

SAFETY EVALUATION FOR KEWAUNEE POWER STATION IMPROVED TECHNICAL SPECIFICATION CONVERSION LICENSE AMENDMENT REQUEST (TAC NOS. ME2139, ME2419, ME2420, AND ME3544)

## 1.0 INTRODUCTION

By letter dated Aug 24, 2009 (Agencywide Documents and Management System (ADAMS) Accession No. ML092440398), as supplemented by letters dated Oct 22, 2009 (ADAMS Accession No. ML093070096), and May 12, 2010 (ADAMS Accession No. ML101380399), Dominion Energy Kewaunee (the licensee) requested changes to the technical specifications (TS) for the Kewaunee Power Station (KPS). The proposed changes would revise the current technical specifications (CTS) to the improved technical specifications (ITS).

The following Safety Evaluation (SE) of the proposed ITS conversion is based on the application, the information provided to the NRC through the Kewaunee ITS Conversion web page hosted by Excel Services Corporation (as docketed by the licensee), and supplements provided, as discussed above.

To expedite its review of the application, the NRC staff issued its requests for additional information (RAIs) through the Kewaunee ITS Conversion web page, and the licensee addressed the RAIs by providing responses on the web page. Entry into the database is protected so that only the licensee and NRC reviewers can enter information into the database to add RAIs (NRC) or provide responses to the RAIs (licensee); however, a public, read-only version of the website is available to allow members of the public to view the questions asked and the responses provided (<http://www.excelservices.com/>). To be in compliance with the regulations for written communications for license amendment requests, the licensee has submitted a copy of the database in a submittal to the NRC.

The public can access the website by going to [www.excelservices.com](http://www.excelservices.com). Once at the website, click on Kewaunee ITS Conversion button on the right side of the screen. The RAIs and responses to RAIs may be sorted and filtered to ease public access to RAI's on a specific TS section of interest.

The additional information provided in the supplemental letters, did not expand the scope of the application as noticed and did not change the NRC staff's initial proposed finding of no significant hazards consideration published in the Federal Register on May 22, 2008 [ **FR** ].

## 2.0 BACKGROUND

KPS has been operating in accordance with the TS issued with the original Facility Operating License dated December 21, 1973, as amended. The proposed conversion to the ITS is based upon:

- NUREG 1431, Revision 3.0, "Standard Technical Specifications – Westinghouse Plants.," (ADAMS Accession No. ML062510073) as modified by: TSTF-475-A, Rev. 1 "Control Rod Notch Testing Frequency and SRM Insert Control Rod Action", TSTF-479-A, Rev. 0 "Changes to Reflect Revision of 10 CFR 50.55a", TSTF-482-A, Rev. 0 "Correct LCO 3.0.6 Bases", TSTF-485-A, Rev. 0 "Correct Example 1.4-1", TSTF-490-A, Rev. 0

Enclosure

“Deletion of E Bar Definition and Revision to RCS Specific Activity Tech Spec”, TSTF-491-A, Rev. 2 “Removal of Main Steam and Main Feedwater Valve Isolation Times from Technical Specifications”, TSTF 493, Rev 4 “Clarify Application of Setpoint Methodology for LSSS Functions”, TSTF-497-A, Rev. 0 “Limit Inservice Testing Program SR 3.0.2 Application to Frequencies of 2 Years or Less”, TSTF-511-A, Rev. 0 “Eliminate Working Hour Restrictions from TS 5.2.2 to Support Compliance with 10 CFR Part 26.”

- KPS CTS
- “Final Policy Statement on Technical Specification Improvements for Nuclear Power Reactors” (Final Policy Statement), published on July 22, 1993 (58 FR 39132); and
- 10 CFR 50.36, “Technical specifications,” as amended July 19, 1995 (60 FR 36953).

Hereinafter, the proposed TS for KPS are referred to as the ITS, the existing TS are referred to as the CTS, and the improved standard TS, as issued in NUREG-1431, are referred to as the ISTS. The corresponding Bases are ITS Bases, CTS Bases, and ISTS Bases, respectively. In addition to basing the ITS on the ISTS, the Final Policy Statement, and the requirements in 10 CFR 50.36, the licensee retained portions of the CTS as a basis for the ITS.

During the course of its review, the NRC staff utilized the KPS ITS conversion database, to issue requests for additional information (RAIs). The RAIs served to clarify the ITS with respect to the guidance in the Final Policy Statement and the ISTS. The NRC staff required that the licensee docket the KPS ITS conversion database in a sworn statement with regards to its accuracy, as well as docket all RAIs and responses under oath and affirmation, in a supplement to the license amendment. The licensee also proposed changes of a generic nature that were not in the ISTS. The NRC staff requested that the licensee submit such generic changes as proposed changes to the ISTS using the industry Technical Specifications Task Force (TSTF) Travelers. These generic issues were considered for specific applications in the KPS ITS.

Consistent with the Commission's Final Policy Statement and 10 CFR 50.36, the licensee proposed transferring some CTS requirements to licensee-controlled documents (such as the KPS Technical Requirements Manual (TRM), for which changes to the documents by the licensee are controlled by a regulation (e.g., 10 CFR 50.59) and which may be made without prior NRC approval. NRC-controlled documents, such as the TS, may not be changed by the licensee without prior NRC approval. In addition, human factors principles were emphasized to add clarity to the CTS requirements being retained in the ITS, and to define more clearly the appropriate scope of the ITS. Further, significant changes were proposed to the CTS Bases to make each ITS requirement clearer and easier to understand.

