50-237 DRESDEN 2 CEC

RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION
SECTION 3/4.1 REACTOR PROTECTION SYSTEM

REC'D W/LTR DTD 5/17/95...9505250145

- NOTICE -

ATTACHMENT

ComEd Response to NRC RAI

Section 3/4.1, "Reactor Protection System"

Generic Questions

1. In review of proposed Technical Specification Upgrade Program (TSUP) Section 3.1, the No Significant Hazards Consideration for this application is not completely accurate and the wording used in the evaluations are confusing. The considerations did not take into account the relaxation of the current Technical Specification (TS) requirement with the adoption of the proposed Standard Technical Specifications (STS). In addition, the staff discovered typographical errors in the considerations. The staff requests that Commonwealth Edison Company (ComEd) re-evaluate the No Significant Hazards Consideration for the application and supplement the application by providing an accurate and complete No Significant Hazards Consideration.

   ComEd Response:
   This is provided in Enclosure 1.

2. In review of proposed TSUP Section 3.1, ComEd did not evaluate and provide justification for the relaxations and deviations between current TS requirements and the proposed TS. ComEd has compared only the proposed TS to the STS and provided justification for any deviations. To allow the staff to perform a complete and accurate review of the above proposed TSUP TS sections, please provide supplemental evaluations of any changes or deviations between the current TS and the proposed TS. In addition, for each deviation or relaxation between the current TS and the proposed TS an evaluation should be provided which demonstrates that the proposed TS maintains the current licensing basis as described in the Updated Final Safety Analysis Report.

   ComEd Response:

   A) Administrative Changes

   ComEd has revised the current Dresden and Quad Cities TS (CTS) to incorporate non-technical, administrative changes into the proposed TS section 3/4.1 (Reactor Protection System - (RPS)). The proposed changes to the Dresden and Quad Cities CTS are based upon the accepted NRC Standard Technical Specifications (BWR-STS), contained in NUREG-0123, Revision 4 "Standard Technical Specifications General Electric Plants BWR/4." These administrative changes are intended to incorporate human factor principles into the form and structure of the TS so that they would be easier to use for plant operation's personnel. These changes are editorial in nature or involve the reorganization or reformatting of requirements without affecting technical content of the current TS or operational requirements. Therefore, these are administrative changes to the CTS, and do not represent a relaxation of the CTS.

   Examples of these administrative changes include:

   Clarification of applicability to specific modes (as referenced in the associated instrumentation tables); Addition of unambiguous Action statements within the LCO; the capitalization of definition-specific nomenclature (i.e. CHANNEL and TRIP SYSTEM);

   Revision of the BWR-STS numbering system (i.e. LCO, SR, and Table numbers);

Relocation of certain requirements to other sections of the TS (i.e. Safety Limits; and Power Distribution LCOs and SRs); and

Incorporation of clarified BWR-STS and plant-specific terminology (i.e. proposed "OPERATIONAL MODE" versus the BWR-STS "OPERATIONAL CONDITION;" and the proposed BWR-STS nomenclature "Reactor Vessel Steam Dome Pressure - High" versus the CTS nomenclature "High-Reactor Pressure").

These administrative changes do not represent a relaxation of the current requirements or licensing basis, as defined in the UFSAR. The equipment and instrumentation used to meet the requirements defined in the proposed TS have not changed, and are equivalent to the new description. Therefore, the proposed nomenclature represents an administrative change, and as such, is not a relaxation of the CTS.

B) LCO and Applicability Changes

The Dresden and Quad Cities CTS contain Applicability and Objective statements at the beginning of TS Section 3/4.1 and 3.1/4.1 (RPS). These statements are generic in nature and do not provide any useful information to the user of the technical specifications. The proposed changes delete the Objective statement and clarify Limiting Condition for Operation (LCO) and Applicability requirements for each RPS instrument. The applicability for each instrument is specified in the associated proposed TS instrumentation tables. This is consistent with BWR-STS format and provides a more user-friendly, and unambiguous presentation of requirements for the RPS systems at Dresden and Quad Cities. These proposed changes represent a more conservative operating practice, and therefore are not a relaxation of the CTS.

C) Rearrangement of RPS Instrument Tables; Relocation of RPS Instrument Setpoints

Dresden CTS 3.1.A.1 specifies the setpoints, minimum number of trip systems, and minimum number of instrument channels that must be operable for each operational mode as stated in Table 3.1.1. These provisions have been incorporated into proposed Table 3.1.A-1. The setpoints for each of the RPS trip instruments is relocated to proposed TS Section 2.0, Table 2.2.A-1. This relocation of current requirements is administrative, and does not represent a relaxation of the CTS.

Quad Cities CTS LCO 3.1.A references Tables 3.1-1 through 3.1-4 for the setpoints, minimum number of trip systems, and minimum number of instrument channels that must be operable for each position of the reactor mode switch. The proposed change combines these tables into one table (proposed Table 3.1.A-1). Instead of a separate table for each of the reactor modes of Refuel, Startup/Hot Standby, and Run, the new Table 3.1.A-1 will contain a column for Applicable Operational Modes to indicate when the instrumentation is required to be operable. The use of a single table for this purpose will help eliminate the possibility of using the wrong table to determine operability requirements and will implement a format similar to later plants using the BWR-STS. This relocation and proposed change to current requirements is administrative, and therefore do not represent a relaxation of the CTS.

The proposed rearrangement of the current instrument tables (Dresden CTS Table 3.1.1; and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3) provide consistency in presentation of the current requirements. The addition of the Applicable Operational Modes column to the instrumentation tables provide clear and concise information concerning when equipment is required to be operable and when surveillance requirements must be performed. These proposed changes adopt BWR-STS format and content for LCOs and Action Statements, and as such, do not represent a relaxation of the CTS.

D) Relocation of Response Time Requirement

CTS (TS 3.1.A) and the BWR-STS requirement (3.3.1) for Response Time has been relocated to proposed SR 4.1.A.3. The CTS wording has been retained in the proposed SR 4.1.A.3 for Instrument Response Time requirements. Since current requirements are retained, the proposed relocation of the requirement represents an administrative change, and as such, is not a relaxation of the CTS.

E) Generic Letter 87-09 Guidance

The STS action provisions which delineate a TS 3.0.4 exception are not incorporated into the proposed TS. This is consistent with the guidance of Generic Letter 87-09. Therefore, this does not represent a relaxation of the CTS.

F) Dresden CTS Table 3.1.1, note (*); Quad Cities CTS 4.1.C and Table 3.1-4 note (2); Proposed TS Action 3.1.A.1

Dresden CTS Table 3.1.1, note (*), Quad Cities CTS 4.1.C, and Quad Cities CTS Table 3.1-4 note (2) have been incorporated (with modification) into the combination of proposed Action 3.1.A.1; proposed footnote (a); and proposed Table 3.1.A-1 note (a). Dresden CTS Table 3.1.1, note (*), Quad Cities CTS 4.1.C, and Quad Cities CTS Table 3.1-4 note (2) require a trip of an inoperable channel/trip system immediately when it is determined that a channel is inoperable.

The proposed requirements (Action 3.1.A.1; footnote (a); and Table 3.1.A-1 note (a)) are consistent with BWR-STS, with the exception that the BWR-STS action provision which delineates a TS 3.0.4 exception is not incorporated. This deviation from BWR-STS is discussed in item (E) above.

i) Proposed Action 3.1.A.1 is a deviation from the CTS in that the Dresden CTS Table 3.1.1, note (*) and Quad Cities CTS 4.1.C require an immediate trip of an inoperable channel/trip system, while the proposed requirement allows 1 hour prior to tripping the inoperable channel. This proposed action is modified by proposed footnote (a), which allows 2 hours prior to tripping the inoperable channel, if the action would cause the trip function to occur. This deviation from the CTS provides an acceptable period of time to restore the inoperable channel/trip system to operable status, prior to placing the reactor in a half-scram condition (one hour), or causing a reactor trip (two hours). This reduces the potential for unnecessary reactor scrams and the associated challenges to the reactor vessel and safety systems. The one hour and two hour periods are consistent with BWR-STS and accepted industry practice, and do not represent a significant increase in the overall risk, relative to the risk associated with placing the reactor in a half-scram condition and/or causing a reactor trip. The proposed deviation from CTS represents a more conservative operating philosophy, and is therefore acceptable.

ii) Quad Cities CTS 4.1.C requires functional testing of redundant RPS channels when a channel or trip system is inoperable, and allows one hour to untrip the previously tripped trip system in order to perform this redundant testing. This has been deleted in the proposed TS.

The requirement for demonstrating operability of the redundant equipment at Quad Cities Station Units One and Two was originally chosen because there was a lack of plant operating history and a lack of sufficient equipment failure data. Since that time, plant operating experience has demonstrated that testing of the redundant equipment when companion *equipment is inoperable, is not necessary to provide adequate assurance of system operability. In fact, removal of the redundant system from service for testing removes the operable channel from monitoring the safety parameter, and creates the risk that the redundant system will fail. Actual industry observations of this type of configuration have indicated that failures of the redundant equipment are related to repeated testing itself and not an indication that the system would have failed should it have been needed.*

iii) *Quad Cities CTS 4.1.C allows the station to place a trip system with an inoperable channel in the untripped position for short periods of time (8 hours maximum) to allow the required functional testing of other RPS channels (see item F.ii above). This requirement is not in the Dresden CTS. The intent of the Quad Cities CTS requirement has been incorporated into proposed TS Table 3.1.A-1, note (a) for both stations. This proposed note states that a channel may be placed in an inoperable status for up to 2 hours for required surveillance without placing the trip system in the tripped condition. Both the Quad Cities CTS requirement and the proposed TS table note also stipulate that the trip system with the failed channel must have one operable channel in order to restore the inoperable channel. The addition of this requirement for Dresden Station provides a greater safety benefit by explicitly delineating specific actions during surveillance testing, thereby reducing the vulnerability to spurious actuation. This additional requirement is not a relaxation of the Dresden CTS. The proposed TS time frame of 2 hours is more conservative than the 8 hours specified in the current Quad Cities TS 4.1.C. Therefore, the proposed TS does not represent a relaxation of the Quad Cities CTS.*

G) *Proposed action 3.1.A.2*

Proposed action 3.1.A.2 is an addition to the CTS, and incorporate Dresden and Quad Cities CTS note (1). This CTS note modifies the "Minimum Operable Channels" column of the CTS tables, and states that there shall be two operable or tripped trip systems for each function. The proposed TS 3.1.A.2 requires that if both trip systems have less than the minimum required operable channels per trip system, that at least one trip system be placed in the trip condition and the appropriate action as proposed in the table be taken. Footnote (b) to proposed Action 3.1.A.2 stipulates that a trip system need not be placed in the tripped condition if the action would cause the trip to occur. In addition, the proposed footnote includes a clarification of action requirements when more than one trip system has inoperable channels.

Proposed action 3.1.A.2 and footnote (b) are consistent with BWR-STS, and are a necessary addition to the CTS. This proposed action and footnote provide a greater safety benefit by explicitly delineating specific actions and allowable outage times prior to tripping a channel or instrument (when two trip systems are inoperable), thereby reducing the vulnerability to spurious actuation. The actions required by proposed Action 3.1.A.2 and footnote (b) are consistent with BWR-STS, and do not reduce the overall ability of the Reactor Protection System to perform its design function. Therefore the adoption of the proposed Action and footnote represents a more conservative operating philosophy, and as such do not represent a relaxation of the CTS.

H) *Dresden CTS 3.1.A.2 (Fuel Design Limiting Ratio); Dresden CTS 3.1.A.3, 4 and 5 (RPS Motor-Generator (MG) power monitoring instrumentation)*

Dresden CTS 3.1.A.2 provides the LCO and action requirements for the fuel design limiting ratio for centerline melt (FDLRC) value. This specification is relocated to proposed TS 3/4.11.B, APRM Setpoints. Dresden CTS 3.1.A.3, 4 and 5 (RPS Motor-Generator (MG) power monitoring instrumentation) are relocated to proposed TS 3.9.G.

These changes are administrative in nature, and consistent with BWR-STS format. Therefore, these proposed changes do not represent a relaxation of CTS.

I) Quad Cities CTS 3.1.B (Maximum Fraction of Limiting Power Density)

Quad Cities CTS 3.1.B provides the LCO and action requirements for the maximum fraction of limiting power density (MFLPD) in relation to the fraction of rated thermal power. This specification is relocated to proposed specification 3/4.11.B, Power Distribution Limits - APRM Setpoints. These changes are administrative in nature, and consistent with BWR-STS format. Therefore, these proposed changes do not represent a relaxation of CTS.

J) Dresden CTS 4.1.A.1 and Quad Cities CTS 4.1.A

Dresden CTS 4.1.A.1 and Quad Cities CTS 4.1.A require that the instrumentation systems be functionally tested and calibrated as indicated in Tables 4.1.1 and 4.1.2. These Surveillance Requirements (SRs) are replaced by proposed TS 4.1.A.

Proposed TS 4.1.A.1 requires that each RPS channel be demonstrated operable by the performance of a channel check, channel functional test and a channel calibration as shown in proposed Table 4.1.A-1. The proposed surveillance requirement combines the CTS surveillance requirement tables into one table (proposed Table 4.1.A-1). The proposed table specifies the requirements for all required surveillances for each RPS instrument in one table (as opposed to the separate CTS tables for Functional Tests and Calibrations). The use of a single table for this purpose will help eliminate the possibility of using the wrong table to determine SRs. This represents a more conservative operating philosophy and an enhancement to the CTS, and therefore is not a relaxation of the CTS.

In addition, proposed 4.1.A.1 and Table 4.1.A-1 add specific requirements for a channel check of each RPS instrument. These proposed changes are an addition to the CTS (with two exceptions, as noted), and are consistent with BWR-STS and represent a more conservative approach for specifying and determining surveillance requirements for the RPS instrumentation. Therefore the proposed changes do not represent a relaxation of CTS.

K) Proposed TS 4.1.A.2 and 4.1.A.3

Proposed TS 4.1.A.2 requires a logic system functional test and simulated automatic operation of all channels be performed at least once per 18 months. This is an addition to the Dresden CTS, and incorporates Quad Cities CTS Table 4.1-1, footnote (7). The proposed TS is an addition to the CTS, and provides clarified requirements for the SRs, consistent with BWR-STS. These proposed changes represent a more conservative testing method than the CTS, and therefore do not represent a relaxation of CTS.

Proposed TS 4.1.A.3 requires that the response times for the trip functional unit be demonstrated at least every 18 months. The proposed surveillance requirement adopts the Quad Cities CTS Table 4.1-2 note (5) requirement for a check of instrument response time once per refuel outage. This testing is not required by the Dresden CTS. The addition of response time testing to the Dresden TS represents a more conservative testing requirement, and therefore is not a relaxation of the CTS. The proposed requirement modifies the BWR-STS requirement for Response Time testing by retaining the CTS wording for instrument Response Time requirements (Dresden CTS 3.1.A.1 and Quad Cities CTS 3.1.A). This modification of the BWR-STS requirement is administrative in nature, and consistent with BWR-STS format. Therefore, these proposed changes do not represent a relaxation of CTS.

L) Dresden CTS 4.1.A.2 and Quad Cities CTS 4.1.B

Dresden CTS 4.1.A.2 for the daily check of FDLRC is relocated to proposed TS 4.11; Quad Cities CTS 4.1.B for the daily check of the maximum fraction of limiting power density is relocated to proposed TS 4.11. Both of these changes are administrative in nature, and consistent with BWR-STS. Therefore, these proposed change does not represent a relaxation of CTS.

