

EXECUTIVE SUMMARY

Technical Specification 3/4.2 "INSTRUMENTATION"

EXECUTIVE SUMMARY

The Quad Cities Technical Specification Upgrade Program (TSUP) was conceptualized in response to lessons learned from the Dresden Diagnostic Evaluation Team inspection and the frequent need for Technical Specification interpretations. A comparison study of the Standard Technical Specification (STS), later operating plants' Technical Specifications provisions and Quad Cities Technical Specifications was performed, and identified potential improvements in clarifying requirements and requirements which are no longer consistent with current industry practices. Dresden and Quad Cities Stations will submit proposals that are identical within equipment and plant design, and closely follow the provisions of STS. The format for the Quad Cities TSUP will remain as a two column layout for human factors considerations. Additionally, chapter organizations will remain unchanged.

The TSUP is not intended to be a complete adoption of the STS. Overall, the Dresden and Quad Cities custom Technical Specifications provide for the safe operation of the plant and, therefore, only an upgrade is deemed necessary.

In response to an NRC recommendation, Quad Cities has combined the Unit 1 and Unit 2 Technical Specifications into one document for the TSUP. The Dresden Unit 2 and Unit 3 Technical Specifications have also been combined into one document. To accomplish the combination of the Units' Technical Specification, a comparison of the different Unit's Technical Specifications at each station was performed to identify any technical differences. The technical differences are identified in the proposed amendment package for each section.

The TSUP is identified as top priorities at each site. The TSUP goal is to provide a better tool to station personnel to implement their responsibilities and to ensure Dresden and Quad Cities Stations are operated in accordance with current industry practices. The improved Technical Specifications provide for enhanced operation of the plants. The program improves the operator's ability to use the Technical Specifications by more clearly defining the Limiting Conditions for Operation and required actions. The most significant improvement to the specifications is the addition of equipment operability requirements during shutdown conditions.

EXECUTIVE SUMMARY (continued) PROPOSED CHANGES TO TECHNICAL SPECIFICATION SECTION 3/4.2, "INSTRUMENTATION"

The proposed changes delete the present Objective statement and provides Applicability statements within each specification in accordance with STS guidelines. The proposed Applicability statements include the Operating Modes or other conditions for which the LCO must be satisfied. An STS type of format is proposed which retains the present two column format.

Specification 3/4.2 has been reordered and new titles have been added based on STS arrangements and nomenclature. Some sections have moved to the appropriate STS section.

A. Isolation Actuation

Proposed Specification 3/4.2.A has been titled "Isolation Actuation," and is a rewrite of existing specifications (3/4.2.A). Proposed Actions and Surveillances are changed to match STS guidelines and format. Clearer guidance is provided as Action Statements for the declaration of inoperable instrumentation channels in the proposed amendment request. Response Time Testing is not included in the proposed specifications. Generic guidance is expected in the near future to waive this requirement for licensees. Dresden and Quad Cities do not contain response time testing within their current technical specifications.

B. Emergency Core Cooling Systems (ECCS) Actuation

Proposed Specification 3/4.2.B, "Emergency Core Cooling Systems (ECCS) Actuation," is a rewrite of existing specifications (3/4.2.B). Proposed Actions and Surveillances are changed to match STS guidelines and format and do not remove any major requirements from the current specifications. Additional allowances are provided for ADS trip systems based upon precedence at LaSalle County, Limerick, River Bend and Perry Station.

C. ATWS - RPT

Proposed Specification 3/4.2.C, "ATWS - RPT," is a rewrite of existing specifications for Dresden (3/4.2.H) and new specifications for Quad Cities. Proposed Actions and Surveillances are changed to match STS guidelines and format and do not remove any major requirements from the current specifications. Additional allowances are provided based on precedence at Grand Gulf-Unit 1. As a deviation from STS guidance, the proposed amendment request does not include Allowable Values. These requirements

are not maintained within the current version of the technical specifications for Dresden and Quad Cities Stations.

D. Reactor Core Isolation Cooling Actuation (Quad Cities Only) Isolation Condenser Actuation (Dresden Only)

> Proposed Specification 3/4.2.D, "Reactor Core Isolation Cooling Actuation," for Quad Cities Station, and the appropriate proposed matching requirements for Dresden Station, 3/4.2.D, "Isolation Condenser Actuation," are a rewrite of existing specifications. Proposed Actions and Surveillances are changed to match STS guidelines and format. Manual initiation requirements are based upon single components as opposed to the STS guidelines that specify system initiation; therefore, the STS guidelines have been modified based upon plant- and system-specific design.

E. Control Rod Block Actuation

Proposed Specification 3/4.2.E, "Control Rod Block Actuation," is a rewrite of existing specifications (3/4.2.C). Proposed Actions and Surveillances are changed to match STS type format for systems and applications applicable to both Dresden and Quad Cities Stations. A change to STS proposed for clarification of surveillance frequencies and to SR 4.2.E.2 that allows an exception to 4.0.D in order to change modes are based upon precedence in the Perry Station Technical Specifications. This latter change clarifies the language for surveillances required of SRM's and IRM's when changing Operational Modes from Mode 1 to 2 on a Shutdown (or 2 to 1 on a Startup).

