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*See Proposed Change To Tech Specs*

SUBJECT: Responds to 970522 RAI re HB Robinson Steam Electric Plant  
 Unit 2 improved TSs conversion submittal of 960827. Suppl  
 5 re TS change request to convert to improved standard TS  
 enclosed.

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**Carolina Power & Light Company**

Robinson Nuclear Plant  
3581 West Entrance Road  
Hartsville SC 29550

RNP File No: 13510HA  
Serial: RNP-RA/97-0133

United States Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

**H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
DOCKET NO. 50-261/LICENSE NO. DPR-23  
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION  
AND TRANSMITTAL OF SUPPLEMENT 5 REGARDING THE  
TECHNICAL SPECIFICATION CHANGE REQUEST TO CONVERT  
TO THE IMPROVED STANDARD TECHNICAL SPECIFICATIONS**

Gentlemen:

This letter provides Carolina Power & Light (CP&L) Company responses to the NRC request for additional information (RAI) dated May 22, 1997, regarding the H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2 Improved Technical Specifications (ITS) conversion submittal of August 27, 1996. The responses pertain to ITS Sections 3.0, "Limiting Condition for Operation (LCO) Applicability," 3.1, "Reactivity Control Systems," 3.2, "Power Distribution Limits," 3.5, "Emergency Core Cooling Systems (ECCS)," and 3.9, "Refueling Operations." In order to support the NRC review schedule for this submittal, the NRC has requested that the response to their request be submitted within 30 days of receipt of their letter (i.e., July 2, 1997). However, to support the NRC development of a draft Safety Evaluation Report, these responses are being provided to the NRC by June 13, 1997.

Attachment I provides an affidavit as required by 10 CFR 50.30(b).

The response to the NRC's request for additional information is provided as Attachments II through VI to this letter. The responses are provided in table format similar to the question format provided in the NRC letter dated May 22, 1997.

By letter dated March 27, 1997, CP&L informed the NRC that a discrepancy had been identified with regard to the basis for the ITS requirement to maintain 21 feet of water above the spent fuel in the Spent Fuel Pit. The evaluation of that discrepancy has not resulted in the need to change the proposed ITS limit of 21 feet for the spent fuel pit water level. The response to NRC

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Highway 151 and SC 23 Hartsville SC

Question 3.7.12-1 has been revised and is included as Attachment VII to this letter. Additional information regarding this issue will be provided to the NRC by separate letter.

Attachment VIII contains an update to Enclosure 4 to CP&L letter dated August 27, 1997, which identifies where relocated current Technical Specifications (CTS) requirements will be located upon ITS implementation. This information was revised in response to NRC requests for additional information and the development of revisions to the Technical Requirements Manual, Core Operating Limits Report (COLR), Quality Assurance Program Description, Offsite Dose Calculation Manual (ODCM) for ITS implementation, and modifications to the submittal in current and past supplements to relocate information into the ITS bases.

Attachment IX contains Supplement 5 to the ITS conversion submittal dated August 27, 1996, as modified by letters dated December 18, 1996, January 17, 1997, March 27, 1997, April 6, 1997, April 25, 1997, and May 30, 1997. Supplement 5 contains submittal pages which have been revised in response to the NRC's requests for additional information. The supplement includes instructions for insertion of pages into the submittal. It also contains changes to the submittal described below.

The bases to LCO 3.1.6, "Control Bank Insertion Limits," LCO 3.2.3, "Axial Flux Difference (AFD)," LCO 3.4.3, "RCS P/T Limits," LCO 3.4.11, "Pressurizer PORVs," LCO 3.4.14, "RCS PIVs," LCO 3.4.16, "RCS Specific Activity," LCO 3.5.3, "ECCS-Shutdown," LCO 3.6.1, "Containment," LCO 3.6.3, "Containment Isolation Valves," LCO 3.6.6, "Containment Spray and Cooling System" LCO 3.8.9, "Distribution Systems-Operating," were revised to include requirements relocated from the Current Technical Specifications (CTS) that are not retained in ITS to the bases.

The bases to LCO 3.2.1, " $F_Q(Z)$ ," were revised to include requirements relocated from the CTS that are not retained in ITS to the bases. Also, the bases to SR 3.2.1.1 were corrected to reference the top and bottom 10% of the core that is excluded from evaluation.

The notes to Table 3.3.2-1 were resequenced.

LCO 3.3.3, "PAM Instrumentation," was revised to require only a Trip Actuation Device Operations Test for primary Power Operated Relief Valve (PORV) position, PORV block valve position, and primary safety valve position, based on the current licensing basis. Verification of setpoint is not required. The bases were revised accordingly.

LCO 3.3.4, "Remote Shutdown System," was revised to add SR 3.3.4.4 from NUREG-1431, "Standard Technical Specifications - Westinghouse Plants," Revision 1, because no other SR verified OPERABILITY of the function. The bases were revised accordingly.

In an SR to LCO 3.5.2, "ECCS-Operating," the bases to LCO 3.6.6, "Containment Spray and Cooling Systems," and an SR LCO 3.7.4, "AFW System," a note was added. The note clarifies testing methods which may be used to determine operability of the pumps. These

methods are in accordance with the provisions of the American Society of Mechanical Engineers (ASME) Boiler & Pressure Vessel (B&PV) Code. The bases were revised accordingly.

A note was added to SR 3.6.3.2 in LCO 3.6.3, "Containment Isolation Valves" to permit non-performance of verification of valve position for Penetration Pressurization System valves of small size. Justification for the change is provided in the supplement. The bases were revised accordingly.

LCO 3.7.1, "MSSVs," was revised to take into account a recent NRC Information Notice that questioned the assumptions behind the allowable THERMAL POWER levels in the event that MSSV(s) were inoperable. In particular, previous Westinghouse analyses did not take into account the effect of a positive Moderator Temperature Coefficient (MTC). A calculation has been performed in accordance with Westinghouse recommendations and the LCO was revised consistent with the results. The bases were revised in accordance with the LCO.

In CP&L letter dated May 30, 1997, CP&L stated that the acceptance criteria for SR 3.8.1.8 in LCO 3.8.1, "AC Sources-Operating," were still being evaluated. The evaluation has been completed and the only supportable acceptance criterion for SR 3.8.1.8 is that the diesel generator not trip on overspeed. Accordingly, the acceptance criteria for SR 3.8.1.8 were revised to require only that the diesel generator not trip on overspeed. No other acceptance criteria were justifiable. The bases were revised accordingly.

In LCO 3.8.6, "Battery Cell Parameters," the required electrolyte temperature for the "A" battery was revised to 67°F in response to an evaluation of design information that the justification for 55°F calculation was a one time only evaluation. The bases were revised accordingly.

SR 3.8.4.1 in LCO 3.8.4, "DC Sources - Operating," and bases are revised to reflect the voltage associated with a single battery cell jumpered out. This change is consistent with the current licensing basis which does not specify the battery float voltage requirement. Also the bases to LCO 3.8.4 were revised to reflect that the minimum battery voltage output of 2.13 volts per cell and total output of 128 volts is not discussed in the UFSAR.

LCO 3.8.8, "AC Instrument Bus Sources-Shutdown," was revised to reflect the current practice of aligning certain instrument buses to a non-emergency bus powered from offsite and the dedicated shutdown diesel generator. The bases were revised accordingly.

LCO 3.9.7, "Containment Purge Filter System," was added including ACTIONS and SRs to maintain CTS requirements and assumptions regarding a fuel handling accident inside containment in the Updated Final Safety Analysis Report. The bases were added accordingly.

ITS Section 5.5.7, "Reactor Coolant Pump Flywheel Inspection Program," was revised to reflect relocation of CTS requirements to the Inservice Inspection Program.


A correction to the CTS markup page for ITS Section 5.5.13, "Diesel Fuel Oil Testing Program," to add information relating to the program is included in Attachment VIII along with a discussion of the change.

In a telephone conversation with the NRC on June 2, 1997, CP&L discussed the methodology for selecting the Appendix G limits utilized in the LTOP analyses. The limits were taken by interpolating between the steady state curve and the 60°F heatup and cooldown curves to find the most limiting data point for the temperature range permitted by the heatup and cooldown procedure. The Appendix G limits from the heatup curve were most limiting and were used in the analyses.

NRC Question 3.1.6-2 requests additional justification for the acceptability of extending the allowed outage time for control rod bank insertion limits from one (1) hour to two (2) hours. CP&L has found that the extension of the allowed outage time from the current licensing basis to two hours is not justified. A supplement to the submittal to revise the ITS allowed outage time to be consistent with the current licensing basis (i.e., one hour) will be provided to the NRC by July 31, 1997.

If you have any questions concerning this matter, please contact me or Mr. H. K. Chernoff of my staff at (803) 857-1437.

Very truly yours,

  
for T. M. Wilkerson  
Manager - Regulatory Affairs

ALG/alg  
Attachments

- I. Affidavit
- II. Response To Request For Additional Information Regarding The Technical Specifications Change Request To Convert To The Improved Standard Technical Specifications, Section 3.0, "Limiting Condition for Operation (LCO) Applicability"
- III. Response To Request For Additional Information Regarding The Technical Specifications Change Request To Convert To The Improved Standard Technical Specifications, Section 3.1, "Reactivity Control Systems"
- IV. Response To Request For Additional Information Regarding The Technical Specifications Change Request To Convert To The Improved Standard Technical Specifications, Section 3.2, "Power Distribution Limits,"

- V. Response To Request For Additional Information Regarding The Technical Specifications Change Request To Convert To The Improved Standard Technical Specifications, Section 3.5, "Emergency Core Cooling Systems (ECCS)"
- VI. Response To Request For Additional Information Regarding The Technical Specifications Change Request To Convert To The Improved Standard Technical Specifications, Section 3.9, "Refueling Operations"
- VII. Revised Response to NRC Question 3.7.12-1
- VIII. Matrix of Relocated Technical Specifications (TS) Requirements and Detailed TS Requirements
- IX. Technical Specifications Change Request To Convert To The Improved Standard Technical Specifications, Supplement 5

c: Mr. M. K. Batavia, Chief, Bureau of Radiological Health (SC)  
Mr. L. A. Reyes, Regional Administrator, USNRC, Region II  
Ms. B. L. Mozafari, USNRC Project Manager, HBRSEP (4 copies)  
Mr. B. B. Desai, USNRC Resident Inspector, HBRSEP  
Attorney General (SC) (w/out Enclosures)  
Lockheed Idaho Technology, Inc.

Affidavit

**State of South Carolina  
County of Darlington**

J. S. Keenan, having been first duly sworn, did depose and say that the information contained in letter RNP-RA/97-0133 is true and correct to the best of his information, knowledge and belief; and the sources of his information are officers, employees, contractors, and agents of Carolina Power & Light Company.

John S. Keenan

Sworn to and subscribed before me

this 13<sup>th</sup> day of June 19 97

(Seal) Albert A. Garro  
Notary Public for South Carolina

My commission expires: March 22<sup>nd</sup> 2005

50-261

CP&L

ROBINSON 2

RESPONSE TO RAI & TRANS SUPPL 5 RE  
THE TECH SPEC CHANGE REQUEST TO  
CONVERT TO THE IMPROVED STANDARD  
TECH SPECS

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| Item #  | DOC<br>or<br>JFD | CTS/STS<br>LCO | Description of Issue  | COMMENTS  | HBRSEP No. 2<br>Responses  |
|---------|------------------|----------------|---|---|--|
| 3.5.1-4 | L1               | CTS 3.3.1.2    | CTS 3.3.1.2 provides a completion time of 4 hours when an accumulator is inoperable. ITS 3.5.1 ACTION A.1 provides a completion time of 72 hours when an accumulator is inoperable due to boron concentration being outside limits. | The DOC did not provide any discussion as to why 72 hours is an appropriate completion time for this condition. Please provide additional discussion to address this issue. | <p>The 72 hour Completion Time for restoration of the boron concentration to within limits is reasonable time to complete the Required Action including confirmatory sampling and analysis.</p> <p>DOC L1 is revised in Supplement 5 to add this additional clarification.</p> |

United States Nuclear Regulatory Commission **HBR ITS 3.5.1, ACCUMULATORS - MODES 1, 2 AND 3 (>1000 psig)**

Attachment V to Serial: RNP-RA/97-0133

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| Item #  | DOC<br>or<br>JFD | CTS/STS<br>LCO | Description of Issue   | COMMENTS   | HBRSEP No. 2<br>Responses  |
|---------|------------------|----------------|--|--|--|
| 3.5.1-2 | M3               | CTS 3.3.1.1.b  | CTS 3.3.1.1.b stipulates a minimum accumulator cover pressure limit but does not provide a maximum limit. ITS SR 3.5.1.3 imposes an upper limit on accumulator cover pressure. No discussion or justification is provided for the bases for selection of the upper limit.                                  | Provide discussion and justification for selection of the upper accumulator cover pressure limit.      | The upper limit for accumulator pressure is the value used in the plant specific ECCS analysis.<br><br>JFD 14 is added in Supplement 5 to provide this information.            |
| 3.5.1-3 | M9               | CTS 3.3.1.1.b  | CTS 3.3.1.1.b stipulates a minimum accumulator boron concentration limit but does not provide a maximum limit on boron concentration. ITS SR 3.5.1.4 imposes an upper limit on accumulator boron concentration. No discussion or justification is provided for the bases for selection of the upper limit. | Provide discussion and justification for selection of the upper accumulator boron concentration limit. | The upper limit for accumulator boron concentration is the value used in the plant specific ECCS analysis.<br><br>JFD 15 is added in Supplement 5 to provide this information. |

**HBR ITS 3.5.1, ACCUMULATORS - MODES 1, 2 AND 3 (>1000 psig)**

| Item #  | DOC or JFD | CTS/STS LCO   | Description of Issue  | COMMENTS   | HBRSEP No. 2 Responses   |
|---------|------------|---|---|--|--|
| 3.5.1-1 | A14<br>JD3 | CTS 3.3.1.1.g<br>3.3.1.2.f<br><br>STS SR<br>3.5.1.5 | CTS 3.3.1.1.g requires removal of control power from a accumulator isolation valves at > 1000 psig. CTS 3.3.1.2.f allows restoration of power to one valve for testing or maintenance for a period of four hours. ITS SR 3.5.1.5 includes a note that allows control power to be restored to one accumulator isolation valve for no more than four hours. The note also refers to similar allowances for other ECCS valves. This note is not contained in the corresponding STS SR. | <p>1) You state in DOC A14 that the allowance to restore power to one valve permitted by CTS 3.3.1.2.f is not explicitly retained in the ITS. However, both the clean copy of the proposed ITS and the markup of NUREG-1431 indicate that this allowance is retained as a Note to ITS SR 3.5.1.5. JFD 3 also addresses this Note as being added consistent with the current licensing basis.</p> <p>2) It is not clear why the addition of the note to SR 3.5.1.5 is needed since, as stated in DOC A14, the completion time for Required Action B.1 would allow 4 hours for this same circumstance without the note.</p> <p>3) The note as is can cause confusion because it also addresses other ECCS valves for which requirements are contained in a separate specification. There is no reason for these other allowances in a note for an SR that only addresses accumulator valves.</p> <p>Provide additional explanation as to why the note is necessary. If the decision is made to retain the note, please revise the note to address the accumulator valves only.</p> | <p>1) DOC A14 is eliminated and the CTS markup is revised in Supplement 5 to indicate this provision is retained.</p> <p>2) The provision to restore power or air to one valve for the specified time does not permit repositioning the valve. With power or air restored to an accumulator isolation valve (valve remains in open position), the accumulator remains OPERABLE. In this circumstance, it is not necessary to enter Condition B.1. This Note retains the CLB which permits restoring power to an accumulator valve for testing or maintenance without rendering the associated accumulator inoperable.</p> <p>3) Since only one of the specified valves is permitted to have air or power restored, the Note is structured to be applied consistently to each SR which includes the specified valves. These valves are addressed in several specifications, but the Notes provision (i.e., only one valve) apply collectively to the entire population of valves specified. The Note is structured in a manner and with appropriate Bases to minimize the potential for confusion.</p> <p>JFD 3 is modified in Supplement 5 to provide this additional clarification.</p> |

