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ComEd

RS-00-104

September 22, 2000

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Dresden Nuclear Power Station, Units 2 and 3
Facility Operating License Nos. DPR-19 and DPR-25
NRC Docket Nos. 50-237 and 50-249

LaSalle County Station, Units 1 and 2
Facility Operating License Nos. NPF-11 and NPF-18
NRC Docket Nos. 50-373 and 50-374

Quad Cities Nuclear Power Station, Units 1 and 2
Facility Operating License Nos. DPR-29 and DPR-30
NRC Docket Nos. 50-254 and 50-265

Subject: Response to Request for Additional Information

References: (1) Letter from R. M. Krich (ComEd) to U. S. NRC Document Control Desk, "Request for Technical Specifications Changes for Dresden Nuclear Power Station, Units 2 and 3, LaSalle County Station, Units 1 and 2, and Quad Cities Nuclear Power Station, Units 1 and 2, to Convert to Improved Standard Technical Specifications," dated March 3, 2000.

(2) Letter from S. N. Bailey (U. S. NRC) to O. D. Kingsley, "Dresden, LaSalle, Quad Cities - Request for Additional Information," dated August 31, 2000.

Commonwealth Edison (ComEd) Company in a letter dated March 3, 2000, Reference 1, proposed changes to the Technical Specifications (TS) of Facility Operating License Nos. DPR-19, DPR-25, NPF-11, NPF-18, DPR-29, and DPR-30 for Dresden Nuclear Power Station, Units 2 and 3, LaSalle County Station, Units 1 and 2, and Quad Cities Nuclear Power Station, Units 1 and 2. The NRC subsequently issued a Request for Additional Information (RAI) letter

A001

bcc: NRC Project Manager, NRR - Dresden Nuclear Power Station, Units 2 and 3
NRC Project Manager, NRR - LaSalle County Station
NRC Project Manager, NRR - Quad Cities Nuclear Power Station
Site Vice President - Dresden Nuclear Power Station
Site Vice President - LaSalle County Station
Site Vice President - Quad Cities Nuclear Power Station
Vice President - Regulatory Services
Nicholas Reynolds - Winston and Strawn
Director, Licensing and Compliance - Dresden and Quad Cities Nuclear Power Stations
Director, Licensing and Compliance - LaSalle County Station
Regulatory Assurance Manager - Dresden Nuclear Power Station
Regulatory Assurance Manager - LaSalle County Station
Regulatory Assurance Manager - Quad Cities Nuclear Power Station
ComEd Document Control Desk - Licensing (Hard Copy)
ComEd Document Control Desk - Licensing (Electronic Copy)

in Reference 2. The RAI letter requested that additional information be provided concerning Section 3.4, "Reactor Coolant Systems (RCS)," of Reference 1 within 60 days after receipt of the letter (i.e., by November 6, 2000). The RAI letter also requested that any necessary revisions to the Reference 1 submittal be made within 60 days after receipt of the letter. The requested additional information is provided in the Attachment to this letter. The necessary changes to the Reference 1 submittal will be made after resolution of the issues in the RAI letter is achieved.

Should you have any questions concerning this letter, please contact Mr. J. V. Sipek at (630) 663-3741.

Respectfully,

R. M. Krich
Vice President - Regulatory Services

Attachment: Response to Request for Additional Information

cc: Regional Administrator - NRC Region III
NRC Senior Resident Inspector - Dresden Nuclear Power Station
NRC Senior Resident Inspector - LaSalle County Station
NRC Senior Resident Inspector - Quad Cities Nuclear Power Station
Office of Nuclear Facility Safety - Illinois Department of Nuclear Safety

ATTACHMENT

Response to Request for Additional Information

Request for Additional Information
Dresden Units 2 and 3 Application for Conversion to
NUREG-1433, Standard Technical Specifications
General Electric Plants (BWR/4)

ITS 3.4.1, Recirculation Loops Operating

3.4.1-01 ITS SR 3.4.1.1
STS SR 3.4.1.1
CTS 3.6.C
DOC M.2

CTS 3.6.C requires that recirculation pump speed shall be maintained within 10% of each other with THERMAL POWER ≥80% of RATED THERMAL POWER and within 15% of each other with THERMAL POWER <80% of RATED THERMAL POWER. ITS SR 3.4.1.1 verifies loop flow mismatch with both recirculation loops in operation is ≤ 10% of rated core flow when operating < 70% of rated flow and ≤ 5% when operating at ≥ 70% of rated flow. CTS utilized recirculation pump speed as the limited parameter whereas ITS uses loop jet pump flow. Also, CTS utilized THERMAL POWER where ITS is using rated core flow. DOC M.2 justified the numerical changes in the specification but did not justify the parameter changes. **Comment:** Provide additional information justifying the change in parameters.