F. Accident Monitoring Instrumentation

Proposed Specification 3/4.2.F, "Accident Monitoring Instrumentation," is a rewrite of existing specifications (3/4.2.E). Proposed Actions and Surveillances are changed to match STS-type format as applicable to plant-specific parameters currently resident in the Technical Specifications for both Dresden and Quad Cities Stations.

G. Source Range Monitoring

Proposed Specification 3/4.2.G, "Source Range Monitoring," is a rewrite of existing specifications (3/4.3.B). Proposed Actions and Surveillances are changed to match STS type format for systems and applications applicable to both Dresden and Quad Cities Stations.

H. Explosive Gas Monitoring

Proposed Specification 3/4.2.H, "Explosive Gas Monitoring," is a rewrite of existing specifications (3/4.8.A). Proposed Actions and Surveillances are changed to match the STS type format. The proposed amendment request is consistent with the recommendations provided in Generic Letter 89-01, "Implementation of Programmatic Controls for Radiological Effluent Technical Specifications in the Administrative Controls Section of the Technical Specifications and the Relocation of Procedural Details of RETS to the Offsite Dose Calculation Manual or to the Process Control Program," Enclosure 1.

I. Suppression Chamber and Drywell Spray Actuation

Proposed Specification 3/4.2.I, "Suppression Chamber and Drywell Spray Actuation," is a rewrite of existing specifications (3/4.2.B). Proposed Actions and Surveillances are changed to match STS type format and are based on STS Section 3/4.3.9.

J. Feedwater Pump Trip

Proposed Specification 3/4/2.J, "Feedwater Pump Trip" is a new specification for Dresden and Quad Cities. Proposed Actions and Surveillances are changed to match STS-type format, and is based upon STS Section 3/4.9 and Generic Letter 89-19.

K. Toxic Gas Monitoring (Quad Cities only)

Proposed Specification 3/4.2.K, "Toxic Gas Monitoring," is a rewrite of existing specifications (3/4.2.F.2). Proposed Action and Surveillances are changed to match STS type format and are based on STS Section 3/4.3.7.8.

BASES

The proposed changes to the 3/4.2 Bases are made to support the changes proposed to the individual specifications.

DESCRIPTION OF CHANGES

Technical Specification 3/4.2 "INSTRUMENTATION"

Introduction

Commonwealth Edison proposes to amend the Technical Specifications (TS) for Dresden and Quad Cities Nuclear Power Stations (DNPS and QCNPS). The proposed amendment would:

For both Dresden and Quad Cities, upgrade the requirements of Section 3/4.2, "Instrumentation," to include operating and shutdown Limiting Condition(s) for Operation (LCO) and Surveillance Requirement(s) (SR) that are consistent with the Standard Technical Specifications and later operating plant provisions except as identified below.

Description and Bases for the Proposed Changes

Generic to all sections

- 1. Response Time Testing surveillance requirements, and the associated tables, are not included in the proposed specifications. Generic guidance is expected in the near future to significantly revise this requirement for licensees. Dresden and Quad Cities Technical Specifications do not currently contain response time testing requirements. The expected Generic Letter guidance will be considered when it is issued.
- 2. A single column of specified setpoints is provided in the proposed Specification tables. Generic guidance is expected in the near future to indicate that only Allowable Value type setpoints should be specified. The actual setpoints applied in the field should be controlled through administrative controls such as procedures. Dresden and Quad Cities Technical Specifications currently contain only these single setpoint requirements. The expected Generic Letter guidance will be considered when it is issued.
- 3. The STS Limiting Conditions for Operation table and the setpoints table are generally combined for each section of instrumentation.
- 4. In all tables, the term "OPERABLE" has been omitted from the column heading for brevity. This statement is redundant to the Limiting Condition for Operation (LCO) which specifies the operability requirements and references the corresponding table for simplicity; therefore, the proposed change does not introduce any technical differences from STS guidelines.
- 5. Generic Letter 87-09 guidance has been incorporated in Section 3/4.0 and in the corresponding ACTIONs of Section 3/4.2. Attachment 7 provides the details of the implementation of the changes reflected in proposed Specification 3.0.D.

