODCM will be controlled by the provisions of ITS 5.5.1.c. This change conforms to the STS and is acceptable.

CTS 5.7.1 specifies component cyclic or transient limits for components. The list of the components governed by this specification (Table 5:7.1-1) is being moved to the FSAR. Inclusion of these details in TS is not necessary to ensure safe operation of the plant. The requirement to monitor the cyclic and transient occurrences is maintained as a program in ITS 5.5.5. Changes to the FSAR are controlled by the provisions of 10 CFR 50.59. This change conforms to the STS and is acceptable.

CTS 4.0.5 specifies requirements for inservice inspection (ISI) of ASME Code Class 1, 2, and 3 components. The details in CTS 4.0.5 related to ISI are being moved to the licensee's ISI program. The ISI program is required by 10 CFR 50.55a to be carried out in accordance with ASME Section XI. Compliance with 10 CFR 50.55a is required by the WNP-2 operating license. The WNP-2 ISI program implements the applicable provisions of ASME Section XI. Generic Letter 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping," provides an ISI Program for piping in accordance with the NRC staff positions on schedule, methods, personnel, and sample expansion or in accordance with alternate measures approved by the NRC staff. WNP-2 commitments to Generic Letter 88-01 are documented in letters to the NRC dated July 26, 1988, and July 20, 1989. Regulations and WNP-2 commitments to the NRC provide the necessary programmatic requirements for ISI, and their inclusion in the TS is unnecessary. Changes to the ISI program will be controlled by the provisions of 10 CFR 50.55a and 10 CFR 50.59. This change conforms to the STS and is acceptable.

The requirements in CTS 4.0.5 relating to inservice testing will be contained in ITS 5.5.6. Therefore, the reference to ASME Code Class 1, 2, and 3 "components" in CTS 4.0.5 has been changed to "pumps and valves" in ITS 5.5.6 for clarity. Pumps and valves are the only components related to the Inservice Testing Program. This change is in accordance with a generic change to the STS under consideration by the NRC staff and is acceptable.

CTS 4.0.5.b specifies details of the Inservice Testing (IST) program. Details of the IST program in the CTS are being moved to the licensee's IST program. The CTS requirements duplicate requirements in 10 CFR 50.55a, which requires the implementation of ASME Section XI and applicable addenda, for inservice testing of ASME Code Class 1, 2, and 3 pumps and valves. Compliance with 10 CFR 50.55a is required by the WNP-2 operating license. Therefore, it is not necessary to retain these CTS provisions in the ITS. Changes to the IST program will be controlled by the provisions of 10 CFR 50.55a and 10 CFR 50.59. This conforms to the STS and is acceptable.

CTS 4.6.5.3 specifies SRs for the standby gas treatment system. CTS 4.7.2 specifies SRs for the control room emergency filtration system. Specifically, CTS 4.6.5.3.b.2, 4.6.5.3.c, 4.7.2.c.2, and 4.7.2.d require removing a representative carbon sample and, within 31 days of the removal, verifying by a laboratory analysis that the sample meets regulatory criteria. Details of the methods for implementing this specification are being moved to the FSAR/LCS. The requirements of Specification 5.5.7 are adequate to ensure the required ventilation filter testing is performed. SR 3.6.4.3.2 of ITS 3.6.4.3, "Standby Gas Treatment (SGT) System," which requires ventilation filter testing of the SGT system to be performed in accordance with the ventilation filter testing program (VFTP), and SR 3.7.3.2 of ITS 3.7.3, "Control Room Emergency Filtration (CREF) System," which requires ventilation filter testing of the CREF system to be performed in accordance with the VFTP, and the requirements of ITS 5.5.7 provide adequate controls over the testing requirements being moved. As a result, the requirements being moved need not be included in the TS to ensure required ventilation filter testing is adequately performed. Changes to the FSAR/LCS will be controlled by the provisions of 10 CFR 50.59.

CTS 3/4.11.1.4 and 3/4.11.2.6 specify requirements for liquid holdup tanks and explosive gas mixtures, respectively. The details in CTS 3/4.11.1.4 and CTS 3/4.11.2.6 for implementing the requirements (applicability, actions, SR details) are being moved to the ODCM and the FSAR/LCS. The requirements of ITS 5.5.8 are adequate to ensure the quantity of radioactivity in outside liquid storage tanks is maintained within limits and explosive gas mixtures in the main condenser offgas treatment system are maintained within limits. ITS 5.5.8 provides control over the limitations and surveillances being moved. As a result, inclusion of these requirements in the TS is unnecessary. Changes to the ODCM will be controlled by the provisions of ITS 5.5.1.c. Changes to the FSAR and LCS will be controlled by the provisions of 10 CFR 50.59. This conforms to the STS and is acceptable.

CTS 4.8.1.1.2.c and d specify American Society for Testing and Materials (ASTM) testing standards and acceptance criteria for diesel fuel oil. The references to ASTM standards (which specify certain diesel fuel oil testing) and acceptance criteria for diesel fuel oil testing are being moved to the description of SR 3.8.3.3 in the Bases of ITS 3.8.3, "Diesel Fuel Oil, Lube Oil, and Starting Air." The requirements of ITS 5.5.9 and SR 3.8.3.3 are adequate to ensure the required diesel fuel oil testing is performed. SR 3.8.3.3 requires diesel fuel oil testing to be performed in accordance with the diesel fuel oil testing program and the requirements of ITS 5.5.9 provide controls over the CTS testing requirements being moved. As a result, inclusion of these requirements in TS is not necessary to ensure required diesel fuel oil testing is performed. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in Chapter 5.0 of the ITS. This less restrictive change conforms to the STS and is acceptable.

The 18-month frequencies of the CTS 4.6.5.3, 4.7.2, and 6.8.4.a.2 surveillances retained in ITS 5.5.7 are changed to 24 months. These changes are acceptable for the reasons given in paragraph (10) entitled "Extension of 18-Month Surveillance Intervals to 24 Months" in the general discussion of less restrictive requirements at the beginning of Part III of this safety evaluation.

CTS 4.6.5.3 and 4.7.2 specify surveillance requirements for the SGT and CREF systems surveillance requirements, respectively. ITS 5.5.7 specifies requirements for the Ventilation Filter Testing Program. The CTS requirements for in-place high efficiency particulate air (HEPA) filter testing of the SGT and CREF systems reference Regulatory Position C.5.a and C.5.c of Regulatory Guide 1.52, "Design, Testing, and Maintenance Criteria for Postaccident Engineered-Safety-Feature Atmosphere Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants," Revision 2, March 1978. ITS 5.5.7.a references Regulatory Guide 1.52, Revision 2, and ASME N510-1989. The change allows the newest ASME N510 standard to be used (i.e., the 1989 version). The 1989 version allows a suitable alternative to dioctyl phosphate (DOP) for the DOP test. The suitable alternative chemical is equivalent to DOP and will still ensure the HEPA filters show a penetration and system bypass <0.05%. Therefore, this change adequately ensures HEPA filter operability. This change conforms to the STS and is acceptable.