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING  
THE TECHNICAL SPECIFICATIONS CHANGE REQUEST TO CONVERT TO THE  
IMPROVED STANDARD TECHNICAL SPECIFICATIONS

SECTION 3.5, "EMERGENCY CORE COOLING SYSTEMS (ECCS)"

# **HBR ITS 3.2.4 QUADRANT POWER TILT RATIO (QPTR)**

|         | DOC<br>or<br>JFD | CTS/STS<br>LCO                     | Description of Issue   | COMMENTS   | HBRSEP, Unit 2<br>Responses               |
|---------|------------------|------------------------------------|--|--|---|
| 3.2.4-4 | L13              | CTS<br>3.10.3.2<br>and<br>3.10.3.3 | <p>If QPTR exceeds 1.09, and there is simultaneous indication of a misaligned control rod, CTS 3.10.3.2 requires specified power reduction and elimination of the tilt condition within two hours, or the reactor placed in hot shutdown. CTS 3.10.3.2 further limits reactor power to <math>\leq 50\%</math>, if the rod is realigned within two hours, until the QPTR is again <math>\leq 1.09</math>.</p> <p>If QPTR exceeds 1.09, and there is no simultaneous indication of a misaligned control rod, CTS 3.10.3.3 requires the reactor immediately placed in the hot shutdown condition.</p> <p>These requirements are not included in ITS 3.2.4.</p> <p>The provided justification states the change is acceptable because operation of the plant in accordance with ITS 3.2.4 Required Actions reasonably assures that plant operations are within the bounds of the safety analysis. There is no specific discussion indicating the CTS requirements and the ITS Required Actions are both bounded within the same analyzed safety envelope, so the justification provided is inadequate.</p> | Provide additional justification for the deleted CTS requirements. | Refer to revised DOC L13 in Supplement 5. |

# **HBR ITS 3.2.4 QUADRANT POWER TILT RATIO (QPTR)**

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|         | DOC<br>or<br>JFD | CTS/ST<br>S LCO        | Description of Issue  | COMMENTS   | HBRSEP, Unit 2<br>Responses               |
|---------|------------------|------------------------|---|--|---|
| 3.2.4-1 | L10              | CTS<br>3.10.3          | <p>CTS 3.10.3 excludes applicability of QPTR limits during power increases below 50% of rated power.</p> <p>ITS 3.2.4 Applicability is MODE 1 with THERMAL POWER &gt; 50% RTP.</p> <p>The increase of QPTR out of limit risk at exactly 50% RTP is only qualitatively stated.</p> <p>There is inadequate discussion and justification for the licensing basis change.</p> | Provide additional discussion and justification for the licensing basis change. Also provide technical discussion for the resulting possibility of an unanalyzed condition, even if small. | Refer to revised DOC L10 in Supplement 5. |
| 3.2.4-2 | L11              | CTS<br>3.10.3.-<br>1.a | <p>CTS 3.10.3.1.a, requires that the power range high flux setpoint be reset by two (2) percent for every one (1) percent that QPTR exceeds 1.0.</p> <p>This requirement is deleted from ITS 3.2.4.</p> <p>There is inadequate discussion and justification for the licensing basis change.</p>   | Provide additional discussion and justification of how the remaining Required Actions work to maintain the required safety margin bases on plant operation.                                | Refer to revised DOC L11 in Supplement 5. |
| 3.2.4-3 | L12              | CTS<br>3.10.3.-<br>1.b | <p>CTS 3.10.3.1.b, requires the power range high flux setpoint to be reset to 55% of rated power.</p> <p>This requirement is deleted from ITS 3.2.4.</p> <p>There is inadequate discussion and justification for the licensing basis change.</p>  | Provide additional discussion and justification for the licensing basis change.  | Refer to revised DOC L12 in Supplement 5. |

**HBR ITS 3.2.3, Axial Flux Difference (AFD) (PDC-3 Axial Offset Control  
Methodology)**

|         | DOC<br>or<br>JFD | CTS/ST<br>S LCO      | Description of Issue   | COMMENTS   | HBRSEP, No. 2<br>Response             |
|---------|------------------|----------------------|--|--|---------------------------------------|
| 3.2.3-7 | A1               | CTS<br>3.10.2.1<br>0 | <p>CTS 3.10.2.10 requires that the AFD be logged every hour for the first 24 hours, and half-hourly thereafter, when the AFD alarm is out of service.</p> <p>ITS SR 3.2.3.2 requires logging AFD for each "OPERABLE" excore channel.</p> <p>There is no discussion or justification for this change.</p> | Provide discussion and justification for the change. | Refer to new DOC A24 in Supplement 5. |

**HBR ITS 3.2.3, Axial Flux Difference (AFD) (PDC-3 Axial Offset Control Methodology)**

|         | DOC<br>or<br>JFD | CTS/STS<br>LCO   | Description of Issue  | COMMENTS  | HBRSEP, No. 2<br>Response   |
|---------|------------------|------------------|---|---|---|
| 3.2.3-6 | L8               | CTS<br>3.10.2.10 | <p>CTS 3.10.2.10 requires that the AFD be logged every hour for the first 24 hours, and half-hourly thereafter, when the AFD alarm is out of service.</p> <p>ITS SR 3.2.3.2 requires a Frequency of once within 15 minutes and every 15 minutes thereafter when THERMAL POWER is &gt; 90% RTP, and once within 1 hour and every 1 hour thereafter when THERMAL POWER is &lt; 90 % RTP.</p> <p>This change is less restrictive in the case that the AFD monitor alarm remains out of service for greater than 24 hours and THERMAL POWER &lt; 90% RTP.</p> | <p>Provide additional justification for change as it relates to the licensing basis and discuss the impact because of differences from the STS power distribution limit methodology</p> | <p>The CTS requirement was imposed by the NRC in Amendment 13 by NRC letter dated October 17, 1975. Amendment 13 incorporated into the CTS the Westinghouse Constant Axial Offset Control (CAOC) methodology. The NRC SER accompanying the amendment evaluates the requirement as acceptable but does not provide any justification for the frequency for obtaining the logs. A review of the docketed correspondence to the NRC did not reveal any CP&amp;L supplied justification for the CTS frequency for obtaining the logs, however, the correspondence does imply that telephone conversations were made between CP&amp;L and the NRC. The CTS frequency appears to not make sense unless CP&amp;L requested informally that a relaxed frequency for the first 24 hours be granted based upon anticipation that a "yet to be installed" AFD monitor could have frequent short periods of inoperability causing undue burden on the Control Room staff. The frequency was retained without modification when the CTS was modified to accept Siemens Power Corporation fuel and analyses. The ITS Frequency for SR 3.2.3.2 when the AFD monitor is out of service is appropriate for the PDC-3 Axial Offset Control Methodology. It is inappropriate for CP&amp;L to comment on the appropriateness of the frequency in SR 3.2.3.2 as it relates currently to the Westinghouse CAOC methodology.</p> |



|         | DOC<br>or<br>JFD | CTS/STS<br>LCO            | Description of Issue   | COMMENTS   | HBRSEP, Unit No. 2<br>Response                  |
|---------|------------------|---------------------------|--|--|---|
| 3.2.3-5 | L7               | CTS<br>3.10.2.9<br>.a & b | <p>CTS 3.10.2.9.a and b allow calibration of the excore detectors if the AFD is not outside of the target band for &gt; 90% rated power, and if the AFD does not exceed the limits specified in the COLR for reactor power between 50% and 90% rated power.</p> <p>ITS 3.2.3.c, NOTE allows up to 16 hours to be accumulated with AFD outside of the target band without penalty deviation time while the excore detectors are being calibrated.</p> | <p>Provide additional justification for change as it relates to the licensing basis and discuss the impact because of differences from the STS power distribution limit methodology.</p> | <p>Refer to revised DOC L7 in Supplement 5.</p> |

**HBR ITS 3.2.3, Axial Flux Difference (AFD) (PDC-3 Axial Offset Control Methodology)**

|         | DOC<br>or<br>JFD | CTS/STS<br>LCO        | Description of Issue   | COMMENTS   | HBRSEP, Unit No. 2<br>Response  |
|---------|------------------|-----------------------|--|--|---|
| 3.2.3-3 | M17              | CTS<br>3.10.2.6       | <p>CTS 3.10.2.6 contains the Required Action to reduce reactor power to a level no greater than 90% of rated power "immediately."</p> <p>STS 3.2.3, Required Action B.1, requires a completion time of "15 minutes" to reduce THERMAL POWER to &lt; 90% in 15 minutes.</p>   | See 3.2.3-1 and 3.2.3-2 comments. Provide additional discussion and justification to increase CTS Allowed Outage Time. | As stated in DOC M17, the CTS does not contain a Completion Time requirement for reducing power to below 90 % rated power. CTS 3.10.2.6 contains the requirement to restore the AFD to within the target band immediately but the Completion Time of immediately does not apply to reduction in power.  |
| 3.2.3-4 | A10              | CTS<br>3.10.2.<br>7.a | <p>CTS 3.10.2.7.a, contains the Required Action to "immediately" reduce reactor power to &lt; 50% rated power if cumulative time exceeds one (1) hour if the AFD is outside of the target band.</p> <p>ITS 3.2.3, Required Action C.1, requires a Completion Time of "30 minutes" to reduce THERMAL POWER to &lt; 50% RTP.</p> | See 3.2.3-1 and 3.2.3-2 comments. Provide additional discussion and justification to increase CTS Allowed Outage Time. | The CTS requirement is administratively equivalent to the ITS requirement because the plant interpretation of the CTS requirement is that the CTS intends that the reactor power reduction be controlled and orderly. DOC A10 is revised in Supplement 5 to clarify that the CTS has no interpretation of the Completion Time of "immediately" equivalent to the ITS Section 1.3. |

**HBR ITS 3.2.3, Axial Flux Difference (AFD) (PDC-3 Axial Offset Control Methodology)**

|         | DOC<br>or<br>JFD | CTS/STS<br>LCO  | Description of Issue   | COMMENTS   | HBRSEP, Unit No. 2<br>Response   |
|---------|------------------|-----------------|--|--|--|
| 3.2.3-1 | M15              | CTS<br>3.10.2.5 | <p>CTS 3.10.2.5, requires that the indicated Axial Flux Difference (AFD) shall be within the target band.</p> <p>ITS 3.2.3.b allows AFD to deviate outside the target band during certain conditions provided the cumulative penalty deviation time is <math>\leq 1</math> hour.</p> <p>This represents a less restrictive change.</p> | <p>The addition of a requirement in and of itself does not constitute a more restrictive requirement. Provide adequate discussion and justification for the Less Restrictive change based on plant operation..</p> | <p>Neither CTS 3.10.2.5 or ITS LCO 3.2.3.b allows AFD to deviate outside the target band above 90% RTP. Between 50% and 90% power CTS 3.10.2.7 and ITS LCO 3.2.3.b allow deviation outside the target band <math>\leq 1</math> hour. Below 50% RTP, CTS 3.10.2.8 and ITS LCO 3.2.3.c permit deviation outside the target band. Small differences between the requirements of CTS and ITS are addressed in the DOCs. Overall, ITS LCO 3.2.3 is not less restrictive than the CTS.</p> |
| 3.2.3-2 | A9               | CTS<br>3.10.2.6 | <p>CTS 3.10.2.6 contains the Required Action to Return the AXIAL FLUX DIFFERENCE (AFD) to the target band "immediately."</p> <p>STS 3.2.3, Required Action A.1, requires a completion time of "15 minutes" to restore AFD to within the target band.</p>   | <p>The change is acceptable, however, a technical justification relative to plant operations for the increase to CTS Allowed Outage Time is needed.</p>  | <p>Refer to revised DOC-A9 in Supplement 5.</p>  |

**HBR LCO 3.2.2, Nuclear Enthalpy Rise Hot Channel Factor ( $F_{\Delta H}^N$ )**

|         | DOC<br>or<br>JFD | CTS/S<br>TS<br>LCO     | Description of Issue  | COMMENTS                       | HBRSEP, No. 2<br>Response  |
|---------|------------------|------------------------|---|--------------------------------|--|
| 3.2.2-6 | M11              | CTS<br>3.10.2.-<br>2.3 | <p>CTS 3.10.2.2.3 requires that if <math>F_{\Delta H}^N</math> is within limits but measurements indicate that <math>F_{\Delta H}^N</math> is increasing, then the total peaking factor (<math>F_{\Delta H}^V(Z)</math>) shall be increased by 2%.</p> <p>CTS 3.10.2.2.3 second paragraph requires that <math>F_{\Delta H}^V(Z)</math> be measured and a target AFD re-established at least every seven days until two successive measurements indicate <math>F_{\Delta H}^N</math> is not increasing.</p> <p>ITS 3.2.2.1 NOTE, addresses the same requirements.</p> <p>The discussion and justification address the change as a more restrictive change instead of an administrative change.</p> | This change is administrative. | The CTS markup for ITS LCO 3.2.2, adds a Note to Condition A, which states "Required Actions A.2 and A.3 must be completed whenever Condition A is entered." This change is justified with DOC M11. The ITS SR 3.2.2.1 Note is referenced to CTS 3.10.2.2.3. Since there were no material differences between CTS 3.10.2.2.3 and the ITS SR 3.2.2.1 Note, the change is considered Administrative within the DOC A1. The CTS markup page has been corrected to reference A1 in Supplement 5. |

**HBR LCO 3.2.2, Nuclear Enthalpy Rise Hot Channel Factor ( $F_{\Delta H}^N$ )**

|         | DOC<br>or<br>JFD | CTS/S<br>TS<br>LCO     | Description of Issue  | COMMENTS   | HBRSEP, No. 2<br>Response                       |
|---------|------------------|------------------------|---|--|---|
| 3.2.2-5 | L5               | CTS<br>3.10.2.-<br>1.1 | <p>CTS 3.10.2.1.1 requires that the OT<math>\Delta</math>T and OP<math>\Delta</math>T setpoints be reduced by the fraction <math>F_{\Delta H \text{ limit}}/F_{\Delta H \text{ actual}}</math> if an out-of-limit condition for <math>F_{\Delta H}</math> is not corrected within 24 hours.</p> <p>This requirement is deleted from ITS 3.2.2.</p> <p>The justification does not adequately address the change as it pertains to the licensing basis.</p> | <p>Provide additional discussion and justification for this change relative to plant operations. See 3.2.1-5 also.</p> | <p>Refer to revised DOC L5 in Supplement 5.</p> |