The overall objective of the proposed amendment, consistent with the Final Policy Statement, is to rewrite, reformat, and streamline the KPS CTS to provide clearer, more readily understandable requirements to ensure safer operation of the plant, while still satisfying the requirements of 10 CFR 50.36. During its review, the NRC staff relied on the Final Policy Statement and 10 CFR 50.36, and the ISTS as guidance for acceptance of CTS changes. This SE provides a summary basis for the NRC staff's conclusion that use of the licensee's proposed ITS based on ISTS, as modified by plant-specific changes, is acceptable for continued operation of the Kewaunee Power Station. This SE also explains the NRC staff's conclusion that the ITS are consistent with the KPS current licensing basis and the requirements of 10 CFR 50.36.

This SE relies on the following license conditions to be included in the facility operating license: (1) the schedule for the first performance of new and revised surveillance requirements (SRs); and (2) the relocation of CTS requirements into licensee-controlled documents as part of the implementation of the ITS.

### 3.0 REGULATORY EVALUATION

Section 182a of the Atomic Energy Act (the "Act") requires that applicants for nuclear power plant operating licenses will provide:

[S]uch technical specifications, including 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 placed emphasis on those matters related to the prevention of accidents and the mitigation of accident consequences. As recorded in the Statements of Consideration, "Technical Specifications for Facility Licenses; Safety Analysis Reports" (33 FR 18610, December 17, 1968), 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." Pursuant to 10 CFR 50.36, TS are required to include items in the following five specific categories: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation (LCOs); (3) SRs; (4) design features; and (5) administrative controls. However, the rule does not specify the particular requirements to be included in a plant's TS.

For several years, the 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 TS improvements, "Interim Policy Statement on Technical Specification Improvements for Nuclear Power Reactors" (52 FR 3788). During the period from 1989 to 1992, utility owners groups and the NRC staff developed ISTS (e.g., NUREG-1431) that would establish model TS based on the Commission's policy for each primary reactor type. In addition, the NRC staff, licensees, and owners groups developed generic administrative and editorial guidelines in the form of a "Writer's Guide" for preparing TS, which gives appropriate consideration to human factors engineering principles and was used throughout the development of plant-specific ITS.

In September 1992, the Commission issued NUREG-1431, Revision 0, which was developed using the guidance and criteria contained in the Commission's Interim Policy Statement. The ISTS in NUREG-1431 were established as a model for developing the ITS for Westinghouse-type plants. The ISTS reflect the results of a detailed review of the application of the Interim Policy Statement criteria which have been incorporated in 10 CFR 50.36(c)(2)(ii) to generic system functions, which were published in a "Split Report" issued to the nuclear steam supply system vendor owners groups in May 1988. ISTS also reflect the results of extensive discussions concerning various drafts of ISTS so that the application of the TS criteria and the Writer's Guide would consistently reflect detailed system configurations and operating

characteristics for all reactor designs. As such, the generic Bases presented in NUREG-1431 provide an abundance of information regarding the extent to which the ISTS present requirements that are necessary to protect public health and safety.

The ISTS in NUREG 1431, Revision 3.0, "Standard Technical Specifications – Westinghouse Plants.," (ADAMS Accession No. ML062510073) as modified by the following TSTF Travelers, applies to Kewaunee: TSTF-475-A, Rev. 1 "Control Rod Notch Testing Frequency and SRM Insert Control Rod Action", TSTF-479-A, Rev. 0 "Changes to Reflect Revision of 10 CFR 50.55a", TSTF-482-A, Rev. 0 "Correct LCO 3.0.6 Bases", TSTF-485-A, Rev. 0 "Correct Example 1.4-1", TSTF-490-A, Rev. 0 "Deletion of E Bar Definition and Revision to RCS Specific Activity Tech Spec", TSTF-491-A, Rev. 2 "Removal of Main Steam and Main Feedwater Valve Isolation Times from Technical Specifications", TSTF 493, Rev 4 "Clarify Application of Setpoint Methodology for LSSS Functions", TSTF-497-A, Rev. 0 "Limit Inservice Testing Program SR 3.0.2 Application to Frequencies of 2 Years or Less", TSTF-511-A, Rev. 0 "Eliminate Working Hour Restrictions from TS 5.2.2 to Support Compliance with 10 CFR Part 26."

On July 22, 1993, the Commission issued its Final Policy Statement, expressing the view that satisfying the guidance in the policy statement also satisfies Section 182a of the "Act" and 10 CFR 50.36. The Final Policy Statement described the safety benefits of the ISTS and encouraged licensees to use the ISTS as the basis for plant-specific TS amendments and for complete conversions to ITS based on the ISTS. In addition, the Final Policy Statement gives guidance for evaluating the required scope of the TS and defines the guidance criteria to be used in determining which of the LCOs and associated SRs should remain in the TS. The Commission noted 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.

By this approach, existing LCO requirements that fall within or satisfy any of the criteria in the Final Policy Statement should be retained in the TS; those LCO requirements that do not fall within or satisfy these criteria may be relocated to licensee-controlled documents. The Commission codified the four criteria in 10 CFR 50.36 (60 FR 36953, July 19, 1995). The four criteria are stated as follows:

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 (DBA) 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 (SSC) that is part of the primary success path and which functions or actuates to mitigate a [DBA] or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
- Criterion 4 An SSC which operating experience or probabilistic risk assessment (PRA) has shown to be significant to public health and safety.