M) Dresden CTS 4.1.A.3

Dresden CTS 4.1.A.3 specifies the SRs for the RPS-MG set instrumentation. These have been relocated to proposed TS 4.9.G. This relocation is administrative in nature, and consistent with BWR-STS. Therefore, the proposed change does not represent a relaxation of CTS.

N) Dresden CTS Tables 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3

Dresden CTS 3.1.A.1 requires the setpoints, minimum number of trip systems, and minimum number of instrument channels that must be operable for each operational mode be as given in Table 3.1.1. This has been incorporated into proposed Table 3.1.A-1. The setpoints for each of the RPS trip instruments is relocated to proposed TS Section 2.0, Table 2.2.A-1.

Quad Cities CTS 3.1.A references Tables 3.1-1 through 3.1-4 for the setpoints, minimum number of trip systems, and minimum number of instrument channels that must be operable for each position of the reactor mode switch. The proposed change combines these tables into one table (proposed Table 3.1.A-1). Instead of a separate table for each of the reactor modes of Refuel, Startup/Hot Standby, and Run, the new Table 3.1.A-1 will contain a column for Applicable Operational Modes to indicate when the instrumentation is required to be operable. The use of a single table for this purpose will help eliminate the possibility of using the wrong table to determine operability requirements and will implement a format similar to later plants using the STS. The setpoints for each of the RPS trip instruments are relocated to proposed TS Section 2.0, Table 2.2.A-1. A complete evaluation of the proposed Actions for each RPS instrument and applicable mode described in proposed Table 3.1.A-1 is provided in response to Specific Question # 2.

1) *Dresden CTS Tables 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3; Intermediate Range Monitor (IRM) High Flux, and - Inoperative*

   CTS requirements for Intermediate Range Monitor (IRM) High Flux, and - Inoperative are incorporated into Proposed Table 3.1.A-1, Items 1a. and 1b. These proposed requirements specify applicable modes 2, 3, 4, and 5, with minimum channel requirements and actions for each applicable mode. The proposed requirements include operational modes 3 and 4, consistent with BWR-STS requirements. These are additional modes relative to CTS requirements, and as such, represent a more conservative requirement for the two protective functions.

   The proposed requirements for proposed Table 3.1.A-1, Item 1 are consistent with the BWR-STS and the CTS, except as described below:

   The CTS requirement for IRM High Flux has been renamed to the BWR-STS nomenclature of "IRM Neutron Flux - High." This is an administrative change to the CTS, and as such does not represent a relaxation of the CTS. The instrumentation used to monitor the parameter has not changed, and is equivalent to the BWR-STS nomenclature.

Proposed Table 3.1.A.1-1, Item 1 deletes the applicability of BWR-STS Table Note (d) in operational mode 5. This note is not in the Dresden and Quad Cities CTS. The deleted note describes APRM and IRM channel configurations when the "shorting links" are removed. The BWR-STS note provides design information which is more appropriate for plant administrative controls (i.e. UFSAR and procedures).

*Proposed TS note (c) modifies applicable operational mode 5 for IRM Neutron Flux - High. Proposed TS note (c) is based upon BWR-STS note (c) and BWR-STS sub-note *, and is an addition to the CTS. This proposed note requires the removal of "shorting links" from the RPS circuitry prior to and during the time that any control rod is withdrawn while in mode 5. The proposed note is consistent with BWR-STS, and provides additional requirements while in the refuel mode. As such, the proposed note represents a more conservative operating philosophy, and therefore does not represent a relaxation of CTS.*

2) *Dresden CTS Tables 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3; Average Power Range Monitor (APRM) -High Flux (flow biased), -High Flux (15% scram), -Inoperative, and -Downscale*

i) *The CTS requirement for APRM - High Flux (15% scram) is incorporated into proposed Table 3.1.A-1, Item 2.a, (APRM Setdown Neutron Flux - High). The proposed requirement specifies applicable operational modes 2, 3, and 5, with minimum channel requirements and actions for each applicable mode. The proposed specification adds the applicability for operational mode 3, consistent with BWR-STS requirements. This is an addition to CTS requirements. The proposed requirements for proposed Item 2.a are consistent with the BWR-STS and the current Dresden TS Table 3.1.1 and Quad Cities TS Table 3.1-1 (APRM High Flux (15% scram)), except as described below:*

The CTS requirement for APRM -High Flux (15% scram) has been renamed to the BWR-STS nomenclature of APRM Setdown Neutron Flux - High. This is an administrative change to the CTS, and as such does not represent a relaxation of the CTS. The instrumentation used to monitor the parameter has not changed, and is equivalent to the BWR-STS nomenclature.

*The proposed APRM specification includes the BWR-STS notes (c) and (e), and adds a new note (g). Proposed note (c) is described above in item N-1. Proposed note (e) states that an APRM channel is inoperable if there are fewer than 2 LPRM inputs per level or less than 50% of the normal complement of LPRM inputs into an APRM channel. Proposed TS note (c) retains the currrent Dresden CTS Table note ** and Quad Cities CTS Table note (3). The proposed note is also consistent with the intent of the same BWR-STS note, as modified by CTS wording. Therefore the incorporation of proposed note (e) is not a relaxation of CTS.*

Proposed note (g) for Table 3.1.A-1 (and note (m) for proposed Table 4.1.A-1) is an addition to CTS and BWR-STS, and is based on an approved amendment to the Limerick Generating Station Technical Specifications. The new note allows the APRM functions to be inoperable in Operational Mode 5 except during Shutdown Margin Testing performed in accordance with Special Test Exception 3.12.B.

Not incorporating the CTS APRM operability requirement while the plant is in *operational mode 5 is acceptable since the APRMs are not necessary for safe operation because there are sufficient levels of protective controls designed to prevent inadvertent criticality and fuel damage during refueling. The Intermediate Range Monitors (IRM), Source Range Monitors (SRM), Refueling Interlocks, and plant procedures, each provides protection which maintains the needed defense-in-depth and therefore, precludes the need for the APRMs to be operable in operational mode 5. However, the requirement for the APRMs to be operable during a shutdown margin demonstration when the mode switch is in Startup, as required by proposed Specification 3.12.B, will remain unchanged. Specification 3.12.B is a Special Test Exception which allows the reactor mode switch to be moved from the Refuel position to the Startup position to perform a shutdown margin demonstration. Based upon the diverse levels of protective controls designed to prevent inadvertent criticality and fuel damage during refueling, the combination of proposed note (g) and proposed TS 3.12.B provide an acceptable level of safety. Therefore, the proposed changes are acceptable.*

ii) The CTS requirement for APRM - High Flux (flow biased) is incorporated into proposed Table 3.1.A-1, Item 2.b, (APRM Flow Biased Neutron Flux - High). This proposed requirement specifies applicable operational mode 1, with minimum channel requirements. The requirements for proposed Item 2.b are consistent with the BWR-STS and the CTS, except as described below:

The Dresden CTS requirement for APRM High Flux and the Quad Cities CTS requirement for APRM -High Flux (flow biased) has been renamed to the BWR-STS nomenclature of APRM Flow Biased Neutron Flux - High. This is an administrative change to the CTS, and as such does not represent a relaxation of the CTS. The instrumentation used to monitor the parameter has not changed, and is equivalent to the BWR-STS nomenclature.

The proposed requirement deletes the applicability of BWR-STS Table Note (d). This is discussed in Section N-1, above.

iii) Proposed Table 3.1.A-1, Item 2.c, APRM Fixed Neutron Flux -High, specifies applicable operational mode 1 with minimum channel and action requirements. The proposed requirements for Item 2.c are consistent with the BWR-STS, and represent an additional requirement from the CTS. Therefore the proposed requirement does not represent a relaxation of CTS.

iv) The CTS requirement for APRM-Inoperative is incorporated into Proposed Table 3.1.A-1, Item 2.d. This requirement specifies applicable operational modes 1, 2, 3, and 5, with minimum channel requirements and actions for each applicable mode. The requirements for proposed Item 2.d are consistent with the BWR-STS and the CTS, except as described below:

The proposed Table 3.1.A-1 Item 2.d includes operational mode 3, consistent with BWR-STS requirements. This is an addition to CTS requirements, and represents a more conservative TS.

The BWR-STS Table 3.3.1-1, Item 2.d applicability of note (c) while in operational mode 5 is not incorporated in the proposed TS. This note requires removal of the shorting links for the APRM Inoperative trip function. Non-applicability of STS note (c) in *operational mode 5 is based upon LaSalle and Perry Station Technical Specifications. The removal of shorting links in mode 5 is intended to prevent inadvertent localized criticality without dependence on neutron detector geometry. The removal of the shorting links provides a non-coincident trip from any single nuclear instrument (i.e. one out of six once for APRMs and one out of eight once for IRMs). This trip is unnecessary and potentially non-conservative for the APRM-Inoperative function in mode 5. An inoperative APRM is not indicative of a localized neutron flux excursion, and a non-coincident scram due to a single inoperative APRM in operational mode 5 would place unnecessary stress on safety systems. The remaining non-coincident nuclear instrumentation trips (APRM and IRM) provide sufficient protection against localized criticality concerns. Therefore the non-applicability and omission of BWR-STS note (c) for the APRM Inoperative trip function in operational mode 5 does not significantly impact safety, and is therefore acceptable.*

v) The Quad Cities CTS Table 3.1-3 and BWR-STS requirement for the APRM - Downscale trip in operational mode 1 was not retained in the proposed TS. The proposed TS also delete Quad Cities CTS note (11). This note states: "The APRM downscale trip function is automatically bypassed when the Intermediate Range Monitor (IRM) instrumentation is operable and not high." Removal of the APRM/IRM companion scram eliminates the APRM downscale scram which occurs in the Run mode with the simultaneous IRM scram that occurs with IRMs "high" or inoperable. The Quad Cities downscale requirement and note (11) provide no enhancement to safety and its deletion has been previously approved by the NRC staff for the Dresden Units 2 and 3 TS (Amendment Nos. 100/96 - letter dated August 24, 1988).

The APRM Downscale Scram functions exists in several early BWR plants including Quad Cities Unit 1 and Unit 2, but this function was deleted in the later BWR plants. The only function performed by the APRM Downscale Scram is during plant startup and shutdown. This scram function provides protection against operator error during startup if the reactor mode switch were improperly switched. During a normal plant startup, the mode switch is usually placed in RUN position when the power is above 5%. If an operator were to prematurely place the mode switch in the RUN position, the APRM will be downscale and the IRM scram function will not be bypassed (the IRM Scram circuit will be bypassed when the mode switch is in the RUN position and the APRMs are not downscale). If this should happen, all safety concerns are addressed without reliance upon the APRM Downscale trip function. The Control Rod Drop Accident (the limiting accident during startup) is prevented by the APRM High Neutron flux scram, and the Rod Withdrawal Error is prevented by the APRM Downscale Rod Block (proposed TS 3.2.E). Proper overlap between the IRMs and APRMs is not affected.

Another example of operator error can occur during power descent if the operator delays changing the reactor mode switch from the RUN position to the STARTUP position, thus bypassing the IRMs for a longer period of time and to a lower power level. The consequences of this error are no different than those described above for power ascension.

The proposed Quad Cities TS Section 2.0, Safety Limits and Limiting Safety System Settings, also deletes the APRM Downscale requirement, consistent with Dresden TS Amendments 100/96.

The proposed deletion of the APRM Downscale trip function and the APRM/IRM companion scram (Quad Cities CTS note (11) clarify the intent of the original specification by clearly defining the scram functions needed to be operable in each mode of operation, and do not involve any modification of the reactor protection system wiring or circuitry. Based upon the discussion above, the proposed changes do not decrease the level of safety, and therefore are acceptable.

3) *Dresden CTS Tables 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3; High Reactor Pressure*

The current CTS requirement for High Reactor Pressure is incorporated into proposed Table 3.1.A-1, Item 3. The proposed requirement specifies applicable modes 1 and 2 with minimum channel requirements. The requirements for proposed Item 3 are consistent with the BWR-STS and the CTS, except as described below:

The CTS requirement has been renamed to the BWR-STS nomenclature of "Reactor Vessel Steam Dome Pressure - High." This is an administrative change to the CTS, and as such does not represent a relaxation of the CTS. The instrumentation used to monitor the parameter has not changed, and is equivalent to the BWR-STS nomenclature.

The CTS mode 5 requirement is not applicable for the "High Reactor Pressure" protective function. Therefore, the mode 5 applicability has not been retained in the proposed TS (Table 3.1.A-1, column 2). This is consistent with BWR-STS requirements. This proposed change to the CTS does not represent a relaxation of current requirements. While in mode 5 (refuel), the reactor status is cold shutdown, the reactor head is detensioned, and the temperature limitations for operational mode 5 eliminate the possibility of a high pressure condition.. In this condition, interlocks are established so that only one control rod may be withdrawn when neutron monitor flux amplifiers are set at the proper sensitivity level and the refueling bridge is not over the reactor. Therefore, since the reactor is in a cold shutdown condition, and the control rods cannot be withdrawn, the Reactor Vessel Steam Dome Pressure -High (reactor scram) instrumentation is not applicable.

Dresden CTS note (10) is retained as proposed note (f), and is applicable to operational mode 2, which allows the function to be inoperable when the reactor vessel pressure head is removed per proposed TS 3.12.A. This is consistent with BWR-STS note (f), (with a minor administrative clarification). Proposed note (f) states: "This function is not required to be operable when the reactor pressure vessel head is unbolted or removed per Specification 3.12.A." The addition of this note to the proposed Quad Cities TS provides clarification of the current requirements. Proposed TS 3.12.A provides requirements during special tests of primary containment. The proposed special test allows for the unbolting or removal of the reactor head in operational mode 2, as long as thermal power is less than 1% and reactor coolant temperature is less than 212°F. With reactor coolant temperature less than 212°F and the reactor head unbolted, there is no need for a high pressure trip function, since a high pressure condition cannot be achieved. Therefore, the addition of proposed note (f) does not represent a relaxation of the CTS.

4) *Dresden CTS Tables 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3; Reactor Low Water Level*

The CTS requirement for Reactor Low Water Level is incorporated into proposed Table 3.1.A-1, Item 4. The proposed requirement specifies applicable modes 1 and 2 with minimum channel *requirements. The requirements for proposed Item 4 are consistent with the BWR-STS and the CTS, except as described below:*

The CTS nomenclature has been retained, as opposed to the BWR-STS nomenclature of "Low-Level 3." The current design at Dresden and Quad Cities Stations incorporates a "Low Level" for reactor scram, and a "Low-Low-Level" for ECCS actuation. The current "Low-Level" setpoint is equivalent to the BWR-STS "Low- Level 3." Therefore, the proposed nomenclature represents an administrative change, and as such, is not a relaxation from BWR-STS requirements.

The CTS mode 5 requirement is not applicable for the "Reactor Low Water Level" protective function. Therefore, the mode 5 applicability has not been retained in the proposed TS (Table 3.1.A-1, column 2). This is consistent with BWR-STS requirements. This proposed change does not represent a relaxation of CTS. While in the refuel mode, the reactor status is cold shutdown, the reactor head is detensioned, and the temperature limitations for operational mode 5 eliminate the possibility of a high pressure condition.. In this condition, interlocks are established so that only one control rod may be withdrawn when neutron monitor flux amplifiers are set at the proper sensitivity level and the refueling bridge is not over the reactor. Therefore, since the reactor is in a cold shutdown condition, and the control rods cannot be withdrawn, the Reactor Vessel Water Level - Low (reactor scram) instrumentation is not applicable.