**HBR LCO 3.2.2, Nuclear Enthalpy Rise Hot Channel Factor ( $F_{\Delta H}^N$ )**

|         | DOC<br>or<br>JFD | CTS/S<br>TS<br>LCO     | Description of Issue  | COMMENTS   | HBRSEP, No. 2<br>Response  |
|---------|------------------|------------------------|---|--|--|
| 3.2.2-3 | M9               | CTS<br>3.10.2.-<br>1.1 | <p>CTS 3.10.2.1.1 requires reactor power to be reduced if either hot channel factor limit is exceeded.</p> <p>ITS 3.2.2 Required Action A.1.2.1, requires reducing THERMAL POWER to &lt;50% when the <math>F_{\Delta H}^N</math> limit is exceeded.</p> <p>There is no discussion or justification for this change.</p>   | Provide discussion and justification for this change relative to plant operations.               | The reference to the DOC in the CTS markup was corrected to M10 in the CTS markup for LCO 3.2.2, RA A.1.2.1, in Supplement 5.  |
| 3.2.2-4 | M10              | CTS<br>3.10.2.-<br>1.1 | <p>CTS 3.10.2.1.1 requires that the high neutron flux trip setpoint be reduced by the ratio of the (<math>F_{\Delta H}^V(Z)</math>) or <math>F_{\Delta H}</math> limit to the measured value which ever is less.</p> <p>ITS 3.2.2 Required Action A.1.2.2, requires reducing Power Range Neutron Flux-High trip setpoints to <math>\leq 55\%</math> RTP.</p> <p>There is no discussion or justification for this More Restrictive change.</p> | Provide discussion and justification for this More Restrictive change relative plant operations. | As stated in DOC M10, the change in $F_{\Delta H}$ between measurements is sufficiently slow that any measurement of $F_{\Delta H}$ in excess of limits is reasonably assured to be less than twice the required limits. Therefore, the power level required by ITS Required Action is more restrictive than the CTS action. There are no aspects of this change that are more restrictive other than the lower THERMAL POWER level required by the ITS. |

**HBR LCO 3.2.2, Nuclear Enthalpy Rise Hot Channel Factor ( $F_{NH}^N$ )**

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|         | DOC<br>or<br>JFD | CTS/S<br>TS<br>LCO     | Description of Issue   | COMMENTS   | HBRSEP, No. 2<br>Response                |
|---------|------------------|------------------------|--|--|--|
| 3.2.2-1 | A1               | CTS<br>3.10.2.-<br>1.1 | <p>CTS 3.10.2.1.1 requires power distribution mapping using the movable in-core detector system.</p> <p>This requirement is not included in ITS Section 3.2. However, it is referenced in the Bases.</p> <p>There is no discussion or justification for this Less Restrictive change.</p>                          | Provide discussion and justification for this Less Restrictive change.                             | Refer to new DOC LA5 in Supplement 5.    |
| 3.2.2-2 | M8               | CTS<br>3.10.2.-<br>1.1 | <p>CTS 3.10.2.1.1 requires that the hot channel factor be determined following initial fuel loading.</p> <p>ITS 3.2.2 changes this requirement to each refueling and prior to THERMAL POWER exceeding 75% RTP.</p> <p>There is no discussion or justification for this More Restrictive licensing basis change</p> | Provide discussion and justification for the More Restrictive change relative to plant operations. | Refer to revised DOC M8 in Supplement 5. |

**HBR ITS 3.2.1 HEAT FLUX HOT CHANNEL FACTOR ( $F_q(Z)$ )  
( $F_q$  METHODOLOGY)**

|         | DOC<br>or<br>JFD | CTS/STS<br>LCO                           | Description of Issue   | COMMENTS  | HBRSEP, No. 2<br>Response   |
|---------|------------------|--|--|---|---|
| 3.2.1-6 | JD5              | STS 3.2.1<br>Required<br>Action<br>A.2.1 | <p>STS 3.2.1, Required Action A.1,<br/>Completion Time is 15 minutes</p> <p>ITS 3.2.1, Required Action A.2.1,<br/>Completion Time is 30 minutes</p> <p>There is inadequate justification to<br/>support this change.</p> | <p>This is a Beyond<br/>Scope issue. Discuss<br/>generic implications.<br/>Provide discussion and<br/>justification for the STS<br/>deviation based on<br/>current licensing basis.</p> | <p>Refer to revised JFD 5 in<br/>Supplement 5 which<br/>discusses the current<br/>licensing basis for the ITS. A<br/>generic change was<br/>presented to the<br/>Westinghouse Owners Group<br/>(WOG) to delete this RA.<br/>However, WOG has not acted<br/>on the change. Since the<br/>ISTS utilizes the<br/>Westinghouse Constant Axial<br/>Offset Control (CAOC)<br/>methodology, it is not<br/>appropriate for CP&amp;L to<br/>comment on the suitability of<br/>RA B.1 for CAOC.</p> |



**HBR ITS 3.2.1 HEAT FLUX HOT CHANNEL FACTOR ( $F_q(Z)$ )  
( $F_q$  METHODOLOGY)**

|         | DOC<br>or<br>JFD | CTS/STS<br>LCO    | Description of Issue   | COMMENTS   | HBRSEP, No. 2<br>Response   |
|---------|------------------|-------------------|--|--|---|
| 3.2.1-5 | L2               | CTS<br>3.10.2.1.1 | <p>CTS 3.10.2.1.1 requires reduction of the overpower delta temperature (<math>OP\Delta T</math>) and over temperature <math>\Delta T</math> (<math>OT\Delta T</math>) trip setpoints within 24 hours.</p> <p>ITS 3.2.1 Required Action A.2.3 extends this required time to 72 hours.</p> <p>This change represents an extension to a CTS Allowed Outage Time.</p> | Provide additional discussion and justification for the differences in CTS and NUREG-1431 methodology for power distribution limits based on plant requirements. | There are no aspects of an extension of an allowed outage time that relate to application of the Siemens Power Corporation PDC-3 Axial Offset Control Methodology. Therefore, DOC L2 has been revised in Supplement 5. Since the ISTS utilizes the Westinghouse CAOC methodology, it is not appropriate for CP&L to comment on the suitability of the 72 hour allowed outage time for CAOC. |

**HBR ITS 3.2.1 HEAT FLUX HOT CHANNEL FACTOR ( $F_q(Z)$ )  
( $F_q$  METHODOLOGY)**

|         | DOC<br>or<br>JFD | CTS/STS<br>LCO   | Description of Issue   | COMMENTS  | HBRSEP, No. 2<br>Response   |
|---------|------------------|--|--|---|---|
| 3.2.1-4 | JD4<br><br>M3    | STS<br>3.2.1<br>Required<br>Action<br>A.1<br><br><br>CTS<br>3.10.2.1.1 | <p>STS 3.2.1 Required Action B.1, requiring reducing AFD limits &gt; 1% for each 1% <math>F_q^V(Z)</math> exceeds its limit, is not adopted in ITS 3.2.1.</p> <p>ITS 3.2.1 Required Action A.1 requires reduction of AFD target band limits to restore <math>F_q^V(Z)</math> within 15 minutes. This requirement is not in CTS 3.10.2.1.1.</p> <p>There is inadequate justification for this change.</p> | <p>JFD4 indicates that Required Action B.1 in STS is invalid. Discuss generic implication. If plant specific, provide discussion why statement should not be an <u>AND</u> statement and justification for the STS deviation based on current licensing basis. and the changed CTS requirement.</p> | <p>Refer to revised JFD 4 in Supplement 5 which discusses the current licensing basis for the ITS. A generic change was presented to the Westinghouse Owners Group (WOG) to delete this RA. However, WOG has not acted on the change. Since the ISTS utilizes the Westinghouse Constant Axial Offset Control (CAOC) methodology, it is not appropriate for CP&amp;L to comment on the suitability of RA B.1 for CAOC.</p> |

**HBR ITS 3.2.1 HEAT FLUX HOT CHANNEL FACTOR ( $F_q(Z)$ )  
( $F_q$  METHODOLOGY)**

|         | DOC<br>or<br>JFD | CTS/ST<br>S LCO | Description of Issue  | COMMENTS   | HBRSEP, No. 2<br>Response  |
|---------|------------------|-----------------|---|--|--|
| 3.2.1-3 | LA1              | CTS<br>3.10.2.1 | <p>CTS 3.10.2.1, "<math>F_q^{RTP}(Z)</math>" is removed from the Nuclear Enthalpy Rise Hot Channel Factor (<math>F_H^{RTP}(Z)</math>) equation.</p> <p>There is no discussion or justification for this change.</p> | Provide discussion and justification for the change. | <p>Due to the intermingling of LCOs for both <math>F_q</math> and <math>F_{\Delta H}</math> it is very difficult to clearly mark up the CTS page. The <math>F_q^{RTP}</math> is not removed from <math>F_{\Delta H}^{RTP}</math>. <math>F_q^{RTP}</math> is relocated per DOC LA1 and the conversion of <math>F_{\Delta H}^{RTP}</math> is described in the CTS markup for ITS LCO 3.2.2. The CTS markup for ITS LCO 3.2.1 has been darkened to help make the markup clear</p> |

**HBR ITS 3.2.1 HEAT FLUX HOT CHANNEL FACTOR ( $F_q(Z)$ )  
( $F_q$  METHODOLOGY)**

|         | DOC<br>or<br>JFD | CTS/STS<br>LCO  | Description of Issue  | COMMENTS   | HBRSEP, No. 2<br>Response   |
|---------|------------------|-----------------|---|--|---|
| 3.2.1-1 | LA1              | CTS<br>3.10.2.1 | <p>CTS 3.10.2.1 is changed to state "as approximated by (<math>F^V_q</math>)."</p> <p>There is no discussion or justification for this change.</p>  | Provide discussion and justification for the change.   | Refer to new DOC A23 in Supplement 5.   |
| 3.2.1-2 | JD3              | STS<br>3.2.1    | <p>STS 3.2.1 is changed from <math>F^O_q(Z)</math> and <math>F^W_q(Z)</math> to "<math>F^V_q(Z)</math>."</p> <p>There is inadequate justification for this change with regard to the current licensing basis.</p> | Discuss any generic implications. Provide justification for the STS deviation based on current licensing basis, including deletion of SRs. | Refer to revised JFD 3 in Supplement 5. Since CAOC as included in the ISTS is based upon Westinghouse fuel analysis methodology, and HBRSEP, Unit No. 2 utilizes Siemens Power Corporation Fuel analysis methodology, and the two methodologies are not the same, there are no generic implications of the change, except with regard to the few Westinghouse plants that utilize Siemens Power Corporation fuel. |

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING  
THE TECHNICAL SPECIFICATIONS CHANGE REQUEST TO CONVERT TO THE  
IMPROVED STANDARD TECHNICAL SPECIFICATIONS

SECTION 3.2, "POWER DISTRIBUTION LIMITS,"

| ITEM #  | DOC # or JFD# | CTS/STS REF. | Description of Issue   | COMMENTS  | HBRSEP, Unit No. 2 Responses  |
|---------|---------------|--------------|--|---|---|
| 3.1.8-3 | M23           | CTS 3.10.1.6 | <p>CTS 3.10.1.6 requires maintaining a specified minimum shutdown margin (SDM), except during the low power physics tests to measure control rod worth and SDM.</p> <p>ITS 3.1.8, PHYSICS TESTS Exceptions-MODE 2, does not retain this minimum SDM exception, because the N-1 rod worth measurement technique, necessitating the SDM exception, is no longer used.</p> <p>The discussion states the elimination of the SDM exception is an additional restriction on plant operation.</p> <p>However, this change imposes no additional restriction, because with the N-1 measurement technique no longer used, neither retention nor removal of the SDM exception has any effect on use and application of the Technical Specifications. This change should be classified, discussed, and justified as an administrative change.</p> | Provide discussion and justification for the administrative change. | <p>CTS 3.10.1.6 allows SDM to not be maintained during low power physics test to measure control rod worth and SDM. While this method is no longer used at HBRSEP Unit No. 2, the CTS still provide the option for its use. The HBRSEP Unit No. 2 ITS does not include this optional allowance. Therefore, this change represents an additional restriction on plant operations through the deletion of an allowed exception to a Limiting Condition for Operation.</p> <p>Discussion of Change M23 is revised in Supplement 5 to reflect this information.</p> |

| ITEM #  | DOC # or JFD# | CTS/STS REF. | Description of Issue   | COMMENTS   | HBRSEP, Unit No. 2 Responses   |
|---------|---------------|--------------|--|--|--|
| 3.1.8-2 | M20           | None         | <p>In the event ITS 3.1.8, PHYSICS TEST Exceptions-MODE 2, is not met, various specific ACTIONS are required, depending on the nature of the anomaly. The ITS 3.1.8 ACTIONS are identified as A.1, A.2, B.1, C.1, and D.1, with Completion Times ranging from "immediately" to 1 hour.</p> <p>CTS requirements comparable to these ITS ACTIONS do not exist, so entry into CTS 3.0 is required. CTS 3.0 requires achieving Hot Shutdown in 8 hours and Cold Shutdown in 30 hours.</p> <p>Justification is not provided for the shorter Completion Times than required by the CTS, nor is there discussion and justification for the specific Required Actions and Completion Times selected.</p> | Provide additional discussion and justification for the changed CTS requirement. | Additional discussion and justification for the changed CTS requirements was provided in revised Discussion of Change M20 in Supplement 1. |
|         |               |              |  |  |  |

| ITEM #  | DOC # or JFD# | CTS/STS REF.    | Description of Issue  | COMMENTS  | HBRSEP, Unit No. 2 Responses   |
|---------|---------------|-----------------|---|---|--|
| 3.1.8   | TSTF-14       |                 | CTS markup deletes MODE 2 from the Applicability.   | TSTF-14 does not allow deletion of MODE 2. Rev. 2 proposed deletion, rejected. OG revised Rev 3 to restore. Restore MODE 2 reference in both LCO and Bases. | ITS 3.1.8 and the associated Bases are revised, in Supplement 5, to restore the MODE 2 reference to the Applicability.   |
| 3.1.8-1 | JFD13         | STS SR 3.1.10.1 | STS SR 3.1.10.1 is deleted. The deletion is not justified on the basis of current licensing basis, system design, or operational constraints. | Provide justification for the STS deviation based on current licensing basis, system design, or operational constraints.                                    | ISTS SR 3.1.10.1, modified to reflect current plant practice, is added to ITS 3.1.8 in Supplement 5. Justification for deviation based on current plant practice and licensing basis is provided in revised JFD13 in Supplement 5. |



**HBR ITS 3.1.7 ROD POSITION INDICATION**

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| ITEM # | DOC<br># or<br>JFD# | CTS/ST<br>S<br>REF. | Description of Issue                                | COMMENTS   | HBRSEP, Unit No.2<br>Response  |
|--------|---------------------|---------------------|---|--|--|
| 3.1.7  |                     |                     | Rod Position Indication spec does not exist in CTS. | Provide justification and discussion relative to plant operations and safety analysis. | CTS Table 4.1-1 items 9 and 10 contain rod position indication requirements. These requirements have been included in revised ITS 3.1.7 in Supplement 4. Justifications for the changes to CTS are provided in new Discussion of Changes M27 and L6 in Supplement 4. |

| ITEM # | DOC # or JFD# | CTS/ST S REF. | Description of Issue  | COMMENTS  | HBRSEP, No. 2 Response   |
|--------|---------------|---------------|---|---|--|
| 3.1.6  | Ms            |               | The DOCS for the More Restrictive changes for 3.1 need to be revised to include justification of discussion of the acceptability of these changes as they apply to the CTS. | Provide additional discussion and justification for the changes.                              | The Discussion of Changes for the More Restrictive Changes of ITS 3.1 were revised in Supplement 1 to provide additional discussion and justification for the changes.   |
| 3.1.6  | Bases         |               | STS Bases include under Background the applicable criteria for reactivity and power distribution design requirements.   | Provide the list of applicable criteria even though it is included and described in the FSAR. | HBRSEP Unit No.2 was not designed and licensed to the 10 CFR 50 Appendix A (General Design Criteria (GDC)) and the corresponding UFSAR criteria are not arranged in three succinct sections like the GDC referenced in the ISTS Bases. Therefore to address this comment, Reference 1 of the Bases for ITS 3.1.6 is revised, in Supplement 5, to explicitly list each of the UFSAR sections containing the HBRSEP Unit No. 2 applicable criteria for the reactivity and power distribution design requirements related to control bank insertion limits. |