Part 4.0 of this SE explains the NRC staff's determination that the conversion of the Kewaunee CTS to ITS based on ISTS, as modified by plant-specific changes, is consistent with the Kewaunee current licensing basis, the requirements and guidance of the Final Policy Statement, and 10 CFR 50.36.

#### 4.0 TECHNICAL EVALUATION

In its review of the Kewaunee ITS application, the NRC staff evaluated five kinds of CTS changes as defined by the licensee. The NRC staff's review also included an evaluation of whether existing regulatory requirements are adequate for controlling future changes to requirements that are removed from the CTS and placed in licensee-controlled documents. The following are the five types of CTS changes:

- A Administrative - Changes to the CTS that do not result in new requirements or change operational restrictions and flexibility.
- M More Restrictive - Changes to the CTS that result in added restrictions or reduced flexibility.
- L Less Restrictive - Changes to the CTS that result in reduced restrictions or added flexibility.
- LA Removed Details - Changes to the CTSs that eliminate detail and relocate the detail to a licensee-controlled document. Typically, this involves details of system design and system description including design limits, description of system operation, procedural details for meeting TS requirements or reporting requirements, and cycle-specific parameter limits and TS requirements redundantly located in other licensee-controlled documents.
- R Relocated Specifications - Changes to the CTS that relocate requirements that do not meet the selection criteria of 10 CFR 50.36(c)(2)(ii).

The ITS application included a justification for each proposed change to the CTS in a numbered discussion of change (DOC), using the above letter designations as appropriate. In addition, the ITS application included an explanation of each difference between ITS and ISTS requirements in a numbered justification for deviation (JFD).

The changes to the CTS, as presented in the ITS application, are listed and described in the following four tables (for each ITS section) provided as Attachments 1 through 4 to this SE:

- Table A - Administrative Changes
- Table M - More Restrictive Changes
- Table L - Less Restrictive Changes
- Table R - Relocated Specifications and Removed Detail (LA) Changes

These tables provide a summary description of the proposed changes to the CTS. The tables are only meant to summarize the changes being made to the CTS. The details as to what the actual changes are and how they are being made to the CTS or ITS are provided in the licensee's application and supplemental letters.

The NRC staff's evaluation and additional description of the kinds of changes to the CTS requirements listed in Tables A, M, L, and R attached to this SE are presented in Sections A through E below, as follows:

- Section A - Administrative Changes (A)
- Section B - More Restrictive Changes (M)
- Section C - Less Restrictive Changes (L)
- Section D - Removed Detail (LA) Changes
- Section E - Relocated Specifications (R)

The control of specifications, requirements, and information relocated from the CTS to licensee-controlled documents is described in Section F below.

#### A. Administrative Changes to the CTS

Administrative changes are intended to incorporate human factors principles into the form and structure of the ITS so that plant operations personnel can use them more easily. These changes are editorial in nature or involve the reorganization or reformatting of CTS requirements without affecting technical content or operational restrictions. In order to ensure consistency, the NRC staff review of the licensee proposed TS used the ISTS as guidance to reformat and make other administrative changes that do not involve technical changes to CTS. Administrative changes are not intended to add, delete, or relocate any technical requirements of the CTS. Examples of changes that Staff has found acceptable include:

- Identifying plant-specific wording for system names;
- Reformatting, renumbering, and rewording of Current Technical Specifications (CTS) with no change in intent;
- Splitting up requirements currently grouped under a single current specification and moving them to more appropriate locations in two or more specifications of the ITSs;
- Presentation changes that involve rewording or reformatting for clarity (including moving an existing requirement to another location within the TS) but that do not involve a change in requirements;
- Wording changes and additions that are consistent with CTS interpretation and practice and that more clearly or explicitly state existing requirements;
- Deletion of TS that no longer apply;
- Deletion of details that are strictly informational and have no regulatory basis; and,
- Deletion of redundant TS requirements that exist elsewhere in the TS.

Table A attached to this SE lists the administrative changes being made in the Kewaunee ITS conversion. Table A is organized in ITS order by each A-type DOC to the CTS, provides a summary description of the administrative change that was made, and provides CTS and ITS references. The NRC staff reviewed all of the administrative and editorial changes proposed by the licensee and finds them acceptable because they are compatible with the ISTS, do not result in any change in operating requirements, and are consistent with the Commission's regulations.

#### B. More Restrictive Changes to the CTS

The licensee, in electing to implement the specifications of the ISTS, proposed a number of requirements that are more restrictive than those in the CTS. The ITS requirements in this category include requirements that are either new to Kewaunee, more conservative than corresponding requirements in the CTS, or have additional restrictions that are not in the CTS, but are in the ISTS.

These changes include additional requirements that decrease allowed outage times, increase the frequency of surveillances, impose additional surveillances, increase the scope of specifications to include additional plant equipment, increase the applicability of specifications, or provide additional actions. These changes are generally made to conform to NUREG-1431 and have been evaluated to not be detrimental to plant safety.

Table M attached to this SE lists the more restrictive changes being made in the Kewaunee ITS conversion. Table M is organized in ITS order by each M-type DOC to the CTS. It provides a summary description of each more restrictive change that was adopted, and references the affected CTS and ITS. The staff reviewed each M-type DOC and found the changes to be acceptable because these changes provide additional restrictions on plant operation that enhance safety.