A. Isolation Actuation

- 1. Proposed Specification 3/4.2.A has been titled "Isolation Actuation," and is a rewrite of existing specifications (3/4.2.A). Proposed Actions and Surveillances are changed to match STS guidelines and format. Clearer guidance is provided as Action Statements for the declaration of inoperable instrumentation channels in the proposed amendment request. The adoption of several STS-type requirements greatly improve the safety margin of the plant due to addition of several additional requirements and more detailed delineation of the current requirements for isolation of Primary and Secondary Containment, Main Steam Lines, Reactor Water Cleanup, Isolation Condenser or Reactor Core Isolation Cooling, High Pressure Coolant Injection, and Shutdown Cooling systems.
- 2. Proposed Footnote (c) is an enhancement to STS guidelines based upon precedence from the LaSalle County Technical Specifications. This footnote provides necessary relief from STS guidelines designed to prevent unnecessary plant trips.
- 3. The STS provides two choices (designated by "a" and "b" page numbers) for the isolation actuation tables. The "b" pages from STS guidelines are being applied for the proposed amendment request. The Trip Function list and Surveillance Requirements are closer to the plant designs for Dresden and Quad Cities Stations than are the "a" pages.
- 4. In Table 3.2.A-1, the STS column which specified valve group designations has not been included. These valve group designations were used with the Primary Containment Isolation Valve table in STS LCO 3/4.6.4 to identify which valves closed on which isolation signals. However, the guidance from Generic Letter 91-08 has been incorporated which removed this only other reference to the valves group designations. These designations now provide only design information and do not implement any additional requirements. Their exclusion does not reduce the safety of the plant. These valve designations are not currently in the instrumentation sections of either the Dresden or Quad Cities Technical Specifications.
- 5. In Table 3.2.A-1, the Manual Initiation functional units are not proposed, since no logic exists which provides system-wide isolation actuation. Manual isolation must be accomplished by the individual closure of each valve. Such valve closure is routinely tested by several mechanisms, including the Inservice Testing Program. Therefore, an additional surveillance to test this logic is unnecessary.
- In Table 3.2.A-1, item 1.a, 2.a, 3.a, and 4.b, Reactor Water Level -Low-Low, Level 2 is not used for Primary Containment and Secondary Containment Isolation due to plant design; therefore, this setpoint has not been included in the proposed amendment request. The plant-specific

setpoints for Reactor Vessel Water Level - Low and Low-Low have been retained from the current Technical Specifications. The Low level setpoint has been modified from >144" to \geq 144" to match STS and the current RPS setpoint. This insignificant change is not important to safety and is made for consistency within the Specifications.

- 7. In Table 3.2.A-1, items 1.b and 2.b, the requirements for Drywell Pressure -High for Primary Containment Isolation and Secondary Containment Isolation are consistent with STS guidelines except that footnote [d] has been retained from the current versions of the Technical Specifications for Dresden and Quad Cities Stations. Footnote [d] maintains consistency between the STS, "Primary Containment Integrity," <u>Special Test Exceptions</u>, and the requirements for this function. This footnote is considered appropriate since Primary Containment Integrity is required any time there is a possibility of an event which would develop high drywell pressure.
- 8. In Table 3.2.A-1, item 1.c. the requirements for Drywell Radiation High for Primary Containment Isolation are consistent with STS guidelines. These are NUREG-0737 requirements which are not included in the current version of the Dresden or Quad Cities Technical Specifications.
- In Table 3.2.A-1, item 2.c, the requirements for Reactor Building Ventilation Exhaust Radiation - High are consistent with STS guidelines (items c, d, and e) for Secondary Containment Isolation with the following exception: the plant-specific functional units for high exhaust radiation have been identified.
- 10. In Table 3.2.A-1, item 2.d, the requirements for Refueling Floor Radiation -High for Secondary Containment Isolation have been retained (from current Specification 3.2.D) as a plant-specific isolation signal.
- 11. STS Table 3.3.2-1, item 2.f is not incorporated since this logic is not included in the design at either Dresden or Quad Cities Stations.
- 12. In Table 3.2.A-1,item 3.b, the requirements for Main Steam Line (MSL) Isolation for MSL Tunnel Radiation - High have been adopted per STS guidelines. Plant-specific setpoints (including hydrogen injection) have been maintained from the current Technical Specifications. The difference in the setpoint for Dresden and Quad Cities (3 vs. 15 times normal background) is due to hydrogen addition. The proposed footnotes address the differences in plant design.
- In Table 3.2.A-1, item 3.c, the requirements for MSL Isolation for MSL Pressure - Low have been adopted per STS guidelines. The plant-specific setpoints for Dresden have been modified from 850 psig to 825 psig to match the previous Quad Cities revision (per amendment 66/60).