ComEd Response:

The change will be more completely described in a new less restrictive "L" Discussion of Change (DOC).

3.4.1-02 ITS 3.4.1 Required Actions B and C
CTS 3.6.C Action 1 and 2
DOC L2, A6
JFD 2

CTS 3.6.C Action requires that if recirculation pump speeds cannot be restored to within mismatch limits within 2 hours then trip one of the recirculation pumps and take required actions for single loop operation. ITS 3.4.1 Required Action B requires that if recirculation flow mismatch is not within limits within 2 hours then declare the recirculation loop with lower flow to be "not in operation." Following declaring the recirculation loop with the lower flow to be "not in operation" the single loop requirements of LCO 3.4.1 should be implemented. ITS 3.4.1 Required Action A should provide a 12 hour time limit to complete actions for single loop operation. However, ITS 3.4.1 Required Action C provides an exception if the LCO cannot be satisfied because of Condition A. Therefore, ITS does not contain a required time limit for completing single loop actions during loop mismatch conditions. **Comment:** Revise ITS to ensure that single loop actions are taken for loop mismatch conditions.

ComEd Response:

If the recirculation flow mismatch is not restored to within limits within 2 hours, Improved Technical Specifications (ITS) Required Action B.1 requires the recirculation loop with the lower flow to be declared "not in operation." At this time, ITS 3.4.1 Condition C is to be entered. The entry conditions of Condition C are met, since the requirements of the Limiting Condition for Operation (LCO) are not being met for reasons other than Condition A (no loops in operation) or Condition B (recirculation loop flow mismatch not within limits). Condition C is to be entered since the loop is now "not in operation." ITS 3.4.1 ACTION C now provides 24 hours to meet the LCO, consistent with Current Technical Specifications (CTS) 3.9.A Action 1. Thus, ITS 3.4.1 does contain a required time limit for completing single loop actions during loop mismatch conditions.

ITS 3.4.2, Jet Pumps No Comments

ITS 3.4.3, Safety/Relief Valves (S/RVs)

3.4.3-01 ITS SR 3.4.3.1
STS SR 3.4.3.1
CTS 3.6.E
DOC A5
JFD 2

CTS 3.6.E markup deleted the one safety valve at 1135 psig ± 1%. STS SR 3.4.3.1 markup lists a safety function lift setpoint at 1135 ± 11.3 psig. The typed version of ITS SR 3.4.3.1 did not contain the lift setpoint for a safety valve at 1135 psig. **Comment:** Clarify if the safety valve setpoint at 1135 psig is being retained or deleted.

ComEd Response:

The safety valve setpoint at 1135 psig is being deleted, consistent with the Commonwealth Edison (ComEd) Company License Amendment Request letter PSLTR 00-0061, dated February 29, 2000, as noted in DOC A.5. The ISTS markup will be corrected to delete the 1135 psig setpoint.

3.4.3-02 Not Used

ITS 3.4.4, RCS Operational Leakage No Comments

ITS 3.4.5, RCS Leak Detection Instrumentation

3.4.5-01 Not Used

ITS 3.4.6, RCS Specific Activity No Comments

ITS 3.4.7, Shutdown Cooling (SDC) System – Hot Shutdown

3.4.7-01 Not Used

3.4.7-02 Not Used

3.4.7-03 ITS LCO 3.4.7, 3.4.7 Condition A, 3.4.7 Condition B
STS LCO 3.4.8, 3.4.8 Condition A, 3.4.8 Condition B

ITS 3.4.7 added the phrase "required" when the specification referred to SDC subsystems. No justification was provided for adding the phrase "required" to the specification. **Comment**: Provide a justification for adding "required" when referring to SDC subsystems.