#### C. Less Restrictive Changes to the CTS

Less restrictive requirements include deletions of and relaxations to portions of the CTS requirements that are being retained in the ITS. When requirements have been shown to give little or no safety benefit, their relaxation or 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 NRC staff positions that have evolved from technological advancements and operating experience, or (3) resolution of the Owners Groups' comments on ISTS. The NRC staff reviewed generic relaxations contained in the ISTS and found them acceptable because they are consistent with current licensing practices and the Commission's regulations. The Kewaunee plant design was also reviewed to determine if the specific design basis and licensing basis are consistent with the technical basis for the model requirements in the ISTS and thus provide a basis for ITS.

All changes to the CTS that involved deletions of or relaxations to portions of CTS requirements can be grouped in the following nine categories:

##### Change Categories:

Category 1 – Relaxation of LCO Requirements

Category 2 – Relaxation of Applicability

Category 3 – Relaxation of Completion Time

Category 4 – Relaxation of Required Action

Category 5 – Deletion of Surveillance Requirement

Category 6 – Relaxation of Surveillance Requirement Acceptance Criteria

Category 7 – Relaxation of Surveillance Frequency

Category 8 – Deletion of Reporting Requirements

Category 9 – Allowed Outage Time, Surveillance Frequency, and Bypass Time Extensions Based on Generic Topical Reports

The following discussion addresses why these categories of less restrictive changes are acceptable:

#### Category 1 – Relaxation of LCO Requirement

Certain CTS LCOs specify limits on operational and system parameters beyond those necessary to ensure meeting safety analysis assumptions and, therefore, are considered overly restrictive. The CTS also contain operating limits that have been shown to give little or no safety benefit to the operation of the plant. The ITS, consistent with the guidance in the ISTS, would delete or revise such operating limits.

These changes reflect the Standard Technical Specifications (ISTS) approach to provide LCO requirements that specify the protective conditions that are required to meet safety analysis assumptions for required features. These conditions replace the lists of specific devices used in the CTS to describe the requirements needed to meet the safety analysis assumptions.

TSs changes represented by this type allow operators to more clearly focus on issues important to safety. The resultant ITS LCOs maintain an adequate degree of protection consistent with the safety analysis. They also improve focus on issues important to safety and provide reasonable operational flexibility without adversely affecting the safe operation of the plant. Changes involving the relaxation of LCOs are consistent with the guidance established by the ISTS taking into consideration the Kewaunee CLB. Therefore, based on the above, Category 1 changes are acceptable.

#### Category 2 – Relaxation of Applicability

The CTS require compliance with the LCO during the applicable Mode(s) or other conditions specified in the Specification's Applicability statement. CTS Applicabilities can be specific defined terms of reactor conditions or more general such as "all MODES." Generalized applicability conditions are not used in ITS, therefore the ITS eliminates CTS requirements such as "all MODES" replacing them with ITS defined MODES or applicable conditions that are consistent with the application of the plant safety analyses assumptions for OPERABILITY of the required features.

Further, where CTS Applicability requirements are inconsistent with the applicable accident analyses assumptions for a system, subsystem, or component specified in the LCO, the licensee proposed to change the LCO to establish a consistent set of requirements in the ITS. These modifications or deletions are acceptable because, during the operational or other conditions specified in the ITS applicability requirements, the LCOs are consistent with the applicable safety analyses. Changes involving relaxation of applicability requirements are consistent with the guidance established by the ISTS, taking into consideration the Kewaunee CLB. Therefore, based on the above, Category 2 changes are acceptable.

#### Category 3 – Relaxation of Completion Time

Upon discovery of a failure to meet an LCO, the TS specify time limits for completing Required Actions of the associated TS Conditions. Required Actions establish remedial measures that must be taken within specified Completion Times. Completion Times specify limits on the duration of plant operation in a degraded condition. Incorporating longer Completion Times is acceptable because such Completion Times continue to be based on the operability status of redundant TS required features, the capacity and capability of remaining TS-required features, provision of a reasonable time for repairs or replacement of required features, vendor-developed standard repair times, and the low probability of a DBA occurring during the repair period. Changes involving relaxation of Completion Times are consistent with the guidance established by the Commission, taking into consideration the Kewaunee CLB. These changes are generally made to conform to NUREG-1431, and have been evaluated to not be detrimental to plant safety. Therefore, based on the above, Category 3 changes are acceptable.

#### Category 4 – Relaxation of Required Action

LCOs specify the lowest functional capability or performance level of equipment that is deemed adequate to ensure safe operation of the facility. When an LCO is not met, the TS specify actions to restore the equipment to its required capability or performance level, or to implement remedial measures providing an equivalent level of protection. These actions minimize the risk associated with continued operation while providing time to repair inoperable features. Some of the Required Actions are modified to place the plant in a MODE in which the LCO does not apply. Adopting Required Actions from NUREG-1431 is acceptable because the Required Actions take into account the OPERABILITY status of redundant systems of required features, the capacity and capability of the remaining features, and the compensatory attributes of the Required Actions as compared to the LCO requirements.

Compared to CTS required actions, certain proposed ITS actions would result in extending the time period during which the licensee may continue to operate the plant with specified equipment inoperable. Upon expiration of this time period, further action, which may include shutting down the plant, is required. These ITS actions provide measures that adequately compensate for the inoperable equipment, and are commensurate with the safety importance of the inoperable equipment, plant design, and industry practice. Therefore, these action requirements will continue to ensure safe operation of the plant. Changes involving relaxations of action requirements are consistent with the guidance established by the ISTS, taking into consideration the Kewaunee CLB. Therefore, based on the above, Category 4 changes are acceptable.