- 14. In Table 3.2.A-1, item 3.d, the requirements for MSL Isolation for MSL Flow - High have been adopted per STS guidelines. A footnote has been added to explain a difference in system design between Dresden and Quad Cities Stations (there is no control room isolation/actuation capability at Dresden). The plant specific setpoints for Dresden have been modified from 120% to 140% to match the previous Quad Cities revision (per amendment 66/60). The STS action is revised based upon precedence at LaSalle County Station, since closure of the associated MSIVs provide an equivalent level of safety without forcing a full shutdown.
- 15. In Table 3.2.A-1, item 3.d, the operability requirements for MSL Isolation for MSL Flow High have been adopted per STS guidelines except for the designation of channels on a per line basis. This is considered design information which, when combined with the note allowing 2 of 4 detectors, is considered to be confusing. Two channels in each of two trip systems, each with four detectors, adequately describes the 16 detectors provided. Since the flow must be measured in four main steam lines, the design requires that the detectors be similarly divided.
- 16. STS Table 3.3.2-1, item 3.e, includes requirements for MSL Isolation for Condenser Vacuum - Low; this trip function provides only RPS input and is not part of the Dresden/Quad Cities design for isolation actuation.
- 17. In Table 3.2.A-1, item 3.e, the requirements for MSL Isolation for MSL Tunnel Temperature High have been adopted per STS guidelines except that these instruments are not provided on a per line basis.
- 18. STS Table 3.3.2-1, item 3.g, includes requirements for MSL Isolation for high tunnel differential temperature; this trip function is not part of the Dresden/Quad Cities design for isolation actuation.
- 19. In Table 3.2.A-1, item 4, the requirements for Reactor Water Cleanup (RWCU) Isolation have been adopted per STS guidelines except that only standby liquid control system initiation and low reactor vessel water level provide isolation of the RWCU Systems assumed in the safety analysis at Dresden and Quad Cities.
- 20. In Table 3.2.A-1, item 5, the requirements for Dresden's Isolation Condenser Isolation are provided consistent with STS guidelines for reactor core isolation cooling systems, but modified as necessary for differences in the system designs. The Dresden setpoint for high steam flow, item 5.a, has been revised to be consistent with Quad Cities setpoint and the bases for the current Dresden setpoint. The requirements for Quad Cities' Reactor Core Isolation Cooling (RCIC) Isolation are consistent with STS guidelines with plant -pecific setpoints included in the proposed amendment request. Turbine Exhaust diaphragm Pressure - High for RCIC Isolation has not been adopted as this trip function is not part of the system design at Quad Cities

Station. In addition, the following trip setpoints have not been adopted from STS guidelines due to design limitations of Quad Cities RCIC System:
a) Equipment Room Differential Temperature - High; b) Pipe Routing Area
Temperature - High; c) Pipe Routing Area Differential Temperature - High;
and d) Emergency Area Cooler Temperature - High.

- 21. In Table 3.2.A-1, item 6, the requirements for High Pressure Coolant Injection (HPCI) Isolation are consistent with STS guidelines for steam line differential pressure (flow), low steam supply pressure (reactor vessel pressure) and area temperature high. The rest of the STS logic functional units have not been adopted since the system design does not include such logic at Dresden and Quad Cities. The Dresden setpoint for high steam flow, item 6.a, has been revised to be consistent with Quad Cities setpoint and the bases for the current Dresden setpoint.
- 22. In Table 3.2.A-1, item 7, the requirements for Shutdown Cooling (SDC) Isolation are consistent with the latest STS guidelines (NUREG-1433). Revision 4 of STS contains requirements, in the Applicable Operational Conditions for the Reactor Vessel Water Level - Low function, that are inconsistent with mitigating an inadvertent drain-down event. Isolation in Operational Mode(s) 1, 2 and 3 is provided by the Reactor Vessel Pressure -High, Cut-in Permissive. The reactor vessel water level-low function is designed to prevent an inadvertent drain-down event of the reactor vessel during SDC operations and therefore Operational Mode(s) 3, 4, and 5 are more appropriate. SDC is a separate system for Dresden Station; however, this is a mode of RHR operation for Quad Cities Station. In addition, the following trip setpoints have not been adopted from STS guidelines due to design limitations of the SDC systems: a) Equipment Room Differential Temperature - High; b) Area Cooler Temperature - High; and c) RHR Flow -High. The proposed ACTION has been revised consistent with the ACTION requirements at Limerick Station. There is no need to lock these isolation valves.
- 23. The proposed Action Statements in Table 3.2.A-1 are consistent with STS guidelines. Actions 21 and 22 are similar to STS except that 8 hours are allowed to reach Startup and/or close MSIVs. This is consistent with current Dresden and Quad Cities requirements and 8 hours are considered necessary to provide sufficient time for a controlled shutdown. STS Actions 24 and 25 are not needed since manual isolation is not provided on a system-wide basis and Action 27 is not needed per changes made in the requirements at Limerick Station, i.e., there is no need to lock the mode switch.
- 24. In Table 3.2.A-1, STS note ** has not been included in the proposed amendment because the functional unit to which this note is applicable is not used at Dresden and Quad Cities Stations. Footnote (c) adds the plantspecific description of the Reactor Building Ventilation System (RBVS) isolation and actuation of the SGTS. STS footnotes (d), (e), (g) and (h) are

not applicable to the plant design. The proposed footnote (d) is retained from the current requirements; Primary Containment Integrity is required during all conditions when this parameter would be indicative of a LOCA. Proposed footnote (e) is to clarify that the existing design does not include the normal two trip systems for this parameter. Proposed footnote (g) is added to provide consistency with the latest STS provisions (NUREG-1433) for SDC in Operational Modes 4 and 5. Proposed footnote (h) is a plant-specific clarification applicable to Dresden Unit 2 (hydrogen injection). Proposed footnote (i) retains a plant-specific note from the current Technical Specifications to identify a time delay. Proposed footnote (j) adds a plant specific note to provide common reference for all reactor vessel water levels (360 inches above vessel zero). Proposed footnote (k) (for Quad Cities only) has been added to clarify plant-specific designs.