ComEd Response:

Justification for Deviation (JFD) 1 was intended to cover the change. Each Dresden Nuclear Power Station unit has three SDC subsystems as described in the Background section of the Bases, with only two required to be Operable by the LCO. Therefore, the term was added into the ITS consistent with the use of the word "required" in the ISTS (i.e., the term "required" is used when the LCO does not require all of the installed subsystems to be Operable). However, a specific JFD will be provided.

ITS 3.4.8, Shutdown Cooling (SDC) System – Cold Shutdown

3.4.8-01 Not Used

3.4.8-02 ITS LCO 3.4.8, 3.4.8 Condition A
STS LCO 3.4.9, 3.4.9 Condition A

ITS 3.4.8 added the phrase "required" when the specification referred to SDC subsystems. No justification was provided for adding the phrase"required" to the specification. **Comment**: Provide a justification for adding the phrase "required" when referring to SDC subsystems.

ComEd Response:

Justification for Deviation (JFD) 1 was intended to cover the change. Each Dresden Nuclear Power Station unit has three SDC subsystems as described in the Background section of the Bases, with only two required to be Operable by the LCO. Therefore, the term was added into the ITS consistent with the use of the word "required" in the ISTS (i.e., the term "required" is used when the LCO does not require all of the installed subsystems to be Operable). However, a specific JFD will be provided.

ITS 3.4.9, RCS Pressure and Temperature (P/T) Limits

3.4.9-01 Not Used

3.4.9-02 Not Used

3.4.9-03 ITS 3.4.9 Required Action A.1
STS 3.4.9 Required Action A.1
CTS 3.6.K Action 1

CTS 3.6.K Action 1 requires restoring the reactor vessel metal temperature and/or pressure to within the limits within 30 minutes, without exceeding the applicable primary system coolant temperature rate of change limit. ITS 3.4.9 Required Action A.1 requires restoring the parameter(s) to within limits within 30 minutes. The ITS did not explicitly retain the requirement

which prohibits exceeding the heatup or cooldown rates during restoration of the parameters to within limits. **Comment**: Provide justification for not retaining the requirement to prohibit exceeding heatup and cooldown rates when restoring parameters to within limits.

ComEd Response:

The heatup and cooldown limits are part of the LCO statement. For this LCO, compliance with the heatup and cooldown limits must be met at all times. Therefore it is unnecessary to state in an Action to make sure the limits are not exceeded, since LCO 3.0.A already requires this. It was intended for DOC A.1 to cover this change, however, a specific "administrative" DOC will be provided.

ITS 3.4.10, Reactor Steam Dome Pressure No Comments

Request for Additional Information
LaSalle Units 1 and 2 Application for Conversion to
NUREG-1434, Standard Technical Specifications
General Electric Plants (BWR/6)

ITS 3.4.1, Recirculation Loops Operating

3.4.1-01 Not Used

3.4.1-02 Not Used

3.4.1-03 ITS 3.4.1 Required Action A.3 and Condition C
DOC LA2

ITS 3.4.1 Condition C requires exiting Region I of Figure 3.4.1-1 if one or two recirculation loops operating within Region I of Figure 3.4.1-1 OR Required Action A.3 and associated Completion Time not met. ITS 3.4.1. Required Action A.3 verifies recirculation loops are not operating in Region I of Figure 3.4.4-1 once per 12 hours. The second part of ITS 3.4.1 Condition C appears to be redundant. If ITS 3.4.1 Required Action A.3 could not be met because the unit was operating in Region I then the first part of ITS 3.4.1 Condition C would be adequate to initiate action to exit Region I. The most probable reason for ITS 3.4.1 Required Action A.3 not being met is because the verification could not be performed within the required Completion Time is an unavailability of indications. Without these indications completing ITS Required Action C.1 cannot be verified. A more appropriate action for not completing ITS Required Action A.3 due to not meeting the Completion Time is necessary. **Comment**: Provide additional information for including "Required Action A.3 and associated Completion Time not met" in ITS 3.4.1 Condition C.

ComEd Response:

The second Condition was added for clarity. However, we agree that the second Condition is covered by the first Condition. Therefore, for consistency with the format of the ISTS, the second Condition will be deleted.

