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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 146 TO FACILITY OPERATING LICENSE NO. DPR-19,

AMENDMENT NO. 140 TO FACILITY OPERATING LICENSE NO. DPR-25,

AMENDMENT NO. 168 TO FACILITY OPERATING LICENSE NO. DPR-29,

AND AMENDMENT NO. 164 TO FACILITY OPERATING LICENSE NO. DPR-30

COMMONWEALTH EDISON COMPANY

AND

MIDAMERICAN ENERGY COMPANY

DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3

QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2

DOCKET NOS. 50-237, 50-249, 50-254 AND 50-265

1.0 INTRODUCTION

By letter dated September 17, 1993, as supplemented by letter dated July 28, 1995, Commonwealth Edison Company (ComEd, the licensee) submitted an amendment requesting to upgrade sections of the Dresden Nuclear Power Station, Units 2 and 3, and the Quad Cities Nuclear Power Station, Units 1 and 2, Technical Specifications (TS). The changes have been requested as part of its Technical Specification Upgrade Program (TSUP).

As a result of findings by a Diagnostic Evaluation Team inspection performed by the NRC staff at the Dresden Nuclear Power Station in 1987, ComEd made a decision that both the Dresden Nuclear Power Station and sister site Quad Cities Nuclear Power Station, needed attention focused on the existing custom TS used at the sites.

The licensee made the decision to initiate a TSUP for both Dresden and Quad Cities. The licensee evaluated the current TS (CTS) for both stations against the Standard Technical Specifications (STS), contained in NUREG-0123, "Standard Technical Specifications General Electric Plants BWR/4, Revision 4." Both Dresden and Quad Cities are BWR-3 designs and are nearly identical plants. The licensee's evaluation identified numerous potential improvements such as clarifying requirements, changing the TS to make them more understandable and to eliminate the need for interpretation and deleting requirements that are no longer considered current with industry practice. As

a result of the evaluation, ComEd elected to upgrade both the Dresden and Quad Cities TS to the STS contained in NUREG-0123.

The TSUP for Dresden and Quad Cities is not a complete adoption of the STS. The TSUP focuses on (1) integrating additional information such as equipment operability requirements during shutdown conditions, (2) clarifying requirements such as limiting conditions for operations (LCO) and Action statements utilizing STS terminology, (3) deleting superseded requirements and modifications to the TS based on the licensee's responses to generic letters (GLs), and (4) relocating specific items to more appropriate TS locations or to licensee controlled documents.

The application dated September 17, 1993, as supplemented July 28, 1995, proposed to upgrade only those sections of the TS to be included in TSUP Section 3/4.5 (Emergency Core Cooling Systems) of the Dresden and Quad Cities TS.

The staff reviewed the proposed changes and evaluated all deviations and changes between the proposed TS, the STS and the CTS. In no case did the licensee propose a change in the TS that would result in the relaxation of the current design requirements as stated in the Updated Final Safety Analysis Reports (UFSAR) for Dresden or Quad Cities.

The licensee submitted identical TS for Quad Cities and Dresden except for plant-specific equipment and design differences. Technical differences between the units are identified as appropriate in the proposed amendment.

2.0 EVALUATION

Review Guidelines - The licensee's purpose for the TSUP was to reformat the existing Dresden and Quad Cities TS into the easier to use STS format. Plant-specific data, values, parameters and equipment-specific operational requirements contained in the CTS for Dresden and Quad Cities were retained by the licensee in the TSUP.

The STS contained in NUREG-0123 were developed by the NRC and industry because of the shortcomings associated with the custom TS which were issued to plants licensed in early 1970s (i.e., Dresden (1971) and Quad Cities (1972)). The STS developed by the NRC and industry provided an adequate level of protection for plant operation by assuring required systems are operable and have been proven to be able to perform their intended functions. The LCOs, the allowed out-of-service times and the required surveillance frequencies were developed based on industry operating experience, equipment performance and probabilistic risk assessment analysis during the 1970s. The STS were used as the licensing basis for plants licensed starting in the late 1970s.

For the most part, ComEd's adoption of the STS resulted in more restrictive LCOs and surveillance requirements (SR). In some cases, however, the STS provides relief from the Dresden and Quad Cities CTS requirements. In all these cases, the adoption of the STS requirements for LCOs or SR does not

change the current design requirements of either plant as described in the each plant's UFSAR. In addition, the success criteria for the availability and operability of all required systems contained in the CTS are maintained by the adoption of the STS requirements in the proposed TSUP TS.

In addition to adopting the STS guidelines and requirements in the TSUP, ComEd has also evaluated GLs concerning line-item improvements for TS. These GLs were factored into TSUP to make the proposed TS reflect industry lessons learned in the 1980s and early 1990s.

Deviations between the proposed specifications, the STS and the CTS were reviewed by the staff to determine if they were due to plant-specific features or if they posed a technical deviation from the STS guidelines. Plant-specific data, values, parameters and equipment specific operational requirements contained in the CTS for Dresden and Quad Cities were retained by the licensee in the upgraded TS.

Administrative Changes - Non-technical, administrative changes were intended to incorporate human factor principles into the form and structure of the STS so that they would be easier for plant operation's personnel to use. These changes are editorial in nature or involve the reorganization or reformatting of requirements without affecting technical content of the CTS or operational requirements. Every section of the proposed TS reflects this type of change.

More Restrictive Requirements - The proposed TSUP TS include certain more restrictive requirements than are contained in the existing TS. Examples of more restrictive requirements include the following: placing an LCO on plant equipment which is not required by the present TS to be operable; adding more restrictive requirements to restore inoperable equipment; and adding more restrictive SR.

Less Restrictive Requirements - The licensee provided a justification for less restrictive requirements on a case-by-case basis as discussed in this safety evaluation (SE). When requirements have been shown to provide little or no safety benefit, their removal from the TS may be appropriate. In most cases, these relaxations had previously been granted to individual plants on a plant-specific basis as the result of (a) generic NRC Actions, and (b) new NRC staff positions that have evolved from technological advancements and operating experience.

The Dresden and Quad Cities plant designs were reviewed to determine if the specific design basis was consistent with the STS contained in NUREG-0123. All changes to the CTS and deviations between the licensee's proposed TS and the STS were reviewed by the staff for acceptability to determine if adequate justification was provided (i.e., plant-specific features, retention of existing operating values, etc.).

Deviations the staff finds acceptable include: (1) adding clarifying statements, (2) incorporating changes based on GLs, (3) reformatting multiple steps included under STS Action statements into single steps with unique

identifiers, (4) retaining plant-specific steps, parameters, or values, (5) moving Action statements within a TS, (6) moving Action statements from an existing TS to form a new TS section, and (7) omitting the inclusion of STS steps that are not in existing TS.

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

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

The Final Policy Statement identified four criteria to be used in determining whether a particular matter is required to be included in the TS, as follows: (1) installed instrumentation that is used to detect and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary; (2) a process variable, design feature, or operating restriction that is an initial condition of a design-basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier; (3) a structure, system, or component that is part of a 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; (4) a structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety. As a result, existing TS requirements which fall within or satisfy any of the criteria in the Final Policy Statement must be retained in the TS, while those TS requirements which do not fall within or satisfy these criteria may be relocated to other, licensee-controlled documents. The Commission recently amended 10 CFR 50.36 to codify and incorporate these four criteria (60 FR 36953).

The following sections provide the staff's evaluations of the specific proposed TS changes.

3.0 EVALUATION OF PROPOSED TS SECTION 3/4.5 ECCS

The following sections provide the staff's evaluation of the TS changes reflected in proposed TS Section 3/4.5. The current Dresden and Quad Cities TS Section 3/4.5 requirements for Emergency Core Cooling Systems (ECCS) have been retained within the proposed TS Section 3/4.5. Proposed TS Section 3/4.5 has been developed in accordance with the guidelines of the STS Section 3/4.5, Emergency Core Cooling Systems. The proposed TS are evaluated below.

3.1 TS 3/4.5.A: Emergency Core Cooling System (ECCS) - Operating

Proposed TS 3/4.5.A, "ECCS - Operating," incorporates the guidelines of STS 3/4.5.1. The proposed TS are discussed below.

3.1.1 LCO

Proposed TS 3.5.A.1, LCO has been formatted in accordance with the guidelines of STS 3.5.1.a, LCO and retains CTS Section 3.5.A.1 requirements. CTS 3.5.A.1 requires both core spray (CS) subsystems to be operable. Proposed TS 3.5.A.1, LCO expands on that requirement to note that each subsystem is comprised of one operable CS pump and an operable flow path. The proposed specifications provide enhanced requirements to explicitly define the necessary equipment for the CS system. As such, the CTS are enhanced by the additional requirements.

Proposed TS 3.5.A.2, LCO has been formatted in accordance with the guidelines of STS 3.5.1.b, LCO and retains CTS Section 3.5.A.3 requirements. CTS 3.5.A.3 for Quad Cities requires the low pressure coolant injection (LPCI) mode of the residual heat removal (RHR) system to be operable. CTS 3.5.A.3 for Dresden requires the LPCI subsystem to be operable. Proposed TS 3.5.A.2, LCO expands on that requirement to note that the LPCI subsystem is comprised of four operable LPCI pumps and an operable flow path. In addition, for Quad Cities, footnote (e) is provided stating that LPCI may be considered operable when lined up for decay heat removal. The proposed specifications provide enhanced requirements which explicitly define the necessary equipment for the LPCI system. As such, the CTS are enhanced by the additional requirements.