#### Category 5 – Deletion of Surveillance Requirement

The CTS require maintaining LCO specified structures, systems, and components (SSCs) operable by meeting SRs in accordance with specified SR frequencies. This includes conducting tests to demonstrate that such SSCs are operable and that LCO specified parameters are within specified limits. When the test acceptance criteria and any specified conditions for the conduct of the test are met, the equipment is deemed operable. The changes of this category relate to deletion of CTS SRs, deletion of acceptance criteria, and deletion of the conditions required for performing the SR.

The ITS eliminates unnecessary CTS Surveillance Requirements that do not contribute to verification that the equipment used to meet the Limiting Condition for Operation

(LCO) can perform its required functions. Deleting the SRs, including acceptance criteria and/or conditions for performing the SRs, for these items is consistent with the objective of the ISTS, without reducing confidence that the equipment is operable. Appropriate equipment continues to be tested in a manner and at a frequency necessary to give confidence that the equipment can perform its assumed safety functions. For example, the CTS contain SRs that are not included in the ISTS for a variety of reasons. This includes deletion of SRs for measuring values and parameters that are not necessary to meet ISTS LCO requirements. In addition, the ISTS may not include reference to specific acceptance criteria contained in the CTS, because these acceptance criteria are not necessary to meet ISTS LCO requirements, or are defined in other licensee controlled documents.

This deletion of SRs is acceptable because appropriate testing standards are retained for determining that the LCO required features are operable as defined by the ISTS taking into consideration the Kewaunee CLB. Therefore, based on the above, Category 5 changes are acceptable.

#### Category 6 – Relaxation of Surveillance Requirement Acceptance Criteria

Prior to placing the plant in a specified operational Mode or other condition stated in the applicability of an LCO, and in accordance with the specified SR time interval thereafter, the CTS require establishing the operability of each LCO-required component by meeting the SRs associated with the LCO. This usually entails performance of tests to demonstrate the operability of the LCO-required components, or the verification that specified parameters are within LCO limits. A successful demonstration of operability requires meeting the specified acceptance criteria, as well as any specified conditions, for the conduct of the test. Relaxations of CTS SRs can include relaxing both the acceptance criteria and the conditions of performance.

For example, the ITS allows some Surveillance Requirements to verify OPERABILITY under actual or test conditions. Adopting the ITS allowance for these conditions is acceptable because required features cannot distinguish between an "actual" signal or a "test" signal. Also included are changes to CTS SRs that are replaced in the ITS with separate and distinct testing requirements that, when combined, provide OPERABILITY verification of all components required in the LCO for the features specified in the CTS. Changes that provide exceptions to Surveillance Requirements to allow for variations that do not affect the results of the test are also included in this category.

These relaxations of CTS SRs optimize test requirements for the affected safety systems and increase operational flexibility. These CTS SR relaxations are consistent with the guidance established by the ISTS in consideration of the Kewaunee CLB. Therefore, based on the above, Category 6 changes are acceptable.

#### Category 7 – Relaxation of Surveillance Frequency

Prior to placing the plant in a specified operational Mode or other condition stated in the applicability of an LCO, and in accordance with the specified SR time interval (frequency) thereafter, the CTS require establishing the operability of each LCO required component by meeting the SRs associated with the LCO. This usually entails performance of tests to demonstrate the operability of the LCO-required components, or the verification that

specified parameters are within LCO limits. A successful demonstration of operability requires meeting the specified acceptance criteria, as well as any specified conditions, for the conduct of the test, at a specified frequency based on the reliability and availability of the LCO-required components.

Relaxations of CTS SRs would include extending the interval between the SRs. Increasing the time interval between Surveillance tests in the ITS results in decreased equipment unavailability due to testing. Relaxation of Surveillance Frequency can also include the addition of Surveillance Notes which allow testing to be delayed until appropriate unit conditions for the test are established, or exempt testing in certain MODES or specified conditions in which the testing cannot be performed.

Reduced testing is also acceptable where operating experience or other deterministic criteria have demonstrated that these components usually pass the Surveillance when performed at the specified interval, thus the Surveillance Frequency is acceptable from a reliability standpoint. Surveillance Frequency changes to incorporate alternate train testing have also been shown to be acceptable where other qualitative or quantitative test requirements are required that are established predictors of system performance.

These CTS SR frequency relaxations are consistent with the guidance established by the ISTS taking into consideration the Kewaunee CLB. Therefore, based on the above, Category 7 changes are acceptable.

#### Category 8 – Deletion of Reporting Requirements

The CTS contain requirements that are redundant to reporting regulations in 10 CFR. Consistent with the ISTS, the ITS would omit many of the CTS reporting requirements and, in many cases, relies on the reporting requirements of 10 CFR 50.73 or other regulatory requirements. The ITS changes to reporting requirements are acceptable because the regulations provide adequate reporting requirements, or the reports do not affect continued plant operation. Therefore, this change has no effect on the safe operation of the plant. Deletion of these requirements reduces the administrative burden on the licensee and in turn allows increased attention to plant operations important to safety. Therefore, Category 8 changes have no impact on the safe operation of the plant and are acceptable.