3.4.1-04 Not Used

3.4.1-05 ITS LCO 3.4.1 and 3.4.1 Required Action F and G
ITS Bases 3.4.1 Actions
STS LCO 3.4.1 and 3.4.1 Required Action A
CTS 3.4.1.1 Action a.1 and 3.4.1.3 Action a and b
JFD 1

CTS 3.4.1.3 Action a and b declare the recirculation loop with the lower flow "not in operation" if mismatch conditions are not corrected within 2 hours. CTS 3.4.1.3 Action b directs CTS 3.4.1.1 actions be taken. CTS 3.4.1.1 Action a.1 requires single loop actions be performed within 4 hours. ITS 3.4.1 Required Action F requires declaring the recirculation loop with the lower flow to be "not in operation" if recirculation loop flow mismatch is not within limits. Following declaring the recirculation loop with the lower flow be "not in operation" the single loop conditions of the LCO should be implemented. ITS 3.4.1 Required Action A should provide a time limit of 12 hours to complete the actions for single loop operation. However, ITS 3.4.1

Required Action A provides an exception if the LCO cannot be satisfied because of Condition D. Therefore, ITS does not have a required time limit for completing single loop actions during loop mismatch conditions. **Comment**: Revise ITS to ensure that single loop actions are taken for loop mismatch conditions within a specific time period.

ComEd Response:

If the recirculation flow mismatch is not restored to within limits within 2 hours, ITS Required Action F.1 requires the recirculation loop with the lower flow to be declared "not in operation." At this time, ITS 3.4.1 Condition G is to be entered. The entry conditions of Condition G are met, since the requirements of the LCO are not being met for reasons other than Condition D (no loops in operation) or Condition F (recirculation loop flow mismatch not within limits). Condition G is to be entered since the loop is now "not in operation." ITS 3.4.1 ACTION G now provides 12 hours to meet the LCO. Thus, ITS 3.4.1 does contain a required time limit for completing single loop actions during loop mismatch conditions.

ITS 3.4.2, Flow Control Valves - No Comments

ITS 3.4.3, Jet Pumps - No Comments

ITS 3.4.4, Safety/Relief Valves (S/RVs)

3.4.4-01 CTS 3/4.4.2, DOC A.2
CTS 4.4.2.2
ITS 3.3.5.1, DOC L.5

Comment: The ITS proposes to delete the TS Channel Calibration requirement pertaining to Safety Relief Valve Low-Low Setpoint Relief instrumentation. DOC L.5 states that CTS 4.4.2.2 verifies, in part, that the low-low set function does not interfere with operability of the ADS. LSCS-UFSAR §5.2.2.4.1 specifies the Low-Low setpoint relief function consist of safety grade logic required to function during the decay-heat-dominant period late in an isolation transient. Additionally, the BWR STS retain the LLS instrumentation as LCO 3.3.6.3, based on this instrumentation meeting Criterion 3, of 10 CFR 50.36. Therefore, based on the design of the ADS instrumentation and Criterion 3 the staff requires the CTS Channel Calibration to be retained in ITS to ensure ADS operability is not rendered inoperable or degraded by the low low set instrumentation. Provide a low-low set SR for ADS instrumentation.

ComEd Response:

The LaSalle County Station, Units 1 and 2, design basis analysis does not assume the low-low set function of the Safety/Relief Valves, nor is this function required to be Operable in the CTS. As stated in Updated Final Safety Analysis Report section 7.3.1.2.2.10, the low-low set function was added as a product improvement to improve primary containment design margins, but is not required to accommodate primary containment loads as defined in NUREG-0487, "Mark 2 Containment Lead Plant Program Load Evaluation and Acceptance Criteria, Supplement 2: Generic Technical Activities A-8, A-39," dated February 1, 1981. As a result, the Low-Low Set Instrumentation at LaSalle County Station, Units 1 and 2, does not meet Criterion 3 of 10 CFR 50.36(c)(2)(ii). The CTS 4.4.2.2 requirement to perform a Channel Calibration of the Low-Low Set Instrumentation to verify that the low-low set function does not interfere with Operability of the Automatic Depressurization System (ADS) is not necessary in the LaSalle County Station

ITS. The ADS Logic System Functional Test requirements of ITS SR 3.3.5.1.5 and the definition of OPERABLE-OPERABILITY will ensure that the low-low set function does not interfere with ADS Operability. In addition, the CTS 4.4.2.2 requirement was dispositioned in the DOCs for ITS 3.3.5.1, "Emergency Core Cooling System (ECCS) Instrumentation."