CTS 4.8.1.1.2.c and d specify ASTM testing standards and acceptance criteria for diesel fuel oil. ITS 5.5.9 provides requirements for the diesel fuel oil testing program, and the diesel fuel oil sampling requirements have been modified to require the tests to be conducted using the latest approved versions of the applicable ASTM standards. These newer standards provide a better indication of the present fuel oil conditions. In addition, since ASTM D975-94 provides methods for sulphur analysis (currently required ASTM D975-81 does not specify sulphur testing standards), which include ASTM D1552 and ASTM D2622, these two specific ASTM standards are not required to be specifically mentioned and have been deleted. This change conforms to the STS and is acceptable.

5.6 Reporting Requirements

CTS 6.9.1 provides requirements for preparing and submitting a Startup Report. The details associated with CTS 6.9.1.1, 6.9.1.2, and 6.9.1.3 are being moved to the FSAR. The Startup Report is a summary of plant startup and power escalation testing following receipt of the operating license, increase in licensed power level, installation of nuclear fuel with a different design or manufacturer than the current fuel, and modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the unit. The report provides the NRC a mechanism for retrospectively assessing the appropriateness of licensee activities, but does not require approval by the NRC. The quality assurance requirements of 10 CFR Part 50, Appendix B, and the startup test program provisions in the FSAR provide assurance the activities in CTS 6.9.1 will be adequately performed and that appropriate corrective actions, if required, are taken. Since the report had to be provided to the Commission no sooner than 90 days following completion of the respective milestone, completing and submitting the report was clearly not necessary to ensure safe operation of the facility for the interval between completion of the startup testing and submittal of the report. Additionally, since there is no requirement that the Commission approve the startup report, the report is not necessary to ensure safe operation of the facility. For these reasons, the startup report is being moved from the TS to the FSAR. Changes to the FSAR are controlled by the provisions of 10 CFR 50.59. This change conforms to the STS and is acceptable.

CTS 6.9.1.4 requires annual reports before March 1 of each year. CTS 6.9.1.10 requires submitting the Annual Radiological Environmental Operating Report before May 1 of each year. ITS 5.6.1 requires the Occupational Radiation Exposure Report by April 30 of each year. ITS 5.6.2 requires the Annual Radiological Environmental Operating Report by May 15 of each year. This change relaxes the requirement for submitting these reports. Since these reports are still required and still cover the previous calendar year, requiring the reports to be completed and submitted by the previously specified date is unnecessary to ensure safe operation of the plant. Additionally, there is no requirement that the NRC approve the reports. Therefore, this change has no impact on safe plant operation. This change conforms to the STS and is acceptable.

5.7 High Radiation Area

CTS Section 6.12 provides high radiation area access control alternatives pursuant to 10 CFR 20.203(c)(2) (revised 10 CFR 20.1601(c)). ITS Section 5.7 is revised to reflect the changes to 10 CFR Part 20, the guidance provided in Regulatory Guide 8.38, "Control of Access to High and Very High Radiation Areas in Nuclear Power Plants," and current industry technology for controlling access to high radiation areas. The changes include a capping dose rate to differentiate a high radiation area from a very high radiation area, additional requirements for groups entering high radiation areas, and clarification of the need for communication among and control of workers in high radiation areas. The changes provide acceptable alternate methods for controlling access to high radiation areas. As a result, these changes will not decrease the ability to control exposures from external sources in restricted areas. These changes are in conformance with the staff's current proposed changes to the STS for high radiation areas, except as identified in Section 5.0.d of this safety evaluation, and are acceptable.

CTS 6.4 Training

CTS 6.4.1 contains requirements on training and replacement training for the unit staff. The details contained in CTS 6.4.1 are being moved to the FSAR. These training provisions are adequately addressed by other ITS Chapter 5.0 provisions and by regulations. ITS 5.3, "Unit Staff Qualifications," provides requirements to ensure adequate, competent staff in accordance with ANSI/ANS N18.1-1977 and Regulatory Guide 1.8, "Qualification and Training of Personnel for Nuclear Power Plants," Revision 1-R, 1977. ITS 5.2 details unit staff requirements. ITS 5.2.2.a and 5.2.2.b and 10 CFR 50.54 state minimum shift crew requirements. Training and requalification of licensed positions is contained in 10 CFR Part 55. Therefore, inclusion of the CTS training requirements in the ITS is not necessary to ensure that training programs continue to be properly maintained in accordance with WNP-2 commitments and regulations. Changes to the FSAR are controlled by the provisions of 10 CFR 50.59. This change conforms to the STS and is acceptable.

CTS 6.5 Review and Audit

CTS 6.5 describes the review and audit activities performed by the Plant Operations Committee (POC) and Corporate Nuclear Safety Review Board (CNSRB).

The details of CTS Section 6.5 are being moved to the WNP-2 Quality Assurance Program description in the FSAR. The review and audit activities performed by the POC and CNSRB are required by ANSI N18.7-1976. Additional audit requirements are contained in 10 CFR 50.54(p); 10 CFR 50.54(t); 10 CFR Part 50, Appendix B, Criterion XVIII; 10 CFR Part 73; and ANSI N45.2-1971. Given the existence of these requirements, inclusion of the provisions of CTS Section 6.5 in TS is not necessary to ensure safe operation of the facility. Changes to the Quality Assurance Program description in the FSAR will be controlled by the provisions of 10 CFR 50.54(a). This change conforms to the STS and is acceptable.

CTS 6.6 Reportable Event Action

CTS 6.6.1.a contains reportable event notification requirements. These requirements are being moved to the FSAR/LCS. The requirements of CTS 6.6.1.a for reportable event action are contained in 10 CFR 50.73. Since 10 CFR 50.73 requires these notifications and reports following the event and since there is no requirement for the Commission to approve the notifications or reports, their inclusion in TS is not necessary to ensure safe facility operation. Changes to the FSAR and the LCS Manual will be controlled by the provisions of 10 CFR 50.59. This change conforms to the STS and is acceptable.

CTS 6.6.1.b contains requirements for reportable event reviews by the POC and submitting the review to the CNSRB and the Assistant Managing Director for Operations. These requirements are being moved to the Quality Assurance Program description in the FSAR. Since no completion time is specified for doing these reviews and submitting the results, the inclusion of these requirements in ITS is not necessary to ensure safe operation of the facility. Changes to the Quality Assurance Program description in the FSAR will be controlled by the provisions of 10 CFR 50.54(a). This change conforms to the STS and is acceptable.

CTS 6.10 Records Retention

CTS 6.10 contains the requirement for retaining records related to activities affecting quality. The details contained in CTS 6.10 are being moved to the Quality Assurance Program description in the FSAR. The requirement for retention of records related to activities affecting quality is contained in 10 CFR Part 50, Appendix B, Criterion XVII and other sections of 10 CFR Part 50 that are applicable to WNP-2 such as 10 CFR 50.71 and 10 CFR 50.73. These record retention requirements ensure retention of records of certain activities important to plant safety, but the records themselves do not ensure safe operation of the facility, since they are used only for after-the-fact compliance reviews. The Quality Assurance Program description in the FSAR, to which these CTS provisions are being moved, will provide adequate controls over record retention requirements for WNP-2. The Quality Assurance Program description in the FSAR is being revised to contain adequate detail with respect to these requirements to ensure recordkeeping is implemented in an appropriate manner. Changes to the Quality Assurance Program description in the FSAR are controlled by the provisions of 10 CFR 50.59; changes to the QA Program are controlled by 10 CFR 50.54(a). This conforms to the STS and is acceptable.