Proposed TS 3.5.A.3, LCO has been formatted in accordance with the guidelines of STS 3.5.1.c, LCO and retains CTS Section 3.5.C.1 requirements. CTS 3.5.C.1 requires the high pressure coolant injection (HPCI) subsystem to be operable. Proposed TS 3.5.A.3 expands on this requirement by stating that the HPCI system is comprised of one operable HPCI pump and an operable flow path. The proposed specifications provide enhanced requirements to explicitly define the necessary equipment for the HPCI system. As such, the CTS are enhanced by the additional requirements.

Proposed TS 3.5.A.4, LCO has been formatted in accordance with the guidelines of STS Section 3.5.1.d, LCO and retains CTS Section 3.5.D.1 requirements. CTS

3.5.D.1 requires the automatic pressure relief subsystem to be operable. Proposed TS 3.5.A.4, LCO expands on this requirement by noting that the automatic depressurization system (ADS) includes five operable ADS valves. This provides an enhancement to the CTS.

The staff finds the proposed LCO has incorporated CTS requirements and has been formatted in accordance with the STS guidelines. In addition, the CTS will be enhanced because the CTS requirements have been documented in the proposed TS to make the TS easier to use and understand by eliminating the operators' need for interpretations of the TS. Therefore, the staff finds the proposed LCO requirements for proposed TS Section 3/4.5.A to be acceptable.

3.1.2 Applicability

Proposed TS 3.5.A, Applicability, has been formatted in accordance with the guidelines of STS Section 3.5.1 and requires operability of the CS, LPCI, HPCI and ADS in MODES 1, 2 and 3 with the exception that HPCI and ADS are not required when reactor steam dome (RSD) pressure is less than or equal to 150 psig.

The CTS require operability of CS in MODES 1, 2, 3, 4 and 5. Proposed TS 3.5.A specifies the applicability of CS in MODES 1, 2 and 3. Proposed TS 3.5.B provides the Applicability for CS in MODES 4 and 5 which, when taken with proposed TS 3.5.A, retains CTS requirements. Quad Cities CTS also require operability prior to reactor startup from a cold condition. This requirement is retained within TSUP TS Section 3.0.D, which prohibits entry into an operational mode when the LCO is not met. Therefore, the proposed applicability has retained the CTS requirements for the CS system.

CTS 3.5.A.3 requires LPCI operability whenever irradiated fuel is in the reactor vessel. Proposed TS 3.5.A has retained the CTS applicability requirements, by requiring the LPCI system to be operable in MODES 1, 2, and 3. In addition, Quad Cities CTS requirements include the provisions prior to reactor startup from a cold condition. This requirement is retained within TSUP TS Section 3.0.D, which prohibits entry into an operational mode when the LCO is not met. Thus, the proposed TS Applicability requirements for LPCI have retained CTS requirements for both Dresden and Quad Cities.

Proposed TS 3.5.A applicability requires the HPCI system to be operable in MODES 1, 2, and 3 with the exception provided for MODES 2 and 3 when the reactor pressure is less than 150 psig. The HPCI system is not required below 150 psig. The proposed TS has retained CTS Section 3.5.C.1 requirements concerning HPCI operability.

Proposed TS 3.5.A applicability requires the ADS to be operable in MODES 1, 2, and 3 except when the reactor pressure is less than 150 psig. The ADS is not required below 150 psig. In the proposed TS the terms "reactor pressure" and "reactor steam dome pressure" refer to equivalent values. Also, "Automatic Pressure Relief Subsystem" and "Automatic Depressurization System" refer to

the same system. These changes in the proposed TS are administrative in nature.

The proposed TS change the ADS applicability from greater than 90 psig to greater than 150 psig for Quad Cities. This proposed change does not constitute a reduction in existing plant safety margins, due to the availability of low pressure ECCS systems at this pressure to provide core cooling. The purpose of ADS is to depressurize the reactor to allow the low pressure ECCS systems to inject, and that purpose is accomplished at 150 psig, at which point all low pressure ECCS systems at Quad Cities can inject water into the reactor. The proposed applicability is consistent with that of HPCI and reactor core isolation cooling (RCIC) for Quad Cities and is consistent with the conditions assumed in the plant safety analysis. The staff finds the change to the ADS applicability requirements from 90 psig to 150 psig change acceptable.

The staff finds the proposed TS applicability statement has retained CTS requirements. The proposed TS have enhanced the CTS requirements by making reference to the specific modes of operation. The reference to explicit MODES of operation eliminates ambiguity regarding the applicability of LCO and surveillance requirements. Therefore, the staff finds the applicability statements for the proposed TS Section 3/4.5.A to be acceptable.

3.1.3 Required Actions

3.1.3.1 ACTION 1

Proposed TS 3.5.A, ACTION 1, incorporates the guidelines of STS 3.5.1, ACTION a and retains CTS Section 3.5.A.2 requirements. CTS Section 3.5.A.2 allows 7 days operation with either CS subsystem inoperable, provided the other CS subsystem, LPCI subsystem and both diesel generators that supply emergency power to these systems are operable. The diesel generator operability requirement is relocated to TSUP TS 3.9.A, ACTION 4.a. The staff has reviewed and approved the proposed required Actions for the diesel generator in amendments 138/132 for Dresden and 160/156 for Quad Cities. The proposed required Actions has retained the CTS required Actions concerning the CS system. The proposed TS allow a 7 day allowed-outage-time (AOT) for one CS subsystem provided the other CS subsystem and the LPCI subsystem are operable.

Proposed TS 3.5.A, ACTION 1.b requires that, in the event both CS subsystems are inoperable, the plant be in hot shutdown in 12 hours and cold shutdown in the following 24 hours. The CTS do not contain a required Action for this situation. The CTS would default to CTS section 3.0.A which is consistent with the proposed TS. The proposed TS enhances the CTS requirements. Based on the above the staff finds ACTION 1 for proposed TS 3.5.A to be acceptable.

3.1.3.2 ACTION 2

Proposed TS 3.5.A, ACTION 2, incorporates the guidelines of STS 3.5.1, ACTION b and retains CTS Section 3.5.A.4 requirements. During staff review of proposed TS ACTION 2 for the LPCI subsystem, the staff identified a number of ambiguities concerning operator interpretation of the proposed TS. During phone conversations with the licensee, the licensee committed to reevaluate the proposed TS required Action for the LPCI system and propose a new TS in the TSUP cleanup amendment. Therefore, ACTION 2 will remain open pending its resolution in the TSUP clean-up amendment.

3.1.3.3 ACTION 3

Proposed TS 3.5.A, ACTION 3, incorporates the guidelines of STS 3.5.1, ACTION c and retains CTS Sections 3.5.C.2, 3.5.C.3 and 3.5.C.4 requirements for Quad Cities and CTS Sections 3.5.C.2.a, 3.5.C.2.b and 3.5.C.3 requirements for Dresden. Proposed TS ACTION 3 allows a 14 day AOT when the HPCI system is inoperable provided both CS subsystems, the LPCI subsystem, the ADS and Isolation Condenser (IC) for Dresden and the RCIC system for Quad Cities are operable.

CTS 3.5.C.3 for Quad Cities allows operation for 14 days after HPCI has been determined to be inoperable, provided ADS, CS, LPCI and RCIC are all operable. CTS 3.5.C.2.a (for Dresden only) provides an AOT of 7 days. The proposed TS changes the Dresden AOT to 14 days to be consistent with Quad Cities. There is no measurable increase in overall risk to the plant with the AOT extended to 14 days. In addition, the proposed TS have not retained the current AOT provision that allows continued operation with one relief valve (ADS valve) out-of-service. The more stringent controls on ADS valve out-of-service combined with a longer HPCI AOT ensures mitigation of the small break loss-of-coolant accident (LOCA) with no measurable relaxation of current requirements. Therefore, the proposed change of extending the Dresden HPCI AOT does not significantly reduce existing plant safety margins for Dresden Station and is acceptable.

CTS 3.5.C.4 for Quad Cities and CTS 3.5.C.3 for Dresden requires the reactor to be less than 150 psig in 24 hours when the HPCI LCO requirements can not be met. This requirement has been retained by proposed ACTION 3 which requires the reactor to be in hot shutdown in 12 hours and below 150 psig within the next 24 hours, when HPCI is inoperable for longer than 14 days, or the other provisions of proposed TS 3.5.A.3 are not met. Although the proposed Action allows an additional 12 hours to reach a reactor pressure of less than 150 psig, it is consistent with the industry standard and has no significant affect on existing plant safety margins. The proposed TS removes the reactor from operating conditions in a shorter period of time by requiring hot shutdown in 12 hours and allows for a more controlled shutdown. Therefore, this change is acceptable.

CTS 3.5.C.2 for Quad Cities and CTS 3.5.C.2.b for Dresden directs that HPCI will be declared inoperable and the reactor will be less than 150 psig in 24

hours if the low-pressure test requirements for startup can not be met. This is to preclude allowing the reactor to run for 14 days with HPCI inoperable, when that inoperability was identified during the low-pressure test. In the proposed TS, this requirement is retained by TSUP TS 4.0.D, which does not allow entry into a mode without completing the required surveillances. Since TS 4.0.D applies to the high pressure test also, the proposed TS is more conservative than the CTS requirements.

Based on the above the staff finds ACTION 3 for proposed TS 3.5.A is acceptable.

3.1.3.4 ACTION 4

Proposed TS 3.5.A, ACTION 4, incorporates the guidelines of STS 3.5.1, ACTION d and retains CTS Sections 3.5.D.2, 3.5.D.3 and 3.5.D.4 requirements. Proposed TS ACTION 4 provides the requirements for inoperable ADS valves. CTS 3.5.D.2 for Quad Cities and CTS 3.5.D.3 for Dresden allows reactor operation for 7 days with two ADS valves inoperable, provided HPCI is operable. Proposed TS 3.5.A, ACTIONS 4.a and 4.b, allows 14 days of operation if only one ADS valve is inoperable, provided HPCI, CS and LPCI are operable; CTS allows two ADS valves to be inoperable. This is an enhancement of CTS which do not address the case of only one ADS valve inoperable and do not require the low pressure ECCS to be operable when a ADS valve is inoperable. If two ADS valves are inoperable, the proposed TS require hot shutdown in 12 hours and the reactor pressure to be less than 150 psig in the following 24 hours. This is more conservative than the current AOT of 7 days.