5) *Dresden CTS Tables 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3; Main Steam Line Isolation Valve (MSIV) Closure*

The CTS requirement for Main Steam Line Isolation Valve Closure is incorporated into proposed Table 3.1.A-1, Item 5. The proposed requirement specifies applicable mode 1 (and 2 for Dresden, as modified by proposed Dresden note (j)) with minimum channel requirements. Dresden proposed note (j) states that the function is not required to be operable when reactor pressure is less than 600 psig. . The requirements for proposed Item 5 are consistent with the BWR-STS and the CTS, except as described below:

The CTS mode 5 requirement is not applicable for the "Main Steam Line Isolation Valve Closure" protective function. Therefore, the mode 5 applicability has not been retained in the proposed TS (Table 3.1.A-1, column 2). This proposed change does not represent a relaxation of CTS. While in the refuel mode (mode 5), the reactor status is cold shutdown, the reactor head is detensioned, and the temperature limitations for operational mode 5 eliminate the possibility of a high pressure condition. In this condition, interlocks are established so that only one control rod may be withdrawn when neutron monitor flux amplifiers are set at the proper sensitivity level and the refueling crane is not over the reactor. Therefore, since the reactor is in a cold shutdown condition, and the control rods cannot be withdrawn, the MSIV-Closure (reactor scram) instrumentation is not applicable in operational mode 5.

Dresden CTS state that the function may be bypassed when reactor pressure is less than 600 psig in operational mode 2 (Dresden CTS Table 3.1.1, Note (3)). This note is consistent with proposed Dresden TS note (j). Therefore, the proposed Dresden TS requirement is consistent with Dresden CTS for applicability in operational mode 2.

Quad Cities CTS state that the function is automatically bypassed when reactor pressure is less than 1060 psig (Quad Cities CTS Tables 3.1.1, 3.1.2, and 3.1.3, Note (7) for mode 2). This reflects the current design which automatically bypasses the trip in mode 2 when pressure is less than 1060 *psig. This design is reflected in the proposed TS for Quad Cities. Based upon the current design at Quad Cities, the CTS mode 2 requirement has not been retained in the proposed TS, consistent with BWR-STS. The proposed TS incorporates the intent of Quad Cities CTS note (7) for operational mode 2. Quad Cities CTS note (7) states that the function is automatically bypassed when reactor pressure is less than 1060 psig (Quad Cities CTS Tables 3.1.1, 3.1.2, and 3.1.3, Note (7) for mode 2). In operational mode 2, the heat generation rate is low enough so that the other diverse RPS functions (i.e. IRM Neutron Flux - High and APRM Setdown Neutron Flux - High) provide sufficient protection. Normal operating pressure for Quad Cities Station is less than or equal to 1020 psig. Therefore, the current Quad Cities MSIV-Closure scram is bypassed in Mode 2 at all times during normal reactor startups. Therefore, the proposed deletion of applicability in operational mode 2 does not represent a relaxation of the Quad Cities CTS.*

6) *Dresden CTS Tables 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3; Main Steam Line High Radiation*

The CTS requirement for Main Steam Line High Radiation is incorporated into proposed Table 3.1.A-1, Item 6. The proposed requirement specifies applicable modes 1 and 2, as modified by proposed note (f), with minimum channel requirements. Note (f) is applied to operational mode 2 which allows the function to be inoperable if the reactor vessel head is removed per proposed Specification 3.12.A. This is discussed in item N-3. The requirements for proposed Item 6 are consistent with the BWR-STS and the CTS, except as described below:

The CTS requirement has been renamed to the BWR-STS nomenclature of "Main Steam Line Radiation - High." This is an administrative change to the CTS, and as such does not represent a relaxation of the CTS. The instrumentation used to monitor the parameter has not changed, and is equivalent to the BWR-STS nomenclature.

The CTS mode 5 requirement is not applicable for the "Main Steam Line High Radiation" protective function. Therefore, the mode 5 applicability has not been retained in the proposed TS (Table 3.1.A-1, column 2). This is consistent with BWR-STS requirements. This proposed change to CTS does not represent a relaxation of current requirements. While in the refuel mode, the reactor status is cold shutdown, the reactor head is detensioned, and the temperature limitations for operational mode 5 eliminate the possibility of a high pressure condition. In this condition, interlocks are established so that only one control rod may be withdrawn when neutron monitor flux amplifiers are set at the proper sensitivity level and the refueling bridge is not over the reactor. Therefore, since the reactor is in a cold shutdown condition, and the control rods cannot be withdrawn, the Main Steam Line Radiation - High (reactor scram) instrumentation is not applicable.

Dresden CTS Table 3.1.1, Note (11) is relocated, and Quad Cities CTS Tables 3.1-1, 3.1-2, 3.1-3, Note (12) is deleted from the proposed TS. Dresden CTS note (11) is moved to proposed specification 2.0, Limiting Safety System Settings, where the setpoints are contained. Quad Cities CTS Note (12) provides design information pertaining to the instrumentation, and as such provide no impact upon the applicable modes, minimum operable channels or action requirements. Therefore, the proposed changes do not represent a relaxation of CTS.

7) *Dresden CTS Tables 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3; High Drywell Pressure*

The CTS requirement for High Drywell Pressure is incorporated into proposed Table 3.1.A-1, Item 7. The proposed requirement specifies applicable modes 1 and 2, as modified by proposed note (h) for operational mode 2. Note (h) allows the function to be inoperable when primary containment is not required. This proposed note is consistent with BWR-STS requirements and current Dresden CTS note (7) and Quad Cities CTS note (5). The requirements for proposed Item 7 are consistent with the BWR-STS and the CTS, except as described below:

The CTS requirement has been renamed to the BWR-STS nomenclature of "Drywell Pressure - High." This is an administrative change to the CTS, and as such does not represent a relaxation of the CTS. The instrumentation used to monitor the parameter has not changed, and is equivalent to the BWR-STS nomenclature.

The CTS mode 5 requirement is not applicable for the "High Drywell Pressure" protective function. Therefore, the mode 5 applicability has not been retained in the proposed TS (Table 3.1.A-1, column 2). This is consistent with BWR-STS requirements. This proposed change to CTS does not represent a relaxation of current requirements. While in the refuel mode, the reactor status is cold shutdown, the reactor head is detensioned, and the temperature limitations for operational mode 5 eliminate the possibility of a high pressure condition. In this condition, interlocks are established so that only one control rod may be withdrawn when neutron monitor flux amplifiers are set at the proper sensitivity level and the refueling bridge is not over the reactor. Therefore, since the reactor is in a cold shutdown condition, and the control rods cannot be withdrawn, the High Drywell Pressure instrumentation is not applicable. Therefore, the proposed change does not represent a relaxation of the CTS.

8) *Dresden CTS Tables 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3; High water level in scram discharge volume (thermal and dp switches)*

The CTS requirement for High water level in scram discharge volume (thermal and dp switches) is incorporated into proposed Table 3.1.A-1, Item 8. The proposed requirement specifies applicable modes 1, 2, and 5, as modified by proposed notes (b) and (i) for operational mode 5. The requirements for proposed Item 8 are consistent with the BWR-STS and the CTS, except as described below:

The CTS requirement has been renamed to the BWR-STS nomenclature of "Scram Discharge Volume Water Level - High," and includes the different types of installed switches have separate line item requirements. These modifications are an administrative change to the CTS, and as such do not represent a relaxation of the CTS. The instrumentation used to monitor the parameter has not changed, and is equivalent to the BWR-STS nomenclature.

Dresden CTS Note (2) and Quad Cities CTS note (4) are retained as note (b) in the proposed TS. This note allows the function to be bypassed when a control rod block is present and the reactor scram signal is reset in the refuel and shutdown positions. Note (i) is adopted from the BWR-STS and requires the function to be operable anytime a control rod is withdrawn except for control rods withdrawn in accordance with Specification 3.10.D or 3.10.E. The retention of the CTS note and adoption of the BWR-STS note represent the same or additional requirements, and as such are not a relaxation of CTS.

The proposed TS represent a clarification of BWR-STS requirements, consistent with current TS. The proposed Scram Discharge Volume Water Level High trip function is differentiated by the type of sensors. For Quad Cities Station, there are two different types of sensors, a differential pressure sensor and a thermal switch. For Dresden Station, Unit 2 is equipped with a differential pressure sensor and thermal switch, while Unit 3 is equipped with a differential pressure sensor and float switch. These deviations from BWR-STS are administrative and provide clarification, and therefore do not represent a relaxation of BWR-STS requirements.

9) *Dresden CTS Tables 3.1.1 and Quad Cities CTS Table 3.1-3; Turbine Stop Valve Closure*

The CTS requirement for Turbine Stop Valve Closure is incorporated into proposed Table 3.1.A-1, Item 9. The proposed requirement specifies applicable mode 1, as modified by proposed note (d). The requirements for proposed Item 9 are consistent with the BWR-STS and the CTS, except as described below:

The CTS requirement has been renamed to the BWR-STS nomenclature of "Turbine Stop Valve - Closure." This is an administrative change to the CTS, and as such does not represent a relaxation of the CTS. The instrumentation used to monitor the parameter has not changed, and is equivalent to the BWR-STS nomenclature.

Dresden CTS note (4) and Quad Cities CTS note (9) are incorporated into proposed note (d), with administrative clarification. The CTS notes state that it is permissible to bypass the scram when first stage turbine pressure is less than the pressure corresponding to 45% of rated steam flow. Proposed note (d) states that the trip will be automatically bypassed when thermal power is less than 45% of rated thermal power. The proposed note is consistent with BWR-STS note (j), the plant design, and the intent of the CTS note. The current RPS design at Dresden and Quad Cities incorporates an automatic bypass of the function when first stage turbine pressure is less than 400 psi, or approximately 45% of rated steam flow. Therefore, the proposed change does not represent a relaxation of the CTS.

The Dresden CTS mode 5 requirement is not applicable for the "Turbine Stop Valve Closure" protective function. Therefore, the mode 5 applicability has not been retained in the proposed TS (Table 3.1.A-1, column 2). This is consistent with BWR-STS requirements. This proposed change to CTS does not represent a relaxation of current requirements. While in the refuel mode, the reactor status is cold shutdown, the reactor head is detensioned, and the temperature limitations for operational mode 5 eliminate the possibility of a high pressure condition. In this condition, interlocks are established so that only one control rod may be withdrawn when neutron monitor flux amplifiers are set at the proper sensitivity level and the refueling crane is not over the reactor. Therefore, since the reactor is in a cold shutdown condition, and the control rods cannot be withdrawn, the Turbine Stop Valve Closure scram is not applicable. Therefore the proposed changes do not represent a relaxation of CTS requirements.

The Dresden CTS mode 2 requirement has not been retained in the proposed TS, consistent with proposed note (d) and proposed Action 16. Proposed Action 16 requires that a power reduction be initiated within 15 minutes and thermal power be reduced to less than 45% of rated thermal power within 2 hours. This is the same as BWR-STS Action 6, with a clarification for power reduction. The BWR-STS Action 6 requires reduction of turbine first stage turbine pressure to less than a specified level, equivalent to the associated reactor power. During normal reactor startup in operational mode 2, the heat generation rate is inadequate to raise the turbine first stage *pressure to the specified level. The APRM Setdown Neutron Flux - High trip function provides adequate protection if the heat generation rate is increased to a level which would result in the specified turbine first stage pressure. In addition, when reactor power is below 45%, the applicable transient fpr this protective function does not threaten the fuel integrity. Based upon this information, the Turbine Stop Valve Closure scram is not applicable in operational mode 2. Therefore the proposed changes do not represent a relaxation of CTS requirements.*

10) *Dresden CTS Tables 3.1.1, Turbine Control - Loss of Control Oil Pressure; and Quad Cities CTS Table 3.1-3, Turbine EHC control fluid low pressure*

The Dresden CTS requirement for Turbine Control - Loss of Control Oil Pressure, and the Quad Cities CTS requirement for Turbine EHC control fluid low pressure are incorporated into proposed Item 10, "Turbine EHC Control Oil Pressure - Low." The proposed requirement specifies applicable mode 1, as modified by proposed note (d). This proposed trip function is not in the BWR-STS, but is retained from Dresden and Quad Cities CTS.

The CTS mode 5 requirement is not applicable for the Dresden "Turbine Control - Loss of Control Oil Pressure;" and the Quad Cities "Turbine EHC control fluid low pressure" protective functions. Therefore, the mode 5 applicability has not been retained in the proposed TS (Table 3.1.A-1, column 2). This is consistent with BWR-STS requirements. This does not represent a relaxation of current requirements. While in the refuel mode, the reactor status is cold shutdown, the reactor head is detensioned, and the temperature limitations for operational mode 5 eliminate the possibility of a high pressure condition. In this condition, interlocks are established so that only one control rod may be withdrawn when flux amplifiers are set at the proper sensitivity level and the refueling crane is not over the reactor. Therefore, since the reactor is in a cold shutdown condition, and the control rods cannot be withdrawn, the Turbine Stop Valve Closure scram is not applicable. Therefore the proposed changes do not represent a relaxation of CTS requirements.

The Dresden CTS mode 2 requirement has not been retained in the proposed TS, consistent with proposed note (d) and proposed Action 16. Proposed Action 16 requires that a power reduction be initiated within 15 minutes and thermal power be reduced to less than 45% of rated thermal power within 2 hours. This is the same as BWR-STS Action 6, with a clarification for power reduction. The BWR-STS Action 6 requires reduction of turbine first stage turbine pressure to less than a specified level, equivalent to the associated reactor power. During normal reactor startup in operational mode 2, the heat generation rate is inadequate to raise the turbine first stage pressure to the specified level. The APRM Setdown Neutron Flux - High trip function provides adequate protection if the heat generation rate is increased to a level which would result in the specified turbine first stage pressure. Based upon this additional protection, the Turbine EHC Control Oil Pressure - Low scram is not applicable in operational mode 2. Therefore the proposed changes do not represent a relaxation of CTS requirements.

11) *Dresden CTS Tables 3.1.1, Generator Load Rejection; and Quad Cities CTS Table 3.1-3, Turbine control valve fast closure, valve trip system oil pressure low.*

The Dresden CTS requirement for Generator Load Rejection, and the Quad Cities CTS requirement for Turbine control valve fast closure - valve trip system oil pressure low, are incorporated into proposed Item 11, "Turbine Control Valve Fast Closure." These two protective functions are equivalent, and represent the requirements for the Fast Acting Solenoid valves at Dresden and Quad Cities Station. These were added to the Dresden Units 2 and 3 and Quad Cities Units 1 and 2 TS

by Amendments 115/112 and 129/125 respectively.
The proposed requirement specifies applicable mode 1, as modified by proposed note (d). The requirements for proposed Item 11 are consistent with the BWR-STS and the CTS, except as described below:

The CTS requirement has been renamed to the BWR-STS nomenclature of "Turbine Control Valve Fast Closure." This is an administrative change to the CTS, and as such does not represent a relaxation of the CTS. The instrumentation used to monitor the parameter has not changed, and is equivalent to the BWR-STS nomenclature.