#### Category 9 – Allowed Outage Time, Surveillance Frequency, and Bypass Time Extensions Based on Generic Topical Reports

Kewaunee is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, Rev. 3.0, "Standard Technical Specifications, Westinghouse Plants." Part of this conversion includes adoption of Technical Specification task Force (TSTF) travelers TSTF-411, TSTF-418 and WCAP 10271.

These TSTFs and WCAP are associated with changes to certain reactor protection system channel completion times, bypass times and surveillance test intervals; engineered safety system actuation system surveillance test intervals, logic cabinet completion times, bypass times, and surveillance test intervals; and reactor trip breakers surveillance test interval, completion times, and bypass times.

The proposed changes have been generically evaluated and approved by the NRC in WCAP-15376-P-A, Revision 1, "Risk-Informed Assessment of the RTS and ESFAS Surveillance Test Intervals and Reactor Trip Breaker Test and Completion Times," March 2003; WCAP-10271-P-A, Evaluation of Surveillance Frequencies and Out of Service Times for the Reactor Protection Instrumentation System, May 1986; WCAP-10271 Supplement 1-P-A, Evaluation of Surveillance Frequencies and Out of Service Times for the Reactor Protection Instrumentation System- Supplement 1, May 1986; WCAP-10271-P-A Supplement 2, Revision 1, Evaluation of Surveillance Frequencies and Out of Service Times for the Reactor Protection Instrumentation System Supplement 2, Revision 1; and WCAP-14333-P-A, Rev. 1, Probabilistic Risk Analysis of the RPS and ESFAS Test Times and Completion Times.

In the 9 cases presented above, the proposed less restrictive changes to the CTS are acceptable because they will not adversely impact safe operation of the facility. The ITS requirements are consistent with the CLB, operating experience, and plant accident and transient analyses, and provide reasonable assurance that public health and safety will be protected.

Table L attached to this SE lists the less restrictive changes being made in the Kewaunee ITS conversion. Table L, which is organized in ITS order by each L-type DOC to the CTS, provides a summary description of the less restrictive change that was made, the CTS and ITS references, and a reference to the specific change type discussed above.

#### D. Removed Details

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 NRC staff positions that have evolved from technological advancements and operating experience, or (3) resolution of the owners groups' comments on the ISTS. The NRC staff reviewed generic relaxations contained in the ISTS and found them acceptable because they are consistent with current licensing practices and the Commission's regulations. The Kewaunee design was also reviewed to determine if the specific design basis and licensing basis are consistent with the technical basis for the model requirements in the ISTS and thus provide a basis for ITS.

All of the changes to the CTS involving the removal of specific requirements and detailed information from individual specifications evaluated to be Types 1 through 4 as described below:

##### Type 1 - Removing Details of System Design and System Description, Including Design Limits

The design of the facility is required to be described in the USAR by 10 CFR 50.34. 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 Quality Assurance Topical Report (QATR). The regulation at 10 CFR 50.59 specifies controls for changing the facility as described in the USAR. The regulation at 10 CFR 50.54(a) specifies criteria for changing the QATR. The TRM is a general reference in the USAR and changes to it are accordingly also subject to 10 CFR 50.59. The ITS Bases also contain descriptions of

system design. ITS 5.5.12 specifies controls for changing the Bases. Removing details of system design is acceptable because the associated CTS requirements being retained without these details are adequate to ensure safe operation of the facility.

In addition, retaining such details in TS is unnecessary to ensure proper control of changes. Cycle-specific design limits are contained in the Core Operating Limits Report (COLR) in accordance with GL 88-16, "Removal of Cycle-Specific Parameter Limits From Technical Specifications," dated October 3, 1988. ITS Section 5.6, "Reporting Requirements," includes the programmatic requirements for the COLR. Therefore, it is acceptable to remove Type 1 details from the CTS and place them in licensee-controlled documents.

#### Type 2 - Removing Descriptions of System Operation

The plans for normal and emergency operation of the facility are required to be described in the USAR by 10 CFR 50.34. ITS 5.4.1.a and 5.4.1.e will require written procedures to be established, implemented, and maintained for plant operating procedures recommended in Appendix A of Regulatory Guide (RG) 1.33, "Quality Assurance Program Requirements (Operation)," Revision 2, dated February 1978, and in all programs specified in ITS Section 5.5, respectively. The ITS Bases also contain descriptions of system operation. Controls specified in 10 CFR 50.59 apply to changes in procedures as described in the USAR and TRM. ITS 5.5.12 specifies controls for changing the Bases. Removing details of system operation is acceptable because the associated CTS requirements being retained without these details are adequate to ensure safe operation of the facility. In addition, retaining such details in TS is unnecessary to ensure proper control of changes. Therefore, it is acceptable to remove Type 2 details from the CTS and place them in licensee-controlled documents.

#### Type 3 - Removing Procedural Details for Meeting TS Requirements or Reporting Requirements

Details for performing TS SRs or for regulatory reporting are more appropriately specified in the plant procedures. Changes to procedural details include those associated with limits retained in the ITS. For example, Specification 5.4.1 requires that written procedures covering activities that include all programs specified in Specification 5.5 be established, implemented, and maintained. ITS 5.5.6, "Inservice Testing Program," requires a program to provide controls for inservice testing (IST) of American Society of Mechanical Engineers (ASME) Code Class 1, 2, and 3 pumps and valves. The program includes testing frequencies specified in the ASME Operation and Maintenance Standards and Codes (OM Codes), and applicable addenda.