CTS 6.11 Radiation Protection Program

CTS 6.11 provides requirements for procedures for personnel radiation protection consistent with 10 CFR Part 20. These requirements are being moved to the FSAR. These required procedures relate to nuclear plant personnel radiation protection and have no impact on nuclear safety or public health and safety. The regulations in 10 CFR 20.1101(b) mandate procedures to implement 10 CFR Part 20, and 10 CFR 20.1101(c) requires periodic review of these procedures. Since the regulations contain the CTS requirements and the Operating License requires compliance with 10 CFR Part 20, there is no need to repeat the requirements in the ITS. Changes to the FSAR are controlled by the provisions of 10 CFR 50.59. This conforms to the STS and is acceptable.

CTS 6.13 Process Control Program (PCP)

CTS 6.13 and 1.33 contain the Process Control Program (PCP) requirements and definition, respectively. These requirements and definition are being moved to the FSAR. The PCP implements the requirements of 10 CFR Part 20, 10 CFR Part 61, and 10 CFR Part 71. The WNP-2 operating license requires compliance with these regulations. As such, moving the PCP description from the TS does not affect safe facility operation. Changes to the FSAR will be controlled by the provisions of 10 CFR 50.59. This conforms to the STS and is acceptable.

Conclusion

These less restrictive requirements are acceptable because they will not affect the safe operation of the plant. As discussed in the evaluation format section and summarized in Table 1, to the extent that these less restrictive requirements involve the relocation of matters from the CTS to licensee-controlled documents, they are not otherwise required to be in the TS under 10 CFR 50.36 and they are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to public health and safety. The TS requirements that remain are consistent with current licensing practices, operating experience, and plant accident and transient analyses, and provide reasonable assurance that public health and safety will be protected.

c. More Restrictive Requirements

The licensee, in electing to implement the specifications of STS Chapter 5.0, proposed a number of requirements that are more restrictive than those in the CTS. The following changes are the most significant.

5.1 Responsibility

ITS 5.1.1 includes new responsibilities for the Plant General Manager that are not included in the CTS. This change makes the Plant General Manager also responsible for approving, before implementation, each proposed test, experiment, and modification to systems or equipment that affect nuclear safety. These responsibilities are in addition to those in the CTS and thus represent a more restrictive change. This change provides additional assurance that the Plant General Manager is aware of all aspects of plant activities that affect nuclear safety. The change is, therefore, acceptable.

5.2 Organization

No more restrictive changes to the CTS are associated with ITS Section 5.2.

5.3 Unit Staff Qualifications

No more restrictive changes to the CTS are associated with ITS Section 5.3.

5.4 Procedures

ITS 5.4.1.e requires written procedures for all programs specified in ITS Section 5.5. ITS 5.5 contains 12 programs that require implementing and maintaining procedures. No comparable requirement exists in the CTS. This is an additional administrative control which will ensure procedures are established, implemented, and maintained for all programs specified in ITS 5.5. Therefore, this change is acceptable.

5.5 Programs and Manuals

ITS 5.5.10 and 5.5.11 add two new programs to the ITS:

5.5.10 Technical Specification (TS) Bases Control Program
5.5.11 Safety Function Determination Program (SFDP)

The Safety Function Determination Program supports implementing the support system operability characteristics of the ITS. The TS Bases Control Program specifically delineates the appropriate methods and reviews necessary for a change to the ITS Bases. These additions are enhancements to the CTS and are acceptable.

5.6 Reporting Requirements

CTS 6.9.1.5.b requires all challenges to the main steam safety/relief valves be reported annually. ITS 5.6.4 requires these reports monthly, by the 15th of the following month. Monthly reporting is a more restrictive reporting requirement. This change conforms to the STS and is acceptable.

CTS 6.9.1.10 specifies reporting requirements for the Annual Radiological Environmental Operating Report. ITS 5.6.2 adds details to these requirements. These details ensure that all reports are similar in content and format and so can be used for comparison with other plants and with prior reports. Since this information is not in the CTS, its addition is a more restrictive change. This change conforms to the STS and is acceptable.

5.7 High Radiation Area

No more restrictive changes to the CTS are associated with ITS Section 5.7.

Conclusion

These more restrictive requirements strengthen the CTS and are therefore acceptable.

d. Deviations From the STS

The licensee, in electing to adopt the specifications of STS Chapter 5.0, proposed a number of deviations from the STS. The following deviations are the most significant.

STS 5.2.2.c provides an exception to the requirements for the minimum shift crew composition specified in "10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.g." Since STS 5.5.2.a is a specification, not a CFR requirement, the word "Specification" has been added to avoid confusion. Also, the reference to STS 5.2.2.g has been deleted since this specification does not state that an STA is part of the shift crew composition or when the STA is required, but only describes the STA qualifications.

STS 5.2.2.e provides requirements on overtime limits. These requirements have been revised to delete the reference to the length of the work day ("[8 or 12] hour day") in ITS 5.2.2.e. However, the nominal 40-hour work week requirement will still be maintained. The work day requirement is being deleted in order to allow shifts up to 12 hours and provide more flexibility in shift scheduling. The proposed change does not change the intent of the guidance of GL 82-16, "NUREG-0737 Technical Specifications," dated September 20, 1982, with regard to the number of hours worked per week, and will continue to ensure that overtime is not heavily used on a regular basis.

STS 5.2.2.g specifies qualifications for the STA and states that the STA provides advisory technical support to the shift supervisor. In reality, the STA provides support to all members of the shift crew, including the shift manager (i.e., the NUREG-1434 shift supervisor position). In addition, the STA position could be filled by the shift manager (provided the shift manager meets the appropriate requirements). To avoid confusion when the STA position is filled by the shift manager (e.g., can the STA provide advice to himself/herself as the shift manager), the ITS does not specify to whom the STA provides this support.

STS 5.4.1.c provides the requirement for establishing, implementing, and maintaining procedures for quality assurance for effluent and environmental monitoring. ITS 5.4.1.c clarifies this requirement to apply to a quality assurance program for radioactive effluent and radiological environmental monitoring, to ensure this program is not confused with the non-radiological environmental monitoring program.

STS 5.5.2.b specifies integrated leak test requirements under the program for primary coolant sources outside containment. The surveillance frequency for these testing requirements has been extended from a refueling cycle interval in the STS to 24 months in ITS 5.5.2.b to be consistent with the proposed refueling cycle interval surveillance frequency in the WNP-2 ITS LCO sections. The normal refueling cycle intervals (i.e., 18 months) have been extended to

24 months in the WNP-2 ITS; thus this requirement, which is essentially a surveillance requirement, has also been extended. In addition, because normal surveillance requirements in the LCO Sections allow a 25 percent extension of the frequency per proposed ITS SR 3.0.2 (CTS LCO 4.0.2), this allowance has also been added for this surveillance requirement (SR 3.0.2 only applies to the LCO Sections 3.1 through 3.10).