The Dresden CTS mode 5 requirement is not applicable for the "Generator Load Rejection" protective function. Therefore, the mode 5 applicability has not been retained in the proposed TS (Table 3.1.A-1, column 2). This is consistent with BWR-STS requirements. This proposed change to CTS does not represent a relaxation of current requirements. While in the refuel mode, the reactor status is cold shutdown, the reactor head is detensioned, and the temperature limitations for operational mode 5 eliminate the possibility of a high pressure condition. In this condition, interlocks are established so that only one control rod may be withdrawn when flux amplifiers are set at the proper sensitivity level and the refueling crane is not over the reactor. Therefore, since the reactor is in a cold shutdown condition, and the control rods cannot be withdrawn, the Turbine Stop Valve Closure scram is not applicable. Therefore the proposed changes do not represent a relaxation of CTS requirements.

The Dresden CTS mode 2 requirement has not been retained in the proposed TS, consistent with proposed note (d) and proposed Action 16. Proposed Action 16 requires that a power reduction be initiated within 15 minutes and thermal power be reduced to less than 45% of rated thermal power within 2 hours. This is the same as BWR-STS Action 6, with a clarification for power reduction. The BWR-STS Action 6 requires reduction of turbine first stage turbine pressure to less than a specified level, equivalent to the associated reactor power. During normal reactor startup in operational mode 2, the heat generation rate is inadequate to raise the turbine first stage pressure to the specified level. The APRM Setdown Neutron Flux - High trip function provides adequate protection if the heat generation rate is increased to a level which would result in the specified turbine first stage pressure. Based upon this additional protection, the Turbine Control Valve Fast Closure scram is not applicable in operational mode 2. Therefore the proposed changes do not represent a relaxation of CTS requirements.

12) *Dresden CTS Tables 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3; Turbine Condenser Low Vacuum*

The CTS requirement for Turbine Condenser Low Vacuum is incorporated into proposed Item 12. The proposed requirement specifies applicable modes 1 (and 2 for Dresden as modified by proposed note (j)) with minimum channel requirements. This proposed trip function is not in the BWR-STS, but is retained from Dresden and Quad Cities CTS, and is consistent with the CTS, except as described below:

The CTS mode 5 requirement is not applicable for the "Turbine Condenser Low Vacuum" protective function. Therefore, the mode 5 applicability has not been retained in the proposed TS (Table 3.1.A-1, column 2). This is consistent with BWR-STS requirements. This proposed change to CTS does not represent a relaxation of current requirements. By definition, while *in the refuel mode (mode 5), the reactor status is cold shutdown. In this condition, interlocks are established so that only one control rod may be withdrawn when flux amplifiers are set at the proper sensitivity level and the refueling crane is not over the reactor. Therefore, since the reactor is in a cold shutdown condition, and the control rods cannot be withdrawn, the Turbine Condenser Low Vacuum (scram) instrumentation is not applicable.*

Dresden CTS also state that the function may be bypassed when reactor pressure is less than 600 psig (Dresden CTS Table 3.1.1, Note (3) for mode 2). Based upon the current requirements, both Dresden and Quad Cities may bypass the Turbine Condenser Low Vacuum scram function while in operational mode 2, if the reactor pressure is less than the setpoint stipulated in the applicable table note. This current requirement is reflected in the proposed TS for Dresden. The Dresden proposed TS retain the Dresden CTS requirement for applicable mode, as modified by the proposed note (j). Since Dresden CTS requirements are maintained in the proposed TS, the proposed change to the Dresden TS (including proposed Dresden TS note (j)) does not represent a relaxation of the CTS.

The Quad Cities CTS mode 2 requirement has not been retained in the proposed TS, consistent with BWR-STS. The proposed TS incorporates the intent of Quad Cities CTS note (7) for operational mode 2. In operational mode 2, the heat generation rate is low enough so that the other diverse RPS functions (i.e. IRM Neutron Flux - High and APRM Setdown Neutron Flux - High) provide sufficient protection. In addition, Quad Cities CTS note (7) states that the function is automatically bypassed when reactor pressure is less than 1060 psig (Quad Cities CTS Tables 3.1.1, 3.1.2, and 3.1.3, Note (7) for mode 2). Normal operating pressure for Quad Cities Station is less than or equal to 1020 psig. Therefore, the current Quad Cities Turbine Condenser Low Vacuum scram instrumentation is bypassed in Mode 2 at all times during normal reactor startups. Therefore, the proposed deletion of applicability in operational mode 2 does not represent a relaxation of the Quad Cities CTS.

13) *Dresden CTS Tables 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3; Mode Switch in Shutdown*

The CTS requirement for Mode Switch in Shutdown is incorporated into proposed Item 13. The proposed requirement specifies applicable modes 1, 2, 3, 4, and 5 with a single minimum channel requirement. One channel per trip system is required in each operational mode. This is consistent with BWR-STS, with the exception of the minimum operable channels. There is only one protective channel for the Shutdown position of the mode switch in the Dresden and Quad Cities design. The proposed change is consistent with the CTS, except as described below:

The CTS requirement has been renamed to the BWR-STS nomenclature of " Reactor Mode Switch Shutdown Position." This does not represent a relaxation of the current requirement. The equipment used to satisfy the requirement has not changed, and is equivalent to the new description. Therefore, the proposed nomenclature represents an administrative change, and as such, is not a relaxation of the current specifications.

14) *Dresden CTS Tables 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3; Manual Scram*

The CTS requirement for Manual Scram is incorporated into proposed Item 14. The proposed requirement specifies applicable modes 1, 2, 3, 4, and 5 with a single minimum channel requirement. One channel per trip system is required in each operational mode. This is consistent *with BWR-STS, with the exception of the minimum operable channels. There is only one protective channel per trip system with two trip systems in the Dresden and Quad Cities design. The proposed change is consistent with the CTS and BWR-STS.*

O) *Dresden CTS Tables 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3: Table Notes*

The attached RAI 3/4.1 Table 1, "Table Notation: Dresden CTS Table 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3 (CTS Table 3.1-4); Proposed TS Table 3.1.A-1" describes the relocation of the table notation from Dresden CTS Table 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3 (Quad Cities CTS Table 3.1-4) to the proposed TS. The description and justification for each relocation and/or change to the CTS table notation is provided below:

1) *Dresden and Quad Cities CTS note (1)*

Dresden and Quad Cities CTS note (1) modifies the "Minimum Operable Channels" column of the CTS tables, and states that there shall be two operable or tripped trip systems for each function. This requirement provides clarifying information relative to the minimum requirements for each protective function. The note has been deleted, and the clarifying requirement has been incorporated into proposed TS 3.1.A, Action 2, consistent with BWR-STS. Proposed Action 2 provides the required action if there is less than the minimum operable channels in both trip systems. Incorporation of proposed Action 2 is discussed in item G above.

The incorporation of the CTS note (1) requirement into the proposed Action enhances the current requirements by providing a more clear and definite action requirement when there is less than the minimum number of operable channels in two trip systems. As such, the proposed change represents a more conservative operating philosophy, and therefore does not represent a relaxation of the CTS.

2) *Dresden CTS note (2) and Quad Cities CTS note (4)*

Dresden CTS note (2) and Quad Cities CTS note (4) have been relocated to proposed note (b). This is discussed in item N-8 above.

3) *Dresden CTS note (3) and Quad Cities CTS note (7)*

Dresden CTS note (3) has been relocated to proposed note (j) in the Dresden proposed TS, and Quad Cities CTS note (7) has been deleted from the Quad Cities proposed TS. This is discussed in item N-5 above.

4) *Dresden CTS note (4) and Quad Cities CTS note (9)*

Dresden CTS note (4) and Quad Cities CTS note (9) have been relocated to proposed note (d). This is discussed in items N-9, N-10, and N-11 above.

5) *Dresden CTS note (5) and Quad Cities CTS note (6)*

Dresden CTS note (5) and Quad Cities CTS note (6) clarify the minimum operable channel requirement for the MSIV Closure function. This has been deleted from the proposed TS. The CTS note provides design information which is more appropriate for plant administrative controls (i.e.

procedures). Therefore, the deletion of Dresden CTS note (5) does not represent a relaxation of any CTS requirement.

6) *Dresden CTS note (6)*

Dresden CTS note (6) clarifies the required applicable mode column for the refuel mode. This has been deleted from the proposed TS. The Dresden CTS note provides design information which is more appropriate for plant administrative controls (i.e. procedures). Therefore, the deletion of Dresden CTS note (6) does not represent a relaxation of any CTS requirement.

7) *Dresden CTS note (7) and Quad Cities CTS note (5)*

Dresden CTS note (7) and Quad Cities CTS note (5) have been relocated to proposed note (h). This is described in item N-7 above.

8) *Dresden CTS note (8)*

Dresden CTS note (8) modifies the mode 2 applicability requirement for the APRM-High Flux and APRM-Inoperative protective functions. This has been deleted from the proposed TS. The Dresden CTS note allows a relaxation of scram requirements in mode 2. This note is unnecessary and potentially nonconservative, relative to the BWR-STS. Therefore, the deletion of Dresden CTS note (8) does not represent a relaxation of any CTS requirement.

9) *Dresden CTS note (9)*

Dresden CTS note (9) modifies applicability requirements for the High Drywell Pressure. This has been deleted from the proposed TS. The Dresden CTS note allows a relaxation of scram requirements in mode 2. This note is unnecessary and potentially nonconservative, relative to the BWR-STS. Therefore, the deletion of Dresden CTS note (9) does not represent a relaxation of any CTS requirement.

10) *Dresden CTS note (10)*

Dresden CTS note (10) has been relocated to proposed TS note (f). This is described in item N-3 above.

11) *Dresden CTS note (11)*

Dresden CTS note (11) clarifies the applicability requirement in mode 1 for the Main Steamline High Radiation function. Dresden CTS note (11) is moved to proposed specification 2.0, Limiting Safety System Settings, where the setpoints are contained. The relocation of Dresden CTS note (11) does not represent a relaxation of any CTS requirement.

12) *Dresden CTS note * and Quad Cities note (2)*

*Dresden CTS note * and Quad Cities CTS note (2) modify the "Action" column of the CTS tables. The note provides the required actions when the minimum operable channel requirement cannot be met for one trip system and for both trip systems. The provisions of the note, and the action requirements, have been incorporated into proposed TS 3.1.A, Actions 1 and 2. The* *incorporation of the CTS notes into the proposed Actions enhances the current requirements by providing more clear and definite action requirements when the minimum number of operable channel requirement cannot be satisfied. As such, the proposed change represents a more conservative operating philosophy, and therefore does not represent a relaxation of the CTS.*

13) *Dresden CTS note * a,b,c, and d; Quad Cities note (2) A,B, and C*

*Dresden CTS note *a and Quad Cities note (2.A have been relocated to proposed TS Action 12. Dresden CTS note *b and Quad Cities note (2)B have been relocated to proposed TS Action 14. Dresden CTS note *c and Quad Cities note (2)C have been relocated to proposed TS Action 15. Dresden CTS note *d has been relocated to proposed TS Action 13. Proposed Actions 12, 13, 14, and 15 are described and justified in the response to Specific Question # 2.*

14) *Dresden CTS note ** and Quad Cities CTS note (3)*

*Dresden CTS note ** and Quad Cities CTS note (3) have been relocated to proposed TS note (e). This is discussed in item N-2i above. The CTS notes modify the operability requirement for the APRM-Inoperative protective function. The proposed note adopts the wording and nomenclature of the BWR-STS, which clarifies the intent of the CTS note. As such, the relocation of, and proposed change to Dresden CTS note ** and Quad Cities CTS note (3) are administrative in nature, and do not represent a relaxation of the CTS.*

15) *Dresden CTS note *** and Quad Cities CTS note (8)*

*Dresden CTS note *** and Quad Cities CTS note (8) clarifies the trip level setting for the Reactor Level Low Water protective function. This has been deleted from the proposed TS. The CTS notes provide design information which is more appropriate for plant administrative controls (i.e. procedures and UFSAR).*

16) *Dresden CTS note **** and Quad Cities CTS note (10)*

*Dresden CTS note **** and Quad Cities CTS note (10) provide information related to the fast acting solenoid valve trip function (Dresden CTS requirement for Generator Load Rejection, and the Quad Cities CTS requirement for Turbine control valve fast closure - valve trip system oil pressure low). The CTS notes provide clarifying information which is more appropriate for plant administrative controls (i.e. procedures and UFSAR).*

17) *Quad Cities CTS note (11)*

Quad Cities CTS note (11) modifies the operability requirement for the APRM Downscale scram function. This trip function has been deleted from the proposed TS, and is discussed in item N-2.

18) *Quad Cities CTS note (12)*

Quad Cities CTS note (12) clarifies the operability requirement for the Main Steam Line High Radiation function. This has been deleted from the proposed TS. The Quad Cities CTS note provides design information which is more appropriate for plant administrative controls (i.e. procedures and UFSAR). Therefore, the deletion of Quad Cities CTS note (12) does not represent a relaxation of any CTS requirement.

18) *Proposed TS note (a)*

Proposed TS note (a) is an addition to the Dresden and Quad Cities CTS. The adoption of the proposed note is described in item Fii above and in the response to Specific Question # 1.

19) *Proposed TS notes (c) & (g)*

Proposed TS notes (c) and (g) are an addition to the CTS, and are described in items N-1 and N-2 respectively.

20) *Proposed TS note (i)*

Proposed TS note (i) is an addition to the CTS. The adoption of the proposed note is described in the response to item N-8.

P) Dresden CTS Tables 4.1.1 and 4.1.2 ; Quad Cities CTS Tables 4.1-1 and 4.1-2

Dresden CTS 4.1.A.1 and Quad Cities CTS 4.1.A require functional tests and calibration of RPS instrumentation systems as listed in Dresden CTS Tables 4.1.1 and 4.1.2, and Quad Cities CTS Tables 4.1-1 and 4.1-2. These tables have been incorporated into proposed Table 4.1.A-1. The use of a single table for this purpose will help eliminate the possibility of using the wrong table to determine surveillance requirements, and will implement a format similar to later plants using the BWR-STS.