# **HBR ITS 3.1.6 CONTROL BANK INSERTION LIMITS**

| ITEM #  | DOC # or JFD# | CTS/ST S REF. | Description of Issue  | COMMENTS  | HBRSEP, No. 2 Response   |
|---------|---------------|---------------|---|---|--|
| 3.1.6-3 | M17           | None          | <p>In the event control bank insertion limits, sequence limits and/or overlap limits are not met, ITS 3.1.6 mandates specific ACTIONS A.1.1, A.1.2, B.1.1, B.1.2, and B.2.</p> <p>None of these ITS ACTIONS is included in the CTS.</p> <p>The discussion for this change provides no justification of why the specific ACTIONS were selected.</p>  | Provide additional discussion and justification for the acceptability of the additional restrictions on plant operations. | Discussion of Change M17 was revised in Supplement 1 to provide additional discussion and justification for these changes. |
| 3.1.6-4 | M18           | None          | ITS SR 3.1.6.1 requires verification of estimated control bank position within limits specified in the COLR within 4 hours prior to achieving criticality. ITS SR 3.1.6.2 requires verification of each control bank insertion within the limits of the COLR every 12 hours. ITS SR 3.1.6.3 requires verification of sequence and overlap limits met, as specified in the COLR, for control banks not fully withdrawn from the core every 12 hours. There are no comparable CTS requirements. There is no justification of why SRs were selected. | Provide additional discussion and justification for the acceptability of the additional restrictions on plant operations. | Discussion of Change M18 was revised in Supplement 1 to provide additional discussion and justification for these changes. |

| ITEM #  | DOC # or JFD# | CTS/ST S REF. | Description of Issue   | COMMENTS  | HBRSEP, No. 2 Response  |
|---------|---------------|---------------|--|---|---|
| 3.1.6-1 | LA2           | CTS 3.10.1.3  | CTS 3.10.1.3 requires placing the reactor in hot shutdown, and specifies that this be accomplished, "using normal operating procedures." This detail, specifying the manner in which to achieve hot shutdown, is relocated to licensee controlled documents. The discussion of change does not document which licensee controlled document contains these details, or the change control process in place for these documents. | Provide further discussion including which licensee controlled document contains these details and the change control process in place for these documents. | The CTS 3.10.1.3 requirement (using normal operating procedures) is to be relocated to the ITS Bases. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in Chapter 5 of the ITS. Discussion of Change LA2 is revised in Supplement 5 to reflect this discussion. |
| 3.1.6-2 | L4            | CTS 3.10.3    | For control rod banks inserted in excess of the specified insertion limits, CTS 3.10.3 requires correction within one hour. ITS 3.1.6 Required Action A.2 permits two hours to restore the banks within limits. This is an extension of an allowed outage time.  | Provide technical justification for acceptability of the extended allowed outage time.  | The extended allowed outage time is not justified. A supplement to the submittal based upon current licensing basis will be submitted by July 31, 1997.   |

United States Nuclear Regulatory Commission

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**HBR ITS 3.1.6 CONTROL BANK INSERTION LIMITS**

| ITEM # | DOC# or JFD# | CTS/STS<br>REF. | Description of Issue | Date<br>Opened | Date<br>Closed | COMMENTS |
|--------|--------------|-----------------|----------------------|----------------|----------------|----------|
|        |              |                 | NO COMMENTS          |                |                |          |

**HBR ITS 3.1.4 ROD GROUP ALIGNMENT LIMITS**

| ITEM #  | DOC # or JFD # | CTS/STS REF.                  | Description of Issue   | COMMENTS   | HBRSEP, Unit No. 2 Response  |
|---------|----------------|-------------------------------|--|--|--|
| 3.1.4-8 | M25 and M26    | CTS 3.10.6.3 and CTS 3.10.4.1 | Both CTS 3.10.6.3 and CTS 3.10.4.1 are enhanced by ITS 3.1.4 ACTIONS which introduce specific Conditions, Required Actions, and Completion Times not found in the CTS. There is no justification for these more restrictive changes, other than to achieve consistency with the STS. | Provide additional discussion and justification for the acceptability of change relative to the safety of the plant. | Discussion of Changes M25 and M26 were revised in Supplement 1 to provide additional discussion and justification for the changes. |

**HBR ITS 3.1.4 ROD GROUP ALIGNMENT LIMITS**

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| ITEM #  | DOC # or JFD # | CTS/STS REF.            | Description of Issue  | COMMENTS   | HBRSEP, Unit No. 2 Response   |
|---------|----------------|-------------------------|---|--|---|
| 3.1.4-6 | M7             | CTS 3.10.1.5            | <p>CTS 3.10.1.5 permits 2 hours to restore an out of alignment control rod to within limits.</p> <p>ITS 3.1.4 Required Action B.1 permits only 1 hour to restore an out of alignment control rod to within limits.</p> <p>No discussion is provided which justifies the selection of 1 hour, except that the change is consistent with the STS.</p>               | Provide additional discussion and justification for the changed CTS requirement. | Discussion of Change M7 was revised in Supplement 1 to provide additional discussion and justification for the change.  |
| 3.1.4-7 | M11            | CTS Table 4.1.3, Item 2 | <p>CTS Table 4.1-3, Item 2 requires periodic partial movement of all full length control rods, but no minimum movement distance is specified.</p> <p>ITS SR 3.1.4.2 stipulates movement of \$ 10 steps in either direction.</p> <p>No discussion is provided which justifies the selection of \$ 10 steps, except that the change is consistent with the STS.</p> | Provide additional discussion and justification for the changed CTS requirement. | Discussion of Change M11 was revised in Supplement 1 to provide additional discussion and justification for the change. |

**HBR ITS 3.1.4 ROD GROUP ALIGNMENT LIMITS**

| ITEM #  | DOC # or JFD # | CTS/STS REF. | Description of Issue   | COMMENTS   | HBRSEP, Unit No. 2 Response   |
|---------|----------------|--------------|--|--|---|
| 3.1.4-5 | A8             | CTS 3.10.4.1 | <p>CTS 3.10.4.1, requiring rod drop time testing, does not specify the pre-test position of the rod to be tested.</p> <p>ITS SR 3.1.4.3 requires verification of rod drop time from the fully withdrawn position.</p> <p>This change enhances the Technical Specifications by clearly specifying the height from which each rod is to be tested. Therefore, this is a more restrictive change, rather than an administrative change.</p> | <p>Provide discussion and justification for the pre-test position of the rod to be tested.</p> | <p>Discussion and justification for the addition of the required pre-test position of the rod to be rod drop time tested is provided in new Discussion of Change M29 in Supplement 5.</p> |



**HBR ITS 3.1.4 ROD GROUP ALIGNMENT LIMITS**

| ITEM #  | DOC # or JFD # | CTS/STS REF.                   | Description of Issue  | COMMENTS  | HBRSEP, Unit No. 2 Response   |
|---------|----------------|--------------------------------|---|---|---|
| 3.1.4-4 | A5             | CTS 3.10.1.5<br><br>CTS 3.10.6 | <p>CTS 3.10.1.5 and 3.10.6 do not include explicit operating condition applicability statements. ITS 3.1.4 is applicable in MODES 1 and 2.</p> <p>This change enhances the Technical Specifications by clearly specifying MODES of applicability. Therefore, this is a more restrictive change, rather than an administrative change.</p> | <p>Provide discussion and justification for the addition of MODES 1 and 2. Explain why they are reasonable interpretations.</p> | <p>Discussion and justification for the addition of MODES 1 and 2 to the requirements of CTS 3.10.1.5 and 3.10.6 is provided in new Discussion of Change M28 in Supplement 5.</p> |

# **HBR ITS 3.1.4 ROD GROUP ALIGNMENT LIMITS**

| ITEM #  | DOC # or JFD # | CTS/ST S REF. | Description of Issue  | COMMENTS  | HBRSEP, Unit No. 2 Response  |
|---------|----------------|---------------|---|---|--|
| 3.1.4-3 | A6             | CTS 3.10.6.1  | <p>CTS 3.10.6.1 requires declaring a control rod inoperable if the rod is misaligned by more than 15 inches from its bank. ITS 3.1.4 requires individual rod positions within 7.5 inches of the average of the individual rod positions in the bank when the bank demand position is &lt; 200 steps.</p> <p>This changes the reference against which individual rod misalignment distances are measured from the bank demand position to the average of all the digital rod position indicators within the bank. There is no discussion or justification for this change.</p> | Provide discussion and justification for the changed CTS requirement for misaligned rods. | <p>CTS 3.10.6.1 requires a rod misaligned by more than 15 inches from its bank to be declared inoperable and CTS 3.10.6.2 allows one control rod to be inoperable during power operation. ITS 3.1.4 ACTION B allows only one rod to be misaligned. CTS 3.10.1.5 (ITS 3.1.4) requires for bank demand positions \$ 200 steps that each rod shall be within 15 inches of its bank demand position and for bank demand positions &lt; 200 steps that each rod shall be within 7.5 inches of the average of the individual rod positions in the bank. If either of these limits are not met, CTS 3.10.1.5 (ITS 3.1.4 ACTION B) requires action to be taken. Since the change reflects a presentation preference and is consistent with current plant interpretation, the change is administrative. This is reflected in revised Discussion of Change A6 in Supplement 5.</p> |

| ITEM #  | DOC # or JFD # | CTS/STS REF.    | Description of Issue  | COMMENTS   | HBRSEP, Unit No. 2 Response  |
|---------|----------------|-----------------|---|--|--|
| 3.1.4-2 | L3             | CTS Table 4.1-3 | CTS Table 4.1-3, Item 2 requires verification of each control rods freedom of movement every 14 days during reactor critical operations. ITS SR 3.1.4.2 requires this surveillance to be performed at a 92 day frequency. ITS does not require fully inserted rods to be exercised. This is a less restrictive requirement and should be justified. | Provide justification for the acceptability of ITS change from CTS to not require fully inserted rods to be exercised. | Justification for this less restrictive change is provided in revised Discussion of Change L3 in Supplement 5. |

### HBR ITS 3.1.4 ROD GROUP ALIGNMENT LIMITS

| ITEM #  | DOC # or JFD # | CTS/ST S REF. | Description of Issue  | COMMENTS   | HBRSEP, Unit No. 2 Response  |
|---------|----------------|---------------|---|--|--|
| 3.1.4-1 | A6             | CTS 3.10.6.1  | CTS 3.10.6.1 requires declaring a control rod inoperable if the rod is misaligned by more than 15 inches from its bank. ITS 3.1.4 requires individual rod positions within 7.5 inches of the average of the individual rod positions in the bank when the bank demand position is < 200 steps. This is a more restrictive change for which there is no discussion or justification. | Provide discussion and justification for this more restrictive change. | CTS 3.10.6.1 requires a rod misaligned by more than 15 inches from its bank to be declared inoperable and CTS 3.10.6.2 allows one control rod to be inoperable during power operation. ITS 3.1.4 ACTION B allows only one rod to be misaligned. CTS 3.10.1.5 (ITS 3.1.4) requires for bank demand positions $\leq$ 200 steps that each rod shall be within 15 inches of its bank demand position and for bank demand positions < 200 steps that each rod shall be within 7.5 inches of the average of the individual rod positions in the bank. If either of these limits are not met, CTS 3.10.1.5 (ITS 3.1.4 ACTION B) requires action to be taken. Since the change reflects a presentation preference and is consistent with current plant interpretation, the change is administrative. This is reflected in revised Discussion of Change A6 in Supplement 5. |

**HBR ITS 3.1.3 MODERATOR TEMPERATURE COEFFICIENT (MTC)**

| ITEM #  | DOC # or JFD# | CTS/STS REF. | Description of Issue  | COMMENTS   | HBRSEP, Unit No.2 Response   |
|---------|---------------|--------------|---|--|--|
| 3.1.3-2 | L5            | CTS 3.1.3.3  | Action C.1 mandates being in MODE 4 with a completion time of 12 hours. This completion time is more than the implicit completion time for CTS 3.1.3.3. This is an extension of an allowed outage time.   |  |  |
| 3.1.3-3 | JFD 3         | STS 3.1.3    | The STS allows inserting a plant specific number for the limits of MTC at hot zero power. The ITS has limits for MTC when less than 50% RTP and greater than or equal to 50% RTP. These limits are the same limits contained in the CTS. This deviation from the STS appears to be based on the current licensing basis. However, the JFD does not make reference to the current licensing basis. | Provide justification for this difference from the STS based on the current licensing basis if applicable. | JFD 3 is revised in Supplement 5 to reflect that this deviation is based on current licensing basis. |

| ITEM #  | DOC # or JFD# | CTS/STS REF. | Description of Issue  | COMMENTS   | HBRSEP, Unit No.2 Response   |
|---------|---------------|--------------|---|--|--|
| 3.1.3-1 | L2            | CTS 3.1.3.3  | While not explicitly stated, establishment of administrative withdrawal limits for control banks, to maintain MTC within the upper limit, is not precluded by the CTS. However, the completion time of 24 hours to establish administrative control banks withdrawal limits is less restrictive than the CTS permits. Therefore, this results in an extended allowed outage time.   |  |  |
| 3.1.3-2 | L5            | CTS 3.1.3.3  | With the MTC outside the limits provided in the COLR, CTS 3.1.3.3 requires the reactor be made subcritical by an amount greater than or equal to the potential reactivity insertion due to depressurization. Since no completion time is explicitly stated, CTS 3.1.3.3 implies completion as soon as practical. (Although not directly applicable, CTS 3.0 requires hot shutdown within 8 hours. Without an explicit statement of completion time, the comparable completion time of 8 hours in CTS 3.0 is considered implicitly binding.) With MTC not within the lower limit, ITS 3.1.3 Required (Continued) | Provide justification for the extended allowed outage time based on plant design. L5 does not provide technical justification. | Justification for extending this allowed outage time is provided in revised Discussion of Change L5 in Supplement 5. |

| ITEM #  | DOC # or JFD# | CTS/STS REF. | Description of Issue  | COMMENTS  | HBRSEP, Unit No.2 Response  |
|---------|---------------|--------------|---|---|---|
| 3.1.3-1 | L2            | CTS 3.1.3.3  | <p>With the MTC outside the limits provided in the COLR, CTS 3.1.3.3 requires the reactor be made subcritical by an amount greater than or equal to the potential reactivity insertion due to depressurization. Since no completion time is explicitly stated, this specification implies completion as soon as practical. (Although not directly applicable, CTS 3.0 requires hot shutdown within 8 hours. Without an explicit statement of completion time, the comparable completion time of 8 hours in CTS 3.0 is considered implicitly binding.) With MTC not within the upper limit, ITS 3.1.3 Required Action A.1 mandates establishment of administrative withdrawal limits for control banks to maintain MTC within the upper limit with a completion time of 24 hours. Provided ITS 3.1.3 Required Action A.1 is satisfied, no further action is required.</p> <p>(Continued)</p> <p>Continued Next Page...</p> | <p>Provide justification for this extended allowed outage time based on acceptability of plant design. L2 describes the change but provides no technical justification.</p> | <p>Justification for extending this allowed outage time is provided in revised Discussion of Change L2 in Supplement 5.</p> |