- 25. Table 4.2.A-1 is consistent with STS guidelines as applied to Dresden and Quad Cities Stations. Any changes to Table 4.2.A-1 have been added to maintain consistency in Applicable Modes between the appropriate LCO and Surveillance Requirement and are administrative in nature.
- 26. In Table 4.2.A-1, items 3.e and 6.c, and 5.c for Quad Cities, are area temperature monitors which require significant effort to test and/or calibrate. These monitors are United Electric liquid-filled bulb type temperature switches which require removal from the system and the area, and subsequent heating in an oven device to verify the correct actuation. Such surveillance results in lengthy out-of-service times for the system and the temperature monitors are normally verified, on a refueling basis, to be within their allowed tolerance. As such, the eighteen month test and calibration frequencies are retained.
- 27. In Table 4.2.A-1, item 4.a the channel functional test surveillance frequency is revised to E, consistent with the previously approved LaSalle Station surveillance frequency for this test. This also eliminates the need for table Note (b).
- 28. In Table 4.2.A-1 and companion LCO Table 3.2.A-1, the STS note [*] is split into two notes * and **. Use of the two notes permits the secondary containment isolation on reactor vessel low water level to be taken out of service during reactor vessel and recirculation piping maintenance periods when the reactor vessel has been defueled and the fuel pool gates are closed. This philosophy is consistent with the latest STS (NUREG-1433) and is necessary to support vessel and piping maintenance and inspections.
- 29. In Table 4.2.A-1, the STS note ** is not adopted since the functional unit to which it applies is not applicable to the design of the stations. Note (a) is also not adopted as it is related to manual initiation circuitry which has not been included in the Specification. The proposed note (a) is adopted to indicate analog trip systems which require monthly calibration of the trip

units, while the transmitters are calibrated on an 18 month frequency. Proposed notes (c), and (d) for Quad Cities only, are provided for consistency between the LCO table and the Surveillance Requirements table.

B. Emergency Core Cooling Systems (ECCS) Actuation

- Proposed Specification 3/4.2.B has been titled "Emergency Core Cooling Systems (ECCS) Actuation," and is a rewrite of existing specifications (3/4.2.B). Proposed Actions and Surveillances are changed to match STS guidelines and format. The adoption of several STS-type requirements greatly improve the safety margin of the plant due to addition of several additional requirements for actuation of Core Spray, Low Pressure Coolant Injection, High Pressure Coolant Injection, Automatic Depressurization, and Loss of Power Systems.
- 2. An additional action is proposed, ACTION 3, to allow an out-of-service time for one trip system of ADS without declaring all of ADS inoperable. This is in accordance with precedent established on the LaSalle docket. This also involves the corresponding division in Table 3.2.B-1 and clarification of the associated actions.
- 3. In Table 3.2.B-1, the minimum channels required to be OPERABLE are specified consistent with the current Dresden and Quad Cities designs and the current plant safety analyses. These have been specified on a trip function basis per STS since the design does not readily adapt to division by Trip System.
- 4. In Table 3.2.B-1, items 1.a, 2.a, 4.a and 5.a, Core Spray, LPCI and ADS actuate on a Reactor Vessel Water Level Low-Low level (using the current terminology); the current terminology is retained because of human factors concerns. The plant-specific setpoint for Reactor Vessel Water Level Low-Low has been retained from the current Technical Specifications.
- 5. The actuation of Core Spray, LPCI, HPCI, and ADS maintains an exemption from the requirements of Drywell Pressure - High to allow the function to be inoperable when Primary Containment Integrity (PCI) is not required. During periods when the operational conditions of the plant do not require PCI, high drywell pressure is not possible; therefore, this exception has been retained in the proposed amendment request. The plant-specific setpoint for Drywell Pressure - High has been retained from the current Technical Specifications.
- 6. A deviation from STS guidelines requiring Manual Initiation has been proposed in Table 3.2.B-1. The plant designs for Dresden and Quad Cities do not include a <u>system</u> manual initiation logic of ECCS except for HPCI. HPCI manual initiation is included in Table 3.2.B-1, item 3.g.

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- 7. In Table 3.2.B-1, items 2.e, 2.f and 2.g, LPCI loop selection logic parameters are incorporated as plant-specific functional units. In Table 4.2.B-1, these items retain their current surveillance frequencies.
- 8. In proposed Table 3.2.B-1, the ADS has been subdivided by TRIP SYSTEM as previously approved for LaSalle.
- 9. In proposed Table 3.2.B-1, items 4.c & 4.d and 5.c & 5.d, two initiation timers (initiation and low-low level) have been incorporated. The initiation timer is retained from the current plant Technical Specifications per designs for ADS at Dresden and Quad Cities Stations. The low-low level timer is designed to provide the same confirmatory function as the STS Reactor Vessel Water Level Low, Level 3, permissive. These requirements are consistent with the current safety analyses in place at Dresden and Quad Cities Station.
- 10. In Table 3.2.B-1, items 4.e and 4.f, the Dresden setpoints are proposed to be revised to match the Quad Cities setpoints. The ECCS discharge pipe keep-filled system operates in the 50 to 100 psig range and the setpoints for the ADS permissive should be sufficiently above that range to assure the keep-filled system is not actuating the permissive.
- 11. In proposed Table 3.2.B-1, item 6, the STS columns for Total Number of Channels and Channel(s) to Trip have been deleted. These columns provide only design information which is inconsistent with the required information for all other functions in the table. The Minimum Channel(s) per Trip Function retain the current plant-specific design requirements for Dresden and Quad Cities Stations. These requirements are consistent with the current safety analyses in place at Dresden and Quad Cities Station. For example, STS guidelines specify 3/bus for Total No. of Channel(s) for 4.16 kV Emergency Bus Undervoltage (Degraded Voltage). The current design and proposed requirements specify 2/bus.
- 12. The Actions proposed to Table 3.2.B-1 are consistent with STS guidelines. Action 31 adopts precedence set in the LaSalle County Station Technical Specifications and is applicable to the design requirements and safety analysis assumptions at Dresden and Quad Cities Stations.
- 13. In Table 3.2.B-1, the Action corresponding to STS Action 35 has been deleted since placing the trip system in the tripped condition is not applicable to the system design for either Dresden or Quad Cities.
- 14. In Table 3.2.B-1, Action 36 has been revised to allow one hour to place the channel in the tripped condition per the precedent of LaSalle.
- 15. STS Table 3.3.3.1-1, Action 38 is not proposed since the functional test referred to is not proposed.