Prescriptive procedural information in a TS requirement is unlikely to contain all procedural considerations necessary for the plant operators to comply with TS and all regulatory reporting requirements, and referral to plant procedures is therefore required in any event. Therefore, it is acceptable to remove Type 3 details from the CTS and place them in licensee-controlled documents.

#### Type 4 - Removal of LCO, SR, or other TS requirement to the TRM, USAR, ODCM, NFQAPD, CLRT Program, IST Program, ISI Program, or Setpoint Control Program

Certain CTS administrative requirements are redundant with respect to current regulations and thus are relocated to the USAR or other appropriate licensee-controlled documents. The Final Policy Statement allows licensees to relocate to licensee-controlled documents, and CTS requirements that do not meet any of the criteria for mandatory inclusion in the TS.

Examples of the proposed changes include moving details out of the Current Technical Specifications (CTS) and into the Technical Specifications Bases, the Updated Safety Analysis Report (USAR), the Containment Leak Rate Testing (CLRT) Program, the Technical Requirements Manual (TRM), and other documents under regulatory control such as the Offsite Dose Calculation Manual (ODCM), the Nuclear Facility Quality Assurance Program Description (NFQAPD), the Inservice Testing (IST) Program, the Inservice Inspection (ISI) Program, and the Setpoint Control Program (SCP). The removal of this information is considered to be less restrictive because it is no longer controlled by the Technical Specification change process. Typically, the information moved is descriptive in nature and its removal conforms to NUREG-1431 for format and content. Changes made in accordance with the provisions of licensee-controlled documents are subject to the specific requirements of those documents. For example, 10 CFR 50.54(a) governs changes to the NFQAPD, and ITS 5.5.12 governs changes to the ITS Bases. Therefore, it is acceptable to remove these details from CTS and place them in licensee-controlled documents.

To the extent that information has been relocated to licensee-controlled documents, such information is not required to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to public health and safety. Further, where such information is contained in LCOs and associated requirements in the TS, the NRC staff has concluded that they do not fall within any of the four criteria set forth in 10 CFR 50.36(c)(2)(ii) and discussed in the Final Policy Statement (see Section 2.0 of this SE). Accordingly, existing detailed information, such as generally described above, may be removed from the CTS and not included in the ITS.

Table LA attached to this SE lists the less restrictive removal of detail changes being made in the Kewaunee ITS conversion. Table LA is organized in ITS order by each LA-type DOC and includes the following:

1. The ITS/CTS number, followed by the DOC number, (e.g. LA01);
2. The reference numbers of the associated CTS requirements;
3. A summary description of the relocated details and requirements;
4. The name of the licensee-controlled document to contain the relocated details and requirements (location);
5. The regulation (or ITS Specification) for controlling future changes to relocated requirements (change control process); and
6. A characterization of the type of change.

#### E. Relocated Specifications

The Final Policy Statement states that LCOs and associated requirements that do not satisfy or fall within any of the four specified criteria (now contained in 10 CFR 50.36(c)(2)(ii)) may be relocated from existing TS (an NRC-controlled document) to appropriate licensee-controlled documents as noted in Section D above.

This section discusses the relocation of entire specifications from the CTS to licensee controlled documents. These specifications generally would include LCOs, Action Statements (i.e., Actions), and associated SRs. In its application and supplements, the licensee proposed relocating such specifications from the CTS to a licensee-controlled document. The NRC staff has reviewed the licensee's submittals and finds that relocation of these requirements is acceptable in that the LCOs and associated requirements were found not to fall within the scope of 10 CFR 50.36(c)(2)(ii) and changes to licensee controlled documents will be adequately controlled by 10 CFR 50.59, as applicable. These provisions will continue to be implemented by appropriate station procedures (i.e., operating procedures, maintenance procedures, surveillance and testing procedures, and work control procedures).

Table R attached to this SE lists the relocated changes that would be made in the Kewaunee ITS conversion and lists all specifications that are being relocated from the CTS to licensee controlled documents. Table R includes the following in columns:

1. References to the ITS/CTS section and DOC number;
2. References to the relocated CTS requirement;
3. Summary descriptions of the relocated CTS requirement;
4. Names of the document that will contain the relocated specifications (i.e., the new location); and
5. The method for controlling future changes to the relocated specifications (i.e., the regulatory change control process).

The specifications relocated from the CTS are not required to be in the TS because they do not fall within the criteria for mandatory inclusion in the TS as stated in 10 CFR 50.36(c)(2)(ii). These specifications 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. The NRC staff concludes that appropriate controls have been established for all of the current specifications and information being moved to the TRM. These relocations are the subject of a new license condition discussed in Section 7.0 of this SE. Until incorporated in licensee controlled documents, changes to these specifications and information will be controlled in accordance with the current applicable procedures and regulations.

#### F. Control of Specifications, Requirements, and Information Relocated from the CTS

In the ITS conversion, the licensee proposes to relocate specifications, requirements, and detailed information from the CTS to licensee-controlled documents. This is discussed in Sections 4.D and 4.E of this SE. The facility and procedures described in the USAR and TRM can be revised in accordance with the provisions of 10 CFR 50.59, to ensure that records are maintained and appropriate controls are established over those requirements removed from the CTS and future changes to the requirements. Other licensee-controlled documents contain provisions for making changes consistent with applicable regulatory requirements. The documentation of these changes will be maintained by the licensee in accordance with the record retention requirements specified in the Nuclear Facility Quality Assurance Program Description (NFQAPD) and such applicable regulations as 10 CFR 50.59.