### HBR ITS 3.1.2 CORE REACTIVITY

| ITEM #  | DOC # or JFD# | CTS/STS REF. | Description of Issue   | COMMENTS   | HBRSEP, Unit No. 2 Response  |
|---------|---------------|--------------|--|--|--|
| 3.1.2-1 | M2            | CTS 4.9      | <p>CTS 4.9 requires, after normalization, periodic comparison of actual boron concentration to predicted boron values. CTS 4.9 does not specify when performance of the normalization is required, nor does it specify the frequency of the comparison check beyond the term "periodically."</p> <p>ITS SR 3.1.2.1 specifies when normalization shall occur, and places specific times and frequencies on when the comparisons shall be performed.</p> | <p>Provide additional discussion and justification for the acceptability of the ITS frequency and normalization.</p> | <p>Discussion of Change M2 was revised in Supplement 1 to provide additional discussion and justification for these changes.</p> |



**HBR ITS 3.1.1 SHUTDOWN MARGIN (SDM)**

| ITEM #  | DOC # or JFD# | CTS/STS REF. | Description of Issue  | COMMENTS  | HBRSEP, Unit No 2. Response   |
|---------|---------------|--------------|---|---|---|
| 3.1.1-1 | A3            | CTS 4.9      | CTS 4.9 requires submittal of a Special Report within 30 days if the difference between observed and predicted steady-state boron concentration reaches the equivalent of 1 percent )k/k. This requirement is deleted in the ITS. | Provide discussion and justification for this less restrictive change. Provide discussion of reasonable equivalency for comparison to 100 ppm boron concentration.                                    | Justification for this less restrictive change is provided in new Discussion of Change L7 in Supplement 5.  |
| 3.1.1-2 | R1            | CTS 3.10.7   | CTS 3.10.7 is moved to licensee controlled documents.   | Provide additional discussion and justification for this change, including which licensee controlled document(s) contain these requirements and how these requirements are controlled and maintained. | Pages A-34 and A-35 of the "Application of the Selection Criteria to the H.B.Robinson Steam Electric Plant Unit No. 2 Technical Specifications" in the HBRSEP Unit No.2 ITS submittal provide the discussion and justification that the requirements of CTS 3.10.7, Power Ramp Rate Limits, did not meet any of the criteria for inclusion in the Technical Specifications.<br><br>The requirements of CTS 3.10.7 are to be relocated to the UFSAR at ITS implementation. |

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING  
THE TECHNICAL SPECIFICATIONS CHANGE REQUEST TO CONVERT TO THE  
IMPROVED STANDARD TECHNICAL SPECIFICATIONS

SECTION 3.1, "REACTIVITY CONTROL SYSTEMS"

**HBR ITS 3.0 LIMITING CONDITION FOR OPERATION (LCO)  
APPLICABILITY**

| ITEM # | DOC #<br>or<br>JFD # | CTS/STS<br>REF. | Description of Issue   | COMMENTS   | HBRSEP, Unit No 2<br>Response  |
|--------|----------------------|-----------------|--|--|--|
| 3.0-6  | A9                   | CTS 4.0         | <p>CTS 4.0 states, "Specified intervals may be adjusted plus or minus 25% to accommodate normal test schedules. This is changed in ITS SR 3.0.2 to 1.25 times the interval specified in the Frequency, and clearly directs from what point in time the interval is to be measured.</p> <p>Because this clarifies the requirement, and adds the stipulation regarding from what point in time the interval is to be measured, this is an enhancement to the technical specifications and constitutes a more restrictive change for which there is no justification, rather than an administrative change.</p> | <p>Provide justification for this more restrictive change.</p> | <p>This change is not a more restrictive change. Although not explicitly stated in CTS, the additional clarification of ITS SR 3.0.2 with regard to, "The specified Frequency for each SR is met if the Surveillance is performed within 1.25 times the interval specified in the Frequency, as measured from the previous performance or as measured from the time a specified condition of the Frequency is met," is inherently implied in CTS 4.0 and is consistent with current interpretation of CTS 4.0. Currently, if a surveillance test is performed early, the next surveillance will be scheduled from that performance to ensure the surveillance test is not performed &gt; 25% of the surveillance interval. DOC A9 has been revised to include this additional clarification.</p> |

**HBR ITS 3.0 LIMITING CONDITION FOR OPERATION (LCO)  
APPLICABILITY**

| ITEM # | DOC #<br>or<br>JFD # | CTS/STS<br>REF. | Description of Issue   | COMMENTS  | HBRSEP, Unit No.2<br>Response   |
|--------|----------------------|-----------------|--|---|---|
| 3.0-4  | A7                   | CTS 3.0         | <p>CTS 3.0 does not include a requirement equivalent to ITS 3.0.7, which provides direction with regard to meeting Test Exceptions LCOs in ITS 3.1.8, which allow certain Technical Specification requirements to be changed (i.e., made applicable in part or whole, or suspended) to permit performance of special tests or required operations which otherwise could not be performed.</p> <p>This enhancement constitutes a more restrictive change for which there is no justification, rather than an administrative change.</p> | Provide justification for this more restrictive change. | <p>This change is not a more restrictive change. If the Special Test Exception LCO did not exist, a PHYSICS TEST could not be performed in ITS. ITS LCO 3.0.7 eliminates confusion which would otherwise exist as to which LCOs apply during performance of a PHYSICS TEST. This change is consistent with the intent of the current physics testing exceptions; however, without this specific allowance to change the requirements of another LCO, a conflict of requirements could be incorrectly interpreted to exist. Technical changes associated with physics testing requirements are addressed in ITS 3.1.8 Discussion of Changes. Since this change only adds clarification to interpretation of CTS, this change is considered administrative. DOC A7 has been revised to include this additional clarification.</p>   |
| 3.0-5  | A8                   | CTS 4.0         | <p>ITS SR 3.0.1 directs that failure to meet a Surveillance shall be failure to meet the LCO. The CTS does not include this direction.</p> <p>This enhancement to the technical specifications constitutes a more restrictive change for which there is no justification, rather than an administrative change.</p>  | Provide justification for this more restrictive change. | <p>This change is not a more restrictive change. CTS 4.0 states, "If it is discovered that a Surveillance Requirement, ... was not performed within its specified frequency, then compliance with the requirement to declare the Technical Specification requirements are not met ..." which implies that if a Surveillance Requirement is not performed when required, the LCO is not met. In addition, each CTS inherently implies that when the associated Surveillance Requirements are not met, the associated equipment is inoperable and the appropriate actions are required to be performed. The requirement to declare the LCO not met, as required by ITS SR 3.0.1, is consistent with current interpretation on the use and application of CTS. DOC A8 has been revised to include this additional clarification.</p> |

# HBR ITS 3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

| ITEM # | DOC #<br>or<br>JFD # | CTS/STS<br>REF. | Description of Issue   | COMMENTS   | HBRSEP, Unit No.2<br>Response   |
|--------|----------------------|-----------------|--|--|---|
| 3.0-3  | A6                   | CTS 3.0         | <p>CTS 3.0 does not include a requirement equivalent to STS 3.0.6, which provides direction related to the appropriate actions to be taken when inoperability of a support system also results in the inoperability of one or more related supported system(s). ITS 3.0.6 adopts STS 3.0.6 in its entirety.</p> <p>This enhancement constitutes an unjustified more restrictive change rather than an administrative change.</p> | Provide justification for the more restrictive change. | <p>This change is not a more restrictive change. ITS LCO 3.0.6 is added to provide guidance regarding the appropriate ACTIONS to be taken when a single inoperability (a support system) also results in the inoperability of one or more related systems (supported system(s)). In the CTS, based on the intent and interpretation provided by the NRC over the years, there has been an ambiguous approach to the combined support/supported inoperability.</p> <p>Guidance provided in the June 13, 1979 NRC memorandum from Brian K. Grimes (Assistant Director for Engineering and Projects) to Samuel E. Bryan (Assistant Director for Field Coordination) would indicate an intent/interpretation consistent with the ITS LCO 3.0.6</p> <p>Guidance provided by the NRC in their April 10, 1980 letter to all Licensees, regarding the definition of OPERABILITY and its impact as a support system on the remainder of the current TS, would indicate a similar philosophy of not taking ACTIONS for the inoperable supported equipment.</p> <p>Generic Letter 91-18 and a plain-English reading of the existing TS provide an interpretation that inoperability requires all associated ACTIONS to be taken.</p> <p>Considering the history of disagreement and misunderstandings in this area, the ISTS, NUREG-1431, was developed, with Industry input and approval of the NRC, to include ITS LCO 3.0.6, and a new program, Specification 5.5.15, Safety Function Determination Program. Since the function of ITS LCO 3.0.6 is to clarify existing ambiguities and to maintain actions within the realm of previous interpretations, this new provision is considered to be administrative in nature. DOC A6 has been revised to include this information.</p> |

**HBR ITS 3.0 LIMITING CONDITION FOR OPERATION (LCO)  
APPLICABILITY**

| ITEM # | DOC #<br>or<br>JFD # | CTS/STS<br>REF. | Description of Issue   | COMMENTS  | HBRSEP, Unit No. 2<br>Response   |
|--------|----------------------|-----------------|--|---|--|
| 3.0-1  | A2                   | CTS 3.0         | <p>CTS 3.0 does not include a requirement equivalent to STS 3.0.1, which provides clarity with regard to when LCOs shall be met. ITS 3.0.1 adopts this STS requirement</p> <p>This enhancement constitutes a more restrictive change for which there is no justification, rather than an administrative change.</p>  | Provide justification for this more restrictive change. | <p>This change is not a more restrictive change. Although this Specification is not explicitly stated in the CTS, current use and application of the CTS is consistent with the intent of ISTS Specification LCO 3.0.1. In addition, each CTS inherently implies that the associated specification requirements must be met when the specification is applicable. ITS LCO 3.0.1 provides clarity with regard to when LCOs must be met, and where any exceptions can be found. ITS LCO 3.0.1 is consistent with NUREG-1431, Revision 1 (including proposed generic change TSTF-6) and does not result in technical changes (either actual or interpretational). As such, this change is administrative. DOC A2 has been revised to include this additional clarification.</p> |
| 3.0-2  | A3                   | CTS 3.0         | <p>CTS 3.0 does not include a requirement equivalent to STS 3.0.2, which provides direction with regard to the Actions required to be taken upon discovery of a failure to meet an LCO." ITS 3.0.2 adopts this STS requirement.</p> <p>This enhancement constitutes a more restrictive change for which there is no justification, rather than an administrative change.</p> | Provide justification for this more restrictive change. | <p>This change is not a more restrictive change. Although this Specification is not explicitly stated in the CTS, current use and application of the CTS is consistent with the intent of ISTS Specification LCO 3.0.2. In addition, each CTS inherently implies that the associated specification actions must be performed when the requirements are not met. ITS LCO 3.0.2 provides clarity with regard to when LCOs must be met, and where any exceptions can be found. ITS LCO 3.0.2 is consistent with NUREG-1431, Revision 1 and the only technical change associated with CTS is the ITS LCO 3.0.5 exception (See DOC L1). As such, this change is administrative. DOC A3 has been revised to include this additional clarification.</p>                             |

HBR ITS SECTIONS 3.0, 3.1, 3.2

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| ITEM # | DOC# or JFD# | CTS/STS REF. | Description of Issue   | COMMENTS   | HBSEP, Unit No. 2 Response  |
|--------|--------------|--------------|--|--|---|
|        |              | All          | Most of the more restrictive and some of the less restrictive discussions of changes and justifications for differences do not provide a technical explanation for the change or deviation based on the licensing basis or plant operations. | Provide additional information to address deficiencies                   | More restrictive changes were augmented in Supplement 1 to include additional justification. Where specific questions were asked regarding less restrictive changes, additional justification was provided in Supplement 5. |
|        |              | BASES        |  | All Bases should be revised in accordance with changes made to the LCOs. | Bases have been revised to agree with changes to the LCOs.  |

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING  
THE TECHNICAL SPECIFICATIONS CHANGE REQUEST TO CONVERT TO THE  
IMPROVED STANDARD TECHNICAL SPECIFICATIONS

SECTION 3.0. "LIMITING CONDITION FOR OPERATION  
(LCO) APPLICABILITY"



H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
MATRIX OF RELOCATED TECHNICAL SPECIFICATIONS (TS) REQUIREMENTS AND  
DETAILED TS REQUIREMENTS

| Improved Technical Specifications (ITS) Relocation No. | Current Technical Specification (CTS) Section Requirement   | Document(s) to which the requirement was relocated |
|--|---|--|
| ITS 3.3 LA7  | Table 3.5-2 Item 15B. Control Rod Misalignment Monitor function as provided by the "Quadrant Power Tilt Monitor" and related ACTION No. 10.                     | TRM  |
| ITS 3.3 LA8  | Table 4.1-1 Item 4, Remark (4) associated with RTD cross calibration and Table 4.1-1 Item 30, Remark (1) associated with testing of the RTB UV and shunt trips. | Bases  |
| ITS 3.3 LA9  | Table 3.5-1 Items 6.a and 6.b that the Functions' channel action is "Trip normal supply breaker."   | UFSAR  |
| ITS 3.3 R1   | Table 3.5-5 Item No. 3 and 12, Notes 2 and 7  | TRM  |
| ITS 3.3 R1   | Table 3.5-5 Item No. 7 and Note 4   | TRM  |
| ITS 3.3 R1   | Table 4.1-1 Item No. 38   | TRM  |
| ITS 3.3 R1   | Table 4.1-1 Item No. 34 and 48 and associated testing requirements  | TRM  |
| ITS 3.4 LA1  | 3.1.2.1.a "Over the temperature range from cold shutdown to hot operating conditions, the heatup rate shall not exceed 60°F in any one hour."                   | Bases  |

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
MATRIX OF RELOCATED TECHNICAL SPECIFICATIONS (TS) REQUIREMENTS AND  
DETAILED TS REQUIREMENTS

| Improved Technical Specifications (ITS)<br>Relocation No. | Current Technical Specification (CTS) Section<br>Requirement  | Document(s) to which the<br>requirement was relocated |
|---|---|---|
| ITS 3.3 LA1   | 2.3.1.2.e Details concerning how the electronic dynamic compensation and delta flux input to the Overpower $\Delta T$ RPS function affects its setpoint | Bases of ITS Section 3.3.1.                           |
| ITS 3.3 LA2   | 2.3.3 "The RCS narrow range temperature sensors response time shall be less than or equal to a 4.0 second lag constant."                                | Bases of ITS section SR 3.3.1.12                      |
| ITS 3.3 LA3   | 3.10.5.1.b "The reactor shall not be made critical"... "unless the reactor trip bypass breakers are racked out or removed."                             | Bases   |
| ITS 3.3 LA4   | Table 4.1-1, Instrument channel Surveillance Requirements.  | TRM   |
| ITS 3.3 LA6   | Table 3.5-5, Note 5, Preplanned alternate method of monitoring be available   | Bases   |
| ITS 3.3 LA7   | Table 3.5-2 Item 15A. Control Rod Misalignment Monitor function as provided by the "ERFIS Rod Position Deviation" feature and related ACTION No. 9.     | TRM   |

**H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2**  
**MATRIX OF RELOCATED TECHNICAL SPECIFICATIONS (TS) REQUIREMENTS AND**  
**DETAILED TS REQUIREMENTS**

| Improved Technical Specifications (ITS) Relocation No. | Current Technical Specification (CTS) Section Requirement   | Document(s) to which the requirement was relocated |
|--|---|--|
| ITS 3.2 LA1  | 3.10.2.1 Algorithms describing the limits of $F_Q(Z)$   | COLR   |
| ITS 3.2 LA1  | 3.10.2.2 Algorithms describing the limits of $F_Q(Z)$ with core penalty factor, $V(Z)$ , included   | COLR   |
| ITS 3.2 LA2  | 3.10.2.1 Algorithm describing the limits of $F_{\Delta H}$ , uncertainty factor, and power factor Multiplier  | COLR   |
| ITS 3.2 LA3  | 3.10.2.11 Details concerning the redefinition of the axial flux target bands  | Bases  |
| ITS 3.2 LA4  | 3.10.2.2.2 Details concerning the description of determining $F_Q(Z)$ from a power distribution map in terms of measurement and engineering factor uncertainties, and Allowable Power Level | Bases of ITS Section 3.2.1 and 3.2.3               |
| ITS 3.3 LA1  | 2.3.1.2.d Details concerning how the electronic dynamic compensation and delta flux input to the Overtemperature $\Delta T$ Reactor Protection System (RPS) function affects its setpoint   | Bases of ITS Section 3.3.1.                        |