- 16. The Table Notation for proposed Table 3.2.B-1 is consistent with STS guidelines. Notes (f), (g), and (h) have been retained from the current Technical Specification requirements in place at either Dresden or Quad Cities Stations. STS note (d) is not proposed since the applicable functional unit is not applicable. Note (e) has been revised from the STS language for specificity.
- 17. Table 4.2.B-1 is generally consistent with STS guidelines as applied to Dresden and Quad Cities Stations. Any changes to the Channel Check requirements in Table 4.2.B-1 have been added to maintain consistency between isolation instrumentation (same instrument or type of instrument is used). This deviation from STS has previously been approved at LaSalle County Station.
- 18. In Table 4.2.B-1, the channel functional test and calibration frequencies for items 2.e, 2.f, 2.g, and 2.h are revised to retain the current frequencies of surveillance for this equipment. There is no current STS guideline for this equipment.
- 19. In Table 4.2.B-1, the channel functional test frequency for item 3.g is revised to match the approved frequencies at LaSalle Station. The manual initiation logic is only a backup to the automatic system and testing sesquiannually is considered adequate.
- 20. In Table 4.2.B-1, the channel functional test and calibration frequencies for items 4.c and 4.d are retained from their current surveillance frequencies. These components represent significant risk of actuation if surveillances are performed during plant operation.
- 21. STS note (a) is not proposed in Table 4.2.B-1 since it is not applicable to the manual initiation switch test frequency. Note (c) is revised from the STS language for specificity and note (d) is added for consistency.

<u>C.</u> <u>ATWS - RPT</u>

Proposed Specification 3/4.2.C, "ATWS - RPT," is a rewrite of existing specifications for Dresden (3/4.2.H) and new specifications for Quad Cities. Proposed Actions and Surveillances are changed to match STS guidelines and format and do not remove any major requirements from the current specifications. Additional allowances are provided based on precedence at Grand Gulf-Unit 1. A 14 day Allowable-Outage-Time (AOT) is retained from the current requirements for inoperable channels being one less than the minimum Operable channels per trip system requirement for one or both trip systems. Additionally, provisions are added to address the loss of an entire trip system (72 hour AOT,) and both trip systems (restore at least one trip system to Operable status within one hour.) If the proposed actions cannot

be implemented, the plant must be placed in the Startup Mode within 8 hours. This is consistent with current Dresden requirements and 8 hours are considered necessary to provide sufficient time for a controlled shutdown.

- 2. Proposed Action 2 retains the 14 day allowed outage time recently approved for Dresden Station in Amendment No. 113/109.
- 3. Proposed 3.2.C, Actions 2, 4 and 5 differ from STS guidelines by proposing 8 hours to reach Startup in the event that one or both Trip System(s) are inoperable. Eight hours are necessary to provide sufficient time for a controlled shutdown to startup and avoid risking plant safety further by performing the maneuver in a controlled manner.
- 4. Table 3.2.C-1, note (a) is based upon precedence set forth in the LaSalle County Station Tech Specs, and provides a reasonable time frame to perform surveillances on a channel without tripping the system. This requirement is consistent with industry standards and does not reduce the margin of safety for the plant.
- 5. Table 3.2.C-1, notes (b) and (c) maintain the current requirements from the Technical Specifications at Dresden and Quad Cities. These notes include specific requirements for time delay and specific water level setpoint reference points. These requirements are consistent with the safety analyses for both Dresden and Quad Cities Stations. Table 4.2.C-1 is consistent with STS guidelines as applicable for plant specific setpoints at each site.
- D. <u>Reactor Core Isolation Cooling Actuation (Quad Cities Only)</u> Isolation Condenser Actuation (Dresden Only)
- Proposed Specification 3/4.2.D, "Reactor Core Isolation Cooling Actuation," is a rewrite of existing specifications for Quad Cities Station. The appropriate proposed matching requirements for Dresden Station is 3/4.2.D, "Isolation Condenser Actuation." Proposed Actions and Surveillances are changed to match STS guidelines and format.
- 2. STS Actions 51, 52, and 53 have not been included in the proposed specifications for Dresden Station due to the plant design. In addition, Footnotes (b), (c), and (d) are also not included due to the plant design at Dresden Station.
- 3. Footnotes (b) and (c) have been added to maintain consistency to the current plant design for Quad Cities. The remaining footnotes from STS have not been included since they are considered plant design information that do not implement additional requirements.