STS 5.5.3 specifies program requirements for post-accident sampling and states that the program provides controls that ensure the capability to obtain and analyze radioactive gas samples under accident conditions. The term "radioactive gases" has been changed to "radioactive iodines" in ITS 5.5.3, consistent with the WNP-2 current licensing basis.

STS 5.5.4, 5.6.1, and 5.6.3 contain requirements affected by the most recent revision to 10 CFR Part 20. Changes have been made in the equivalent ITS specifications to comply with the new 10 CFR Part 20 requirements.

STS 5.5.4 specifies requirements for the Radioactive Effluent Controls Program. The ITS adds Specification 5.5.4.k to include limitations on venting and purging of the primary containment through the standby gas treatment system to maintain releases as low as reasonably achievable. This requirement has been added since WNP-2 has a Mark II containment, and it is consistent with the WNP-2 current licensing basis.

STS 5.5.7 specifies requirements for the IST program. The program description has been modified in ITS 5.5.6 to state that the IST program provides controls for ASME Code Class 1, 2, and 3 "pumps and valves," in place of the STS wording of "components including applicable supports." Section 50.55a(f) of the Title 10 of the Code of Federal Regulations provides the regulatory requirements for an IST program. It specifies that ASME Code Class 1, 2, and 3 pumps and valves are the only components covered by an IST program. Section 50.55a(g) provides regulatory requirements for an Inservice Inspection (ISI) program. It specifies that ASME Code Class 1, 2, and 3 components (including supports) are covered by the ISI program, and that pumps and valves are covered by the IST Program in 10 CFR 50.55a(f). Therefore, the "applicable support" requirement has been deleted and the components the IST program applies to (i.e., pumps and valves) have been added for clarity. In addition, the statement "The program shall include the following" has been deleted since not all of the items that follow are really program requirements.

The purpose statements of the ventilation filter testing program (VFTP) in STS 5.5.8 (ITS 5.5.7) and the diesel fuel oil testing program in STS 5.5.10 (ITS 5.5.9) have been modified to be consistent with the purpose statements of the other programs in this chapter. The current STS wording requires a program to be established. This wording implies that a program does not exist. However, when ITS is implemented, a program will already have been established. The purpose statement needs to say that the applicable program establishes certain requirements (e.g., testing of engineered safety feature filter ventilation systems). The purpose statements for the other ITS programs (e.g., IST program, Specification 5.5.6) are properly worded, assuming that the program is already established. Therefore, these changes bring the VFTP and the diesel fuel oil testing program in line with the wording of the other programs.

STS 5.5.8 and ITS 5.5.7 provide requirements for the VFTP. In the ITS, the WNP-2 current licensing basis surveillance frequencies have been substituted for references to the frequencies specified in particular Regulatory Guides, as outlined in the STS.

The temperature requirement specified in STS 5.5.8.c for demonstrating methyl iodide penetration of a sample of the charcoal adsorber has been deleted in ITS 5.5.7.c to be consistent with the WNP-2 current licensing basis. In addition, since the temperature requirement has been deleted, the wording of the relative humidity requirement has been revised to be consistent with the wording of ITS 5.5.7.a, 5.5.7.b, and 5.5.7.d.

STS 5.5.8.d and ITS 5.5.7.d requires demonstration that the pressure drop across the HEPA filters and charcoal adsorbers is less than the specified pressure drop when tested at the specified system flow rate. The STS references methods in Regulatory Guide 1.52 and ASME N510-1989 for performing the test, but these methods are not in fact methods for performing this test. Accordingly, these test method references have been deleted. In addition, WNP-2 does not currently require prefilter pressure drop tests; thus, the prefilter requirement has also been deleted consistent with the WNP-2 current licensing basis.

STS 5.5.9 and ITS 5.5.8 provide the requirements for the explosive gas and storage tank radioactivity monitoring program. Certain provisions in the STS program description for waste gas systems are applicable not to WNP-2 but only to pressurized-water reactors (PWRs). These provisions have been deleted. In addition, quantities of radioactivity contained in all outdoor liquid radwaste tanks meeting the conditions of ITS 5.5.8 are determined in accordance with the specified surveillance program in ITS 5.5.8.b. Therefore, the sentence in the STS specifying a method to determine liquid radwaste quantities is not necessary and has been deleted.

STS 5.5.9.a specifies that the explosive gas and storage tank radioactivity monitoring program shall include the limits for concentrations of hydrogen and oxygen in the waste gas holdup system (main condenser offgas treatment system at WNP-2). The requirement to limit oxygen in the main condenser offgas treatment system has been deleted in ITS 5.5.8.a consistent with the WNP-2 current licensing basis.

STS 5.5.10.a specifies requirements for ensuring the acceptability of new fuel oil before it is added to storage tanks. These requirements have been modified in ITS 5.5.9.a to be consistent with the WNP-2 current licensing basis. In addition, an allowance that the provisions of SR 3.0.2 and SR 3.0.3 are applicable has been added to the diesel fuel oil testing program, consistent with the WNP-2 current licensing basis.

STS 5.6.7 specifies a requirement for an emergency diesel generator failure report. This requirement has been deleted in the ITS in accordance with the guidance of GL 94-01, "Removal of Accelerated Testing and Special Reporting

Requirements for Emergency Diesel Generators," dated May 31, 1994. WNP-2 will implement a maintenance program for monitoring and maintaining diesel generator performance in accordance with the provisions of the maintenance rule and consistent with the guidance of Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." The commitment will be implemented within 90 days of issuance of the ITS license amendment.

STS Section 5.7, "High Radiation Area," has been changed in ITS 5.7 to be consistent with the most recent revisions to 10 CFR Part 20. These changes are generally consistent with the draft NRC guidance on TS improvements related to administrative controls and reporting requirements. Minor editorial changes to the draft NRC guidance were made for consistency with plant-specific terminology or for clarity. In addition, ITS 5.7.2.a provides an allowance to guard the high radiation area in lieu of locking the doors and gates to the area. This allowance is necessary for numerous reasons, including when there is a transitory high radiation area, when there is a discovery of a new high radiation area, and when establishing a temporary access to a high radiation area. This change will continue to provide adequate control of access to high radiation areas.

ITS 5.5.12, "Primary Containment Leakage Rate Testing Program," has been added to the STS programs consistent with the WNP-2 current licensing basis; no such provision is contained in the STS. WNP-2 adopted 10 CFR Part 50, Appendix J, Option B, in Amendment Number 144, dated May 8, 1996 (see the related discussion in Section 3.6 of this safety evaluation).

The utilization of a pressure and temperature limits report (PTLR) requires the development, and NRC approval, of detailed methodologies for future revisions to the P/T limits. At this time, WNP-2 does not have the necessary methodologies submitted to the NRC for review and approval. Therefore, ITS 5.6 removes the references to the PTLR contained in STS 5.6 and the specific P/T limits and curves have been included in the P/T limits specification (ITS 3.4.11).