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
MATRIX OF RELOCATED TECHNICAL SPECIFICATIONS (TS) REQUIREMENTS AND  
DETAILED TS REQUIREMENTS

| Improved Technical Specifications (ITS)<br>Relocation No. | Current Technical Specification (CTS) Section<br>Requirement  | Document(s) to which the<br>requirement was relocated     |
|---|---|---|
| ITS 2.0 LA1   | 6.7.1.c,d,e Safety limit reporting requirements   | Quality Assurance Program Description                     |
| ITS 3.0 LA1   | 4.0 "Prior to returning the system to service, the specified calibration and testing surveillance shall be performed."  | Bases of ITS section Surveillance Requirement (SR) 3.0.1. |
| ITS 3.1 LA1   | 3.10.6.3 and Figure 3.10-2, Shutdown Margin requirements with an inoperable full length control rod   | Core Operating Limits Report (COLR)                       |
| ITS 3.1 LA1   | 3.10.8.1 "Shutdown Margin - Hot Shutdown"   | COLR  |
| ITS 3.1 LA1   | 3.10.8.2 "Shutdown Margin - Cold Shutdown"  | COLR  |
| ITS 3.1 LA1   | 3.10.1.4 "At 50% of the cycle as defined by burnup, the limits shall be adjusted to the end-of-core values as specified in the COLR."   | COLR  |
| ITS 3.1 LA2   | 3.10.1.3 "If bank insertion is not restored to the specified limits"... "the reactor shall be placed in the hot shutdown condition utilizing normal operating procedures within six hours." | Bases   |
| ITS 3.1 R1  | 3.10.7 Restrictions placed on power ramp rate following a shutdown where core fuel assemblies have been handled   | UFSAR   |

| Comment # | DOC or JFD | CTS/STS LCO | Description of Issue   | Comments | HBRSEP, Unit No. 2 Response   |
|-----------|------------|-------------|--|----------|---|
| 3.7.12-1  | None       | ITS 3.7.12  | This specification is not in the CTS therefore it is not clear where the 21 foot limit comes. Provide the UFSAR or accident analysis reference that supports that value. |          | <p>There are certain pool situations where less than 23 feet of water above the spent fuel occurs. This is due to physical dimensions of the racks and pool, and the setpoints used for control room level alarms. Only about 22 feet of water above the fuel in the highest spent fuel rack is available at our current low level alarm setpoint. The value of 21 feet was selected for the ITS limit to allow for variations about the low level alarm value of 22 feet. JFD 25 has been revised in Supplement 5 to provide this additional information.</p> <p>A discrepancy has been found in the current licensing basis (i.e., UFSAR) which reflects utilization of Regulatory Guide 1.25 in the offsite dose consequences analysis for a fuel handling accident. UFSAR Section 15.7.4 provides the safety analysis for a fuel handling accident in the spent fuel pool. The UFSAR analysis was performed in accordance with Safety Guide 25; however, the analysis failed to account for a pool depth of 21 feet above the spent fuel in lieu of the assumed 23 feet in Safety Guide 25. A preliminary evaluation has been performed to determine the effective decontamination factor (DF) for 21 feet of elevation above the fuel. Utilizing the methodology of Westinghouse WCAP 7828, and WCAP 7828, Addendum 1, the effective DF for 21 feet and 23 feet were found to be 1600 and 3200, respectively. A reanalysis of the fuel handling accident is being performed utilizing a DF of 50, preserving the 1:32 ratio between Safety Guide 25 and the WCAP 7828 methodology. The results of this analysis is expected to meet acceptance criteria of Standard Review Plan 15.7.4 and will be provided to the NRC by separate letter.</p> |

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING  
THE TECHNICAL SPECIFICATIONS CHANGE REQUEST TO CONVERT TO THE  
IMPROVED STANDARD TECHNICAL SPECIFICATIONS

REVISED RESPONSE TO NRC QUESTION 3.7.12-1

United States Nuclear Regulatory Commission **HBR ITS 3.9.6 REFUELING CAVITY WATER LEVEL**

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| ITEM #  | DOC # or JFD # | CTS/STS REF.  | Description of Issue   | COMMENTS   | HBRSEP, Unit No 2, Response   |
|---------|----------------|---------------|--|--|---|
| 3.9.6-3 | JD6            | STS 3.9.7 A.3 | STS 3.9.7 ACTION A.3 requires ...Initiate action to restore refueling cavity water level to within limit immediately. ITS 3.9.3 ACTION A does not retain this requirement. The justification provided is inadequate. | Provide justification for the STS deviation based on current licensing basis, system design, or operational constraints. | The deletion of ISTS 3.9.7 Required Action A.3 is consistent with generic change TSTF-20. TSTF-20 was approved by the NRC on March 13, 1997. This information is incorporated into JFD 6 in Supplement 5. |

| ITEM #  | DOC # or JFD # | CTS/ST S REF. | Description of Issue  | COMMENTS   | HBRSEP, Unit No 2, Response  |
|---------|----------------|---------------|---|--|--|
| 3.9.6-2 | A2             | CTS 3.8.1.k   | CTS 3.8.1.k specifies the reactor shall be subcritical as required by CTS 3.10.8.3. ITS 3.9.6 does not retain this requirement. There is no discussion or justification for this less restrictive change. | Provide discussion and justification for this less restrictive change. | <p>CTS 3.8.1.k requires that the reactor be subcritical as required by CTS 3.10.8.3 and CTS 3.10.8.3 requires the shutdown margin to be at least 6 percent <math>\Delta k/k</math> during refueling (relocation of CTS 3.10.8.3 is addressed in Discussion of Change LA3). CTS 3.8.1.f also requires a minimum boron concentration to be maintained during refueling operations. The requirement in CTS 3.8.1.f is included in ITS 3.9.1 with the actual value of minimum boron concentration relocated to the COLR. However, the Bases of ITS 3.9.1 states the minimum boron concentration requirement in the COLR ensures that core <math>K_{eff}</math> is maintained <math>\leq 0.94</math> (which is equivalent to 6 percent <math>\Delta k/k</math>). As a result, it is unnecessary to state that the reactor must be subcritical as required by CTS 3.10.8.3 since meeting the requirements of ITS 3.9.1 ensures that the reactor is subcritical with a shutdown margin equivalent to at least 6 percent <math>\Delta k/k</math>. Discussion of Change A2 is revised in Supplement 5 to reflect this additional information.</p> |



| ITEM #  | DOC # or JFD # | CTS/ST S REF. | Description of Issue  | COMMENTS   | HBRSEP, Unit No 2, Response   |
|---------|----------------|---------------|---|--|---|
| 3.9.6-1 | LA6            | CTS 3.8.1.e   | <p>CTS 3.8.1.e requires that during refueling evolutions the Tave will be <math>\leq 140^{\circ}\text{F}</math>. ITS 3.9.6 does not retain this requirement. This change constitutes a less restrictive change for which there is inadequate justification.</p> <p>Note: licensee controlled document is not specified.</p> | <p>Provide additional justification for the less restrictive change.</p> | <p>Additional justification for this change is provided in revised Discussion of Change LA6 in Supplement 5.</p> <p>The requirement of CTS Specification 3.8.1.e is to be relocated to the Technical Requirements Manual (TRM). The TRM will be incorporated by reference into the UFSAR at ITS implementation.</p> |

**HBR ITS 3.9.5 RESIDUAL HEAT REMOVAL (RHR) AND COOLANT  
CIRCULATION - LOW WATER LEVEL**

| ITEM #  | DOC # or JFD # | CTS/ST S REF.  | Description of Issue  | COMMENTS   | HBRSEP Unit No 2, Response  |
|---------|----------------|----------------|---|--|---|
| 3.9.5-2 | JD5            | STS SR 3.9.6.1 | STS SR 3.9.6.1 requires verification of one RHR loop in operation and circulating reactor coolant at a flow rate of $\geq 2800$ gpm. In ITS SR 3.9.5.1 this requirement is changed to verification of one RHR train in operation. The justification for this deviation from the STS is not based on current licensing basis or system design. | Provide justification for the STS deviation based on current licensing basis, system design, or operational constraints. | JFD 5 is revised in Supplement 5 to provide justification for the deviation based on current licensing basis. |

**HBR ITS 3.9.5 RESIDUAL HEAT REMOVAL (RHR) AND COOLANT  
CIRCULATION - LOW WATER LEVEL**

| ITEM #  | DOC # or JFD # | CTS/STS REF. | Description of Issue  | COMMENTS   | HBRSEP Unit No 2, Response  |
|---------|----------------|--------------|---|--|---|
| 3.9.5-1 | JD4            | STS 3.9.6    | STS 3.9.6 requires that at least two RHR loops be OPERABLE and one RHR loop shall be in operation. ITS 3.9.5 requires that at least two RHR trains be OPERABLE... The justification provided is inadequate in that the term "loop" as used in the justification, refers to absence of a "loop" within each train of the RHR system. While "loop," as used in the STS, refers to the coolant flow path which removes decay heat from the reactor core. | Provide justification for the STS deviation based on current licensing basis, system design, or operational constraints. | The change from the ISTS term "loops" to "trains" in reference to the RHR System is done for consistency with the HBRSEP Unit No. 2 plant specific description of the RHR System as reflected in UFSAR Section 5.4.4; UFSAR Section 5.4.4 describes that there is one loop of the RHR System. Therefore, to avoid confusion with the description of the RHR System in the UFSAR, the term "train" is used in place of the term "loop" in the ITS. An RHR loop (as described in the ISTS Bases) consists of an RHR pump, a heat exchanger, valves, piping, and instruments and controls to ensure a flow path for decay heat removal is available. In the HBRSEP Unit No. 2 ITS, an RHR train consists of an RHR pump, a heat exchanger, valves, piping, and instruments and controls to ensure a flow path for decay heat removal is available. JFD 4 is revised in Supplement 5 to reflect this information. |

**HBR ITS 3.9.4 RESIDUAL HEAT REMOVAL (RHR) AND COOLANT  
CIRCULATION - HIGH WATER LEVEL**

| ITEM #  | DOC # or JFD # | CTS/STS REF.   | Description of Issue  | COMMENTS   | HBRSEP Unit No 2, Response  |
|---------|----------------|----------------|---|--|---|
| 3.9.4-5 | JD8            | STS SR 3.9.5.1 | STS SR 3.9.5.1 requires verification of one RHR loop in operation and circulating reactor coolant at a flow rate of $\geq$ 2800 gpm. In ITS SR 3.9.4.1 this requirement is changed to verification of one RHR train in operation. The justification for this deviation from the STS is not based on current licensing basis or system design. | Provide justification for the STS deviation based on current licensing basis, system design, or operational constraints. | JFD 8 is revised in Supplement 5 to provide justification for the deviation based on current licensing basis. |

**HBR ITS 3.9.4 RESIDUAL HEAT REMOVAL (RHR) AND COOLANT  
CIRCULATION - HIGH WATER LEVEL**

| ITEM #  | DOC # or JFD # | CTS/ST S REF. | Description of Issue  | COMMENTS   | HBRSEP Unit No 2, Response   |
|---------|----------------|---------------|---|--|--|
| 3.9.4-4 | A2             | CTS 3.8.1.k   | CTS 3.8.1.k specifies the reactor shall be subcritical as required by CTS 3.10.8.3. ITS 3.9.4 does not retain this requirement. There is no discussion or justification for this less restrictive change. | Provide discussion and justification for this less restrictive change. | CTS 3.8.1.k requires that the reactor be subcritical as required by CTS 3.10.8.3 and CTS 3.10.8.3 requires the shutdown margin to be at least 6 percent $\Delta k/k$ during refueling (relocation of CTS 3.10.8.3 is addressed in Discussion of Change LA3). CTS 3.8.1.f also requires a minimum boron concentration to be maintained during refueling operations. The requirement in CTS 3.8.1.f is included in ITS 3.9.1 with the actual value of minimum boron concentration relocated to the COLR. However, the Bases of ITS 3.9.1 states the minimum boron concentration requirement in the COLR ensures that core $K_{eff}$ is maintained $\leq 0.94$ (which is equivalent to 6 percent $\Delta k/k$ ). As a result, it is unnecessary to state that the reactor must be subcritical as required by CTS 3.10.8.3 since meeting the requirements of ITS 3.9.1 ensures that the reactor is subcritical with a shutdown margin equivalent to at least 6 percent $\Delta k/k$ . Discussion of Change A2 is revised in Supplement 5 to reflect this additional information. |

**HBR ITS 3.9.4 RESIDUAL HEAT REMOVAL (RHR) AND COOLANT  
CIRCULATION - HIGH WATER LEVEL**

| ITEM #  | DOC # or JFD # | CTS/ST S REF.  | Description of Issue   | COMMENTS  | HBRSEP Unit No 2, Response  |
|---------|----------------|----------------|--|---|---|
| 3.9.4-3 | JD7            | STS 3.9.5 NOTE | <p>STS 3.9.5 NOTE allows that the required RHR loop may be removed from operation for <math>\leq 1</math> hour per 8 hour period ...</p> <p>This requirement is modified by ITS 3.9.4 NOTE allowing the required RHR train to be removed from operation for <math>\leq 1</math> hour in any 8 hour period... The justification for this deviation from the STS is not based on current licensing basis, system design, or operational constraints.</p> | <p>Provide justification for the STS deviation based on current licensing basis, system design, or operational constraints.</p> | <p>The HBRSEP Unit No. 2 current licensing basis reflected in the CTS does not contain explicit requirements for an RHR pump to be in operation. As such, the allowance to remove an RHR train from operation is not needed in the CTS. However, there have been times in the past when it would not have been prudent to remove the one required RHR train from operation due to high decay heat loads. Therefore, the Note allowing the one required RHR train to be removed from operation for <math>\leq 1</math> hour per 8 hour period is modified to eliminate any interpretation that this required RHR train can be removed from operation for consecutive 1 hour periods in two 8 hour periods.</p> |

**HBR ITS 3.9.4 RESIDUAL HEAT REMOVAL (RHR) AND COOLANT  
CIRCULATION - HIGH WATER LEVEL**

| ITEM #  | DOC # or JFD # | CTS/ST S REF. | Description of Issue   | COMMENTS   | HBRSEP Unit No 2, Response  |
|---------|----------------|---------------|--|--|---|
| 3.9.4-2 | M7             | CTS 3.8.1.e   | CTS 3.8.1.e requires that one RHR loop shall be OPERABLE. ITS 3.9.4 requires that one RHR train shall be OPERABLE... There is no justification that the definition of a loop and train are the same. | Provide additional discussion and justification for the changed CTS terminology. | Additional discussion and justification is provided in Discussion of Change M7 in Supplement 5. |