4. In proposed Table 4.2.D-1, STS note (b) is not incorporated since the functional test frequency associated with note (b) in not consistent with the proposed sesquiannual test frequency.

E. Control Rod Block Actuation

- 1. Proposed Specification 3/4.2.E, "Control Rod Block Actuation," is a rewrite of existing specifications (3/4.2.C). Proposed Actions and Surveillances are changed to match STS-type format for systems and applications applicable to both Dresden and Quad Cities Stations. The Table 4.2.E-1 Note (j) is a change to the STS, Applicable Operational Modes column for IRMs and SRMs that allows an exception to 4.0.D in order to change modes and is based upon precedence in the Perry Station Technical Specifications. This change clarifies the language for surveillances required of SRM's and IRM's when changing Operational Modes from Mode 1 to 2 on a Shutdown.
- 2. The change proposed in Table 3.2.E-1 for RBM Upscale places the Trip Setpoint in the COLR (Core Operating Limits Report) per the guidance specified in GL 88-16. The RBM setpoints are specified and controlled in the COLR.
- 3. In proposed Table 3.2.E-1, the Trip Setpoints are retained from current plant design and maintain the current requirements specified in the Technical Specifications. The Minimum Channels per Trip Function is also retained from current plant design and Technical Specifications.
- 4. Table 3.2.E-1, Item 2.a is revised from STS guidelines and is based upon the guidance specified in GL 86-09. Footnote (h) specifies the trip function location of the APRM setpoints and is taken from STS Table 3.3.6-2.
- 5. Table 3.2.E-1, Items 2.b and 2.d are revised from STS guidelines by the addition of note (j). This revision is based on recent approval of a similar change for Limerick Station (Amendment No. 41/7) which indicates that APRMs are only required during shutdown margin testing in Operational Mode 5.
- 6. In proposed Table 3.2.E-1, item 3.d, note (i) is added to specify an exception to the 3 cps requirements for SRM operability requirements. This clarification is based upon industry experience for SRM operability and maintains consistency to proposed Sections 3.10.B and 3.2.G.
- 7. In proposed Table 3.2.E-1, the Minimum Channels per Trip Function, Item 5.a (Water Level High) and 5.b (SDV Switch in Bypass) for SDV Trip, deviates from STS guidelines and maintains consistency to current requirements based upon plant design for Dresden and Quad Cities.

- 8. In proposed Table 4.2.E-1, several notes are repeated from the LCO table to prevent confusion of applicability. These repeated notes provide no additional requirements and are included only to prevent confusion.
- 9. In proposed Table 4.2.E-1, the SRs for APRMs, item 2, are a deviation from STS for consistency with the RPS SRs. These are the same instruments providing the signal and the frequencies should be the same.
- 10. In proposed Table 4.2.E-1, the channel functional test SRs for the source range monitors, item 3, and intermediate range monitors, item 4, are deviations from STS based on recently approved amendments for Perry Nuclear Power Plant (Amendment Nos. 31 & 41) which delete the need for identification of a "within 24 hours" for the prior to startup surveillance.
- 11. In proposed Table 4.2.E-1, the channel calibration SRs for the source range monitors, item 3, and intermediate range monitors, item 4, are deviations from STS based on recently approved amendments for Perry Nuclear Power Plant (Amendment Nos. 31 & 41).
- 12. In proposed Table 4.2.E-1, Note (j) is added per Perry Nuclear Power Plant Amendment Nos. 31 & 41.
- 13. In proposed Table 4.2.E-1, note (k) is added per Limerick Amend. No. 41/7.
- 14. TSUP Tables 3.3.E-1 and 4.3.E-1 do not include requirements for the Control Rod Block Instrumentation of Reactor Coolant System Recirculation Flow. This is a deviation from STS Table 3.3.6-1 and 4.3.6-1. This deviation from STS guidelines maintains consistency with current Technical Specification requirements and is consistent with the guidance provided in the Improved Technical Specifications (ITS). ComEd, therefore finds this acceptable.
- F. Accident Monitoring Instrumentation
- 1. Proposed Specification 3/4.2.F, "Accident Monitoring Instrumentation," is a rewrite of existing specifications (3/4.2.E). Proposed Actions and Surveillances are changed to match STS-type format as applicable to plant-specific parameters currently resident in the Technical Specifications for both Dresden and Quad Cities Stations.
- 2. In proposed Table 3.2.F-1, Item(s) 8 and 9/Action 62, retains the currently approved, plant-specific action requirements. These requirements are a deviation from STS guidelines and are based upon a plant specific design.
- 3. In proposed Table 3.2.F-1, Item 9, is provided consistent with the requirements specified in GL 83-36.