1) *The proposed table 4.1.A-1 deletes the CTS table column labeled "Group." This column references the CTS Bases, which provide design information related to the applicable RPS instrument. This design information is more appropriate for plant administrative controls (i.e. procedures and UFSAR). As such, the deletion of the information is administrative, and does not represent a relaxation of CTS.*

2) *The proposed table 4.1.A-1 replaces the Dresden and Quad Cities CTS table (4.1.1 and 4.1-1) column labeled "Functional Test." This column provides clarifying information related to the procedure for performing a functional test of each RPS instrument. This clarifying information is more appropriate for plant administrative controls (i.e. procedures and UFSAR). As such, the deletion of the information is administrative, and does not represent a relaxation of CTS.*

3) *Proposed table 4.1.A-1 deletes the Dresden and Quad Cities CTS table (4.1.2 and 4.1-2) column labeled "Calibration Test" (Dresden CTS Table 4.1.2) and "Calibration Standard" (Quad Cities CTS Table 4.1-2). This column provides clarifying information related to the procedure for performing a calibration of each RPS instrument. This clarifying information is more appropriate for plant administrative controls (i.e. procedures and UFSAR). As such, the deletion of the information is administrative, and does not represent a relaxation of CTS.*

4) *Proposed Table 4.1.A-1 specifies the applicable modes for each surveillance requirement for each RPS instrument, consistent with BWR-STS. The applicable modes in proposed Table 4.1.A-1 are consistent with the applicable modes in proposed Table 3.1.A-1. This specification of applicable modes in the proposed table is an addition to the CTS. The proposed addition provides explicit guidance and requirements for the performance of surveillance requirements in various operational modes. This represents an enhancement to the CTS, and is therefore more conservative than the CTS.*

5) *The Quad Cities CTS Table 4.1-1 surveillance requirements for the APRM - Downscale instrument were not retained in the proposed TS. This is consistent with deletion of the Quad Cities CTS requirements associated with the APRM Downscale protective function, and deletion of Quad Cities CTS Table 3.1.A-1 note (11). This is discussed and justified in item N-2 above. Based upon the information in item N-2 above, the deletion of the APRM Downscale surveillance requirements does not represent a relaxation of the CTS.*

6) *The Quad Cities CTS Table 4.1-2 specifies calibration requirements for the LPRM instruments, as modified by CTS note (6). This requirement has been relocated to proposed note (f). In addition, Dresden and Quad Cities CTS note (6) have been deleted from the proposed TS. This discussed in response to Specific Question #4.*

7) *Proposed Table 4.1.A-1 incorporates explicit requirements for channel checks of the RPS instruments in the applicable operational modes. The explicit requirement (in the form of a new column in the proposed table) is consistent with the format and requirements of BWR-STS, and represents an enhancement to the CTS. Therefore, the addition of the "Channel Check" column and requirements is more conservative than the CTS. The attached RAI 3/4-1 Table 2, "Surveillance Intervals: Dresden CTS Tables 4.1.1 and 4.1.2; Quad Cities CTS Tables 4.1-1 and 4.1-2; Proposed TS Table 4.1.A-1" describes the CTS and proposed TS Surveillance frequencies for each RPS protective function. The description and justification for each relocation and/or change to the CTS tables is provided below:*

i) *Channel Checks:*

The proposed Table 4.1.A-1 adds Channel Check requirements, consistent with BWR-STS requirements, for the following RPS instruments specified in CTS:

IRM - High flux	*Once-per-shift (modes 3, 4, and 5)* *Startup and Once-per-shift (mode 2)*
APRM High flux - 15%	*Once-per-shift (modes 3 and 5)* *Startup and Once-per-shift (mode 2)*
APRM High flux	*Once-per-shift (mode 1)*
High Flux APRM Flow Bias	*Once daily (mode 1)*

Proposed Table 4.1.A-1 retains the one-per-shift CTS channel check requirement for Main Steam Line High Radiation, and the once-per-day CTS channel check requirement for Reactor Low Water Level instrument . The current requirements are specified in Dresden CTS Table 4.1.1 note (2) and Quad Cities CTS Table 4.1-1 note (2). Based upon the inclusion of a "Channel Check" column in proposed Table 4.1.A-1, CTS note (2) has been deleted. This is an administrative change, and therefore does not represent a relaxation of the CTS.

Dresden CTS Table 4.1.1 and Quad Cities CTS Table 4.1-1 do not require a channel check of the remaining RPS instruments. This has been retained and incorporated within proposed Table 4.1.A-1.

ii) Dresden CTS Table 4.1.1 and Quad Cities CTS Table 4.1-1; Functional Tests

a) Retention of Current Requirements

Based upon the information in the attached RAI 3/4.1 - Table 2, the following CTS functional test surveillance requirements (Dresden CTS Table 4.1.1 and Quad Cities CTS Table 4.1-1) have been retained in the proposed TS. Therefore, this retention of requirements does not represent a relaxation of CTS.

IRM - High Flux
APRM - Inoperative
APRM - High Flux
APRM - High Flux 15%
High Reactor Pressure
High Drywell Pressure
Reactor Low Water Level
High Water Level in Scram Discharge Volume
Turbine Condenser Low Vacuum
MSIV Closure
Generator Load Reject - Turbine Control Valve Fast Closure (Dresden)
Turbine Control Valve Fast Closure - Valve Trip System Oil Pressure low (Quad)
Turbine Stop Valve Closure
Turbine EHC Control Fluid Low Pressure
Mode Switch in Shutdown

IRM - Inoperative
The Dresden and Quad Cities CTS surveillance requirement for this protective function requires a functional test before each startup; The Quad Cities CTS also requires a functional test weekly during refueling. The CTS requirements are modified by Dresden and Quad Cities CTS note (6), which stipulates that the frequency of functional tests shall not exceed weekly. The proposed TS incorporates the CTS note (6) into the surveillance interval by requiring a functional test weekly in modes 2, 3, 4, and 5. This is consistent with BWR-STS requirements, and implements the CTS requirements. The proposed TS provide a more clear and unambiguous surveillance requirement, including applicable operational modes. Therefore the proposed TS provide a more conservative approach for the surveillance requirement. As such, the proposed TS are not a relaxation of CTS.

b) Adoption of More Restrictive Requirements

Based upon the information in the attached RAI Table 2, the following CTS functional test surveillance requirements (Dresden CTS Table 4.1.1 and Quad Cities CTS Table 4.1-1) have been revised to incorporate more restrictive requirements into the proposed TS. As such, these proposed requirements are more conservative than the CTS.

High Flux APRM - Flow Bias
Manual Scram

c) *Adoption of Less Restrictive Requirements*

Based upon the information in the attached RAI 3/4.1 Table 2, the following CTS functional test surveillance requirement (Dresden CTS Table 4.1.1 and Quad Cities CTS Table 4.1-1) has been revised to incorporate less restrictive requirements into the proposed TS:

Main Steam Line High Radiation
The Dresden and Quad Cities CTS surveillance requirement for this protective function requires a functional test once per week. The proposed frequency has been changed to once per month. This proposed frequency is consistent with BWR-STS and accepted industry practices, and is technically supported by instrument failure history at both Dresden and Quad Cities Station. In addition, both Dresden and Quad Cities Stations have installed "NUMAC" Main Steamline radiation monitor drawers, which continuously perform internal, online diagnostic circuit checks. These checks are performed by internal hardware that is independent of the sensing circuitry. Therefore, the requirement to perform manual trip checks (functional tests) once per week does not provide additional assurance of functionality.

iii) *Dresden CTS Table 4.1.2 and Quad Cities CTS Table 4.1-2; Calibration Tests*

a) *Retention of Current Requirements*

Based upon the information in RAI Table 2 above, the following CTS calibration test surveillance requirements (Dresden CTS Table 4.1.2 and Quad Cities CTS Table 4.1-2) have not been changed in the proposed TS:

IRM - Inoperative
APRM - Inoperative
High Reactor Pressure
High Drywell Pressure
Turbine Condenser Low Vacuum
Generator Load Reject - Turbine Control Valve Fast Closure (Dresden)
Turbine Control Valve Fast Closure - Valve Trip System Oil Pressure low (Quad)
Turbine EHC Control Fluid Low Pressure
Mode Switch in Shutdown
Manual Scram

High Water Level in Scram Discharge Volume
The Dresden CTS and Quad Cities CTS only require calibration of the differential pressure switches. The Dresden and Quad Cities CTS does not require a channel calibration for the thermal switches (Quad Cities Unit 1 and Unit 2 and Dresden Unit 2) and float switches (Dresden Unit 3). These switches can not be calibrated in accordance with the definition of channel calibration. That is, the channel output is either a go or no-go indication. Therefore, the channel output cannot be adjusted "such that it responds with the necessary range and accuracy to known values of the parameter which the channel monitors."

Main Steam Line High Radiation

The Dresden CTS requirement specifies a channel calibration every three months, as modified by CTS Table 4.1.2 note (3). This note states that a current source provides an instrument channel alignment, and channel calibration using a radiation source shall be performed once per refuel outage. The Quad Cities CTS specifies a channel calibration once per refuel outage, as modified by CTS Table 4.1-2 note (3). This note states that a current source provides an instrument channel alignment every three months. Therefore, the CTS for both Dresden and Quad Cities require a channel calibration once-per-refuel outage. The proposed TS maintains this requirement within proposed TS Table 4.1.A-1, and deletes CTS note (3). The proposed TS provide a more clear and unambiguous surveillance requirement, including applicable operational modes. As such, the proposed TS are not a relaxation of the CTS.

Reactor Low Water Level

The CTS surveillance requirement for this protective function requires a monthly calibration of trip units, and a once-per-cycle calibration of transmitters. This is currently delineated in Dresden CTS Table 4.1.2 note (5) and Quad Cities 4.1-2 note (7). These CTS notes specify that trip units are calibrated monthly, and transmitters are calibrated once per cycle. The proposed TS incorporate a sesquiannual (i.e. once per 18 months) calibration requirement into Table 4.1.A-1 item 4, as modified by proposed note (h). Proposed note (h) requires a monthly calibration of the trip units. The proposed requirements are consistent with the current requirements. The proposed TS provide a more clear and unambiguous surveillance requirement, including applicable operational modes. As such, the proposed TS are not a relaxation of the CTS.

b) Adoption of More Restrictive Requirements

Based upon the information in RAI Table 2 above, the following CTS calibration test surveillance requirements (Dresden CTS Table 4.1.2 and Quad Cities CTS Table 4.1-2) have incorporated more restrictive requirements into the proposed TS:

APRM High Flux - 15%
MSIV Closure
Turbine Stop Valve Closure

High Flux APRM - Flow Bias
High Flux APRM - Output Signal

The CTS surveillance requirements for these protective functions require a channel calibration once per refuel outage (Output Signal) and a weekly calibration of the heat balance (Flow Bias). The proposed TS (APRM Flow Biased Neutron Flux - High and Fixed Neutron Flux - High) require a channel calibration semiannually (i.e. once per six months), consistent with BWR-STS requirements and a weekly calibration which includes comparing the APRM values with the plant heat balance and adjustment of the core flow bias [proposed TS notes (d) and (e) respectively], consistent with BWR-STS. The semiannual calibration is more conservative than the CTS frequency of once per refuel outage. The weekly calibration of heat balance and adjustment of the core flow bias is consistent to the CTS requirements. The *proposed TS [proposed notes (d) and (e)] provide a more clear and unambiguous surveillance requirement, including applicable operational modes. As such, the proposed TS are not a relaxation of the CTS.*

Q) Dresden CTS Tables 4.1.1 and 4.1.2; Quad Cities CTS Tables 4.1-1, 4.1-2: Table Notes; Dresden CTS Figure 4.1.1 and Quad Cities CTS 4.1-1

The attached RAI 3/4.1 Table 3, "Table Notation: Dresden CTS Tables 4.1.1 and 4.1.2; Quad Cities CTS Tables 4.1-1 and 4.1-2," describes the relocation of the table notation from the specified CTS tables to the proposed TS. The description and justification for each relocation and/or change to the CTS table notation is also provided below:

1) Dresden CTS Table 4.1.1 note (1); Quad Cities CTS Table 4.1-1 note (1)

Dresden CTS Table 4.1.1 note (1), Quad Cities CTS Table 4.1-1 note (1), and the accompanying CTS graphs (Dresden CTS Figure 4.1.1 and Quad Cities CTS Figure 4.1-1) allows the functional test frequency for the affected parameters to be extended to quarterly using an outdated methodology. This note and the accompanying graphs are being deleted from the proposed TS. Functional test frequencies are specified in proposed TS Table 4.1.A-1. These are discussed in item P.7.ii above. The deletion of the note and associated graph represents a more conservative approach for determining functional test surveillance frequencies, consistent with BWR-STS and other licensees. Therefore, the deletion of the note and graph does not represent a relaxation of the CTS.

2) Dresden CTS Table 4.1.1 note (2); Quad Cities CTS Table 4.1-1 note (2)

Dresden CTS Table 4.1.1 note (2) and Quad Cities CTS Table 4.1-1 note (2) require channel checks for the Low Reactor Water Level and Main Steam Line High Radiation functions. These requirements have been incorporated into proposed TS Table 4.1.A-1, column 3, Items 4 and 6. This is an administrative change, and therefore does not represent a relaxation of the CTS.

3) Dresden CTS Table 4.1.1 note (3) and CTS Table 4.1.2 note (1); Quad Cities CTS Table 4.1-1 note (3) and CTS Table 4.1-2 note (1)

Dresden CTS Table 4.1.1 note (3), Dresden CTS Table 4.1.2 note (1), Quad Cities CTS Table 4.1-1 note (3), and Quad Cities CTS Table 4.1-2 note (1) modify the table column labeled "Group". This column, and the modifying note, provide clarifying information related to the procedure for performing a calibration of each RPS instrument. These notes have been deleted in the proposed TS. The clarifying information in the notes is more appropriate for plant administrative controls (i.e. procedures and UFSAR). As such, the deletion of the information and note is administrative, and does not represent a relaxation of CTS.

4) Dresden CTS Table 4.1.1 note (4) and CTS Table 4.1.2 note (2); Quad Cities CTS Table 4.1-1 note (4) and CTS Table 4.1-2 note (2);

Dresden CTS Table 4.1.1 note (4), Dresden CTS Table 4.1.2 note (2), Quad Cities CTS Table 4.1-1 note (4), and Quad Cities CTS Table 4.1-2 note (2) modify the table columns which specify the minimum frequencies for functional tests and channel calibrations. The note states that the specified surveillances are not required when the systems are not required to be operable or are *tripped. The notes also state that if the tests are missed, they shall be performed prior to returning the systems to operable status.*

These notes have been incorporated into proposed TS Table 4.1.A-1 column 2, and TSUP 4.0.A. Proposed TS Table 4.1.A-1 incorporates the BWR-STS format, which includes the applicable modes for each RPS instrument. This is a more clear and unambiguous method for delineating the surveillance requirements for a particular instrument. TSUP 4.0.A establishes the requirement that surveillances must be performed during the operational modes for which the requirements of the LCO apply, unless otherwise specified. TSUP 4.0.A was approved by the NRC staff on February 16, 1995 for both Dresden and Quad Cities. The incorporation of the specified notes into the proposed (and approved) TS represents a more conservative approach for determining functional test surveillance frequencies, consistent with BWR-STS and other licensees. Therefore, the deletion of the note and graph does not represent a relaxation of the CTS.

5) *Dresden CTS Table 4.1.1 note (5); Quad Cities CTS Table 4.1-1 note (5)*

Dresden CTS Table 4.1.1 note (5) and Quad Cities CTS Table 4.1-1 note (5) provides clarifying information for the IRM and APRM High Flux functional test requirement. This CTS note provides design information which is more appropriate for plant administrative controls (i.e. procedures and UFSAR). Therefore, the deletion of Dresden CTS Table 4.1.1 note (5) and Quad Cities CTS Table 4.1-1 note (5) does not represent a relaxation of any CTS requirement.

6) *Dresden CTS Table 4.1.1 note (6) and CTS Table 4.1.2 note (4); Quad Cities CTS Table 4.1-1 note (6) and CTS Table 4.1-2 note (4)*

Dresden CTS Table 4.1.1 note (6), Dresden CTS Table 4.1.2 note (4), Quad Cities CTS Table 4.1-1 note (6), and Quad Cities CTS Table 4.1-2 note (4) clarify the functional test and calibration frequencies during reactor startup for specific neutron monitoring RPS instruments. The notes state that the surveillance frequency need not exceed weekly for the specified instruments and startup surveillances if the reactor startups occur more frequently than once per week. The proposed TS incorporates the CTS Table 4.1.1 (4.1-1 for Quad Cities) note (6) and CTS Table 4.1.2 (4.1-2 for Quad Cities) note (4) into proposed note (c). This is consistent with BWR-STS requirements, and implements the CTS requirements. The proposed TS provide a more clear and unambiguous surveillance requirement, including applicable operational modes. Therefore the proposed TS provide a more conservative approach for the surveillance requirement. As such, the proposed TS do not represent a relaxation of CTS.