**HBR ITS 3.9.4 RESIDUAL HEAT REMOVAL (RHR) AND COOLANT  
CIRCULATION - HIGH WATER LEVEL**

| ITEM #  | DOC # or JFD # | CTS/ST S REF. | Description of Issue  | COMMENTS   | HBRSEP Unit No 2, Response  |
|---------|----------------|---------------|---|--|---|
| 3.9.4-1 | JD4            | STS 3.9.5     | STS 3.9.5 requires that one RHR loop shall be OPERABLE and in operation. ITS 3.9.4 requires that one RHR train shall be OPERABLE... The justification provided is inadequate in that the term "loop" as used in the justification, refers to absence of a "loop" within each train of the RHR system. While "loop," as used in the STS, refers to the coolant flow path which removes decay heat from the reactor core. | Provide justification for the STS deviation based on current licensing basis, system design, or operational constraints. | The change from the ISTS term "loops" to "trains" in reference to the RHR System is done for consistency with the HBRSEP Unit No. 2 plant specific description of the RHR System as reflected in UFSAR Section 5.4.4; UFSAR Section 5.4.4 describes that there is one loop of the RHR System. Therefore, to avoid confusion with the description of the RHR System in the UFSAR, the term "train" is used in place of the term "loop" in the ITS. An RHR loop (as described in the ISTS Bases) consists of an RHR pump, a heat exchanger, valves, piping, and instruments and controls to ensure a flow path for decay heat removal is available. In the HBRSEP Unit No. 2 ITS, an RHR train consists of an RHR pump, a heat exchanger, valves, piping, and instruments and controls to ensure a flow path for decay heat removal is available. JFD 4 is revised in Supplement 5 to reflect this information. |



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| ITEM #  | DOC # or JFD # | CTS/STS REF. | Description of Issue  | COMMENTS | HBRSEP, Unit No 2, Response |
|---------|----------------|--------------|---|----------|-----------------------------|
| 3.9.3-9 | M14            | CTS 3.8.1.a  | <p>Because this change gives the operator additional options to meet the requirement, it is a less restrictive, rather than a more restrictive change.</p> <p>There is no discussion or justification for this less restrictive change.</p> |          |                             |

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| ITEM #  | DOC # or JFD # | CTS/STS REF. | Description of Issue   | COMMENTS   | HBRSEP, Unit No 2, Response   |
|---------|----------------|--------------|--|--|---|
| 3.9.3-9 | M14            | CTS 3.8.1.a  | <p>CTS 3.8.1.a requires all automatic containment isolation valves operable, or at least one valve securely closed in each line penetrating the containment.</p> <p>ITS 3.9.3.c.1 and .2 require "Each penetration providing direct access from the containment ... closed by a manual or automatic isolation valve, blind flange, or equivalent, or capable of being closed by an OPERABLE Containment Ventilation Isolation System."<br/>(Continued)</p> | Provide discussion and justification for this less restrictive change. | Discussion and justification for this less restrictive change is provided in new Discussion of Change L9 in Supplement 5. |

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| ITEM #  | DOC # or JFD # | CTS/ST S REF.  | Description of Issue   | COMMENTS | HBRSEP, Unit No 2, Response |
|---------|----------------|----------------|--|----------|-----------------------------|
| 3.9.3-8 | A9             | CTS 3.8.2.c. 2 | <p>Because this change gives the operator additional options to meet the requirement, it is a less restrictive change rather than an administrative change.</p> <p>There is no discussion or justification for this less restrictive change.</p> |          |                             |

| ITEM #  | DOC # or JFD # | CTS/ST S REF. | Description of Issue  | COMMENTS   | HBRSEP, Unit No 2, Response   |
|---------|----------------|---------------|---|--|---|
| 3.9.3-8 | A9             | CTS 3.8.2.c.2 | <p>CTS 3.8.2.c.2 requires "... at least one automatic containment isolation valve in each line penetrating the containment ... shall be securely closed."</p> <p>ITS 3.9.3.c.1 and .2 require "Each penetration providing direct access from the containment ... closed by a manual or automatic isolation valve, blind flange, or equivalent, or capable of being closed by an OPERABLE Containment Ventilation Isolation System."<br/>(Continued)</p> | Provide discussion and justification for this less restrictive change. | Discussion and justification for this less restrictive change is provided in new Discussion of Change L9 in Supplement 5. |

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|---------|----------------|---------------|--|--|---|
| 3.9.3-7 | R1             | CTS 3.8.1.c   | CTS 3.8.1.c requires that radiation levels in the containment and spent fuel storage areas shall be monitored continuously. ITS 3.9.2 does not retain this requirement. There is inadequate justification for removing this requirement. This is a less restrictive change rather than a relocation of an LCO. | Provide discussion and justification for this less restrictive change. | Radiation levels in containment during refueling operations are continuously monitored by the radiation monitors associated with Containment Ventilation Isolation Instrumentation (ITS 3.3.6). In addition, page A-17 of the "Application of Selection Criteria to the H.B.Robinson Steam Electric Plant Unit No. 2 Technical Specifications" in the HBRSEP Unit No. 2 ITS submittal provides the discussion and justification that the monitoring requirement of CTS 3.8.1.c did not meet any of the criteria for inclusion in the Technical Specifications and could therefore be relocated. The CTS 3.8.1.c requirement will be included in the Technical Requirements Manual (TRM). The TRM will be referenced in the UFSAR. |

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|---------|----------------|---------------|---|--|--|
| 3.9.3-6 | A6             | CTS 3.6.1.b   | CTS 3.6.1.b requires the containment integrity shall not be violated when the reactor vessel head is removed unless a shutdown margin of at least 6% $\Delta k/k$ is "constantly" maintained. ITS 3.9.3 does not retain this requirement. There is inadequate justification for this less restrictive change. | Provide discussion and justification for this less restrictive change. | CTS 3.6.1.b requires that containment integrity shall not be violated when the reactor vessel head is removed unless a shutdown margin of at least 6% $\Delta k/k$ is "constantly" maintained. ITS 3.9.1 requires a minimum boron concentration to be maintained at all times during MODE 6 (MODE 6 encompasses the condition with the reactor vessel head removed) with the actual value of minimum boron concentration relocated to the COLR. The Bases of ITS 3.9.1 states the minimum boron concentration requirement in the COLR ensures that core $K_{eff}$ is maintained $\leq 0.94$ (which is equivalent to 6% $\Delta k/k$ ). The requirement in CTS 3.6.1.b is unnecessary to be maintained in ITS and its elimination is considered to be administrative since entry into MODE 6 (and removal of the reactor vessel head) is precluded by ITS 3.9.1 Required Action A.3 when boron concentration is not within limits of ITS 3.9.1 (i.e., boron concentration is not sufficient to maintain a shutdown margin of at least 6% $\Delta k/k$ ). Discussion of Change A6 is revised in Supplement 5 to reflect this additional information. |

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|---------|----------------|---------------|---|--|---|
| 3.9.3-5 | A5             | CTS 3.8.1.b   | CTS 3.8.1.b requires containment vent and purge system isolation capability to be tested and verified OPERABLE prior to refueling operations. ITS SR 3.9.3.2 allows verification by an actual or simulated actuation signal. This change provides the operator with a degree of flexibility not found in CTS 3.8.1.b. This is a less restrictive change for which there is no justification | Provide discussion and justification for this less restrictive change. | Justification for this change is provided in new Discussion of Change L8 in Supplement 5. |

| ITEM #  | DOC # or JFD # | CTS/ST S REF. | Description of Issue   | COMMENTS   | HBRSEP, Unit No 2, Response   |
|---------|----------------|---------------|--|--|---|
| 3.9.3-4 | None           | CTS 3.8.1.b   | CTS 3.8.1.b requires the containment vent and purge system... isolation shall be tested and verified to be OPERABLE immediately prior to refueling operations. ITS SR 3.9.3.2 requires verification that each required containment ventilation valve actuates to the isolation position on an actual or simulated actuation signal every 18 months. This is an extension of surveillance interval. | This extension to the CTS Surveillance Test Interval is consistent with STS. | Justification for this change is provided in new Discussion of Change L7 in Supplement 5. |



| ITEM #  | DOC # or JFD # | CTS/ST S REF. | Description of Issue  | COMMENTS   | HBRSEP, Unit No 2, Response   |
|---------|----------------|---------------|---|--|---|
| 3.9.3-3 | LA8            | CTS 3.8.2.c.2 | CTS 3.8.2.c.2 requires at least one Containment purge filter fan be shown to operate within $\pm 10\%$ of the design flow and must be OPERABLE during core alterations or movement of irradiated fuel assemblies. ITS 3.9.3 does not retain this requirement. The justification provided for this removal of detail is inadequate, and the licensee controlled document is not specified. | Provide adequate justification for this removal of detail from the CTS, and specify the document(s) to which the requirement is moved. | The flow rate requirement of CTS 3.8.2.c.2 for the containment purge filter fan is included in ITS 5.5.11, Ventilation Filter Test Program (VFTP). The remaining requirement of CTS 3.8.2.c.2 for OPERABILITY of the containment purge filter fan is included in ITS 3.9.7, Containment Purge Filter System. ITS 3.9.7 is added to the ITS in Supplement 5. |

| ITEM #  | DOC # or JFD # | CTS/ST S REF. | Description of Issue  | COMMENTS   | HBRSEP, Unit No 2, Response   |
|---------|----------------|---------------|---|--|---|
| 3.9.3-2 | A2             | CTS 3.8.1.k   | CTS 3.8.1.k specifies the reactor shall be subcritical as required by CTS 3.10.8.3. ITS 3.9.3 does not retain this requirement. There is no discussion or justification for this less restrictive change. | Provide discussion and justification for this less restrictive change. | <p>CTS 3.8.1.k requires that the reactor be subcritical as required by CTS 3.10.8.3 and CTS 3.10.8.3 requires the shutdown margin to be at least 6 percent <math>\Delta k/k</math> during refueling (relocation of CTS 3.10.8.3 is addressed in Discussion of Change LA3).</p> <p>CTS 3.8.1.f also requires a minimum boron concentration to be maintained during refueling operations. The requirement in CTS 3.8.1.f is included in ITS 3.9.1 with the actual value of minimum boron concentration relocated to the COLR. However, the Bases of ITS 3.9.1 states the minimum boron concentration requirement in the COLR ensures that core <math>K_{eff}</math> is maintained <math>\leq 0.94</math> (which is equivalent to 6 percent <math>\Delta k/k</math>). As a result, it is unnecessary to state that the reactor must be subcritical as required by CTS 3.10.8.3 since meeting the requirements of ITS 3.9.1 ensures that the reactor is subcritical with a shutdown margin equivalent to at least 6 percent <math>\Delta k/k</math>. Discussion of Change A2 is revised in Supplement 5 to reflect this additional information.</p> |

| ITEM #  | DOC # or JFD # | CTS/ST S REF. | Description of Issue  | COMMENTS   | HBRSEP, Unit No 2, Response  |
|---------|----------------|---------------|---|--|--|
| 3.9.3-1 | LA5            | CTS 3.8.1.i   | CTS 3.8.1.i requires when in operation, the exhaust flow of the Containment Purge System shall discharge through HEPA and impregnated charcoal filters. ITS 3.9.3 does not retain this requirement. The justification provided for this removal of detail is inadequate, and the licensee controlled document is not specified. | Provide adequate justification for this removal of detail from the CTS, and specify the document(s) to which the requirement is moved. | <p>Additional justification for the relocation of this detail is provided in revised Discussion of Change LA5 in Supplement 5.</p> <p>The requirement of CTS 3.8.1.i is to be relocated to the Bases. Changes to the Bases are to be controlled by the Bases Control Program in ITS Chapter 5.0.</p> |

United States Nuclear Regulatory Commission **HBR ITS 3.9.2 NUCLEAR INSTRUMENTATION**

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|---------|----------------|---------------|--|-----------|-----------------------------|
| 3.9.2-5 | L5             | CTS 3.8.1.j   | The discussion does not identify the disposition for the other requirements. There is no discussion or justification for this less restrictive change. |           |                             |

| ITEM #  | DOC # or JFD # | CTS/ST S REF. | Description of Issue   | COMMENT S  | HBRSEP, Unit No 2, Response   |
|---------|----------------|---------------|--|--|---|
| 3.9.2-5 | L5             | CTS 3.8.1.j   | <p>CTS 3.8.1.j requires if any of the specified limiting conditions for refueling (equipment/air lock door closed, containment vent and purge system OPERABLE, radiation levels in containment monitored, core neutron flux monitored by source range flux monitors, one RHR loop OPERABLE, minimum boron concentration while loading and unloading fuel, direct communication between control room and refueling cavity, no movement of fuel within 100 hours of shutdown, and spent fuel building ventilation operating) are not met refueling of the reactor shall cease. ITS 3.9.2 only includes requirements for the source range neutron flux monitors.</p> <p>(Continued)</p> | Provide discussion and justification for this less restrictive change. | <p>CTS 3.8.1.j does apply to more than one requirement in the ITS. However, Discussion of Change L5 only applies to changes associated with ITS 3.9.2. The application of CTS 3.8.1.j to the other mentioned requirements are included in the CTS markups and Discussion of Changes for the corresponding ITS section (e.g., ITS 3.9.1, ITS 3.9.3, ITS 3.9.5, etc.). Other applicable Discussion of Changes include L4 (for ITS 3.9.3) and L6 (for ITS 3.9.4 and 3.9.5). In addition, for CTS requirements for which CTS 3.8.1.j applies and are relocated from the Technical Specifications, the requirements of CTS 3.8.1.j are also relocated.</p> |

| ITEM #  | DOC # or JFD # | CTS/ST S REF. | Description of Issue   | COMMENT S  | HBRSEP, Unit No 2, Response   |
|---------|----------------|---------------|--|--|---|
| 3.9.2-4 | A1             | CTS 3.8.1.d   | CTS 3.8.1.d requires whenever core geometry is being changed, core subcritical neutron flux shall be continuously monitored by at least two source range neutron monitors. ITS 3.9.2 requires two source range neutron flux monitors shall be OPERABLE. This change is not consistent with the requirements of an administrative change in that the words do not retain the same meaning. The change is actually less restrictive, rather than administrative. | Provide additional discussion and justification for the changed CTS Requirement. | CTS 3.8.1.d requires continuous monitoring of neutron flux to be performed by at least two source range monitors. ITS 3.9.2 requires two source range monitors to be OPERABLE. The CTS and ITS definition of OPERABLE requires that the component be capable of performing its intended safety function. During refueling, the intended safety function of the source range monitors (as described in the HBRSEP Unit No. 2 UFSAR) is to monitor the reactivity of the core and to provide indication in the control room and the containment of any abnormal increase in core reactivity (i.e., neutron flux). Since ITS 3.9.2 requires the two source range monitors to be OPERABLE continuously during refueling and the definition of OPERABLE requires the source range monitors to be capable of monitoring neutron flux of the core, this change is considered to be administrative. New Discussion of Change A11 is provided in Supplement 5 to reflect this information. |