CTS 3.5.D.2 for Dresden allows provisions to restore to operable an inoperable ADS valve if the appropriate maximum average planar linear heat-generation rate (MAPLHGR) multipliers are applied. The proposed TS have not retained the AOT condition that allows continued operation with one ADS valve out-of-service for an indefinite period of time as long as the MAPLHGR multipliers are applied. The proposed TS require more stringent controls on ADS being out-of-service. The proposed TS changes are more restrictive than CTS requirements.

CTS 3.5.D.3 for Quad Cities and CTS 3.5.D.4 for Dresden requires that reactor pressure be reduced to 90 psig for Quad Cities and 150 psig for Dresden in 24 hours when the requirements for the ADS LCO are not met. Proposed TS 3.5.A, ACTIONS 4.a and 4.b, requires hot shutdown within 12 hours and less than 150 psig reactor pressure in the following 24 hours. The proposed TS removes the reactor from operating conditions in a shorter period of time than the CTS requirements and allows for a more controlled reactor shutdown. The staff finds this proposed change acceptable.

CTS 4.5.D.4 for Quad Cities requires HPCI to be demonstrated operable immediately whenever two ADS valves are inoperable. The proposed TS no longer allows continued operation with two ADS valves inoperable (proposed TS ACTION 3.5.A.4.b requires a reactor shutdown to less than 150 psig reactor pressure in the event two ADS valves are inoperable) and a reactor shutdown is

required to the point where the HPCI system is no longer required to be operable. Therefore, the CTS required surveillance is no longer applicable. The proposed change enhances the CTS by restricting reactor operation with two ADS valves inoperable.

CTS 4.5.C for Quad Cities allows an extra 12 hours to perform low-pressure testing if there is also overspeed testing to be performed. This allowance has conservatively been deleted in proposed TS 3.5.A, ACTIONS.

Based on the above, the staff finds ACTION 4 for proposed TS 3.5.A is acceptable.

3.1.3.5 ACTION 5

Proposed TS 3.5.A, ACTION 5, has been formatted in accordance with the guidelines of STS 3.5.1, ACTIONS. ACTION 5 provides requirements that ensure the ECCS keep-fill system is operable. The proposed Actions are new requirements for the Dresden and Quad Cities TS and ensure consistency with proposed TS 4.5.A.3.c. The proposed Action is an enhancement of CTS. The staff finds ACTION 5 for proposed TS 3.5.A is acceptable.

3.1.3.6 ACTION 6

Proposed TS 3.5.A, ACTION 6, has been formatted in accordance with the guidelines of STS 3.5.1, ACTION e. ACTION 6 provides new requirements in the event a CS header differential pressure (ΔP) instrument channel is inoperable. The proposed TS require the channel to be restored to operable status within 72 hours or the ΔP is to be determined locally once per 12 hours. Otherwise, the CS subsystem will be declared inoperable. This specification provides additional requirements not incorporated within the CTS and is based on the guidelines of STS. The proposed Action is an enhancement of CTS. The staff finds proposed ACTION 6 acceptable.

3.1.3.7 ACTION 7

Proposed TS 3.5.A, ACTION 7, has been formatted in accordance with the guidelines of STS 3.5.1, ACTION f. ACTION 7 provides new requirements for reportability after an ECCS system initiates and injects. This is an enhancement of CTS and is, therefore, acceptable. Proposed TS 3.5.A, ACTION 7, for Quad Cities incorrectly refers to Specification 6.6.B.4. The correct reference, as listed in proposed TS 3.5.A, ACTION 7, for Dresden, is TS 6.9.B. This should remain as an open item, contingent upon its implementation in the TSUP clean-up package.

Based on each of the above evaluations, the staff finds proposed TS 3.5.A, required ACTION 1 through ACTION 7, has been formatted in accordance with the STS guidelines. The proposed required Actions have retained the CTS requirements. Deviations between the proposed TS and CTS requirements have been evaluated by the staff and found acceptable. Therefore, the staff finds proposed TS 3.5.A required ACTION 1 through ACTION 7 to be acceptable, with

the exception of ACTION 2 and ACTION 7 which remain open and will be addressed in the TSUP clean-up amendment.

3.1.4 Surveillance Requirements

The proposed TS SR has been formatted in accordance with the guidelines of STS 4.5.1.a.1(a) and has retained CTS Section 4.5.G.1 requirements for Quad Cities and CTS Section 4.5.H.1 requirements for Dresden. Proposed TS 4.5.A.1.a(1) requires the CS, LPCI and HPCI systems to be vented once per 31 days. CTS 4.5.G.1 for Quad Cities and CTS 4.5.H.1 for Dresden requires that the discharge piping be vented from the high point each month for LPCI, CS, HPCI and RCIC (for Quad Cities) and flow verified. The proposed TS are consistent with current requirements except that the requirements for RCIC are relocated to proposed TS 3/4.5.D for Quad Cities.

CTS 4.5.G.2 for Quad Cities and 4.5.H.2 for Dresden requires a check of the high point vent after maintenance on HPCI, LPCI, CS or RCIC (for Quad Cities). This requirement has been deleted in the proposed TS. Specific details related to post-maintenance testing are inappropriate for inclusion within the TSs. Such requirements are more appropriate for administrative controls which are referenced in the UFSAR and revisions to which are controlled by the provisions of 10 CFR 50.59. The staff has determined that the requirement for post-maintenance verification of the high point vents for HPCI, LPCI, CS, and RCIC are not required to be in the TS under 10 CFR 50.36 or Section 182a of the Atomic Energy Act. Further they do not fall within any of the four criteria discussed in Section 2.0, above. Therefore, the relocation of CTS post-maintenance testing requirements is acceptable.

CTS 4.5.G.3 for Quad Cities and CTS 4.5.H.3 for Dresden requires a surveillance of the high point vent every 24 hours for Quad Cities and every month for Dresden for HPCI (and RCIC for Quad Cities) whenever these systems are lined up to take suction from the suppression pool. These requirements provide design details of the system which are inappropriate for inclusion within the TS. Such requirements are more appropriately controlled by a licensees' administrative program, referenced in the UFSAR and revisable under the provisions of 10 CFR 50.59. The staff has determined that the requirement for post-maintenance verification of the high point vents for HPCI, LPCI, CS, and RCIC are not required to be in the TS under 10 CFR 50.36 or Section 182a of the Atomic Energy Act. Further they do not fall within any of the four criteria discussed in Section 2.0, above. Therefore, the relocation of CTS post maintenance testing requirements is acceptable.

Proposed TS SR 4.5.A.1.a(1) requires a monthly functional test of the LPCI/CS keep-fill systems. The purpose of the keep-fill system is to ensure that ECCS system piping is filled with water. The proposed SR has retained CTS Section 4.5.G.4 requirements for Quad Cities and CTS Section 4.5.H.4 requirements for Dresden. The staff finds the proposed SR acceptable.

Proposed TS 4.5.A.1.a(2) has been formatted in accordance with the guidelines of STS 4.5.1.a.1(b). Proposed TS 4.5.A.1.a(2) requires that every valve in

the flow path that is not locked, sealed or otherwise secured in its correct position be verified in its correct position every 31 days. TS 4.5.A.1.a(2) retains CTS Section 4.5.C.1 requirements for Quad Cities and Table 4.5.1 requirements for Dresden. CTS 4.5.C.1 for Quad Cities requires a valve position verification every 31 days. Table 4.5.1 for Dresden requires a pump/valve operability verification every 31 days. Therefore, the proposed TS requirements provide an equivalent level of protection when compared to CTS requirements. The staff finds the proposed SR acceptable.

Proposed TS 4.5.A.1.a(2) includes footnote (a) which is based on the guidelines of STS 4.5.1.a, footnote '*'. Footnote (a) provides an exception for the valves which reposition to the correct position during accident conditions may be in the non-accident condition and not meet the SR 4.5.A.1.a(2) requirements. The proposed change does not reduce the availability of the ECCS system. The staff finds the proposed TS change acceptable.

Proposed TS 4.5.A.1.b provides an additional SR of verifying that the HPCI pump flow controller is in the correct position. TS 4.5.A.1.b is based on the guidelines of STS 4.5.1.a.3. This surveillance is not included in the CTS for Dresden or Quad Cities. Therefore, the proposed SR provides additional restrictions which enhance the CTS. The staff finds the proposed change acceptable.

Proposed TS 4.5.A.2.a and 4.5.A.2.b provide the requirements for testing pursuant to TSUP TS 4.0.E (Inservice Inspection and Inservice Testing). The proposed TS is based on the guidelines of STS 4.5.1.b and retains CTS Section 4.5.A.1.b requirements. CTS 4.5.A.1.b requires a flow rate test for CS and LPCI every 3 months and after pump maintenance. This specification is retained by proposed TS 4.5.A.2.a for CS and 4.5.A.2.b for LPCI. Instead of the 3 month requirement, TSUP TS 4.0.E is referenced in the proposed TS, which requires that Inservice Testing (IST) be performed per the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code). The provisions of the ASME Code also require quarterly testing (every 3 months); as such, the proposed TS requirements are equivalent to CTS requirements and are acceptable.