7) *Dresden CTS Table 4.1.1 note (7); Quad Cities CTS Table 4.1-1 note (9)*

Dresden CTS Table 4.1.1 note (7) and Quad Cities CTS Table 4.1-1 note (9) clarify the functional test requirement in the CTS "Functional Test" column for the High Water Level in Scram Discharge Volume function. This column, and the modifying note, provide clarifying information related to the procedure for performing a functional test of the specified RPS instruments (an additional discussion regarding the calibration of these instruments is described in item P-7iii.b above). This clarifying information is more appropriate for plant administrative controls (i.e. procedures and UFSAR). As such, the deletion of the information and note is administrative, and does not represent a relaxation of CTS.

8) *Dresden CTS Table 4.1.1 note (8); Quad Cities CTS Table 4.1-1 note (8)*
Dresden CTS Table 4.1.2 note (5); Quad Cities CTS Table 4.1-2 note (7)

Dresden CTS Table 4.1.1 note (8) and Quad Cities CTS Table 4.1-1 note (8) modifies the functional test requirement in the CTS "Functional Test" column for the Low Reactor Water Level function. This column, and the modifying note, provide clarifying information related to the procedure for performing a functional test for the specified RPS instrument. This information has been incorporated into proposed TS Table 4.1.A-1, Item 4, and proposed note (h). The proposed TS provide a more clear and unambiguous delineation of the functional test requirements for the functional test requirements for the Low Reactor Water Level function. As such, the proposed TS does not represent a relaxation of CTS.

9) *Quad Cities CTS Table 4.1-1 note (7)*

The Quad Cities CTS note modifies the "Functional Test" column, and states that the functional test, coupled with placing the mode switch in shutdown each refueling outage constitutes a Logic System Functional Test (LSFT) of the scram system. This has been incorporated into proposed TS 4.1.A.2. This proposed TS requires an LSFT of all RPS channels every 18 months, as opposed to the CTS requirement for placing the mode switch in the shutdown position. This proposed requirement results in a more comprehensive set of LSFTs than the CTS requirement. Therefore, the proposed change does not represent a relaxation of the CTS.

10) *Dresden CTS Table 4.1.2 note (3); Quad Cities CTS Table 4.1-2 note (3)*

Dresden CTS Table 4.1.2 note (3) and Quad Cities CTS Table 4.1-2 note (3) clarifies the calibration test requirement in the CTS "Calibration Test" (Dresden)/"Calibration Standard" (Quad Cities) column for the Main Steam Line High Radiation function. This column, and the modifying note, provide clarifying information related to the procedure for performing a functional test of the specified RPS instrument. This note has been incorporated into proposed TS Table 4.1.A-1, item 6. This is discussed in item P.7.iii.a above.

11) *Quad Cities CTS Table 4.1-2 note (5)*

The Quad Cities CTS Table 4.1-2 note (5) modifies the "Calibration Standard" column, and requires a check of the response time once per refueling outage. This has been relocated to proposed TS 4.1.A.3. The proposed TS is consistent with BWR-STS, and provides a more clear and unambiguous delineation of the response time testing requirements for the RPS instruments. As such, the proposed TS do not represent a relaxation of CTS.

12) *Quad Cities CTS Table 4.1-2 note (6)*

The Quad Cities CTS Table 4.1-2 note (6) modifies the "Group" column for the LPRM item. The surveillance requirement and associated note have been deleted in the proposed TS. This is discussed in the response to Specific Question #4.

13) *Proposed TS note (a)*

The proposed note is an addition to the CTS, and modifies the Channel Calibration column. The proposed note allows the neutron detectors to be excluded from the channel calibrations, consistent *with BWR-STS. The inclusion of this note is discussed in response to Specific Question #4.*

14) *Proposed TS note (b)*

The proposed note is an addition to the CTS, and modifies the channel check requirement for the IRM Neutron Flux - High and APRM Setdown Neutron Flux - High functions. The proposed note requires that the SRM/IRM overlap and the IRM/APRM overlap be checked during startups and shutdowns. This requirement is consistent with BWR-STS, and provides additional requirements relative to CTS. Therefore, the proposed note is more conservative than CTS.

15) *Proposed TS note (c)*

The proposed note is an addition to the CTS, and modifies the functional test requirement for the IRM Neutron Flux - High and APRM Setdown Neutron Flux - High functions. The proposed note allows the channel functional test to fulfill the prior to startup functional test requirement. The proposed note is adopted from the BWR-STS with an additional restriction. The proposed note adds the limitation that the weekly functional test may be used to fulfill the requirement provided that the surveillance had been performed within the last 24 hours. This requirement is consistent with BWR-STS, and provides additional requirements relative to CTS. Therefore, the proposed note is more conservative than CTS.

16) *Proposed TS note (d)*

The proposed note is an addition to the CTS, and modifies the channel calibration requirement for APRM Flow Biased Neutron Flux - High and APRM Fixed Neutron Flux - High. The proposed note requires that an APRM calibration be performed against the plant heat balance. This is discussed in item P.7.iii.b above.

18) *Proposed TS note (e)*

The proposed note is an addition to the CTS, and modifies the channel calibration requirement for the APRM Flow Biased Neutron Flux - High and APRM Fixed Neutron Flux - High functions. The proposed note requires that an APRM calibration be performed against the core flow bias signal. This is discussed in item P.7.iii.b above.

19) *Proposed TS note (f)*

The proposed note is a relocation of CTS requirements, and requires that the LPRMs be calibrated every 1000 effective full power hours. Quad Cities CTS Table 4.1-2 specifies a calibration of LPRMs every 1000 equivalent full power hours, as modified by note (6). Quad Cities CTS note (6) clarifies the requirement by stating that the LPRM does not provide a scram function. This is discussed in response to Specific Question #4.

20) *Proposed TS note (g)*

The proposed note is an addition to the CTS, and modifies the channel check requirement for the APRM Flow Biased Neutron Flux - High function. The proposed note requires that the measured loop flow be greater than or equal to the established loop flow characteristics. The proposed note is adopted from BWR-STS with some plant specific clarifications to identify which flows are to be *compared. This requirement is consistent with BWR-STS, and provides additional requirements relative to CTS. Therefore, the proposed note is more conservative than CTS.*

21) *Proposed TS notes (i), (j), (k), (l), (m), (n), (o), and (p) (Dresden only)*

The proposed notes are an addition to the CTS, and are added to Table 4.1.A-1 to ensure that the applicable equipment required to be operable in each operational mode, has been tested and demonstrated operable prior to entry into the mode. Each of the notes are repeated from Table 3.1.A-1 to maintain consistency with the applicable operational modes. Each of the proposed notes are delineated in RAI 3/4.1 Table 1 - "Table Notation: Dresden CTS Table 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3 (CTS Table 3.1-4); Proposed Table 3.1.A-1," and discussed in item n above.

Specific Questions on Sections 3/4.1

1. Section 3.1.A. Action 1, footnote (a) - This footnote appears to provide for a relaxation of the current TSs (see Note * of Table 3.1.1 for Dresden Unit 3) for both stations and the wording of the proposed TS also appears to be less specific as to the applicability of the footnote than the wording found in the STS. However, the wording of note (a), which incorporates the phrase "required surveillances", associated with the TSUP Table 3.1.A-1 does more closely follow the wording of the STS. Address whether this footnote (and the note for the Table) provides a relaxation of the current TSs and whether the footnote to the Action statement should be reworded to include specifically mentioning surveillance testing as the cause of the inoperability.

ComEd Response:
This is discussed in response to Generic Question #2 above (items f, G, and O-1).

2. Generic question regarding Action statements of Section 3.1 - While the relation of the TSUP Action statements 10 through 19 to those of the STS is basically clear, their relation to the Action requirements of the current TSs for both stations is not. Identify under which of the functional inoperability conditions of TSUP Table 3.1.A-1 do the proposed required Actions represent a relaxation of the required Actions of the current TS for the same functional inoperability. For example, the Reactor Vessel Water Level Low functional inoperability condition current Dresden TS Action A is replaced by TSUP Action 11 and these Actions should be compared in assessing whether this is or is not a relaxation of the current TSs for either station.

Comed Response:
The discussion below provides a summary of the CTS Action Statements in relation to proposed Action statements. Additional information pertaining to the relocation of CTS Action statements is provided in response to Generic Question #2, items O-13, -14, -15, and -16. The CTS Action Statements are also delineated in the attached RAI 3/4.1 Table 4, "Action Requirements; Dresden CTS Table 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3; Proposed TS Table 3.1.A-1."

a) *CTS Action A is replaced by proposed Action 11 for the following CTS - RPS instruments in operational mode 1 (Run):*

High Reactor Pressure
Reactor Low Water Level
High Drywell Pressure
High Water Level in Scram Discharge Volume (Quad Cities only)
Mode Switch in Shutdown
Manual Scram

CTS Action A requires the insertion of all operable rods within 4 hours. The proposed Action 11 is consistent with BWR-STS requirements and requires that the reactor be in hot shutdown within 12 hours. The proposed Action 11 is a relaxation of the current TS, however, the proposed change does not represent a significant reduction in safety. The extended period to shutdown the reactor is consistent with industry-accepted and NRC-approved requirements (BWR-STS) and allows for a more orderly reactor shutdown, thus reducing the probability of transients and reactivity management events due to the reactor shutdown.

b) *CTS Action A is replaced by proposed Action 11 for the following CTS - RPS instruments in operational mode 2 (Startup/Hot Standby):*

IRM - High Flux
IRM - Inoperative
APRM - High Flux (15% scram)
High Reactor Pressure
Reactor Low Water Level
High Drywell Pressure
Mode Switch in Shutdown
Manual Scram

CTS Action A requires the insertion of all operable rods within 4 hours. The proposed Action 11 is consistent with BWR-STS requirements and requires that the reactor be in hot shutdown within 12 hours. The proposed Action 11 is a relaxation of the current TS, however, the proposed change does not represent a significant reduction in safety. The extended period to shutdown the reactor is consistent with industry-accepted and NRC-approved requirements (BWR-STS) and allows for a more orderly reactor shutdown, thus reducing the probability of transients and reactivity management events due to the reactor shutdown.

c) *Proposed Table 3.1.A-1, Action 12 is applicable in operational modes 3 and 4 for the following CTS - RPS instruments:*

IRM - High Flux and Inoperative
APRM - Inoperative (mode 3 only)
APRM - High Flux (15% scram)

The proposed requirement is consistent with BWR-STS requirements. This proposed requirement is an addition to CTS requirements in that the CTS does not require operability of RPS instruments in operational modes 3 and 4. Therefore, the addition of proposed Action 12 is more conservative than CTS requirements.

d) *Dresden CTS Action A or Action D are replaced by proposed Action 11 for the following CTS - RPS instrument in operational modes 1 and 2:*

High Water Level in Scram Discharge Volume (Dresden only)

Dresden CTS Action A requires the insertion of all operable rods within 4 hours. Dresden CTS Action D requires the suspension of all core alterations and insertion of all insertable control rods within one hour, when any control rod is withdrawn.

CTS Action A requires the insertion of all operable rods within 4 hours. The proposed Action 11 is consistent with BWR-STS requirements and requires that the reactor be in hot shutdown within 12 hours. The proposed Action 11 is a relaxation of the current TS, however, the proposed change does not represent a significant reduction in safety. The extended period to shutdown the reactor is consistent with industry-accepted and NRC-approved requirements (BWR-STS) and allows for a more orderly reactor shutdown, thus reducing the probability of transients and reactivity management events due to the reactor shutdown.

Dresden CTS Action D does not apply to the operating status in operational modes 1 or 2, therefore, the proposed change clarifies the CTS with respect to required actions in specific modes. As such, the proposed change is administrative and does not represent a relaxation of CTS.

e) *Dresden CTS Action A or Action D, and Quad Cities Action A are replaced by proposed Action 13 for the following CTS - RPS instrument in operational mode 5:*

High Water Level in Scram
Discharge Volume;
(Replaces Quad Cities CTS Action A and Dresden CTS Actions A or D)

Dresden and Quad Cities CTS Action A requires the insertion of all operable rods within 4 hours. Dresden CTS Action D requires the suspension of all core alterations and insertion of all insertable control rods within one hour, when any control rod is withdrawn.

Proposed Action 13 is equivalent to Dresden CTS Action D, and requires the suspension of all core alterations and full insertion of all insertable control rods within one hour. Proposed Action 13 is consistent with BWR-STS requirements, with an additional requirement to suspend replacement of LPRMs if SRM instrumentation is not operable. Proposed Action 13 is also more appropriate for Operational mode 5, compared to CTS Action A. CTS Action A does not provide adequate guidance to operations personnel while in operational mode 5.

f) *CTS Action A is replaced by proposed Action 13 for the following CTS - RPS instruments in operational mode 5:*

IRM - High Flux
IRM - Inoperative
APRM - High Flux (15% scram)
Mode Switch in Shutdown

CTS Action A requires the insertion of all operable rods within 4 hours.

Proposed Action 13 is equivalent to Dresden CTS Action D, and requires the suspension of all core alterations and full insertion of all insertable control rods within one hour. This is more conservative than CTS Action A, and consistent with BWR-STS requirements, with an additional requirement to suspend replacement of LPRMs if SRM instrumentation is not operable. Proposed Action 13 is also more appropriate for Operational mode 5, compared to CTS Action A. CTS Action A does not provide adequate guidance to operations personnel while in operational mode 5.

g) CTS Actions A or B are replaced by proposed Action 14 for the following CTS - RPS instruments in operational mode 1:

APRM - High Flux (flow biased)

CTS Action A requires the insertion of all operable rods within 4 hours. CTS Action B requires the reduction of power to the IRM range and placement of the mode switch in Startup/Hot Standby within 8 hours.

Proposed Action 14 is consistent with CTS Action B, and represents a modification of BWR-STS Action 4. The proposed action requires that the reactor be in startup within 8 hours, as opposed to the BWR-STS requirement of 6 hours. The CTS value is consistent with the normal operating practice at Dresden and Quad Cities and allows for a more controlled reactor shutdown, thus reducing the probability of transients and reactivity management events during the reactor shutdown. Therefore, the proposed change does not represent a relaxation of the CTS.

h) CTS Actions A or B (Dresden) and CTS Action A (Quad Cities) are replaced by proposed Action 11 for the following CTS - RPS instrument in operational modes 1 and 2:

APRM - Inoperative

CTS Action A requires the insertion of all operable rods within 4 hours. CTS Action B requires the reduction of power to the IRM range and placement of the mode switch in Startup/Hot Standby within 8 hours.

The proposed Action 11 is consistent with BWR-STS requirements and requires that the reactor be in hot shutdown within 12 hours. The proposed Action 11 is a relaxation of the current TS, however, the proposed change does not represent a significant reduction in safety. The extended period to shutdown the reactor is consistent with industry-accepted and NRC-approved requirements (BWR-STS) and allows for a more orderly reactor shutdown, thus reducing the probability of transients and reactivity management events due to the reactor shutdown.

i) CTS Actions A or B (Dresden) and CTS Action A (Quad Cities) are replaced by proposed Action 13 for the following CTS - RPS instrument in operational mode 5:

APRM - Inoperative

CTS Action A requires the insertion of all operable rods within 4 hours. CTS Action B requires the reduction of power to the IRM range and placement of the mode switch in Startup/Hot Standby within 8 hours.

Proposed Action 13 requires the suspension of all core alterations and full insertion of all insertable *control rods within one hour. This is consistent with BWR-STS requirements, with an additional requirement to suspend replacement of LPRMs if SRM instrumentation is not operable. Proposed Action 13 is more appropriate for Operational mode 5, compared to CTS Actions A or B. CTS Actions A and B do not provide adequate guidance to operations personnel while in operational mode 5.*

j) *CTS Actions A or C are replaced by proposed Action 14 (Quad Cities) in operational mode 1, and proposed Action 10 [Dresden, as modified by proposed note (j)] in operational modes 1 and 2 for the following CTS - RPS instrument:*

Main steamline isolation valve closure

CTS Action A requires the insertion of all operable rods within 4 hours. CTS Action C requires a reduction in turbine load and closure of the main steam line isolation valves within 5 hours (Dresden) and 8 hours (Quad Cities).