3.4.4-02 Not Used

3.4.4-03 ITS Bases 3.4.4 Applicable Safety Analysis
STS Bases 3.4.4 Applicable Safety Analysis
JFD 3

STS Bases 3.4.4 Applicable Safety Analysis states "for the purpose of the analyses, [six] of the S/RVs are assumed to operate in the relief mode, and seven in the safety mode. ITS Bases 3.4.4 Applicable Safety Analysis revised this to "for purpose of the analyses, ten of the S/RVs are assumed to operate in the safety mode." Unit 1 and Unit 2 have a different number of S/RVs yet the same number of valves (10) were specified in the Bases as the assumed number to operate in the safety mode. **Comment**: Verify that and discuss why the same number of S/RVs are assumed to operate both on Unit 1 and Unit 2.

ComEd Response:

The NRC approved a recent license amendment to decrease the number of required S/RVs to 12 for each unit. However, the NRC would only allow this change if the extra S/RVs were removed from the plant. Unit 2 will complete this modification prior to the implementation of the ITS, thus only 12 S/RVs are required. Unit 1 will not complete this modification until after the ITS is implemented. Therefore, the Unit 1 ITS retains the current 17 S/RV requirement. The ISTS Bases markup and ITS Bases are incorrect, in that they should say 17 S/RVs are assumed in the Unit 1 analyses and 12 are assumed in the Unit 2 analyses. This will be corrected.

ITS 3.4.5, RCS Operational Leakage - No Comments

ITS 3.4.6, RCS Pressure Isolation Valve (PIV) Leakage - No Comments

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ITS 3.4.7, RCS Leak Detection Instrumentation

3.4.7-01 ITS Bases 3.4.7 Actions B.1
STS Bases 3.4.7 Actions B.1 and B.2
JFD 1

ITS Bases 3.4.7 Actions B.1 specifies the 12 hour interval provides periodic information that is adequate to detect LEAKAGE. The STS Bases markup indicate this sentence was changed and designated by JFD 1. No change could be identified on the STS Bases markup. **Comment**: Clarify if a change has been made.

ComEd Response:

No change was made to the sentence. The ISTS Bases Markup will be corrected to delete the reference to JFD 1.

ITS 3.4.8, RCS Specific Activity

3.4.8-01 CTS 3.4.5 Action c, Table 4.4.5-1 Item 4.b)
DOC A.2

CTS 3.4.5 Action c, and Table 4.4.5-1 Item 4.b) required performing sampling based on a specific change in reactor power or changes in off-gas levels. These requirements were not retained in the ITS. DOC A.2 indicated that these items were an administrative change. Not retaining the CTS requirements reduces the sampling requirements required by Technical Specifications. This is a less restrictive change. **Comment**: Revise DOC A.2 to not use term "delete" or provide documentation for a less restrictive change to Technical Specifications.

ComEd Response:

The sampling requirement is only required when the LCO is not being met, since the sampling requirement is only required by CTS 3.4.5 Action c. While CTS Table 4.4.5-1 Item 4.b) repeats the sampling requirement of Action c, it adds the words "as required by ACTION c." Thus, the sampling requirements of CTS Table 4.4.5-1 Item 4.b) are only required when required by Action c. As stated in CTS 3.0.2 (and ITS LCO 3.0.2), Actions only have to be taken when the LCO is not being met. Therefore, since this is an Action that is duplicative of CTS 3.4.5 Action b, the deletion of CTS 3.4.5 Action c and Table 4.4.5-1 Item 4.b) is not a less restrictive change, but is an administrative change, as described in DOC A.2. This additional discussion/clarification will be provided in a revision to DOC A.2. This change has also been previously accepted by the NRC in the most recent Boiling Water Reactor (BWR)/5 ITS submittal, as documented in the Nine Mile Point 2 (NMP2) ITS Safety Evaluation.