- 4. In proposed Table 3.2.F-1, Item 10/Action 63, is a plant-specific action retained from the current version of the Technical Specifications (Dresden Amendment Nos. 90/83 for Units 2/3 and Quad Cities Amendment Nos. 94/90 for Units 1/2) and follows the guidance specified in GL 83-36.
- 5. STS Table 3.3.7.5-1, item 11 is not proposed. This item is not included in the station designs.
- 6. In proposed Table 3.2.F-1, Item 11 for Neutron Monitors (Source Range) maintains the requirements specified in the current version of the technical specifications, based upon plant-specific design. Table 4.2.F-1 SR specify a surveillance frequency that is consistent with other proposed SRM calibration requirements.
- 7. Item 13 adds a plant-specific parameter applicable for Quad Cities only that deviates from STS guidelines based upon plant-specific design. This requirement maintains the current safety margin for Quad Cities Station.
- 8. Action 60 in Table 3.2.F-1 retains the current requirements for allowed outage times (AOT) for accident monitoring instrumentation (30 days). This change is consistent with plant-specific design and maintains the current margin of safety for Dresden and Quad Cities Station.
- Action 61 in Table 3.2.F-1 is consistent with the guidelines specified in GL 83-36. The 30 day reporting requirement is consistent with other reporting times (10 CFR 50.73) and is consistent with current practices.
- Table 3.2.F-1, Action 62, items b and c, retain the usage of the High Radiation Sampling System (HRSS) to allow for combustible gas monitoring. This deviation from STS guidelines is consistent with the current requirements and is based upon plant-specific design.
- G. Source Range Monitoring
- Proposed Specification 3/4.2.G, "Source Range Monitoring," adds LCOs and SRs that are limited to a single SR provision (SR 4.3.B.4) in the current Technical Specifications. Proposed Actions and Surveillances are changed to match STS-type format for systems and applications applicable to both Dresden and Quad Cities Stations. The proposed specifications offer no major deviations from STS guidelines.
- 2. Proposed Specification 4.2.G.3 is revised and note (c) is added in accordance with a recently approved amendment for Perry Nuclear Power Plant (Amendment No. 41).

H. Explosive Gas Monitoring

- Proposed Specification 3/4.2.H, "Explosive Gas Monitoring," are new instrumentation requirements not currently provided in the Technical Specifications. Proposed Actions and Surveillances are changed to match STS-type format with setpoints specified based upon plant-specific design. The proposed requirements are based on precedence at Perry Station and Generic Letter 89-01, "Implementation of Programmatic Controls for Radiological Effluent Technical Specifications in the Administrative Controls Section of the Technical Specifications and the Relocation of Procedural Details of RETS to the Offsite Dose Calculation Manual or to the Process Control Program," Enclosure 4.
- 2. References to exclusions from the requirements of 3.0.D have been excluded per the guidance specified in GL 87-09.
- I. Suppression Chamber and Drywell Spray Actuation Instrumentation
- 1. Proposed Specification 3/4.2.1, "Containment Cooling," is a rewrite of existing specifications (3/4.2.B). Proposed Actions and Surveillances are changed to match STS-type format and is based upon STS Section 3/4.3.9 as applicable to the Dresden/Quad Cities plant design (e.g., Functional Units).
- 2. In Table 4.2.I-1, the channel check for drywell high pressure is not proposed since this instrument does not currently provide indication.
- 3. In Table 4.2.I-1, the channel calibration frequency is different from STS guidelines. The current requirements specified in the Technical Specifications have been retained and maintain the current safety margin for Dresden and Quad Cities Stations.
- J. <u>Feedwater Pump Trip</u>
- Proposed Specification 3/4.2.J, "Feedwater Pump Trip", is a new specification for both Dresden and Quad Cities Stations. Proposed Actions and Surveillances are changed to match STS-type format and is based upon STS Section 3/4.3.9 as applicable to Dresden/Quad Cities plant design (e.g., Functional Units).
- 2. In proposed Table 3.2.J-1, the Minimum Channel requirement (2) is based upon plant-specific design. Action 90 is a deviation from STS requirements and allows the station 8 hours to reach a startup condition in order to avoid further risking the unit by unnecessarily hurrying operating personnel. The time frame is commensurate with the safety significance of the Trip Setpoint. Footnote (a) is added to maintain consistency to other Trip Setpoints specified within the Technical Secifications.

- K. Toxic Gas Monitoring (Quad Cities only)
- 1. Proposed Specification 3/4.2.K, "Toxic Gas Monitoring", is a rewrite of existing specifications for Quad Cities Station (3/4.2.F.2). Proposed Actions and Surveillances are changed to match STS-type format and are based on STS Section 3/4.3.7.8.

Summary and Schedule

The proposed changes to both the Dresden and Quad Cities Station Technical Specifications have been reviewed and approved by the On-Site Review in accordance with controlled Station Procedures. Commonwealth Edison has reviewed these proposed amendments in accordance with 10 CFR 50.92(c) and determined that no significant hazards consideration exist. This evaluation is documented in Attachment 6.