Conclusion

These deviations from STS Chapter 5.0 are consistent with the WNP-2 design and with existing requirements and commitments, or with proposed changes found to be acceptable, as discussed elsewhere in this evaluation. Therefore, these differences are acceptable.

e. Relocated Specifications

None.

IV. <u>STATE CONSULTATION</u>

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

V. ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact was published in the Federal Register on September 24, 1996 (61 FR 50056).

Accordingly, based upon the environmental assessment, the Commission has determined that issuance of this amendment will not have a significant effect on the quality of the human environment.

VI. CONCLUSION

The improved WNP-2 TS provide clearer, more readily understandable requirements to ensure safe operation of the plant. The staff concludes that they satisfy the guidance in the Commission's policy statement with regard to the content of technical specifications, and conform to the model provided in NUREG-1434 with appropriate modifications for plant-specific considerations. The staff further concludes that the improved WNP-2 TS satisfy Section 182a of the Atomic Energy Act, 10 CFR 50.36 and other applicable standards. In addition, the ITS ensure continued safe operation of the facility. On this basis, the staff concludes that the proposed improved WNP-2 TS are acceptable.

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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Attachment: Table

Principal Contributors: C. Schulten
R. Tjader
T. Wambach
C. Harbuck
N. Gilles
S. V. Athavale
V. L. Beaston
O. Chopra
J. Dawson
W. Long

Date: March 4, 1997

RELOCATED ITEMS AND CONTROL PROCESS

Spec #	DOC	Comments	Proposed Location (DOC, Rev C)	CTS
1.0	LA.1	FRTP Definition	Bases 3.2.4	1.15
	LA.2	Pa	Bases 3.6.1.1 and 3.6.1.2	1.31a
2.0	LA.1	Restore RPV water level	FSAR/LCS	2.1.4
3.1.2	LA.1	Requirement to analyze changes in reactivity	Bases	3.1.2.action a
3.1.3	LA.1	Relocate way to disarm CRDs	Bases	3.1.2.1.a.1.b.1 & 2, 3.1.2.1.b.2.a & b, 3.1.3.7.a.3.b
	LA.2	How to determine position of rod	Bases	3.1.3.7.a.1 & 2
3.1.4	LA.1	"Representative" sample of rods	Bases	4.1.3.2.c
3.1.5	LA.1	Disarm CRDs	Bases	3.1.3.5.a.2.b.1 & 2
	LC.1	Leak and pressure, leak detection, and alarms for accumulators	FSAR/LCS	4.1.3.5.b
3.1.7	LA.1	SR "During Shutdown"	FSAR/LCS	4.1.5.d
	LA.2	SR Details	Bases	4.1.5.d.1
	LA.3	SR Details	Bases	4.1.5.d.1, 4.1.5.d.3
	LA.4	SLC-RV	IST Program	4.1.5.d.2
	LA.5	Hi/Low Tank Alarms	Bases and FSAR	Figure 3.1.5-2
3/4.1.6	LA.1	Allowance to reduce feedwater	COLR	3/4.1.6
3.2.1,2,3,4	LA.1	15 Min = Prompt	Bases	3.2.1.a, 3.2.3.a, 3.2.4.a, 3.2.2.a

RELOCATED ITEMS AND CONTROL PROCESS

Spec #	DOC	Comments	Proposed Location (DOC, Rev C)	CTS
3.2.4	R.1	APRM flow biased neutron flux-upscale C.R. block	LCS	3.2.2
	LA.2	APRM GAFs	FSAR/LCS	4.2.2.*
3.3.1.1	LA.1	Details of SR	Bases	4.3.1.2, Table 4.3.1.1-1
	LA.2	Put channel in trip	Bases	4.3.1.3.* & **
	LA.3	Shorting links	FSAR/LCS	Table 3.3.1-1.a, Table 3.3.1-1.b, Table 3.3.1-1.*
	LA.4	Required number of LPRMs	Bases	Table 3.3.1-1.2, Table 3.3.1-1.c
	LA.5	Design details	FSAR	Table 3.3.1-1.5,6,8,9 Table 3.3.1-1.e, Table 3.3.1-1.d Table 3.3.1-1.g, Table 3.3.1-1.i Table 3.3.1-1.j
	LA.6	Min thermal time constant	LCS	Table 4.3.1.1-1.h
	LA.7	Trip Setpoint	FSAR/LCS	2.2, Table 3.3.1.1-1
3.3.1.2	LA.1	SR Details	Bases	4.3.7.6.c
	LA.2	Details of operable	Bases	3.9.2.a, 4.9.2.a.2
	LA.3	Shorting links	FSAR/LCS	3.9.2.d, 4.9.2.d

RELOCATED ITEMS AND CONTROL PROCESS

Spec #	DOC	Comments	Proposed Location (DOC, Rev C)	CTS
3.3.2.1	R.1	Rod blocks for APRM, SRM, IRM, Scram discharge Volume and RRC Flow	LCS	Table 3.3.6-1, Table 4.3.6-1 Table 3.3.6.2
	LA.1	Trip Setpoints	FSAR/LCS	3.3.6, 3.3.6.a, Table 3.3.6-2.1, 3.3.4.1
	LA.2	Design detail	FSAR	Table 3.3.6-1
	LA.3	Details of SR	Bases	Table 3.3.6-1, 4.1.4.a,b,c
3.3.2.2	LA.1	Trip Setpoints	FSAR/LCS	3.3.9, Table 3.3.9-2
3.3.3.1	R.1	Specific accident monitoring instruments from Table	LCS	Table 3.3.7.5-1, Table 4.3.7.5-1
	LA.1	Alternate monitoring method	Bases	Table 3.3.7.5-1
	LA.2	SR Details	Bases	Table 4.3.7.5-1
3.3.3.2	LA.1	Remote Shutdown Panel Table	LCS and Bases	3.3.7.4, 3.3.2.4.a, 4.3.7.4, Table 3.3.7.1-1, Table 4.3.7.4-1
3.3.4.1	LA.1	Trip Setpoints	FSAR/LCS	3.3.4.2, 3.3.4.2.a, Table 3.3.4.2-2
	LA.2	EOC-RPT RTT	LCS	3.3.4.2, 4.3.4.2.3, Table 3.3.4.2-3
	LA.3	Design detail	FSAR	Table 3.3.4.2-1
3.3.4.2	LA.1	Trip Setpoints	FSAR/LCS	3.3.4.1, 3.3.4.1.a, Table 3.3.4.1-2