The CTS also specify post-maintenance testing requirements and the specific valve configurations. The proposed TS have been relocated these requirements to administrative controls and referenced them in the UFSAR. Specific details related to post-maintenance testing are inappropriate for inclusion within the TSs. Such requirements are more appropriate for administrative controls - revisions to which are controlled by the provisions of 10 CFR 50.59. The staff has determined that the requirements for post-maintenance testing are not required to be in the TS under 10 CFR 50.36 or Section 182a of the Atomic Energy Act. Further they do not fall within any of the four criteria discussed in Section 2.0, above. Therefore, relocating the post-maintenance testing requirement to administrative controls whose revision is controlled by 10 CFR 50.54 is acceptable.

Proposed TS 4.5.A.2.c is based on the guidelines of STS 4.5.1.b.3 and retains CTS Section 4.5.C.2 requirements for Quad Cities and CTS Section 4.5.C, Table 4.5.1, Item 3 requirements for Dresden. CTS 4.5.C.2 for Quad Cities requires a flow test every 92 days and CTS Table 4.5.1 for Dresden requires a flow test every 3 months. This requirement is retained by proposed TS 4.5.A.2.c, which requires the same flow test per TS 4.0.E (IST program). The IST program specifies quarterly pump test requirements. As such, the proposed TS requirements provide an equivalent level of protection when compared to CTS requirements.

Proposed TS 4.5.A.3.a is based on the guidelines of STS 4.5.1.c.1 and retains CTS Section 4.5.A.1.a requirements for Quad Cities and 4.5.A.1.f requirements for Dresden. The proposed TS requires a system functional test every 18 months. CTS requires this testing be performed each refueling outage. The Dresden and Quad Cities fuel cycles are based on 18 months. Therefore, the proposed TS testing interval is equivalent to the CTS test interval. Proposed TS 4.5.A.3.a also notes that actual injection of coolant into the reactor vessel may be excluded from this test. This is a clarification of the CTS and does not constitute a change to the margin of safety. The staff finds the proposed SR is sufficient to determine operability of the CS and LPCI without injection of coolant into the reactor vessel.

Proposed TS 4.5.A.3.b(1) requires verification of HPCI system flow. The proposed TS is based on the guidelines of STS 4.5.1.c.2 and retains CTS Section 4.5.C.3 requirements for Quad Cities and CTS 4.5.C, Table 4.5.1, Items 3 and 4 requirements for Dresden. The CTS require flow tests at high pressure and low pressure during startup following a refuel outage or an outage in which work was performed on HPCI. Proposed TS 4.5.A.3.b(1) requires the same test once every 18 months. This is equivalent to performing the test each refueling outage. The CTS provisions specifying post-maintenance testing requirements have been relocated to administrative controls. Specific details related to post-maintenance testing are inappropriate for inclusion within the TSs. Such requirements are more appropriate for administrative controls. The staff has determined that the requirements for post-maintenance testing are not required to be in the TS under 10 CFR 50.36 or Section 182a of the Atomic Energy Act. Further, they do not fall within any of the four criteria discussed in Section 2.0, above. Therefore, moving the post-maintenance testing criteria to administrative controls is acceptable.

Proposed TS 4.5.A.3.b(2) requires verification every 18 months that the HPCI pump suction will automatically transfer from the condensate storage tank to the suppression chamber when condensate storage level is low, or suppression chamber level is high. This is a new surveillance and is not part of the CTS for Dresden or Quad Cities, and is based on the guidelines of STS 4.5.1.c.2(b). Therefore, because this change adds additional restrictions, the proposed TS enhances the CTS and is acceptable.

Proposed TS 4.5.A.3.c requires a channel calibration of the keep-fill alarm instrumentation. Proposed TS 4.5.A.3.c is based on the guidelines of STS 4.5.1.c.3 and retains CTS Section 4.5.G.4 requirements for Quad Cities and CTS

Section 4.5.H.4 requirements for Dresden concerning testing requirements. The CTS specify a surveillance frequency of every 3 months. Proposed TS 4.5.A.3.c modifies the CTS frequency to every 18 months. The extension of the calibration frequency is consistent with industry experience which has been shown to provide an adequate level of protection for ensuring the keep-fill system is appropriately maintained. The purpose of the keep-fill system is to ensure that the discharge piping is filled with water. Proposed TS 4.5.A.1.a requires verification on a monthly basis that the CS, LPCI and HPCI system piping is filled with water. As such, the proposed changes do not significantly reduce existing plant safety margins and the staff finds changing the SR frequency from 3 months to 18 months is acceptable.

Proposed TS 4.5.A.3.d requires a channel calibration of the CS header differential pressure instrumentation and verification that the setpoint is less than or equal to 4.4 psid for Quad Cities and 0.5 psid for Dresden every 18 months. The proposed TS is based on the guidelines of STS 4.5.1.c.4 and retains CTS Section 4.5.A.1.e requirements. CTS 4.5.A.1.e requires that the CS header Δp instrumentation be checked once per day, calibrated once per 3 months and tested once per 3 months. This requirement is retained by proposed TS 4.5.A.3.d, except that a channel calibration is required every 18 months (a channel calibration includes a channel functional test, per the TS Definition for channel calibration in TSUP TS Section 1.0) and there is no instrument check required. The extension of the calibration and functional frequency and the deletion of the daily instrument check are based on industry standards and the STS guidelines, which have been shown by industry experience to provide an adequate level of protection. In addition, the proposed TS 4.5.A.3.d provides a specific setpoint for the instrument. The staff finds the proposed SR is adequate to determine the operability and reliability of the instrumentation. Therefore, the staff finds the proposed change acceptable.

Proposed TS 4.5.A.4 requires a system functional test of ADS every 18 months. The proposed TS is based on the guidelines of STS 4.5.1.d.2. The proposed TS deviate from the CTS requirements by excluding actual valve actuation. The CTS require simulated automatic initiation which open all pilot valves. The proposed TS continue to ensure that the system will actuate on an automatic signal by proposed TS 4.5.A.4.b which verifies that the valves will manually open. The proposed TS requirements provide an equivalent level of protection when compared to CTS requirements. The staff finds the proposed TS acceptable.

Proposed TS 4.5.A.4.b is based on the guidelines of STS 4.5.1.d.2(b) and retains CTS Section 4.5.D.1 requirements for Quad Cities and CTS Section 4.5.D.1.b requirements for Dresden. The CTS require each ADS valve to be opened every 6 months for Quad Cities and every 18 months for Dresden, with opening verified by compensating turbine bypass valve or control valve closure. Proposed TS 4.5.A.4.b requires this surveillance to be performed every 18 months. Changing the surveillance frequency to once per 18 months for Quad Cities does not constitute a significant change in the margin of safety. This change is consistent with the intent of GL 93-05 which recommends the reduction of unnecessary SR allowing for less wear on the ADS

valves. The staff finds the change in the test frequency for Quad Cities from 6 months to 18 months is acceptable.

CTS Section 4.5.D.1.a for Quad Cities and CTS Section 4.5.D.1.b for Dresden requires ADS valve opening to be verified by a compensating turbine bypass valve or control valve closure. Proposed TS 4.5.A.4.b.2 also allows the use of a corresponding change in measured steam flow. Since this is an industry-recognized method of verifying ADS valve operation and essentially the same as noting a change in turbine bypass valve or control valve position, the staff finds the proposed SR is equivalent to CTS requirements and is, therefore, acceptable.

Proposed TS 4.5.A.4, footnote (c) states that the provisions of TS 4.0.D are not applicable provided the surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the test. Footnote (c) is based on the guidelines of STS 4.5.1, footnote '**'. Proposed footnote (c) provides a twelve (12) hour allowance to change operating mode(s) to achieve the proper conditions for the performance of the ADS testing. The proposed provision is not included in the CTS for Dresden or Quad Cities Stations. The proposed requirements explicitly limit the time period for which ADS system testing can be accomplished as compared to CTS requirements. This is an enhancement to the CTS. The staff finds the proposed TS acceptable.

CTS Section 4.5.A.1.c requires a pump operability test once per month for CS and LPCI. This testing requirement is retained within TSUP 4.0.E, which requires that IST testing be performed per the requirements of the ASME Code Section XI. Based on industry experience the Code has determined that quarterly testing is sufficient to verify the operability of the CS and LPCI pumps. The IST program for Dresden and Quad Cities has been approved by the staff and is controlled per the provisions of 10 CFR 50.55a. 10 CFR 50.55a provides sufficient guidance to control the CS and LPCI pump requirements and verify their operability. The staff finds changing the testing frequency from 1 month to every 92 days is acceptable.

CTS 4.5.A.1.d requires a motor-operated valve operability test once per month. This specification is retained within TSUP TS 4.0.E, which requires that IST testing be performed per the requirements of the ASME Code Section XI. However, the proposed requirements per the IST program require testing be performed once per 92 days. The IST program for Dresden and Quad Cities has been approved by the staff and is controlled per the provisions of 10 CFR 50.55a. As indicated above, 10 CFR 50.55a provides sufficient guidance to control the CS and LPCI motor-operated valve testing requirements and the staff finds changing the value testing frequency from 1 month to 92 days is acceptable.

Based on the above the staff finds the proposed TS SR has been formatted in accordance with the STS guidelines. The proposed TS requirements have retained the CTS requirements and have added new SR requirements for both Dresden and Quad Cities. Deviations from the CTS requirements have been

evaluated by the staff and found acceptable. Therefore, the staff finds the proposed SR 4.8.A is acceptable.

3.1.5 Conclusion

Based on the above evaluation, the staff finds that proposed TS 3/4.5.A, "ECCS - Operating," has adopted the guidelines of the STS and retained CTS requirements. The deviations from the CTS requirements do not reduce the margin of safety for Dresden or Quad Cities. Therefore, the staff finds proposed TS Section 3/4.5.A, with the exception of the above open items, to be acceptable.