3.4.8-02 ITS 3.4.8 Required Action A.1 and B.1
STS 3.4.8 Required Action A.1 and B
CTS Table 4.4.5-1 Item 4

CTS Table 4.4.5-1, Item 4 requires performing an Isotopic Analysis for Iodine including I-131, I-133, and I-135. ITS 3.4.8 Required Action A.1 and B.1 require determining DOSE EQUIVALENT I-131. There is no discussion that Table 4.4.5-1 Item 4, (Isotopic Analysis for Iodine Including I-131, I-133, I-135), is equivalent to ITS Required Action A.1 and B.1 sampling requirements for DOSE EQUIVALENT I-131 specific activity or that sampling for DOSE EQUIVALENT I-131 specific activity satisfies the requirements of CTS Table 4.4.5-1 Item 4. **Comment**: Provide applicable change documentation.

ComEd Response:

The definition of DOSE EQUIVALENT I -131 (DEI-131) states that DEI-131 shall be the concentration of I-131 that alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. Thus the ITS Required Actions A.1 and B.1, which require a determination of DEI-131, essentially covers the current requirements to perform an isotopic analysis for iodine, including I-131, I-133, and I-135. The

only way to determine DEI-131 is to perform an isotopic analysis for iodine. The change from the CTS Table 4.4.5-1 Item 4.a) words to the ITS Required Actions A.1 and B.1 words is covered by DOC A.1, consistent with the most recently approved BWR/5 ITS submittal (i.e., NMP2).

ITS 3.4.9, RHR Shutdown Cooling System – Hot Shutdown - No Comments

ITS 3.4.10, RHR Shutdown Cooling System – Cold Shutdown - No Comments

ITS 3.4.11, RCS Pressure and Temperature (P/T) Limits

3.4.11-01 ITS SR 3.4.11.6
STS SR 3.4.11.6
Unit 1 and Unit 2 CTS 4.4.6.1.4.a.2
JFD 1

Unit 1 CTS 4.4.6.1.4.a requires verifying reactor vessel flange and head flange temperature to be greater than or equal to 80 °F in OPERATIONAL CONDITION 4. CTS requires, when reactor coolant temperature is ≤85°F, the verification is required at least once per 30 minutes, however the CTS markup was changed to specify a reactor coolant temperature is ≤ 77°F. STS SR 3.4.11.6 Note markup indicates the RCS temperature as ≤ 85°F for Unit 1. The typed ITS SR 3.4.11.6 Note specifies a temperature of ≤ 77°F which is consistent with the Unit 1CTS markup.

Unit 2 CTS 4.4.6.1.4.a requires verifying reactor vessel flange and head flange temperature to be greater than or equal to 86 °F in OPERATIONAL CONDITION 4. When reactor coolant temperature is ≤91°F the verification is required at least once per 30 minutes. ITS SR 3.4.11.6 requires the verification be performed once per 30 minutes when Unit 2 RCS temperature is ≤ 77°F . The Unit 2 CTS was not marked-up to denote the difference in temperature. A DOC was not provided to explain the difference in temperatures. The typed ITS SR 3.4.11.6 Note uses ≤ 91°F which is consistent with Unit 2 CTS 4.4.6.1.4.a.2.

The values in the ITS Bases SR 3.4.11.6 are consistent with the values in the typed ITS.

Comment: Verify the correct values are used in the ITS and correct the STS markup and provide proper discussion.

ComEd Response:

The values in the ITS are correct. The values in the ISTS markups will be corrected. The proper discussion for the change to the ISTS will remain the same, i.e., JFD 1.

ITS 3.4.12, Reactor Steam Dome Pressure - No comments

Request for Additional Information
Quad Cities Units 1 and 2 Application for Conversion to
NUREG-1433, Standard Technical Specifications
General Electric Plants (BWR/4)

ITS 3.4.1, Recirculation Loops Operating

3.4.1-01 ITS SR 3.4.1.1
STS SR 3.4.1.1
CTS 3.6.C
DOC M.1

CTS 3.6.C requires that recirculation pumps speed shall be maintained within 10% of each other with THERMAL POWER ≥80% of RATED THERMAL POWER and within 15% of each other with THERMAL POWER <80% of RATED THERMAL POWER. ITS SR 3.4.1.1 verifies loop flow mismatch with both recirculation loops in operation is ≤ 10% of rated core flow when operating < 70% of rated flow and ≤ 5% when operating at ≥ 70% of rated flow. CTS utilized recirculation pump speed as the limited parameter whereas ITS uses loop jet pump flow. Also, CTS utilized THERMAL POWER where ITS is using rated core flow to determine which limit applies. DOC M.1 justified the numerical changes in the specification but did not justify the parameter changes. **Comment:** Provide additional information justifying the change in parameters.