The license condition for the relocation of requirements from the CTS, which is discussed in Section 7.0 of this SE, will address the implementation of the ITS conversion and the schedule for the relocation of the CTS requirements into licensee-controlled documents.

G. Evaluation of Other TS Changes (Beyond-Scope Issues) Included in the Application for Conversion to ITS

[BSI Section to be filled in by DORL]

Technical issues raised as BSI's were resolved..... with exceptions??

Attach or reference:

SE for TSTF 500 (McConnell - EEEB), SE for TSTF 493 (Bucholtz – ITSB)

H. Implementation of TSTF 493 Rev 4 “Clarify Application of Setpoint Methodology for LSSS Functions”

Changes in accordance with several of the above categories are a result of the licensee’s adoption of Technical Specification Task Force (TSTF) Traveler TSTF 493 “Clarify Application of Setpoint Methodology for LSSS Functions”. The Notice of Availability (NOA) for this Traveler was published in the Federal Register 75 FR 26294 on May 11, 2010. This TSTF was nearing approval when this TS Conversion was submitted. As a result, the Licensee opted to serve as the pilot plant for TSTF 493. Because of that decision and the timing of the NOA, the original submittal for technical specifications affected by TSTF 493 was subject to several revisions submitted to the NRC as LAR supplements and responses to Requests for Additional Information during the review of the overall conversion. The final version of the Kewaunee ITS and the Discussions of Changes from CTS attached to this SE reflect the final, noticed version of TSTF 493. The Safety Evaluation for TSTF 493 used as the basis for accepting these changes is available in ADAMS as MLXXXXXXXXXXXX.

5.0 DELETED LICENSE CONDITIONS

6.0 LICENSEE COMMITMENTS

In reviewing the proposed ITS conversion for Kewaunee, the NRC staff has relied upon the licensee’s commitment to relocate certain requirements from the CTS to licensee-controlled documents as described in Table LA, “Removed Details” (Attachment 3 to this SE) and Table R, “Relocated Specifications” (Attachment 5 to this SE). These tables, and Sections 4.D and 4.E of this SE, reflect the relocations described in the licensee’s submittals on the conversion. The NRC staff requested and the licensee submitted a set of license conditions to make these commitments enforceable (see Section 7.0 of this SE). Such commitments from the licensee are important to the ITS conversion because the acceptability of removing certain requirements from the TS is based on those requirements being relocated to licensee-controlled documents where further changes to the requirements will be controlled by applicable regulations or other requirements (e.g., 10 CFR 50.59).

7.0 LICENSE CONDITIONS

In its letter dated XXXXXXX, the licensee agreed to license conditions which describe 1) the relocation of certain CTS requirements and license conditions, as applicable, to other license controlled documents prior to ITS implementation, and 2) a schedule to begin performing new and revised SRs after ITS implementation. The following license conditions are included in the Facility Operating Licenses:

1. This amendment authorizes the relocation of certain technical specification and operating license conditions, as applicable, to other licensee-controlled documents. Implementation of License Amendment [ XXX ] shall include relocation of these requirements to the specified documents, as described in Table LA of Removed Details and Table R of Relocated Specifications attached to the NRC staff's SE.
2. The schedule for performing SRs that are new or revised in Amendment No. XXX shall be as follows:
  - a) For SRs that are new in this amendment, the first performance is due at the end of the first Surveillance interval, which begins on the date of implementation of this amendment.
  - b) For SRs that existed prior to this amendment, whose intervals of performance are being reduced, the first reduced Surveillance interval begins upon completion of the first Surveillance performed after implementation of this amendment.
  - c) For SRs that existed prior to this amendment, whose intervals of performance are being extended, the first extended Surveillance interval begins upon completion of the last Surveillance performed prior to implementation of this amendment.
  - d) For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance subject to the modified acceptance criteria is due at the end of the first Surveillance interval that began on the date the Surveillance was last performed prior to the implementation of this amendment.

The NRC staff has reviewed the above schedule for the licensee to begin performing the new and revised SRs and concludes that it is acceptable. The licensee states that its implementation date for the new ITS will be no later than [ ]. This implementation date is acceptable.

Because the commitments discussed in Section 6.0 of this SE are being relied upon for the amendment, a license condition is included in the amendment that will enforce the relocation of requirements from the CTS to licensee-controlled documents. The relocations are described in Table LA and Table R, which are Attachments 3 and 5 to this SE. The license condition states that implementation of this amendment shall include relocation of these requirements to the specified documents. The relocation of these requirements to the specified documents is to be completed no later than [ ]. This implementation date is acceptable.

## 8.0 STATE CONSULTATION

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

## 9.0 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 XXXXXXXXX (XX FR XXX), for the proposed conversion of the CTS to ITS for KPS. Accordingly, the Commission has determined that issuance of these amendments will not result in any significant environmental impacts other than those evaluated in the Final Environmental Statement for KPS dated October 1975. The

Commission also issued a Notice of Consideration of Issuance of Amendment to Facility Operating Licenses and Opportunity for a Hearing on **May 22, 2008 (73 FR 29787-29791)**. There have been no comments or requests for hearing.

## 10.0 CONCLUSION

The ITSB staff 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Attachments: 1. Table A - Administrative Changes  
2. Table L - Less Restrictive Changes  
3. Table LA - Removed Details  
4. Table M - More Restrictive Changes  
5. Table R - Relocated Specifications

Principal Contributors:

**XXX**