3.2 TS 3/4.5.B: ECCS - Shutdown

Proposed TS 3/4.5.B, "ECCS - Shutdown," incorporates the guideline of STS 3/4.5.2. The CTS requirements for the ECCS during shutdown conditions have been relocated from CTS 3/4.5 and retained in the proposed TS. The proposed TS are discussed below.

3.2.1 LCO

Proposed TS 3.5.B requires at least two of the following subsystems to be operable: (1) one or both CS subsystems, and the LPCI subsystem. Proposed TS 3.5.B, LCO is based on the guidelines of STS 3.5.2, LCO and retains CTS 3.5.F.2 requirements for Dresden Station. There are no such explicit LCO requirements within the CTS for Quad Cities Station. Dresden CTS 3.5.F.1 requires that any combination of inoperable components in the core and containment cooling systems not defeat the capability of the remaining operable components to fulfill the core and containment cooling functions. In addition, CTS 3.5.F.2 for Dresden explicitly specifies the minimum equipment needed to fulfill ECCS requirements during shutdown conditions. Proposed TS 3.5.B, LCO is consistent with plant system designs for Dresden and Quad Cities Stations and provides an equivalent level of protection for ensuring sufficient ECCS systems are operable during shutdown conditions. The proposed TS LCO requirements ensure sufficient ECCS capability during shutdown conditions, and have retained the CTS requirements.

The proposed TS provide additional requirements to the CTS and are consistent with the current plant designs. The staff finds the LCO for proposed TS 3/4.5.B to be acceptable.

3.2.2 Applicability

The proposed applicability is MODES 4 and 5 with the exception that the ECCS is not required to be operable if the reactor vessel head is removed, the cavity is flooded, the spent fuel pool gates are removed and water level is within limits. Proposed TS 3.5.B, Applicability has been formatted in accordance with the guidelines of STS 3.5.2, Applicability. Current Dresden TS 3.5.F.2 applicability is in cold shutdown or refuel which is equivalent to MODES 4 and 5. Current Dresden TS 3.5.F.5 allows all low pressure core and

containment cooling subsystems to be inoperable provided the reactor vessel head is removed, the cavity is flooded, the spent fuel pool gates are removed, water level is above the low level alarm point and the reactor cavity water temperature is less than 140 degrees Fahrenheit. The current Quad Cities TS don't include a specifically defined applicability. Therefore, proposed TS 3.5.B, Applicability, provides enhanced requirements for Quad Cities and has retained the CTS requirements for Dresden. The staff finds the Applicability statement for proposed TS 3.5.B is acceptable.

3.2.3 Required Actions

Proposed TS 3.5.B, ACTION 1, is based on the guidelines of STS 3.5.2, ACTION a, and retains CTS Section 3.5.F.2 requirements for Quad Cities and CTS Section 3.5.F.3 requirements for Dresden Station. Proposed TS 3.5.B, ACTION 1, requires suspension of all operations with a potential to drain the reactor vessel when one of the required subsystems is inoperable for more than 4 hours. Current Quad Cities TS do not address the situation when one subsystem is inoperable. Therefore, the proposed Action is an enhancement for Quad Cities and has retained the CTS requirements for Dresden. The staff finds proposed ACTION 1 acceptable.

Proposed 3.5.B, ACTION 2, is based on the guidelines of STS 3.5.2, ACTION b, and retains CTS Section 3.5.F.4 requirements for Dresden. ACTION 2 requires suspension of core alterations and operations with a potential for draining the reactor vessel when both subsystems are inoperable. If one subsystem is not restored within 4 hours, secondary containment integrity must be established within the next 8 hours. CTS 3.5.F.2 for Quad Cities allows all low-pressure core and containment cooling systems to be inoperable in cold shutdown, provided no work is being done which has the potential for draining the reactor vessel. As such, the proposed TS 3.5.B, ACTION 2, requirements provide additional restrictions and enhances the Quad Cities CTS. The staff finds proposed required ACTION 2 acceptable.

The proposed required Action has been formatted in accordance with the STS guidelines and retained CTS requirements. In addition, the proposed required Action adds additional requirements to the Quad Cities CTS. Therefore, the staff finds proposed TS required Action for TS 3/4.5.B is acceptable.

3.2.4 Surveillance Requirements

Proposed TS 4.5.B is based on the guidelines of STS 4.5.2 and retains CTS Section 4.5.F requirements for Quad Cities. Proposed TS 4.5.B.1 and 4.5.B.2 require surveillances to be performed on the ECCS systems when the reactor is shutdown. These consist of reference to proposed TS Section 4.5.A, with the exception that the LPCI crosstie valves may be closed and a requirement that the pumps in the LPCI system develop the required flow individually. In shutdown, the LPCI pumps will be pumping to the injection point in their own loop, so LPCI loop selection logic is not required. Consequently, the cross-tie valves may be closed and the pumps must be capable of producing the required flow individually. This is a new requirement not in the CTS. The

proposed changes add additional restrictions to the CTS. Therefore, the staff finds the proposed TS changes are acceptable.

Current Dresden TS 4.5.F.1 requires demonstration that the plant can be safely shut down and maintained in case of failure of the Dresden Dam. CTS 4.5.F.1 requirements for Dresden has been relocated to TSUP TS 3/4.8.E requirements for flood protection.

The staff finds the SR for proposed TS 3/4.5.B are acceptable.

3.2.5 Conclusion

Based on the above evaluation, the staff finds that proposed TS 3/4.5.B, "ECCS - Shutdown," has adopted the guidelines of the STS and retained CTS requirements. Deviations from the CTS requirements do not reduce the margin of safety for Dresden or Quad Cities. Therefore, the staff finds proposed TS Section 3/4.5.B to be acceptable.

3.3 TS 3/4.8.C: Suppression Chamber

Proposed TS 3/4.5.C, "Suppression Chamber," incorporates the requirements of STS 3/4.5.3. The suppression chamber is required to be operable as part of the ECCS to ensure that a sufficient supply of water is available to the HPCI and CS systems and the LPCI subsystem in the event of a LOCA. The limits on suppression chamber minimum water volume ensures that sufficient water is available to permit recirculation cooling flow to the core. The CTS requirements for the suppression chamber have been relocated from CTS 3/4.5.F into proposed TS Section 3/4.5.C. The proposed TS are discussed below.

3.3.1 LCO

Proposed TS 3.5.C.1 specifies a minimum suppression chamber water level in MODES 1, 2 and 3. The proposed TS is based on STS 3.5.3.a, LCO. The CTS do not contain a specified suppression chamber water level in MODES 1, 2 and 3. The proposed TS is consistent with the requirements in proposed TS TSUP Section 3/4.7 regarding the suppression pool.

Proposed TS 3.5.C.2 specifies a minimum suppression chamber level in MODES 4 and 5 except when the following conditions are satisfied: (1) no operations are performed that have a potential for draining the vessel, (2) the reactor mode switch is locked in the shutdown or refuel position, (3) the condensate storage tank contains at least 140,000 gallons of water, and (4) the ECCS systems are operable. The proposed TS is based on STS 3.5.3.b and retains CTS Section 3.5.F.6 requirements for Dresden and CTS Section 3.5.F.3 requirements for Quad Cities. The proposed TS requirements retain restrictions on all operations with the potential to drain the vessel. CTS 3.5.F.6 for Dresden and CTS 3.5.F.3 for Quad Cities provide explicit examples and descriptions of an operation that may have the potential for draining the vessel but for which compensatory actions are delineated. Such explicit procedural details are inappropriate for inclusion within the TS. This information is more

appropriate for inclusion within plant procedures or policies referenced in the UFSAR, the revision of which is adequately controlled per the provisions of 10 CFR 50.59. The staff has determined that these requirements are not required to be in the TS under 10 CFR 50.36 or Section 182a of the Atomic Energy Act. Further, they do not fall within any of the four criteria discussed in Section 2.0, above. Therefore, the staff finds relocating the procedural details are acceptable.

The proposed provision that the mode switch be locked in the Shutdown or Refuel position during MODES 4 or 5 with the suppression chamber water level below the minimum is a new requirement, applicable to the Dresden and Quad Cities plant system designs. This is an enhancement of CTS and is acceptable.

The condition regarding the minimum condensate storage tank (CST) reserve ensures that during MODE 4 or 5, the CST has sufficient volume of water available. In MODES 4 and 5, the suppression chamber minimum required water volume is reduced (as compared to MODES 1, 2 and 3) because the reactor coolant is maintained at or below 212 degrees Fahrenheit. Since pressure suppression capability is not required below 212 degrees Fahrenheit, the minimum volume is based on net positive suction head required for ECCS pumps, recirculation volume, vortex prevention and margin for conservatism. With the suppression chamber water level less than the required limit, ECCS subsystems are inoperable unless they are aligned to an operable CST. When the suppression chamber is below the LCO limit, the CS or LPCI system is considered operable only if it can take suction from the CST. Proposed TS 3.5.C.2.c revises the water volume requirements for the condensate storage tanks at Dresden and Quad Cities Stations during cold shutdown/refueling operations from 230,000 total gallons water (CTS 3.5.F.3 for Quad Cities and CTS 3.5.F.6 for Dresden) to 140,000 available gallons of water. The proposed changes do not alter the physical configuration or the operation of the plant's condensate storage system. As described in the plant's safety analysis (UFSAR Section 9.2.6.1), the condensate storage system is designed to ensure a minimum of 90,000 gallons of water is available from the condensate storage tank for use by the HPCI and RCIC systems at Quad Cities (HPCI only at Dresden). This is accomplished by the design of the discharge lines from the tank being configured such that the taps into the tank to be utilized for make-up are above the 90,000 gallon level. Tank taps for HPCI and RCIC at Quad Cities and HPCI at Dresden are configured to utilize the lower water volume (i.e., the aforementioned 90,000 gallons). The CTS required volume of 230,000 gallons was based on the total water volume in the condensate storage tank. Therefore, only 140,000 gallons (230,000 gallons minus 90,000 gallons) of water is available for the ECCS as a make-up source during cold shutdown/refueling operations. As such, the current licensing basis of Dresden and Quad Cities has not been changed by the proposed TS revisions. Therefore, the proposed TS changes ensure consistency between the TS and the required water volume (140,000 available gallons) for the ECCS as a make-up source during cold shutdown/refueling operations. Corresponding surveillance requirements have been added to ensure that the available water volume requirements are periodically verified. Because the proposed change is consistent with the safety analysis requirements, does not change the physical

configuration or operation of the condensate system and is consistent with the guidance of STS, the staff finds the proposed change acceptable.