RELOCATED ITEMS AND CONTROL PROCESS

Spec #	DOC	Comments	Proposed Location (DOC, Rev C)	CTS
3.3.5.1	R.1	ADS inhibit	LCS	1.3.5.2
	LA.1	Trip Setpoints	FSAR/LCS	3.3.3, 3.3.3.a, Table 3.3.3-2
	LA.2	SR Details	Bases	4.3.3.2
	LA.3	Details design	Bases	Table 3.3.3-1, Table 3.3.3-2, Table 4.3.3.1-1
3.3.5.2	LA.1	Trip Setpoints	FSAR/LCS	3.3.5, 3.3.5.a, Table 3.3.5-2
	LA.2	SR Details	Bases	4.3.5.2
	LA.3	Design details	Bases	Table 3.3.5-1, Table 3.3.5-2
3.3.6.1	R.1	RCIC isolation signal	LCS	Table 3.3.2-1.h, Table 3.3.2-2.h, Table 4.3.2.1-1.h
	LA.1	Trip Setpoints	FSAR/LCS	3.3.2, 3.3.2.a, Table 3.3.2-2
	LA.2	Action Details	Bases	3.3.2.b.1, 3.3.2.b.2, 3.3.2.b.2.c
	LA.3	Action Details	Bases	3.3.2.*
	LA.4	SR Details	Bases	4.3.2.2
	LA.5	Design Details	Bases	Table 3.3.2-1
	LA.6	Condenser low vacuum	FSAR/LCS	Table 4.3.2.1-1
	LA.7	RHR-V-8 controls	FSAR/LCS	Table 3.3.2-1.i
	LA.8	Action Details	Bases	Table 3.3.2-1, Action 27

RELOCATED ITEMS AND CONTROL PROCESS

Spec #	DOC	Comments	Proposed Location (DOC, Rev C)	CTS
3.3.6.2	LA.1	Trip Setpoints	FSAR/LCS	3.3.2, 3.3.2.a, Table 3.3.2-2
	LA.2	Action Details	Bases	3.3.2.b.1, 3.3.2.b.2, 3.3.2.b.2.b
	LA.3	Action Details (which system to trip)	Bases	3.3.2.*
	LA.4	SR Details	Bases	4.3.3.2
	LA.5	Design Details	Bases	Table 3.3.2-1
3.3.7.1	LA.1	Trip Setpoints	FSAR/LCS	3.3.7.1-1
3.3.8.1	LA.1	Trip Setpoints	FSAR/LCS	3.3.3, 3.3.3.a, Table 3.3.8.1-1
	LA.2	SR Details	Bases	4.3.3.2
	LA.3	Design Details	Bases	Table 3.3.8.1-1
	LA.4	120V basis for Trip Setpoint	FSAR	Table 3.3.8.1-1
3/4.3.7.1	R.1	Rad Monitoring Instrumentation	LCS	3.3.7.1, 3.3.7.1-1, 4.3.7.1, Table 3.3.7.1-1
3/4.3.7.3	R.1	Met tower Instrumentation	FSAR/LCS	3.3.7.3, 4.3.7.3, Table 3.3.7.3-1
3/4.3.7.7	R.1	TIPs	LCS	3.3.7.7, 4.3.7.7
3/4.3.7.10	R.1	LPDS	FSAR/LCS	3.3.7.10, 4.3.7.10
3/4.3.7.12	R.1	Explosive Gas	LCS	3.3.7.12, 4.3.7.12, Table 3.3.7.12-1
3/4.3.8	R.1	TG overspeed	LCS	3.3.8, 4.3.8.1, 4.3.8.2

RELOCATED ITEMS AND CONTROL PROCESS

Spec #	DOC	Comments	Proposed Location (DOC, Rev C)	CTS
3.4.1	LA.1	Action Details, 15 minutes	Bases	3.4.1.1.2
	LA.2	Details on how to exit region	Bases	3.4.1.1.2, 3.2.7, 3.2.7.b, 3.2.8.a, 3.2.8.b
	LA.3	Details on single loop limits	FSAR/LCS	3.4.1.1.3.a, 3.4.1.1.3.d, 4.4.1.1.1.a, 4.4.1.1.1.b
	LA.4	Power/Flow map	COLR	3.4.1.1.2, 4.4.1.1.1.c, Figure 3.4.1.1-1, 3.2.6, 4.2.6, Figure 3.2.6-1, 3.2.7, Figure 3.2.7-1, 3.2.8, Figure 3.2.8-1
	LA.5	Action Details	Bases	3.2.6
	LA.6	Stability Monitor System Details	Bases	3.2.7, 3.2.7.a, 3.2.8, 3.2.8.a
	LA.7	Action Details	Bases	3.2.7.a, 3.2.7.b, 3.2.8.a, 3.2.8.b
	LA.8	Speed Control Surveillance	FSAR	4.4.1.1.3
3.4.3	LA.1	Lift Setpoint Details	Bases	3.4.2.*
3.4.4	LA.1	Lift Setpoint Details	Bases	3.4.2.*
3.4.5	LA.1	SR Details	Bases	4.4.3.2.1.a & b
3.4.6	LA.1	PIV Table of equipment	LCS	3.4.3.2.e, 4.4.3.2.2, Table 3.4.3.2-1
	LA.2	IST Frequency	IST Program	4.4.3.2.2.a
	LC.1	PIV high/Low interface instruments	LCS	3.4.3.2.Action d, 4.4.3.2.3, Table 3.4.3.2-2

RELOCATED ITEMS AND CONTROL PROCESS

Spec #	DOC	Comments	Proposed Location (DOC, Rev C)	CTS
3.4.8	LA.1	Offgas isotope	FSAR/LCS	Table 4.4.5-1
3.4.9	LA.1	OPERABLE RHR SDC Details	Bases	3.4.9.1.a & b
3.4.10	LA.1	OPERABLE RHR SDC Details	Bases	3.4.9.2.a & b
3.4.11	LA.1	Details of Surveillance	Bases	4.4.6.1.1, 4.4.6.1.2
	LA.2	Thermal Power and RRC Flow Details	Bases	4.4.1.1.2.***
	LA.3	SLO limits	FSAR/LCS	3.4.1.4.b, 3.4.1.4.action
3/4.4.4	R.1	Rx chem	LCS	3.4.4, 4.4.4, Table 3.4.4-1
3/4.4.8	R.1	Structure integrity	FSAR	3.4.8, 4.4.8
3.5.1	LA.1	OPERABILITY Details	Bases	3.5.1.a.1 & 2, 3.5.1.b.1, 3.5.1.c
	LA.2	SR Details	Bases	4.5.1.a.1 & 2, 4.5.1.b.1-3 4.5.1.c, 4.5.1.d, 4.5.1.e.3.b
	LC.1	Instrumentation requirement	FSAR/LCS	4.5.1.e.2, 4.5.1.e.3.c
	LC.2	ADS nitrogen capacity	FSAR/LCS	4.5.1.e.3.d
3.5.2	LA.1	OPERABILITY Details	Bases	3.5.2, 3.5.3.d.4
	LA.2	CST level/volume correlations	Bases	3.5.3, 3.5.3.b.3
3.5.3	LA.1	OPERABILITY Details	Bases	3.7.3
	LA.2	SR Details	Bases	4.7.3.a.1, 4.7.3.a.3, 4.9.3.c.1, 4.7.3.c.3