ComEd Response:

The change will be more completely described in a new less restrictive "L" Discussion of Change (DOC).

3.4.1-02 ITS 3.4.1 Required Actions B and C
CTS 3.6.C Action 1 and 2
DOC L2, A6
JFD 2

CTS 3.6.C Action 2 requires that if recirculation pump speeds cannot be restored to within mismatch limits within 2 hours then trip one of the recirculation pumps and take required actions for single loop operation. ITS 3.4.1 Required Action B requires that if recirculation flow mismatch is not within limits within 2 hours then declare the recirculation loop with lower flow to be "not in operation." Following declaring the recirculation loop with the lower flow to be "not in operation" the single loop requirements of LCO 3.4.1 should be implemented. ITS 3.4.1 Required Action A should provide a 12 hour time limit to complete actions for single loop operation. However, ITS 3.4.1 Required Action C provides an exception if the LCO cannot be satisfied because of Condition B, which requires action for loop mismatch conditions. Therefore, ITS does not contain a required time limit for completing single loop actions during loop mismatch conditions. **Comment:** Revise ITS to ensure that single loop actions are taken for loop mismatch conditions.

ComEd Response:

If the recirculation flow mismatch is not restored to within limits within 2 hours, ITS Required Action B.1 requires the recirculation loop with the lower flow to be declared "not in operation." At this time, ITS 3.4.1 Condition C is to be entered. The entry conditions of Condition C are met, since the requirements of the LCO are not being met for reasons other than Condition A (no loops in operation) or Condition B (recirculation loop flow mismatch not within limits). Condition C is to be entered since the loop is now "not in operation." ITS 3.4.1 ACTION C now provides 24 hours to meet the LCO, consistent with CTS 3.9.A Action 1. Thus, ITS 3.4.1 does contain a required time limit for completing single loop actions during loop mismatch conditions.

ITS 3.4.2, Jet Pumps

3.4.2-01 Not Used

ITS 3.4.3, Safety/Relief Valves (S/RVs)

3.4.3-01 Not Used

ITS 3.4.4, RCS Operational Leakage No Comments

ITS 3.4.5, RCS Leak Detection Instrumentation

3.4.5-01 ITS SR 3.4.5.1 and ITS Bases SR 3.4.5.1
STS SR 3.4.6.1
CTS 4.6.H.1
DOC A.2
JFD 3

CTS 4.6.H.1 requires sampling the primary containment atmospheric particulate radioactivity at least once per 12 hours. STS 3.4.6.1 requires performance of a CHANNEL CHECK of required primary containment atmospheric monitoring system. ITS SR 3.4.5.1 verifies primary containment atmospheric monitoring system operating. DOC A.2 states that Quad Cities continuously monitors primary containment atmosphere so the purpose of the SR is to verify the operation of the continuous monitoring system. The surveillance requirement should retain the requirement to perform a CHANNEL CHECK which is a defined term in STS and ITS. **Comment**: Retain the defined terminology of STS or provide a plant specific design bases for not retaining the STS.

ComEd Response:

ITS SR 3.4.5.1 will be changed to require a CHANNEL CHECK. DOC A.2 will also be modified accordingly.

ITS 3.4.6, RCS Specific Activity No Comments

ITS 3.4.7, Residual Heat Removal (RHR) Shutdown Cooling System – Hot Shutdown

3.4.7-01 Not Used

3.4.7-02 Not Used

ITS 3.4.8, Residual Heat Removal (RHR) Shutdown Cooling System – Cold Shutdown

3.4.8-01 ITS 3.4.8 Required Action A.2
STS 3.4.9 Required Action B.1
CTS 3.6.P Action 2