The proposed requirements are applicable to the Dresden and Quad Cities plant system design and provide an adequate level of protection for ensuring this system is adequately maintained. Because the proposed TS provide additional requirements consistent to the current plant designs, the staff finds the proposed TS LCO acceptable.

3.3.2 Applicability

Proposed TS 3.5.C, Applicability, is based on STS 3.5.3, Applicability. Proposed TS 3.5.C, Applicability, requires the suppression chamber to be operable in MODES 1, 2, 3, 4 and 5[(a)], where footnote (a) states "The suppression chamber is not required to be operable provided that the reactor vessel head is removed, the cavity is flooded or being flooded from the suppression pool, the spent fuel pool gates are removed when the cavity is flooded and the water level is maintained within the limits." CTS Section 3.5.F.6 requirements for Dresden and CTS Section 3.5.F.3 requirements for Quad Cities are retained within proposed TS 3.5.C, Applicability. The suppression chamber is required to be operable as part of the ECCS to ensure that a sufficient supply of water is available to the HPCI, CS and the LPCI systems in the event of a LOCA. The proposed TS 3.5.C, Applicability, ensures that the LCO requirements are maintained during modes of operation for which sufficient water is made available to permit recirculation cooling flow to the reactor core.

CTS Section 3.5.F.6 requirements for Dresden regarding when irradiated fuel is in the vessel and the reactor is in the refuel condition is equivalent to the proposed TS MODE 5. CTS 3.5.F.3 for Quad Cities regarding when irradiated fuel is in the vessel and the vessel head is removed is also equivalent to the proposed TS MODE 5. Therefore, these specific CTS requirements concerning the Applicability of the suppression chamber have been retained within the proposed TS 3.5.C, Applicability.

Proposed TS 3.5.C, Applicability, footnote (a) retains the requirements of CTS Section 3.5.F.6 requirements for Dresden and CTS Section 3.5.F.3 requirements for Quad Cities regarding allowances for the suppression chamber being drained and control rod drive (CRD) maintenance being performed. Footnote (a) provides explicit contingencies for an inoperable suppression chamber. In the proposed TS, the suppression chamber or suppression chamber being drained would not satisfy proposed TS 3.5.C.1 or 3.5.C.2, LCO, respectively, because the required minimum water volume requirements would not be satisfied. In such cases, the contingencies required in MODE 5 by footnote (a) would need to be satisfied to allow for the suppression chamber or suppression chamber to be drained. Similarly, in MODES 4 or 5, CRD maintenance would not satisfy proposed TS 3.5.C.2.a, LCO; thus, rendering the suppression chamber inoperable. Again, in such cases, the contingencies required in MODE 5 by proposed footnote (a) would need to be satisfied. Therefore, these specific CTS requirements are retained within proposed TS 3.5.C, Applicability.

Proposed TS 3.5.C, Applicability, footnote (a) retains the requirements of CTS Section 3.5.F.6 requirements for Dresden and CTS Section 3.5.F.3 requirements for Quad Cities regarding spent fuel pool gates removed and fuel pool water level above the low level alarm point.

The proposed Applicability statement for proposed TS 3.5.C has been formatted in accordance with STS guidelines and retains CTS requirements. Therefore, the staff finds the proposed TS 3.5.C Applicability statement acceptable.

3.3.3 Required Actions

Proposed TS 3.5.C, ACTION 1, is based on STS 3.5.3, ACTION a. The proposed requirements provide a 1 hour AOT for the suppression chamber water level requirements during MODES 1, 2 and 3. If the water level requirements can not be restored, proposed TS 3.5.C, ACTION 1 requires the plant be brought to hot shutdown conditions within 12 hours and cold shutdown conditions within the following 24 hours. The CTS requirements provide no such explicit Action requirement; thus, the provisions of CTS 3.0.A would be followed, requiring the unit to be in hot shutdown within 12 hours and cold shutdown conditions within the following 24 hours. Therefore, proposed TS 3.5.C, ACTION 1, provides an additional one (1) hour time period, which is a reasonable period of time to restore the required water level in the suppression chamber while limiting the plant's vulnerability and eliminating a possible unnecessary thermal transient of the reactor vessel. The proposed relaxation does not significantly reduce existing plant safety margins and is acceptable. The staff finds the proposed ACTION 1 acceptable.

Proposed TS 3.5.C, ACTION 2, is based on STS 3.5.3, ACTION b. The proposed requirements specify that if the suppression chamber water level requirements can not be maintained during MODES 4 or 5, the following activities shall be prohibited: core alterations; activities with the potential for draining the vessel; and operations with the mode switch not locked in the Shutdown or Refuel position. An 8 hour time period is provided to establish secondary containment integrity. The proposed Actions have retained CTS requirements associated with the suppression chamber minimum water level. The proposed TS 3.5.C, ACTION 2, provides explicit requirements to address potentially degraded conditions associated with the suppression chamber during cold shutdown or refueling activities. The requirement to establish secondary containment integrity is a new restriction not in the CTS for the Dresden or Quad Cities Station. As such, this additional restriction provides increased assurance that the effects of a degraded suppression chamber are adequately controlled.

The proposed required Actions have been formatted in accordance with the STS guidelines and retain CTS requirements. Therefore, the staff finds the required Actions for proposed TS 3.5.C are acceptable.

3.3.4 Surveillance Requirements

TSUP 4.5.C.1 and 4.5.C.2 provide new requirements based on STS 4.5.3 guidelines. The proposed TS require the suppression chamber water level be monitored in all modes of operation. The proposed change is an enhancement of CTS and is, therefore, acceptable.

3.3.5 Conclusion

Based on the above evaluation, the staff finds that proposed TS 3/4.5.C, "Suppression Chamber," has adopted the guidelines of the STS. The proposed TS provides enhanced requirements for the suppression chamber at both the Dresden and Quad Cities Stations. Therefore, the staff finds proposed TS Section 3/4.5.C to be acceptable.

2.4 TS 3/4.5.D: Isolation Condenser (IC) - (Dresden Only)

Proposed TS 3/4.5.D for Dresden, "Isolation Condenser," incorporates the format of STS 3/4.7.4. The format of STS 3/4.7.4, "Reactor Core Isolation Cooling," was chosen for Dresden's proposed TS 3/4.D because there are no comparable STS requirements for the IC system. The IC is provided for core decay heat removal following a reactor scram and subsequent reactor isolation from the main condenser. The CTS requirements for Dresden's IC system have been retained in proposed TS 3/4.5.D. The proposed TS are discussed below.

3.4.1 LCO

Proposed TS 3.5.D, LCO is based on STS 3.7.4, LCO and retains CTS Section TS 3.5.E.1 requirements. STS 3.7.4, LCO has been modified from the guidelines for RCIC to be consistent with the requirements for Dresden Station's IC. The proposed LCO requires the IC to be operable. The proposed LCO has been documented in accordance with STS guidelines and has retained CTS requirements. Therefore, the staff finds the LCO for proposed TS 3.5.D acceptable.

3.4.2 Acceptable Applicability

Proposed TS 3.5.D, Applicability, is based on STS 3.7.4, Applicability. The proposed TS requires operability in MODES 1, 2 and 3 with reactor pressure greater than 150 psig. CTS Section 3.5.E.1 requires the IC to be operable whenever reactor pressure is greater than 150 psig and irradiated fuel is in the vessel. These plant conditions are equivalent to MODES 1, 2 and 3 with pressure greater than 150 psig. Therefore, the proposed TS Applicability requirements are equivalent to CTS requirements. The staff finds the Applicability statement for proposed Applicability 3.5.D to be acceptable.

3.4.3 Required Actions

Proposed TS 3.5.D, ACTION, has been formatted in accordance with STS 3.7.4, ACTION, and has retained CTS Section 3.5.E.2 requirements. CTS 3.5.E.2

provides an AOT of 7 days for the IC provided that the HPCI system is operable. The proposed required Action allows a 14 day AOT for the IC similar to the AOT in STS guidelines for HPCI and RCIC systems. The CTS have a 7 day AOT for the IC. The proposed requirements are consistent with the proposed AOT for HPCI. The proposed AOT provides an adequate level of protection for ensuring the plant's vulnerability to an inoperable IC or HPCI system is limited. There is no measurable increase in overall risk to the plant with the AOT, extended to 14 days. To strengthen the TS as a result of extending the IC AOT the proposed TS, as evaluated in Section 3.1.3.4 above, do not allow continued reactor operation with one ADS valve out-of-service. The CTS allow continued operation with one ADS valve out-of-service. The more stringent controls on ADS valve out-of-service combined with a longer HPCI AOT ensures mitigation of the small break LOCA with no measurable relaxation of current requirements. Therefore, the proposed changes do not significantly reduce existing safety margins. The staff finds extending the IC AOT is acceptable.