Proposed Action 14 for Quad Cities and Action 10 for Dresden represent a modification of BWR-STS Action 4, consistent with CTS Action B requirements. Proposed footnote (j) modifies the applicability of operational mode 2 at Dresden to require the function when reactor pressure is greater than 600 psig.

Proposed Action 14 for Quad Cities and Action 10 for Dresden require that the reactor be in startup within 8 hours, as opposed to the BWR-STS requirement of 6 hours. The timeframe of 8 hours is consistent with CTS Action B, and represents the normal operating practice at the stations. This value allows for a more controlled reactor shutdown, thus reducing the probability of transients and reactivity management events during the reactor shutdown.

The use of proposed Action 14 for Quad Cities and proposed Action 10 for Dresden [as modified by proposed note (j)], in place of CTS Actions A or C, is consistent with BWR-STS and equivalent to CTS Action C with respect to reactor safety. Proposed Actions 10 and 14 will both result in a more controlled and orderly shutdown of the reactor to a point where the reactor trip (Main Steam Isolation Valve Closure) is no longer required. Therefore, the use of proposed Actions 10 and 14 is consistent with the applicable operational mode, and as such does not represent a relaxation of the CTS. An additional discussion of the applicability of the instrument applicability is provided in response to Generic Question #2, item N-5.

k) *CTS Actions A or C are replaced by proposed Action 15 for the following CTS - RPS instrument in operational modes 1 and 2:*

Main Steam Line High Radiation

CTS Action A requires the insertion of all operable rods within 4 hours. Dresden CTS Action C requires a reduction in turbine load and closure of the main steam line isolation valves within 5 hours. Quad Cities CTS Action C requires the same action within 8 hours.

Proposed Action 15 represents a modification of BWR-STS Action 5, consistent with Quad Cities CTS Action C requirements. That is, the proposed action requires that the reactor be in startup with the main steam line isolation valves closed within 8 hours, or be at least Hot Shutdown within 12 hours. The BWR-STS requirement stipulates 6 hours to startup; Dresden CTS Action C stipulates 5 hours to startup.

The Quad Cities CTS Action C value is consistent with the normal operating practice at the stations and allows for a more controlled reactor shutdown, thus reducing the probability of transients and reactivity management events during the reactor shutdown. Therefore, the proposed changes to the CTS do not represent a relaxation of current requirements.

l) CTS Actions A or C is replaced by proposed Action 10 for the following CTS - RPS instrument in operational modes 1 and 2:

Turbine condenser low vacuum

CTS Action A requires the insertion of all operable rods within 4 hours. CTS Action C requires a reduction in turbine load and closure of the main steam line isolation valves within 5 hours (Dresden) and 8 hours (Quad Cities).

Proposed Action 10 represents a modification of BWR-STS Action 4, consistent with CTS Action B requirements. Proposed footnote (j) modifies the applicability of operational mode 2 to require the function when reactor pressure is greater than 600 psig.

Proposed Action 10 requires that the reactor be in startup within 8 hours (CTS Action B), as opposed to the BWR-STS requirement of 6 hours. The CTS Action B value (8 hours) is consistent with the normal operating practice at the stations and allows for a more controlled reactor shutdown, thus reducing the probability of transients and reactivity management events during the reactor shutdown.

The use of proposed Action 10, in place of CTS Action C, is consistent with BWR-STS and equivalent to CTS Action C with respect to reactor safety. Proposed Action 10 will result in a more controlled and orderly shutdown of the reactor to a point where the reactor trip is no longer required. Therefore, the use of proposed Action 10 is consistent with the applicable operational mode, and as such does not represent a relaxation of the CTS.

m) CTS Actions A or C are replaced by proposed Action 16 for the following CTS - RPS instruments in operational mode 1:

Turbine Stop Valve Closure

Turbine control valve fast closure, valve trip system oil pressure low (Quad Cities nomenclature); Generator Load Rejection, turbine control valve trip system oil pressure low (Dresden nomenclature)

Turbine EHC control fluid low pressure (Quad Cities CTS nomenclature); Turbine Control - Loss of Control Oil Pressure (Dresden CTS nomenclature)

CTS Action A requires the insertion of all operable rods within 4 hours. CTS Action C requires a reduction in turbine load and closure of the main steam line isolation valves within 5 hours (Dresden) and 8 hours (Quad Cities).

Proposed Action 16 requires that a power reduction be initiated within 15 minutes and thermal power be reduced to less than 45% of rated thermal power within 2 hours. This is the same as BWR-STS Action 6, with a clarification for power reduction, and considerably more conservative than CTS Actions A and C. Therefore the proposed changes do not represent a relaxation of the CTS.

n) *CTS Action A is replaced by proposed Action 19 for the following CTS - RPS instrument in operational mode 5:*

Manual Scram

CTS Action A requires the insertion of all operable rods within 4 hours.

Proposed Action 19 requires the suspension of all core alterations, full insertion of all insertable control rods, and placement of the reactor mode switch into the shutdown position within one hour. This is more conservative than CTS Action A, and consistent with BWR-STS requirements, with an additional requirement to suspend replacement of LPRMs if SRM instrumentation is not operable. In addition, Proposed Action 19 is similar to Dresden CTS Action D, without the placement of the mode switch into shutdown. Therefore the adoption of proposed Action 19 represents a more conservative operating philosophy consistent with the applicable operational mode, and as such does not represent a relaxation of the CTS.

o) *Proposed Table 3.1.A-1, Actions 17 and 18 are applicable in operational modes 3 and 4 for the following CTS - RPS instruments:*

Mode Switch in Shutdown	*(Action 17)*
Manual Scram	*(Action 18)*

The proposed requirements are consistent with BWR-STS requirements. These proposed requirements are an addition to CTS requirements in that the CTS does not require operability of RPS instruments in operational modes 3 and 4. Therefore, the proposed change to add Actions 17 and 18 is more conservative than CTS requirements.

p) *CTS Actions have been deleted for the following instruments in the specified modes, based upon the deletion of the applicability of the instrument for the specified mode. The deletion of applicability for each instrument/mode is described in response to Generic Question #2, item N.*

Mode 2
- *APRM - Flow Biased (Dresden only)*
- *MSIV Closure (Quad Cities only)*
- *Generator Load Reject (Dresden only)*
- *Turbine Stop Valve Closure (Dresden only)*
- *Turbine Control Oil Pressure (Dresden only)*

Mode 5
- *APRM - Flow Biased (Dresden only)*
- *High Reactor Pressure*
- *High Drywell Pressure*
- *Reactor Low Water Level*
- *Turbine Condenser Low Vacuum*
- *Main Steam Line High Radiation*
- *MSIV Closure*
- *Generator Load Reject (Dresden only)*
- *Turbine Stop Valve Closure (Dresden only)*
- *Turbine Control Oil Pressure (Dresden only)*

3. Referring to current Quad Cities TS 4.1.C, the last sentence under the heading of Specific Changes in Attachment #2 implies that this requirement is captured in proposed note (b) to Table 3.1.A-1. This note reads, "This function may be bypassed, provided a control rod block is actuated, for reactor protection system logic reset in Refuel and Shutdown positions of the reactor mode switch." This has no apparent relevance to the current TS 4.1.C, but the footnote (b) to TSUP 3.1.A. Actions 1 and 2 does appear to capture part of the current TS.

   Identify where all of the provisions of current Quad Cities TS 4.1.C. are located within the TSUP or explain whether the deletion of any part of this TS (particularly the testing of other reactor protection system (RPS) channels in the event of a failed channel) is a relaxation of the current Quad Cities TSs.

   Comed Response:
   Quad Cities CTS 4.1.C is partially incorporated into proposed TS 3.1.A, Action 1 and proposed TS Table 3.1.A-1, note (a). This partial incorporation is discussed in response to Generic Question #2 - Item F.

4. Proposed TS Table 4.1.A-1 note (a) - With regard to the calibration of the neutron detectors which support the intermediate-range monitor (IRM) and average power range monitor (APRM) system channels, the local-power range monitors (LPRMs) are noted (Table footnote (f)) to be calibrated every 1000 effective full-power hours (EFPH). Does this represent the calibration frequency on the LPRM detectors also or how often are the LPRM and IRM detectors to be calibrated and where is this addressed in the current TSs for each station and in the TSUP amendments?

   ComEd Response:
   Dresden CTS Table 4.1.2 and Quad Cities CTS Table 4.1-2 specify the calibration requirements for the IRM and APRM protective instrument functions. In addition, the Quad Cities CTS Table 4.1-2 specifies a calibration of LPRMs every 1000 equivalent full power hours, as modified by note (6). Quad Cities CTS note (6) clarifies the requirement by stating that the LPRM does not provide a scram function.

   This Quad Cities CTS requirement is incorporated into proposed TS Table 4.1.A-1, note (f), which modifies all of the APRM surveillance requirements. This proposed note states that the LPRMs shall be calibrated once per 1000 effective full power hours. In addition, proposed Table 4.1.A-1, column 4 (CHANNEL CALIBRATION) is modified by proposed note (a). This note states that neutron detectors are excluded from channel calibration. The neutron detectors are excluded from CHANNEL CALIBRATION because they are passive devices, with minimal drift, and because of the difficulty of simulating a meaningful signal. In addition, detector failure will cause a total loss of signal, rather than instrument drift to a wrong indication. Changes in neutron detector sensitivity are compensated for by performing the weekly APRM calibration (proposed TS Table 4.1.A-1, items 2.b and 2.c, column 4) and the 1000 effective full power hour LPRM calibration (proposed TS Table 4.1.A-1 note (f)).

RAI 3/4.1 Table 1 - Table Notation: Dresden CTS Table 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3 (CTS Table 3.1-4); Proposed TS Table 3.1.A-1

Dresden CTS note	*Quad Cities CTS note*	*Proposed TS note*
(1)	*(1)*	*Deleted; Information incorporated into 3.1.A Action 2*
(2)	*(4)*	*(b)*
(3)	*(7)*	*(j) - Dresden only; Deleted and incorporated into Applicable Mode Column for Quad Cities*
(4)	*(9)*	*(d)*
(5)	*(6)*	*n/a; Deleted*
(6)	*n/a*	*n/a; Deleted*
(7)	*(5)*	*(h)*
(8)	*n/a*	*n/a; Deleted*
(9)	*n/a*	*n/a; Deleted*
(10)	*n/a*	*(f)*
(11)	*n/a*	*n/a; Deleted*
*	*(2)*	*Incorporated into 3.1.A Action 1 and Table 3.1.A-1, Actions 10 through 19*
*.a	*(2).A*	*Action 12*
*.b	*(2).B*	*Action 14*
*.c	*(2).C*	*Action 15*
*.d	*n/a*	*Action 13*
**	*(3)*	*(e)*
***	*(8)*	*n/a; Deleted*
****	*(10)*	*n/a; Deleted*
n/a	*(11)*	*n/a; Deleted*
n/a	*(12)*	*n/a; Deleted*
n/a	*n/a*	*(a)*
n/a	*n/a*	*(c)*
n/a	*n/a*	*(g)*
n/a	*n/a*	*(i)*

RAI 3/4.1 Table 2 - Surveillance Intervals: Dresden CTS Tables 4.1.1 and 4.1.2; Quad Cities CTS Tables 4.1-1 and 4.1-2; Proposed TS Table 4.1.A-1

Note: The proposed TS notation is used in the following matrix to specify the CTS and TSUP surveillance intervals.

S	*Once per shift*	*(12 hours)*
D	*Once per day*	*(24 hours)*
W	*Once per week*	*(7 days)*
M	*Once per month*	*(31 days)*
Q	*Once per quarter*	*(92 days)*
SA	*Semiannual*	*(148 days)*
A	*Annual*	*(366 days)*
E	*Sesquiannual*	*(18 months - 550 days)*
S/U	*Startup*	*(prior to each reactor startup)*

Dresden CTS Function	*TSUP Function*	*Channel Check*	*Functional Test*	*Channel Calibration*	*Quad Cities CTS Function*
IRM - High Flux	*1.a IRM - Neutron Flux - High*	*D and QC = n/a; TSUP = S/U and S (mode 2), and S (modes 3, 4, and 5)*	*D = S/U; QC = S/U and W (mode 5); TSUP = S/U and W (mode 2), and W (modes 3 , 4, and 5)*	*D and QC = S/D (every shutdown); TSUP = E (modes 2, 3, 4, and 5*	*IRM - High Flux*
IRM - Inoperative	*1.b IRM - Inoperative*	*D and QC = n/a; TSUP = n/a*	*D = S/U; QC = S/U and W (mode 5); TSUP = W (modes 2, 3, 4, and 5)*	*D and QC = n/a; TSUP = n/a*	*IRM - Inoperative*
High Flux APRM - Flow Bias	*2.b APRM - Flow Biased Neutron Flux High*	*D and QC = n/a; TSUP = S and D (mode 1)*	*D and QC = n/a; TSUP = W (mode 1)*	*D and QC = R (refuel outage); TSUP = W and SA (mode 1)*	*High Flux APRM - Flow Bias*
APRM - Inoperative	*2.d APRM - Inoperative*	*D and QC = n/a; TSUP = n/a*	*D = and QC = W; TSUP = W*	*D and QC = n/a; TSUP = n/a*	*APRM - Inoperative*
High Flux APRM - Output Signal	*2.c APRM - Fixed Neutron Flux - High*	*D and QC = n/a; TSUP = S (mode 1)*	*D and QC = W; TSUP = W (mode 1)*	*D and QC = W; TSUP = W, SA (mode 1)*	*High Flux APRM - Output Signal*

RAI 3/4.1 Table 2 - Surveillance Intervals: Dresden CTS Tables 4.1.1 and 4.1.2; Quad Cities CTS Tables 4.1-1 and 4.1-2; Proposed TS Table 4.1.A-1

APRM - High Flux (15% scram)	*2.a APRM Setdown Neutron Flux - High*	*D and QC = n/a; TSUP = S/U, S (mode 2); S (modes 3 and 5)*	*D = S/U; QC = S/U and W (mode 5); TSUP = S/U, W (mode 2); W (modes 3 and 5)*	*D and QC = n/a; TSUP = SA (modes 2, 3, and 5)*	*APRM - High Flux 15%*
High Reactor Pressure	*3. Reactor Vessel Steam Dome Pressure - High*	*D and QC = n/a; TSUP = n/a*	*D and QC = Figs. 4.1.1 and 4.1-1 (M to Q): TSUP = M (modes 1 and 2)*	*D and QC = Q; TSUP = Q (modes 1 and 2)*	*High Reactor Pressure*
High Drywell Pressure	*7. Drywell Pressure - High*	*D and QC = n/a; TSUP = n/a*	*D and QC = Figs. 4.1.1 and 4.1-1 (M to Q); TSUP = M (modes 1 and 2)*	*D and QC = Q; TSUP = Q (modes 1 and 2)*	*High Drywell Pressure*
Reactor Low Water Level	*4. Reactor Vessel Water Level - Low*	*D and QC = D; TSUP = D (modes 1 and 2)*	*D and QC = Figs. 4.1.1 and 4.1-1 (M to Q); TSUP = M (modes 1 and 2)*	*D and QC = M (trip units), once per cycle (transmitters); TSUP = E (modes 1 and 2)*	*Reactor Low Water Level*
High Water Level in Scram Discharge Volume	*8. Scram Discharge Volume Water Level - High*	*D and QC = n/a; TSUP = n/a*	*D and QC = Q; TSUP = Q (modes 1, 2, and 5)*	*D and QC = refuel (dP only); TSUP = E (modes 1, 2, and 5) (dP only)*	*High Water Level in Scram Discharge Volume*
Turbine Condenser Low Vacuum	*12. Turbine Condenser Vacuum - Low*	*D and QC = n/a; TSUP = n/a*	*D and QC = Figs. 4.1.1 and 4.1-1 (M to Q); TSUP = M (modes 1 and 2)*	*D and QC = Q; TSUP = Q (modes 1 and 2)*	*Turbine Condenser Low Vacuum*
Main Steam Line High Radiation	*6. Main Steam Line Radiation - High*	*D and QC = S; TSUP = S (modes 1 and 2)*	*D and QC = W; TSUP = M (modes 1 and 2)*	*D = Q; QC = refuel; TSUP = E (modes 1 and 2)*	*Main steamline high radiation*