RELOCATED ITEMS AND CONTROL PROCESS

Spec #	DOC	Comments	Proposed Location (DOC, Rev C)	CTS
3.6.1.1	LA.1	PCIV list of valves for 3.6.3.1	LCS	3.6.1.2.b, 3.6.1.2.AWb, 3.6.1.2.ARb, 4.6.1.2.*
3.6.1.2	LA.1	Details of OPERABLE air lock	Bases	3.6.1.3.b
3.6.1.3	LA.1	PCIV list of valves	LCS	3.6.3, 3.6.3.a, 3.6.3.b, 3.6.3.1, 4.6.3.2, 4.6.3.3, 4.6.3.4, Table 3.6.3.1, 4.6.1.1.b
	LA.2	Explosive squibs for TIPs	Bases	4.6.3.5.b
	LA.3	Administrative Control on locked PCIV	FSAR/LCS	4.6.1.1.**
	LA.4	Leak rate and test pressure	Bases	3.6.1.2.d
3.6.1.4	LA.1	SR Details	Bases	4.6.1.7
3.6.1.5	R.1	Suppression pool spray capability	LCS	3.6.2.2.Action a & b, 4.6.2.2, 4.6.2.2.b
	LA.1	OPERABILITY Details	Bases	3.6.2.2
	LA.2	SR Details	Bases	4.6.2.2.c
3.6.1.6	LA.1	OPERABILITY Details	Bases	3.6.4.2
	LA.2	Visual Inspection	FSAR	4.6.4.2.b.2.b
3.6.1.7	LA.1	Design details	Bases	3.6.4.1

RELOCATED ITEMS AND CONTROL PROCESS

Spec #	DOC	Comments	Proposed Location (DOC, Rev C)	CTS
3.6.1.8	LA.1	Design Details	Bases	3.6.1.4
	LA.2	SR Details	Bases	4.6.1.4.a.1 & 2, 4.6.1.4.c
	LA.3	Repeated IST Details	IST Program	4.6.1.4.b
	LC.1	MSLC instrumentation	FSAR/LCS	4.6.1.4.d
3.6.2.1	LA.1	How to reduce SP temp details	FSAR/LCS	3.6.2.1.Action b.2.b
3.6.2.2	LA.1	Pool Volumes vs Level Details	Bases	3.6.2.1.a.1, 3.5.3.a
3.6.2.3	LA.1	OPERABILITY Details	Bases	3.6.2.3
3.6.3.1	LA.1	Design Details	Bases	3.6.6.1
	LA.2	SR Details	Bases	4.6.6.1.b.2, 4.6.6.1.b.3, 4.6.6.1.b.4
	LC.1	Instrumentation	FSAR/LCS	4.6.6.1.b.1
3.6.4.1	LA.1	Verify blow out panels	FSAR/LCS	4.6.5.1.b.1
3.6.4.2	LA.1	Secondary containment isolation equipment	LCS	3.6.5.2, 3.6.5.2.Action, Table 3.6.5.2-1
3.6.4.3	LA.1	Design Details	Bases	3.6.5.3
	LA.2	SR Details	Bases	4.6.5.3.a

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Spec #	DOC	Comments	Proposed Location (DOC, Rev C)	CTS
3.7.1	LA.1	OPERABILITY Details	Bases	3.7.1.1, 3.7.1.3
	LA.2	SW in MODE 4 & 5 is a support system for ECCS, DG, SDC and other systems required in MODE 4, 5.	3.5.2 Bases, 3.8.2 Bases and others	3.7.1.1, 3.7.1.1.Action b, c & d, 3.7.1.1.*, 3.7.1.3, 3.7.1.3.Action b & c, 3.7.1.3.*
3.7.2	LA.1	OPERABILITY Details	Bases	3.7.2.1
	LA.2	OPERABILITY in MODE 4 & 5 moved to supported systems	3.8.2 Bases	3.7.1.2, 3.7.1.2.Action
3.7.3	LA.1	Design Details	Bases	3.7.2
	LA.2	SR Details	Bases	4.7.2.b
3.7.5	LA.1	SR Details	Bases	3.11.2.7, 4.11.2.7.2, 4.11.2.7.2.b
	LA.2	Monitor radioactivity rate	ODCM	4.11.2.7.1
3.7.6	LA.1	SR details.	Bases	4.7.9.b.1, 4.7.9.b.2
	LA.2	RTT for bypass system	LCS	4.7.9.b.3
3.7.7	LA.1	Crane operations w/loads	FSAR/LCS	3.9.9.Action
	LA.1	Load analysis & controls	FSAR	3.9.9.Action
	LA.2	ACTION details	Bases	3.9.9.Action
3/4.7.4	LA.1	Snubber Program	LCS	3.7.4, 4.7.4, Table 4.7-1, Figure 4.7-1
3/4.7.5	R.1	Sealed Sources	LCS	3.7.5, 4.7.5.1, 4.7.5.2, 4.7.5.3
3/4.7.8	R.1	Area Temperature Monitoring	LCS	3.7.8, 4.7.8, Table 3.7.8-1

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Spec #	DOC	Comments	Proposed Location (DOC, Rev C)	CTS
3.8.1	LA.1	OPERABILITY and Design Details	Bases	3.8.1.1.a, 3.8.1.1.b
	LA.2	DG test frequency - must implement RG 1.160 in 90 days	FSAR/LCS	4.8.1.1.2.a, Table 4.8.1.1.2-1
	LA.3	Identify specific start signals	FSAR/LCS	4.8.1.1.2.a.4, 4.8.1.1.2.a.6
	LA.4	Maintenance inspection	FSAR	4.8.1.1.2.e.1
	LA.5	Reject load size	Bases	4.8.1.1.2.e.2, 4.8.1.1.2.e.9
	LA.5	Auto connected load size	FSAR	4.8.1.1.2.e.2, 4.8.1.1.2.e.9
	LA.6	Loading logic	Bases	4.8.1.1.2.e.4.2, 4.8.1.1.2.e.6.a.2, 4.8.1.1.2.e.6.b.2
	LA.7	Starting and maintaining DG	FSAR/LCS	4.8.1.1.2.e.8
	LA.8	Test lock out feature	FSAR/LCS	4.8.1.1.2.e.13
3.8.2	LA.1	Crane operations	FSAR/LCS	3.8.1.2.Action a
3.8.3	LA.1	10 year testing and cleaning of storage tank	FSAR	4.8.1.1.2.g