Proposed TS 3.5.D, ACTION retains CTS 3.5.E.3 required Actions. CTS 3.5.E.3 requires the plant to be 150 psig within 24 hours. Proposed TS 3.5.D, ACTIONS, require that the unit be in hot shutdown within 12 hours and 150 psig within the next 24 hours. The proposed TS 3.5.D, ACTIONS clarifies the time frame for the plant to be brought out of power operation conditions. Proposed TS 3.5.D, ACTION, results in the subsequent extension of the requirement to be less than 150 psig. However, the plant's overall vulnerability from an inoperable IC is not significantly increased because hot shutdown conditions have been achieved in a more expeditious time frame. The staff finds this acceptable. Based on the above the staff finds the required Action for proposed TS 3.5.E to be acceptable.

3.4.4 Surveillance Requirements

Proposed TS 4.5.D.1 requires daily verification of the water volume and temperature requirements for the IC system. Proposed TS 4.5.D has retained the requirements of CTS Section 4.5.E.1.a. Proposed TS 4.5.D.1.a and 4.5.D.1.b provides specific water volume and water temperature requirements which are consistent with current plant design requirements.

Proposed TS 4.5.D.2 is based on STS 4.7.D.a.2 guidelines. Proposed TS 4.5.D.2 is a new requirement, that ensures the IC valves are in the proper position for the required operational readiness of the system. Based on industry experience, the proposed requirements have been shown to provide an adequate level of control regarding the periodicity for verification of proper system line-up. This is an enhancement of CTS and is acceptable.

Proposed TS 4.5.D.3 is based on STS 4.7.4.c.1 guidelines and has retained CTS 4.5.E.1.b requirements. The requirements specified in STS 4.7.4.c.1 regarding actual injection into the vessel is not applicable to the IC design and, therefore, has not been incorporated into proposed TS 4.5.D.2. The proposed TS contains an additional requirement to verify that each system valve in the flow path actuates to its correct position. This is a new

requirement not currently encompassed within the CTS. CTS 4.5.E.1.b that requires the surveillance to be performed whenever major repairs are completed on the system has not been retained within proposed TS 4.5.D. When a system is taken out-of-service due to major repairs, it is rendered inoperable. Prior to returning the system to operable, it is necessary to verify the operability of the affected system. As such, these requirements are retained in TSUP TS 3/4.0 and the TSUP TS Definition of operability.

Proposed TS 4.5.D.4 is based on CTS Section 4.5.E.1.c requirements. There are no comparable STS requirements for this SR. Proposed TS 4.5.D.4 ensures that the system heat removal capability is periodically verified. The proposed TS have retained CTS requirements.

CTS 4.5.E.1.d which requires quarterly calibration of the IC radiation monitor is not being retained within the TS. The monitor provides an alarm function only and is not required to mitigate any design bases transients or accidents. Calibration surveillances and the availability of the vent radiation monitor will be administratively controlled. The staff has determined that the requirement for quarterly calibration of the IC radiation monitor is not required to be in the TS under 10 CFR 50.36 or Section 182a of the Atomic Energy Act. Further, it does not fall within any of the four criteria discussed in Section 2.0, above. Therefore, the deletion of this requirement from the TS and its relocation to administrative controls is acceptable.

3.4.5 Conclusion

Based on the above evaluation, the staff finds that proposed TS 3/4.5.D, "Isolation Condenser," has adopted the guidelines of the STS. The proposed TS has retained the CTS requirements and any deviations from the CTS requirements has been evaluated above and found acceptable. Therefore, the staff finds proposed TS 3/4.5.D to be acceptable.

3.5 TS 3/4.5.D: Reactor Core Isolation Cooling - (Quad Cities Only)

Proposed TS 3/4.5.D for Quad Cities, "Reactor Core Isolation Cooling," has been formatted in accordance with the guidelines of STS 3/4.7.4. The RCIC system is provided to supply continuous makeup water to the reactor core when the feedwater system is isolated from the turbine and when the feedwater system is not available. The CTS requirements for Quad Cities' RCIC system have been retained into proposed TS 3/4.5.D. The proposed TS are discussed below.

3.5.1 LCO

Proposed TS 3.5.D, LCO has retained CTS Section 3.5.E.1 requirements and incorporates the guidelines described in STS 3.7.4, LCO. CTS 3.5.E.1 specifies that the RCIC system shall be operable. The proposed TS 3.5.D, LCO provides additional requirements for the RCIC system that further define operability of the system to include an operable flow path that is capable of automatically transferring water from the suppression chamber to the reactor

vessel. Therefore, the proposed requirements explicitly define operability and ensures that the RCIC system is available to perform its function if necessary. The staff finds the LCO for proposed TS 3.5.D acceptable.

3.5.2 Applicability

The proposed TS applicability requires the RCIC to be operable in MODES 1, 2 and 3 with reactor pressure greater than 150 psig. The CTS requires the RCIC system to be operable whenever reactor pressure is greater than 150 psig and irradiated fuel is in the vessel. These plant conditions are equivalent to MODES 1, 2 and 3 with the reactor pressure greater than 150 psig. Therefore, the proposed TS requirements are equivalent to CTS requirements. The staff finds the Applicability statement for proposed TS 3.5.D acceptable.

3.5.3 Required Actions

TS 3.5.D, ACTION, retains CTS Section 3.5.E.3 requirement and has been formatted in accordance with STS 3.7.4, ACTION guidelines. CTS 3.5.E.3 provides an AOT of 14 days for the RCIC system provided that the HPCI system is operable. The proposed TS 3.5.D, ACTION, provides an AOT of 14 days provided that the HPCI system is operable.

CTS 3.5.E.2 requires that RCIC will be declared inoperable and the reactor will be less than 150 psig in 24 hours if the low-pressure test requirements for startup can not be met. This is to preclude allowing the reactor to run for 14 days with RCIC inoperable, when that inoperability was identified during the RCIC low-pressure test. In the proposed TS, the same requirements are retained within TSUP TS 4.0.D, which does not allow entry into a mode without completing the required surveillances. If the surveillances were not successfully performed within 12 hours, 4.0.D would apply and continued startup greater than 150 psig would not be allowed. Since this applies to the high pressure test also, the TSUP TS is more conservative than CTS requirements.

CTS Section 3.5.E.4 regarding reactor shutdown when the LCO is not met has been retained in proposed TS 3.5.D, ACTION. CTS 3.5.E.4 requires the plant to be less than 150 psig within 24 hours. Proposed TS 3.5.D, ACTIONS, require that the plant be brought to hot shutdown within 12 hours and less than 150 psig within the next 24 hours. The proposed TS 3.5.D, ACTION, clarifies the time frame for the plant to be brought out of power operation conditions. TSUP 3.5.D, ACTION, results in the subsequent extension of the requirement to be less than 150 psig. However, the plant's overall vulnerability from an inoperable RCIC is not significantly increased because hot shutdown conditions have been achieved in a more expeditious time frame. The staff finds this acceptable.

Based on the above, the staff finds the required Actions for proposed TS 3.5.D is acceptable.

3.5.4 Surveillance Requirements

Proposed TS 4.5.D.1.a is based on the guidelines provided in STS 4.7.4.a.1 and retains CTS 4.5.G.1 requirements. CTS 4.5.G.1 requires that the discharge piping be vented from the high point each month for RCIC and flow observed. This is consistent with proposed TS 4.5.D.1.a.

CTS 4.5.E.3 requires a flow rate test during startup. The CTS allows 12 hours to perform low-pressure testing once reactor vessel pressure is adequate to perform the test. In addition, CTS 4.5.E allows 24 hours to restore RCIC to operable to complete testing prior to exceeding 325 psig. These exceptions are no longer allowed in the proposed TS, which is a conservative change.

CTS 4.5.G.2 requires a check of the high point vent after maintenance on the RCIC system. This requirement is relocated to the TSUP TS definition of operability. Post-maintenance testing is encompassed within administrative programs in place for that purpose, with the definition of operability sufficing for the RCIC systems. The proposed TS requirements provide an equivalent level of protection and do not reduce existing plant safety margins. The staff finds this acceptable.

CTS 4.5.G.3 requires a check of the high point vent every 24 hours for RCIC whenever it is lined up to take suction from the suppression pool. Per the guidelines of STS 4.7.4.a.1, this requirement is being moved to administrative controls, with the TSUP TS definition of operable sufficing for the RCIC system. The specific details related to the system design are details inappropriate for inclusion within the TS. Such requirements are more appropriate for inclusion within the plant's UFSAR - revisions to which are controlled by 10 CFR 50.59. The staff has determined that this requirement is not required to be in the TS under 10 CFR 50.36 or Section 182a of the Atomic Energy Act. Further, it does not fall within any of the four criteria discussed in Section 2.0, above. The staff finds relocation of the post-maintenance testing requirements acceptable.

Proposed TS 4.5.D.1.b retains CTS Section 4.5.E.1 requirements and is formatted in accordance with the guidelines of STS 4.7.4.a.2. CTS 4.5.E.1 requires a valve position verification every 31 days. Proposed TS 4.5.D.1.b requires that every valve in the flow path that is not locked, sealed, or otherwise secured in its correct position be verified in its correct position every 31 days. The proposed TS requirements provide an equivalent level of protection and retain CTS requirements. The staff finds the proposed SR acceptable.

Proposed TS 4.5.D.1.c provides an additional SR of verifying that the RCIC pump flow controller is in the correct position. Proposed TS 4.5.D.1.c is based on the guidelines of STS 4.7.4.a.3. This is a surveillance not in the CTS. This is an enhancement of CTS and is acceptable. TSUP 4.5.D.2 retains CTS Section 4.5.E.2 requirements and has been formatted in accordance with STS 4.7.4.b guidelines. The proposed TS requires a flow test every 92 days; the

same as the CTS. The proposed SR is consistent with the CTS requirements and is acceptable.