RAI 3/4.1 Table 2 - Surveillance Intervals: Dresden CTS Tables 4.1.1 and 4.1.2; Quad Cities CTS Tables 4.1-1 and 4.1-2; Proposed TS Table 4.1.A-1

MSIV Closure	*5. MSIV - Closure*	*D and QC = n/a; TSUP = n/a*	*D and QC = Figs. 4.1.1 and 4.1-1 (M to Q); TSUP = M (modes 1 and 2)*	*D and QC = n/a; TSUP = E (modes 1 and 2)*	*MSIV Closure*
Generator Load Rejection	*11. Turbine Control Valve Fast Closure*	*D and QC = n/a; TSUP = n/a*	*D and QC = Figs. 4.1.1 and 4.1-1 (M to Q); TSUP = M (mode 1)*	*D and QC = refuel; TSUP = E (mode 1)*	*Turbine control valve fast closure*
Turbine Stop Valve Closure	*9. Turbine Stop Valve Closure*	*D and QC = n/a; TSUP = n/a*	*D and QC = Figs. 4.1.1 and 4.1-1 (M to Q); TSUP = M (mode 1)*	*D and QC = n/a; TSUP = E (mode 1)*	*Turbine stop valve closure*
Turbine Control - Loss of Control Oil Pressure	*10. Turbine EHC Control Oil Pressure - Low*	*D and QC = n/a; TSUP = n/a*	*D and QC = Figs. 4.1.1 and 4.1-1 (M to Q); TSUP = M (mode 1)*	*D and QC = Q; TSUP = Q (mode 1)*	*Turbine EHC control fluid low pressure*
Mode switch in shutdown	*13. Reactor Mode Switch Shutdown Position*	*D and QC = n/a; TSUP = n/a*	*D and QC = refuel; TSUP = E (modes 1, 2, 3, 4, and 5)*	*D and QC = n/a; TSUP = n/a*	*Mode switch in shutdown*
Manual scram	*14. Manual Scram*	*D and QC = n/a; TSUP = n/a*	*D and QC = Q; TSUP = M (modes 1, 2, 3, 4, and 5)*	*D and QC = n/a; TSUP = n/a*	*Manual Scram*

RAI 3/4.1 Table 3 - Table Notation: Dresden CTS Tables 4.1.1 and 4.1.2; Quad Cities CTS Tables 4.1-1 and 4.1-2

Dresden CTS note	*Quad Cities CTS note*	*Proposed TS note*
4.1.1 (1)	*4.1-1 (1)*	*n/a; Deleted*
4.1.1 (2)	*4.1-1 (2)*	*Incorporated into Table 4.1.A-1 column 3, Items 4 and 6*
4.1.1 (3)	*4.1-1 (3)*	*n/a; Deleted*
4.1.1 (4)	*4.1-1 (4)*	*Incorporated into Table 4.1.A-1 column 2 and 4.0.A*
4.1.1 (5)	*4.1-1 (5)*	*n/a; Deleted*
4.1.1 (6)	*4.1-1 (6)*	*Incorporated into Table 4.1.A-1 note (c)*
4.1.1 (7)	*4.1-1 (9)*	*n/a; Deleted*
4.1.1 (8)	*4.1-1 (8)*	*Incorporated into Table 4.1.A-1 item 4 and note (h)*
n/a	*4.1-1 (7)*	*Incorporated into 4.1.A.2*
4.1.2 (1)	*4.1-2 (1)*	*n/a; Deleted*
4.1.2 (2)	*4.1-2 (2)*	*Incorporated into Table 4.1.A-1 column 2*
4.1.2 (3)	*4.1-2 (3)*	*Incorporated into Table 4.1.A-1 Item 6*
4.1.2 (4)	*4.1-2 (4)*	*n/a; Deleted*
4.1.2 (5)	*4.1-2 (7)*	*Incorporated into Table 4.1.A-1 item 4 and note (h)*
n/a	*4.1-2 (5)*	*Incorporated into 4.1.A.3*
n/a	*4.1-2 (6)*	*n/a; Deleted*
n/a	*n/a*	*(a)*
n/a	*n/a*	*(b)*
n/a	*n/a*	*(c)*
n/a	*n/a*	*(d)*
n/a	*n/a*	*(e)*
n/a	*n/a*	*(f)*
n/a	*n/a*	*(g)*
n/a	*n/a*	*(i)*

RAI 3/4.1 Table 3 - Table Notation: Dresden CTS Tables 4.1.1 and 4.1.2; Quad Cities CTS Tables 4.1-1 and 4.1-2

n/a	*n/a*	*(j)*
n/a	*n/a*	*(k)*
n/a	*n/a*	*(l)*
n/a	*n/a*	*(m)*
n/a	*n/a*	*(n)*
n/a	*n/a*	*(o)*

RAI Table 3/4.1 Table 4 - Action Requirements; Dresden CTS Table 3.1.1 and Quad Cities CTS Tables 3.1-1, 3.1-2, and 3.1-3; Proposed TS Table 3.1.A-1

Function	*Mode 1*	*Mode 2*	*Mode 5*	*Modes 3 & 4*
IRM - High Flux	*D & QC = n/a; TSUP = n/a*	*D & QC =A; TSUP = 11*	*D & QC =A; TSUP = 13*	*D & QC = n/a; TSUP = 12*
IRM - Inoperative	*D & QC = n/a; TSUP = n/a*	*D & QC =A; TSUP = 11*	*D & QC =A; TSUP = 13*	*D & QC = n/a; TSUP = 12*
APRM - Flow Biased	*D & QC = A or B; TSUP = 14*	*D = A or B; QC = n/a; TSUP = n/a*	*D = A or B; QC = n/a; TSUP = n/a*	*D & QC = n/a; TSUP = n/a*
APRM - Inoperative	*D & QC = A or B; TSUP = 11*	*D = A or B; QC = A; TSUP = 11*	*D = A or B; QC = A; TSUP = 13*	*D & QC = n/a; TSUP = 12 (mode 3 only)*
APRM - High Flux 15%	*D & QC = n/a; TSUP = n/a*	*D & QC =A; TSUP = 11*	*D & QC =A; TSUP = 13*	*D & QC = n/a; TSUP = 12*
High Reactor Pressure	*D & QC =A; TSUP = 11*	*D & QC =A; TSUP = 11*	*D & QC =A; TSUP = n/a*	*D & QC = n/a; TSUP = n/a*
High Drywell Pressure	*D & QC =A; TSUP = 11*	*D & QC =A; TSUP = 11*	*D & QC =A; TSUP = n/a*	*D & QC = n/a; TSUP = n/a*
Reactor Low Water Level	*D & QC =A; TSUP = 11*	*D & QC =A; TSUP = 11*	*D & QC =A; TSUP = n/a*	*D & QC = n/a; TSUP = n/a*
High Water Level in Scram Discharge Level	*D = A or D; Q= A; TSUP = 11*	*D = A or D; Q= A; TSUP = 11*	*D = A or D; Q= A; TSUP = 13*	*D & QC = n/a; TSUP = n/a*
Turbine Condenser Low Vacuum	*D & QC =A or C; TSUP = 10*	*D = A or C; Q= A; TSUP = 10*	*D = A or C; Q= A; TSUP = n/a*	*D & QC = n/a; TSUP = n/a*
Main Steam Line High Radiation	*D & QC = A or C; TSUP = 15*	*D = A or C; QC = A; TSUP = 15*	*D = A or C; QC = A; TSUP = n/a*	*D & QC = n/a; TSUP = n/a*
MSIV Closure	*D & QC = A or C; D-TSUP = 10; QC-TSUP = 14*	*D = A or C; QC = A; D-TSUP = 10; QC-TSUP = n/a*	*D = A or C; QC = A; TSUP = n/a*	*D & QC = n/a; TSUP = n/a*
Generator Load Reject - Turbine CV Fast Closure	*D & QC = A or C; TSUP = 16*	*D = A or C; QC = n/a; TSUP = n/a*	*D = A or C; QC = n/a; TSUP = n/a*	*D & QC = n/a; TSUP = n/a*
Turbine Stop Valve Closure	*D & QC = A or C; TSUP = 16*	*D = A or C; QC = n/a; TSUP = n/a*	*D = A or C; QC = n/a; TSUP = n/a*	*D & QC = n/a; TSUP = n/a*
Turbine Control Oil Pressure	*D & QC = A or C; TSUP = 16*	*D = A or C; QC = n/a; TSUP = n/a*	*D = A or C; QC = n/a; TSUP = n/a*	*D & QC = n/a; TSUP = n/a*
Mode Switch in Shutdown	*D & QC =A; TSUP =11*	*D & QC =A; TSUP = 11*	*D & QC =A; TSUP = 13*	*D & QC = n/a; TSUP = 17*
Manual Scram	*D & QC =A; TSUP = 11*	*D & QC =A; TSUP = 11*	*D & QC =A; TSUP = 19*	*D & QC = n/a; TSUP = 18*

ENCLOSURE 1

Evaluation of Significant Hazards Consideration
TSUP 3/4.1
Reactor Protection System

Commonwealth Edison has evaluated the proposed amendment and determined that it involves no significant hazards consideration. According to 10 CFR 50.92(c), a proposed amendment to an operating license involves no significant hazards consideration if operation of the facility, in accordance with the proposed amendment, would not:

1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or

2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or

3) Involve a significant reduction in a margin of safety.

1) The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated because:

In general, the proposed amendment represents the conversion of current requirements to a more generic format, or the addition of requirements which are based on the current safety analysis. Implementation of these changes will provide increased reliability of equipment assumed to operate in the current safety analysis, or provide continued assurance that specified parameters remain within their acceptance limits, and as such, will not significantly increase the probability or consequences of a previously evaluated accident.

Some of the proposed changes to the current Technical Specifications (CTS) represent minor curtailments of the current requirements which are based on generic guidance or previously approved provisions for other stations. The proposed amendment for Dresden and Quad Cities Station's Technical Specification Section 3/4.1 are based on BWR-STS (NUREG-0123, Revision 4 "Standard Technical Specifications General Electric Plants BWR/4) guidance or NRC accepted changes at later operating BWR plants. Any deviations from BWR-STS and CTS requirements do not significantly increase the probability or consequences of any previously evaluated accident for Dresden and Quad Cities Station. These proposed changes are consistent with the current safety analyses and have been previously determined to represent sufficient requirements for the assurance and reliability of equipment assumed to operate in the safety analysis, or provide continued assurance that specified parameters remain within their acceptance limits. As such, these changes will not significantly increase the probability or consequences of a previously evaluated accident.

The associated systems that make up the Reactor Protection System are not assumed in any safety analysis to initiate any accident sequence for both Dresden and Quad Cities Stations; therefore, the probability of any accident previously evaluated is not increased by the proposed amendment. In addition, the proposed surveillance requirements for the proposed amendments to these systems are generally more prescriptive than the current requirements specified within the Technical Specifications. These more prescriptive surveillance requirements increase the probability that the

Reactor Protection System will perform its intended function. Therefore, the proposed TS will improve the reliability and availability of all affected systems and reduce the consequences of any accident previously evaluated.

2. *Create the possibility of a new or different kind of accident from any previously evaluated because:*

In general, the proposed amendment represents the conversion of current requirements to a more generic format, or the addition of requirements which are based on the current safety analysis. Others represent minor curtailments of the current requirements which are based on generic guidance or previously approved provisions for other stations. These changes do not involve revisions to the design of the station. Some of the changes may involve revision in the operation of the station; however, these changes provide additional restrictions which are in accordance with the current safety analyses, or are to provide for additional testing or surveillances which will not introduce new failure mechanisms beyond those already considered in the current safety analyses. Therefore, these changes will not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed amendment for Dresden and Quad Cities Station's Technical Specification Section 3/4.1 is based on BWR-STS guidelines or NRC accepted changes at later operating BWR plants. The proposed amendment has been reviewed for acceptability at the Dresden and Quad Cities Nuclear Power Stations considering similarity of system or component design versus the BWR-STS or later operating BWRs. Any deviations from BWR-STS or CTS requirements do not create the possibility of a new or different kind of accident than previously evaluated for Dresden and Quad Cities Stations. No new modes of operation are introduced by the proposed changes. Surveillance requirements are changed to reflect improvements in technique, frequency of performance or operating experience at later plants. Proposed changes to action statements in many places add requirements that are not in the present technical specifications or adopt requirements that have been used at other operating BWRs with designs similar to Dresden and Quad Cities. The proposed changes maintain at least the present level of operability. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

The associated systems that make up the Reactor Protection System are not assumed in any safety analysis to initiate any accident sequence for Dresden or Quad Cities Stations. In addition, the proposed surveillance requirements for affected systems associated with the Reactor Protection System are generally more prescriptive than the current requirements specified within the Technical Specifications; therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

3. ***Involve a significant reduction in the margin of safety because:***

In general, the proposed amendment represents the conversion of current requirements to a more generic format, or the addition of requirements which are based on the current safety analysis. Others represent minor curtailments of the current requirements which are based on generic guidance or previously approved provisions for other stations. Some of the later individual items may introduce minor reductions in the margin of safety when compared to the current requirements. However, other individual changes are the adoption of new requirements which will provide significant enhancement of the reliability of the equipment assumed to operate in the safety analysis, or provide enhanced assurance that specified parameters remain within their acceptance limits. These enhancements compensate for the individual minor reductions, such that taken together, the proposed changes will not significantly reduce the margin of safety.

The proposed amendment to Technical Specification Section 3/4.1 implements present requirements, or the intent of present requirements in accordance with the guidelines set forth in the BWR-STS. Any deviations from BWR-STS and CTS requirements do not significantly reduce the margin of safety for Dresden and Quad Cities Stations. The proposed changes are intended to improve readability, usability, and the understanding of technical specification requirements while maintaining acceptable levels of safe operation. The proposed changes have been evaluated and found to be acceptable for use at Dresden and Quad Cities based on system design, safety analysis requirements and operational performance. Since the proposed changes are based on NRC accepted provisions at other operating plants that are applicable at Dresden and Quad Cities and maintain necessary levels of system or component readability, the proposed changes do not involve a significant reduction in the margin of safety.

The proposed amendment for Dresden and Quad Cities Stations will not reduce the availability of systems associated with the Reactor Protection System when required to mitigate accident conditions; therefore, the proposed changes do not involve a significant reduction in the margin of safety.