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Spec #	DOC	Comments	Proposed Location (DOC, Rev C)	CTS
3.8.4	LA.1	OPERABILITY Details	Bases	3.8.2.1.a.1, 2, 4 & 5, 3.8.2.1.b.1 & 3, 3.8.2.1.c
	LA.2	24 volt DC requirement	LCS	3.8.2.1.a.3 & 6, 3.8.2.1.b.2 & 4, 4.8.2.1, 4.8.2.1.b, 4.8.2.1.b.3, 4.8.2.1.c.4.1, 4.8.2.1.d.2
	LA.4	Required loads	Bases	4.8.2.1.c.4.2
	LA.5	Details of DC loads and Service duration	FSAR	4.8.2.1.d.1 & 2
	LA.6	Degraded battery	Bases	4.8.2.1.f
3.8.5	LA.1	OPERABILITY Details	Bases	3.8.2.2, 3.8.2.2.a.1, 2, 4 & 5, 3.8.2.2.b.1 & 3, 3.8.2.2.c
	LA.2	24 VDC Requirement	LCS	3.8.2.2.a.3 & 6, 3.8.2.2.b.2 & 4
3.8.6	LA.1	24 VDC Requirement	LCS	4.8.2.1, 4.8.2.1.b, 4.8.2.1.b.3
	LA.2	Details of "representative"	Bases	4.8.2.1.b.3
3.8.7	LA.1	OPERABILITY and Design Details	Bases	3.8.3.1, 3.8.3.1.a, 3.8.3.1.b.1.a - g & i, 3.8.3.1.b.2.a - e, 3.8.3.1.b.3
	LA.2	24 VDC Distribution	LCS	3.8.3.1.b.1.h, 3.8.3.1.b.2.f
	LA.3	SR Details	Bases	4.8.3.1

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Spec #	DOC	Comments	Proposed Location (DOC, Rev C)	CTS
3.8.8	LA.1	OPERABILITY and Design Details	Bases	3.8.3.2.a.1-3, 3.8.3.2.b.1-3
	LA.2	SR Details	Bases	4.8.3.2
	LA.3	24 VDC Distribution	LCS	3.8.3.2.b.1.h, 3.8.3.2.6.2.f
3/4.8.4.1	R.1	De-energize circuits	LCS	3.8.4.1, 4.8.4.1
3/4.8.4.2	R.1	Over current protective devices	LCS	3.8.4.2, 4.8.4.2, Table 3.8.4.2-1
3/4.8.4.3	R.1	Thermal overloads	LCS	3.8.4.3, 4.8.4.3, Table 3.8.4.3-1
3.9.5	LC.1	Accumulator instrumentation indication/alarm SR and Operable	FSAR/LCS	4.1.3.5.b.1
3.9.6	LA.1	Place fuel in safe condition	Bases	3.9.8.Action
3.9.7	LA.1	Place fuel and rods in safe condition	Bases	3.9.8.Action
3.9.8	LA.1	OPERABILITY Details	Bases	3.9.11.1.a & b
	LA.2	SR Details	Bases	4.9.11.1
3.9.9	LA.1	OPERABILITY Details	Bases	3.9.11.2.a & b
	LA.2	SR Details	Bases	4.9.11.2
3/4.9.4	R.1	24 hr. decay time	FSAR/LCS	3.9.4, 4.9.4
3/4.9.5	R.1	Control room to refuel platform communications	FSAR/LCS	3.9.5, 4.9.5
3/4.9.6	R.1	Refuel Platform OPERABILITY	LCS	3.9.6, 4.9.6

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Spec #	DOC	Comments	Proposed Location (DOC, Rev C)	CTS
3/4.9.7	R.1	Crane travel	LCS	3.9.7, 4.9.7, Figure 3.9.7-1
3.10.1	LA.1	Max Coolant temperature	FSAR/LCS	3.10.7
3.10.2	LA.1	Details of actions for verification	Bases	Table 1.2, 4.9.1.2.*
3.10.4	LA.1	Details to disarm CRD	Bases	3.9.10.1.d, 4.9.10.1.d
3.10.5	LA.1	Details to disarm CRD	Bases	3.9.10.1.d, 4.9.10.1.d
4.0	LA.1	Details of unrestricted area	FSAR	5.1.2, 5.1.3, 5.4
	LA.2	Details of design for Primary and secondary containment and RCS	FSAR	5.2, 5.3.1
	LA.3	Met tower location/design	FSAR	5.5
5.2	LA.1	Reporting requirement for QA	FSAR	6.2.1.e
	LA.2	Minimum shift crew requirement	FSAR	6.2.2.a, Table 6.2.2-1
	LA.3	Chemistry personnel requirement	FSAR	6.2.2.c, 6.2.2.*
	LA.3	Fire brigade requirement	Fire Protection Plan (FSAR)	
	LA.4	SRO to supervise core ALTS	FSAR/LCS	6.2.2.d
	LA.5	Crew position license requirement	FSAR	6.2.2.f
	LA.6	NSAD requirement	OQAPD	6.2.3
5.3	LA.1	Operator qualification requirements	FSAR	6.3.1

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Spec #	DOC	Comments	Proposed Location (DOC, Rev C)	CTS
5.4	LA.1	Details for Plant Procedures and deviation reviews	OQAPD	6.8.2, 6.8.3
5.5	LA.1	In plant rad monitoring program	FSAR	6.8.4.B
	LA.2	REMP	ODCM	6.8.4.e
	LA.3	Component cyclic, transients	FSAR	5.7.1, Table 5.7.1-1
	LA.4	ISI	ISI Program	4.0.5, 4.0.5.a, 4.0.5.b, 4.0.5.c, 4.0.5.d, 4.0.5.f
	LA.5	IST	IST Program	4.0.5.a
	LA.6	VFTP implementation	FSAR/LCS	Page 3/4 6-42.b.2, Page 3/4 6-42.c, Page 3/4 7-6.c.2, Page 3/4 7-6.d
	LA.7	Stored radioactive liquid limits contained in CTS 3/4.11.1.4 and explosive gas limits contained in 3/4.11.2.6.	ODCM and FSAR/ LCS	3.11.1.4, 4.11.1.4, 3.11.2.6, 4.11.2.6
	LA.8	DG fuel oil ASTMs	Bases 3.8.3	Page 3/4 8-4.c, Page 3/4 8-4.c.1, Page 3/4 8-4.c.1.a, Page 3/4 8-4.c.1.b, Page 3/4 8-4.c.1.c, Page 3/4 8-4.c.1.d, Page 2/4 8-4.c.2, Page 3/4 8-4.d
5.6	LA.1	Start up report	FSAR	6.9.1.1, 6.9.1.2, 6.9.1.3
CTS 6.4	LA.1	Training requirements	FSAR	6.4

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Spec #	DOC	Comments	Proposed Location (DOC, Rev C)	CTS
CTS 6.5	LA.1	POC, CNSRB, audits, etc.	OQAPD	6.5
CTS 6.6	LA.1	Reportable events	FSAR/LCS	6.6.1.a
	LA.2	Event review requirement	OQAPD	6.6.1.b
CTS 6.7	LA.1	Notifications of Safety Limit violation	FSAR/LCS	6.7.1
CTS 6.10	LA.1	Record retention	OQAPD	6.10
CTS 6.11	LA.1	Rad protection program	FSAR	6.11
CTS 6.13	LA.1	Process Control Program	FSAR	6.13, 1.33

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CONTROL PROCESS

DOCUMENT	PROCESS
Bases	ITS 5.5, Bases Control Program
COLR	10 CFR 50.59
FSAR	10 CRF 50.59
ISI and IST Programs	10 CFR 50.59 and 50.55a(f)
LCS Manual	10 CFR 50.59
ODCM	ITS 5.5
OQAPD	10 CFR 50.59 and 50.54(a)(3)