CTS 3.6.P Action 2 requires with no OPERABLE RHR shutdown cooling subsystem, within 1 hour establish reactor coolant circulation with a recirculation pump or by an alternate method and monitor reactor coolant temperature and pressure at least once per hour. STS 3.4.9 Required Action B.1 requires verifying reactor coolant circulation by an alternate method with a Completion Time of 1 hour from discovery of no reactor coolant recirculation and once per 12 hours thereafter. ITS 3.4.8 Required Action A.2 requires verifying reactor coolant circulation by an alternate method with a Completion Time of 1 hour and once per 12 hours thereafter. A justification for deviating from the STS by deleting the phrase "from discovery of no reactor coolant circulation" was not provided. Also, the more restrictive requirement to verify the alternate reactor coolant circulation method "once per 12 hours thereafter" was not justified. **Comment**: Provide justification for deviating from the STS by deleting "from discovery of no reactor coolant circulation."

ComEd Response:

Justification for Deviation (JFD) 2 states that Quad Cities is not required to maintain a Residual Heat Removal (RHR) SDC subsystem or recirculation pump in operation. This allowance was approved by the NRC in Amendments 162 (Unit 1) and 158 (Unit 2). Therefore, the deletion of the words "from discovery of no reactor coolant circulation" is covered by this JFD. Since Quad Cities is not required to operate an RHR SDC subsystem or recirculation pump, it is not necessary to add the clarifying words which modify the start of the 1 hour Completion Time; the 1 hour Completion Time starts at all times upon entry into Condition A.

For the "once per 12 hours thereafter" question, a more restrictive DOC will be provided for the change associated with verifying the alternate reactor coolant circulation method "once per 12 hours thereafter."

ITS 3.4.9, RCS Pressure and Temperature (P/T) Limits

3.4.9-01 ITS 3.4.9
STS 3.4.10
CTS 3.6.K

CTS 3.6.K used "reactor vessel metal temperature" when referring to temperature limits throughout the LCO. STS 3.4.10 and ITS 3.4.9 use "RCS Temperature" for limits on parameters throughout the LCO. The values for reactor vessel metal temperature could vary from the RCS temperature during heatup and cooldown evolutions. The change in terminology was not justified.

CTS Figure 3.6.K-1 through 3.6.K-3 and ITS Figures 3.4.9-1 through 3.4.9-3 all use "Reactor Vessel Metal Temperature" for the x-axis label. The x-axis labels in ITS figures should match the terminology used in the LCO.

Comment: Provide justification for the change in terminology. Use consistent terminology between the LCO and the ITS figures.

ComEd Response:

The term "Reactor Coolant System (RCS)" is used as a generic manner in which to identify the various types of temperature requirements. ISTS 3.4.10 specifically uses the term "RCS temperature," even though ISTS SRs 3.4.10.5, 3.4.10.6, and 3.4.10.7 require the reactor vessel flange and head flange temperatures to be within limits. These two locations are part of the reactor pressure vessel, i.e., metal, not water. The ISTS was written using a generic term, and we have applied this same term to the reactor vessel metal temperatures of ITS Figures 3.4.9-1, 3.4.9-2, and 3.4.9-3. Therefore, the change from "reactor vessel metal" in the CTS to a generic term "RCS" is purely administrative, and covered under Discussion of Change A.1.

3.4.9-03 ITS 3.4.9 Required Action A.1
STS 3.4.9 Required Action A.1
CTS 3.6.K Action 1

CTS 3.6.K Action 1 requires restoring the reactor vessel metal temperature and/or pressure to within the limits within 30 minutes, without exceeding the applicable primary system coolant temperature rate of change limit. ITS 3.4.9 Required Action A.1 requires restoring the parameter(s) to within limits within 30 minutes. The ITS did not explicitly retain the requirement which prohibits exceeding the heatup or cooldown rates during restoration of the parameters to within limits. **Comment**: Provide justification for not retaining the requirement to prohibit exceeding heatup and cooldown rates when restoring parameters to within limits.

ComEd Response:

The heatup and cooldown limits are part of the LCO statement. For this LCO, compliance with the heatup and cooldown limits must be met at all times. Therefore it is unnecessary to state in an Action to make sure the limits are not exceeded, since LCO 3.0.A already requires this. It was intended for DOC A.1 to cover this change, however, a specific "administrative" DOC will be provided.

ITS 3.4.10, Reactor Steam Dome Pressure No Comments