Proposed TS 4.5.D.3.a retains CTS Section 4.5.E.4 requirements and has been formatted in accordance with STS 4.7.4.c.1 guidelines. CTS 4.5.E.4 requires a simulated automatic actuation test each refueling outage. This is consistent with proposed TS 4.5.D.3.a, which also notes that actual injection of coolant into the reactor vessel may be excluded from this test. This is a clarification of the CTS by stating how the TS required testing is to be performed. The staff finds the proposed SR acceptable.

Proposed TS 4.5.D.3.b requires a flow test at low pressure every 18 months. Proposed TS 4.5.D.3.b retains CTS 4.5.E.3.a which requires a flow test at low pressure during startup following a refuel outage or an outage in which work was performed on RCIC. The proposed TS periodicity provides an equivalent level of protection when compared to the CTS periodicity for assuring the RCIC system is operable. The CTS specify post-maintenance testing requirements which in the proposed TS will be relocated to administrative controls and referenced in the UFSAR. Specific details related to post-maintenance testing are inappropriate for inclusion within the TSs. Such requirements are more appropriate for administrative control through the UFSAR - revisions to which are controlled by the provisions of 10 CFR 50.59. The staff has determined that the requirements for post-maintenance testing are not required to be in the TS under 10 CFR.50.36 or Section 182a of the Atomic Energy Act. Further, it does not fall within any of the 4 criteria discussed in Section 2.0, above. Therefore, relocating the post-maintenance testing requirements to administrative controls whose revision is controlled by 10 CFR 50.59, is acceptable.

Proposed TS Section 4.5.D.3.c requires verification every 18 months that the RCIC pump suction will automatically transfer from the CST to the suppression chamber when condensate storage level is low, or suppression chamber level is high. This surveillance is not required by CTS and is based on the STS guidelines. Therefore, the proposed change is an enhancement of CTS and is acceptable.

CTS 4.5.E.3.b requires a high pressure flow test during startup following a refuel outage or an outage in which work was performed that directly affects RCIC system operability. The specific requirement related to post-maintenance testing is moved to administrative controls and referenced in the UFSAR, as such details are inappropriate for inclusion within the TS. Such requirements are more appropriate for administrative control through the UFSAR - revisions to which are controlled by the provisions of 10 CFR 50.59. The staff has determined that the requirements for post-maintenance testing are not required to be in the TS under 10 CFR.50.36 or Section 182a of the Atomic Energy Act. Further, it does not fall within criteria discussed in Section 2.0, above. Therefore, relocating the post-maintenance testing requirements to administrative controls whose revision is controlled by 10 CFR 50.59 is acceptable.

CTS 4.5.E.5 requires a logic system functional test each refueling outage. A fuel cycle at Quad Cities is 18 months. Therefore, testing every 18 months or during a refueling outage is equivalent. This requirement has been relocated to proposed TS Section 4.2.D.2, which requires that an equivalent logic system functional test on RCIC actuation instrumentation be performed once per 18 months.

The proposed TS SR are applicable to the Quad Cities plant design and provide an adequate level of protection for RCIC. The proposed SR have been formatted in accordance with the STS guidelines and have retained CTS requirements. In addition, the proposed TS add new restrictions to the CTS that ensure that RCIC system is maintained operable. Therefore, the staff finds the SRs for proposed TS 3/4.5.D acceptable.

3.5.5 Conclusion

Based on the above evaluation, the staff finds that proposed TS 3/4.5.D, "Reactor Core Isolation Cooling," has been formatted in accordance with the guidelines of the STS and retained CTS requirements. Therefore, the staff finds proposed TS Section 3/4.5.D to be acceptable.

3.6 Relocations from CTS 3/4.5 Not Retained Within Proposed TS 3/4.5

3.6.1 CTS 3/4.5.H: Condensate Pump Room Flood Protection (Quad Cities) and CTS 3/4.5.M: Condensate Pump Room Flood Protection (Dresden)

CTS 3/4.5.H for Quad Cities and 3/4.5.M for Dresden have been relocated to administrative controls. Flood protection measures for these systems will be administratively/procedurally controlled outside of the TSs for Dresden and Quad Cities Stations. The requirements are currently located in the UFSAR. The operability of systems which prevent, mitigate and indicate flooding of the condensate pit is an indirect contributor to RHRSW, CCSW or emergency diesel generator (EDG) cooling water pump operability and is more appropriately administratively controlled. Because these requirements will continue to be performed, there is no reduction in existing plant safety margins by the proposed changes. The staff has determined that the requirements for condensate pump room flood protection are not required to be in the TS under 10 CFR 50.36 or Section 182a of the Atomic Energy Act. Further, they do not fall within any of the four criteria discussed in Section 2.0, above. Therefore, the deletion of these requirements from the TS and their relocation to the UFSAR is acceptable.

3.6.2 Current TS 3/4.5.I: Average Planar LHGR

The requirements for CTS 3/4.5.I, "Average Planar LHGR," have been relocated to TSUP 3/4.11.A. TSUP 3/4.11.A has been approved by the NRC staff (Amendment Nos. 134 and 128 to Facility Operating License Nos. DPR-19 and DPR-25 for the Dresden Nuclear Power Station, Units 2 and 3, and Amendment Nos. 155 and 151

to Facility Operating License Nos. DPR-29 and DPR-30 for the Quad Cities Nuclear Power Station, Units 1 and 2, issued on June 13, 1995).

3.6.3 Current TS 3/4.5.J: Local LHGR (Quad Cities) and Current TS 3/4.5.J: Local Steady State LHGR (Dresden)

The requirements in CTS 3/4.5.J, "Local LHGR," for Quad Cities and "Local Steady State LHGR," for Dresden have been relocated to TSUP 3/4.11.D. TSUP 3/4.11.D has been approved by the NRC staff (Amendment Nos. 134 and 128 to Facility Operating License Nos. DPR-19 and DPR-25 for the Dresden Nuclear Power Station, Units 2 and 3, and Amendment Nos. 155 and 151 to Facility Operating License Nos. DPR-29 and DPR-30 for the Quad Cities Nuclear Power Station, Units 1 and 2, issued on June 13, 1995).

3.6.4 Current TS 3/4.5.K: Minimum Critical Power Ratio (MCPR) (Quad Cities) and Current TS 3/4.5.L: Minimum Critical Power Ratio (MCPR) (Dresden)

The requirements in CTS 3/4.5.K, "Minimum Critical Power Ratio (MCPR)," for Quad Cities and "Minimum Critical Power Ratio (MCPR)," for Dresden have been relocated to TSUP 3/4.11.C. TSUP 3/4.11.C has been approved by the NRC staff (Amendment Nos. 134 and 128 to Facility Operating License Nos. DPR-19 and DPR-25 for the Dresden Nuclear Power Station, Units 2 and 3, and Amendment Nos. 155 and 151 to Facility Operating License Nos. DPR-29 and DPR-30 for the Quad Cities Nuclear Power Station, Units 1 and 2, issued on June 13, 1995).

3.6.5 Current TS 3/4.5.K: Local Transient LHGR (Dresden)

The requirements in CTS 3/4.5.K, "Local Transient LHGR," have been relocated to TSUP 3/4.11.E. TSUP 3/4.11.E has been approved by the NRC staff (Amendment Nos. 134 and 128 to Facility Operating License Nos. DPR-19 and DPR-25 for the Dresden Nuclear Power Station, Units 2 and 3).

3.6.6 Current TS 3/4.5.B: Containment Cooling Subsystems

CTS 3/4.5.B discusses the requirements for the containment cooling system for Dresden and the containment cooling mode of the RHR system for Quad Cities. These requirements have been relocated to proposed TS 3/4.7.L (Suppression Chamber and Drywell Spray), 3/4.7.M (Suppression Pool Cooling) and 3/4.8.A (RHRSW for Quad Cities, Containment Cooling Service Water for Dresden).

TSUP TS 3/4.7 has been approved by the NRC staff (Amendment Nos. 143 and 137 to Facility Operating License Nos. DPR-19 and DPR-25 for Dresden Nuclear Power Station, Units 2 and 3, and Amendment Nos. 165 and 161 to Facility Operating License Nos. DPR-29 and DPR 30 for Quad Cities Nuclear Power Station, Units 1 and 2, issued on November 27, 1995). TSUP 3/4.8 has been approved by the NRC staff (Amendment Nos. 144 and 138 to Facility Operating License Nos. DPR-19 and DPR-25 for Dresden Nuclear Power Station, Units 2 and 3, and Amendment Nos. 166 and 162 to Facility Operating License Nos. DPR-29 and DPR 30 for Quad Cities Nuclear Power Station, Units 1 and 2, issued on December 19, 1995).

3.7 Open Items

The following items are open items contingent upon further evaluation by the NRC staff:

1. Proposed TS 3.5.A, ACTION 2 - the LPCI subsystem does not fully satisfy the requirements of a two-train system. In addition, the electrical power configuration requires additional clarification regarding operability and its effect on supported system. Additional clarification is required to address any potential discrepancies.

2. Proposed TS 3.5.A, ACTION 7 - Quad Cities incorrectly refers to Specification 6.6.B.4. The correct reference is 6.9.B.

4.0 SUMMARY

The proposed TS for Section 3/4.5 will be clearer and easier to use as a result of the adaptation of the STS format. The changes result in additional limitations, restrictions, or changes based on generic guidance. It is the staff's assessment that the changes proposed in this amendment do not pose any decrease in safety, or an increase in the probability of an analyzed or unanalyzed accident. The revised TS changes do not reduce the existing margin of safety set forth by the CTS. Therefore, the staff finds the proposed TS changes acceptable with the exception of the above open items.

5.0 STATE CONSULTATION

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

6.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types, of any effluent that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration and there has been no public comment on such finding (60 FR 42599). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

7.0 CONCLUSION

The Commission has concluded, 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.

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