**HBR ITS 3.9.2 NUCLEAR INSTRUMENTATION**

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| ITEM #  | DOC # or JFD # | CTS/ST S REF. | Description of Issue   | COMMENT S  | HBRSEP, Unit No 2, Response   |
|---------|----------------|---------------|--|--|---|
| 3.9.2-3 | R1             | CTS 3.8.1.c   | CTS 3.8.1.c requires that radiation levels in the containment and spent fuel storage areas shall be monitored continuously. ITS 3.9.2 does not retain this requirement. There is inadequate justification for removing this requirement. This is a less restrictive change rather than a relocation of an LCO. | Provide discussion and justification for this less restrictive change. | <p>Radiation levels in containment during refueling operations are continuously monitored by the radiation monitors associated with Containment Ventilation Isolation Instrumentation (ITS 3.3.6).</p> <p>In addition, page A-17 of the "Application of Selection Criteria to the H.B.Robinson Steam Electric Plant Unit No. 2 Technical Specifications" in the HBRSEP Unit No. 2 ITS submittal provides the discussion and justification that the monitoring requirement of CTS 3.8.1.c did not meet any of the criteria for inclusion in the Technical Specifications and could therefore be relocated. The CTS 3.8.1.c requirement will be included in the Technical Requirements Manual (TRM). The TRM will be referenced in the UFSAR.</p> |

| ITEM #  | DOC # or JFD # | CTS/ST S REF. | Description of Issue  | COMMENT S  | HBRSEP, Unit No 2, Response   |
|---------|----------------|---------------|---|--|---|
| 3.9.2-2 | A2             | CTS 3.8.1.k   | CTS 3.8.1.k specifies the reactor shall be subcritical as required by CTS 3.10.8.3. ITS 3.9.2 does not retain this requirement. There is no discussion or justification for this less restrictive change. | Provide discussion and justification for this less restrictive change. | CTS 3.8.1.k requires that the reactor be subcritical as required by CTS 3.10.8.3 and CTS 3.10.8.3 requires the shutdown margin to be at least 6 percent $\Delta k/k$ during refueling (relocation of CTS 3.10.8.3 is addressed in Discussion of Change LA3). CTS 3.8.1.f also requires a minimum boron concentration to be maintained during refueling operations. The requirement in CTS 3.8.1.f is included in ITS 3.9.1 with the actual value of minimum boron concentration relocated to the COLR. However, the Bases of ITS 3.9.1 states the minimum boron concentration requirement in the COLR ensures that core $K_{eff}$ is maintained $\leq 0.94$ (which is equivalent to 6 percent $\Delta k/k$ ). As a result, it is unnecessary to state that the reactor must be subcritical as required by CTS 3.10.8.3 since meeting the requirements of ITS 3.9.1 ensures that the reactor is subcritical with a shutdown margin equivalent to at least 6 percent $\Delta k/k$ . Discussion of Change A2 is revised in Supplement 5 to reflect this information. |



| ITEM #  | DOC # or JFD # | CTS/ST S REF.             | Description of Issue   | COMMENT S  | HBRSEP, Unit No 2, Response  |
|---------|----------------|---------------------------|--|--|--|
| 3.9.2-1 | A1             | CTS Table 4.1-1, (Item 3) | CTS Table 4.1-1, (Item 3) requires a Check of the Nuclear Source Range Once/shift when in service. ITS SR 3.9.2.1 requires a CHANNEL CHECK of Nuclear Instrumentation every 12 hours. There is no discussion or justification to indicate that once/shift equates to every 12 hours. | Provide additional discussion and justification for the changed CTS requirement. | CTS Table 4.1.1 (item 3) requires a Check of Nuclear Source Range channels. The specified Frequency for this Check is identified as "S." On CTS page 4.1.9a (the last page of CTS Table 4.1-1), "S" is defined as "At least once per 12 hours." Therefore, this change is considered to be administrative and adequately addressed by Discussion of Change A1. |

United States Nuclear Regulatory Commission **HBR ITS 3.9.1 BORON CONCENTRATION**

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| ITEM #  | DOC # or JFD # | CTS/STS REF. | Description of Issue  | COMMENTS   | HBRSEP, Unit No 2, Response   |
|---------|----------------|--------------|---|--|---|
| 3.9.1-6 | R1             | CTS 3.8.1.g  | CTS 3.8.1.g requires direct communication between the operators in the control room and the refueling cavity manipulator crane operator whenever core geometry is being changed. ITS 3.9.1 does not retain this requirement. There is inadequate justification for removing this requirement. This is a less restrictive change rather than Relocation of an LCO. | Provide discussion and justification for this less restrictive change. | As discussed in the NRC letter date May 9, 1988 from T.E.Murley (NRC) to R.A. Newton (Westinghouse Owners Group) which provided the NRC evaluation of the Application of the Selection Criteria to Standard Technical Specifications, the requirements of STS 3/4.9.5, Communications, did not meet the criteria for inclusion in Technical Specifications (TS) and could be relocated from the TS. The HBRSEP Unit No.2 requirements of CTS 3.8.1.g are equivalent to those in STS 3/4.9.5. Page A-17 of the "Application of Selection Criteria to the H.B.Robinson Steam Electric Plant Unit No. 2 Technical Specifications" in the HBRSEP Unit No. 2 ITS submittal provides the discussion and justification that the requirements of CTS 3.8.1.g did not meet any of the criteria for inclusion in the TS and could therefore be relocated. The position that removing the CTS 3.8.1.g requirements is a "Less Restrictive" change rather than a "Relocation" is not consistent with previous NRC Safety Evaluations for ITS conversions. The CTS 3.8.1.g requirements will be included in the TRM which will be referenced in the UFSAR. |

United States Nuclear Regulatory Commission **HBR ITS 3.9.1 BORON CONCENTRATION**

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| ITEM #  | DOC # or JFD # | CTS/STS REF. | Description of Issue   | COMMENTS  | HBRSEP, Unit No 2, Response  |
|---------|----------------|--------------|--|---|--|
| 3.9.1-5 | LA3            | CTS 3.10.8.3 | CTS 3.10.8.3 requires shutdown margin of at least 6% $\Delta k/k$ during refueling operation mode. ITS 3.9.1 does not retain this requirement. This CTS requirement is moved to an unspecified licensee controlled document. | Specify the licensee controlled document to which the CTS requirement is moved, and how the requirement is maintained and controlled. | The requirement of CTS 3.10.8.3 is to be relocated to the CORE OPERATING LIMITS REPORT (COLR). Changes to COLR are controlled by the provisions of 10 CFR 50.59. |

United States Nuclear Regulatory Commission **HBR ITS 3.9.1 BORON CONCENTRATION**

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| ITEM #  | DOC # or JFD # | CTS/STS REF.             | Description of Issue  | COMMENTS  | HBRSEP, Unit No 2, Response   |
|---------|----------------|--------------------------|---|---|---|
| 3.9.1-4 | LA2            | CTS Table 4.1-3 (Item 6) | CTS Table 4.1-3 (Item 6) requires functional check of Refueling System Interlocks prior to each refueling shutdown. ITS 3.9.1 does not retain this requirement. This CTS requirement has been moved to an unspecified licensee controlled document. | Specify the licensee controlled document to which the CTS requirement is moved, and how the requirement is maintained and controlled. | The requirements of CTS Table 4.1.3, item 6, are to be relocated to the Technical Requirements Manual (TRM). The TRM will be incorporated by reference into the UFSAR at ITS implementation. Changes to the UFSAR are controlled by the provisions of 10 CFR 50.59. |

**HBR ITS 3.9.1 BORON CONCENTRATION**

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| ITEM #  | DOC # or JFD # | CTS/STS REF. | Description of Issue  | COMMENTS   | HBRSEP, Unit No 2, Response  |
|---------|----------------|--------------|---|--|--|
| 3.9.1-3 | A2             | CTS 3.8.1.k  | CTS 3.8.1.k specifies the reactor shall be subcritical as required by CTS 3.10.8.3. ITS 3.9.1 does not retain this requirement. There is no discussion or justification for this less restrictive change. | Provide discussion and justification for this less restrictive change. | CTS 3.8.1.k requires that the reactor be subcritical as required by CTS 3.10.8.3 and CTS 3.10.8.3 requires the shutdown margin to be at least 6 percent $\Delta k/k$ during refueling (relocation of CTS 3.10.8.3 is addressed in Discussion of Change LA3). CTS 3.8.1.f also requires a minimum boron concentration to be maintained during refueling operations. The requirement in CTS 3.8.1.f is included in ITS 3.9.1 with the actual value of minimum boron concentration relocated to the COLR. However, the Bases of ITS 3.9.1 states the minimum boron concentration requirement in the COLR ensures that core $K_{eff}$ is maintained $\leq 0.94$ (which is equivalent to 6 percent $\Delta k/k$ ). As a result, it is unnecessary to state that the reactor must be subcritical as required by CTS 3.10.8.3 since meeting the requirements of ITS 3.9.1 ensures that the reactor is subcritical with a shutdown margin equivalent to at least 6 percent $\Delta k/k$ . Discussion of Change A2 is revised in Supplement 5 to reflect this additional information. |

| ITEM #  | DOC # or JFD # | CTS/STS REF. | Description of Issue   | COMMENTS   | HBRSEP, Unit No 2, Response  |
|---------|----------------|--------------|--|--|--|
| 3.9.1-2 | LA7            | CTS 3.8.1.h  | CTS 3.8.1.h specifies movement of fuel within the core shall not be initiated prior to 100 hours after shutdown. ITS 3.9.1 does not retain this requirement. The justification provided for this removal of detail is inadequate, and the licensee controlled document is not specified. | Provide adequate justification for the changed CTS requirement, and specify the document(s) to which the requirement is moved. | Discussion of Change LA7 is revised in Supplement 5 to include additional justification and specify the Technical Requirements Manual as the document to which the requirement is to be moved. |

| ITEM #  | DOC # or JFD # | CTS/STS REF. | Description of Issue   | COMMENTS   | HBRSEP, Unit No 2, Response   |
|---------|----------------|--------------|--|--|---|
| 3.9.1-1 | L1             | CTS 3.8.1.f  | CTS 3.8.1.f sampling frequency is every shift. ITS SR 3.9.1 sampling frequency is every 72 hours. This is an extension of surveillance interval. | This extension to the CTS Surveillance Test Interval is consistent with STS. | A review of the surveillance test history was performed to validate that the impact, if any, on the capability to maintain boron concentration within the required limit is minimal as a result of the change in the surveillance test interval. This review of the surveillance test history, demonstrates that there are no failures that would invalidate the conclusion that the impact, if any, on the capability to maintain boron concentration within the required limit is minimal from a change to a 72 hour surveillance interval. Discussion of Change L1 is revised in Supplement 5 to reflect this information. |

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING  
THE TECHNICAL SPECIFICATIONS CHANGE REQUEST TO CONVERT TO THE  
IMPROVED STANDARD TECHNICAL SPECIFICATIONS

SECTION 3.9, "REFUELING OPERATIONS"



United States Nuclear Regulatory Commission **HBR ITS 3.5.4 REFUELING WATER STORAGE TANK MODES 1, 2, 3, and 4**

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|         | DOC<br>or<br>JFD | CTS/STS LCO   | Description of Issue   | COMMENTS  | HBRSEP, Unit No.2<br>Response   |
|---------|------------------|---------------|--|---|---|
| 3.5.4-1 | M21              | CTS 3.3.1.1.a | CTS 3.3.1.1.a stipulates a minimum RWST boron concentration limit but does not provide a maximum limit on boron concentration. ITS SR 3.5.4.3 imposes an upper limit on RWST boron concentration. No discussion or justification is provided for the bases for selection of the upper limit. | Provide discussion and justification for selection of the upper RWST boron concentration limit. | The upper limit for RWST boron concentration is the value used in the plant accident and transient analysis.<br><br>JFD 19 added in Supplement 5 to provide this clarification. |

United States Nuclear Regulatory Commission **HBR ITS 3.5.3 ECCS-SHUTDOWN MODE 4**

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|         | DOC or JFD         | CTS/STS LCO                      | Description of Issue   | COMMENTS  | HBRSEP, Unit No.2 Response   |
|---------|--------------------|----------------------------------|--|---|--|
| 3.5.3-2 | M16<br>JD8<br>JD12 | CTS 4.5.2.2<br>STS SR<br>3.5.3.1 | CTS 4.5.2.1 requires verification that specified valves are correctly positioned with control power removed. CTS 4.5.2.2 requires verification that specified valves are correctly positioned. Both requirements apply during power operation. ITS SR 3.5.3.1 does <u>not</u> require performance of ITS SR 3.5.2.1 (equivalent to CTS 4.5.2.1) and <u>does</u> require performance of SR 3.5.2.2 (equivalent to CTS 4.5.2.2) in Mode 4. Both of these items are changes to the STS. | The changes to the requirements of STS SR 3.5.3.1 to <u>not</u> require performance of SR 3.5.2.1 but <u>to</u> require performance of SR 3.5.2.2 in Mode 4 are generic changes that are not completely consistent with the CTS. Please provide additional plant-specific justification for these changes in Mode 4 ECCS requirements or submit a generic change package to the TSTF. | <p>CTS 4.5.2.1 is comparable to ITS SR 3.5.2.1 and is required to be performed whenever reactor pressure is &gt; 1000 psig. Although not directly comparable a reactor pressure of 1000 psig normally occurs well above the MODE 3-4 transition temperature. Therefore this CTS requirement is not applicable in MODE 4. Similarly CTS 4.5.2.1 is comparable to ITS SR 3.5.2.2 is required to be performed during Power Operation. Power Operation is well above MODE 4.</p> <p>Consequently the CLB for HBR does not require adopting the bracketed STS SR 3.5.2.1 in MODE 4. For operation considerations (i.e., the desire to keep these valves powered for certain plant evolutions) ITS SR 3.5.2.1 was not adopted in MODE 4 (ITS Specification 3.5.3).</p> <p>Supplement 5 is modified to eliminate SR 3.5.2.2 from ITS SR 3.5.3.1 as requested.</p> <p>These changes are consistent with the STS. A generic change is not required.</p> |

United States Nuclear Regulatory Commission **HBR ITS 3.5.3 ECCS-SHUTDOWN MODE 4**

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|         | DOC or JFD | CTS/STS LCO | Description of Issue  | COMMENTS  | HBRSEP, Unit No.2 Response   |
|---------|------------|-------------|---|---|------------------------------|
| 3.5.3-1 | A12        | CTS 3.3.1.3 | <p>CTS requires two RHR subsystems to be operable in Hot Shutdown (Modes 3 &amp; 4). ITS SR 3.5.3.1 contains a note that allows an RHR train to be considered operable during alignment and operation for decay heat removal if capable of being manually realigned to the ECCS mode of operation. You state in DOC A12 that, although the CTS do not explicitly provide for RHR subsystems to be considered operable in Hot Shutdown when aligned for decay heat removal, it is your current practice and interpretation to allow credit to be taken for portions of an ECCS subsystem as an operable subsystem although they may be manually aligned to function for decay heat removal. Therefore, you conclude that the addition of this clarification to ITS SR 3.5.3.1 as a note is an administrative change.</p> | <p>Although the flexibility provided in the note to ITS SR 3.5.3.1 may be consistent with your current interpretation of CTS 3.3.1.3 and your operating practice, it is, nevertheless, not explicitly provided for in your CTS. Therefore, this is a less restrictive change, not an administrative change. The staff will reflect it as such in the safety evaluation. No action is required on your part.</p> | <p>No response required.</p> |

|         | DOC<br>or<br>JFD | CTS/STS<br>LCO             | Description of Issue   | COMMENTS   | HBRSEP, Unit No.2<br>Response  |
|---------|------------------|----------------------------|--|--|--|
| 3.5.2-7 | JD7              | No<br>comparable<br>STS SR | ITS SR 3.5.2.7 was added to require surveillance of air operated valves FCV-605 & HCV-758. A note is included in ITS SR 3.5.2.7 to allow power or air to be restored to one valve for the purpose of testing or maintenance. The note also refers to similar allowances for other ECCS valves. While the intent of the note maintains consistency with the current licensing basis, the note applies to, and includes requirements for ITS SR 3.5.1.5 and ITS SR 3.5.2.1 as well as ITS SR 3.5.2.7 where it is placed. | <p>1) It is not clear why the addition of the note to SR 3.5.2.7 is needed since the completion time for Required Action A.1 would allow 72 hours for this same circumstance without the note.</p> <p>2) The note as is can cause confusion because it also addresses other ECCS valves for some of which requirements are contained in a separate specification. There is no reason for these other allowances in a note for an SR that doesn't address those valves.</p> | <p>1)The specified valves are required to be deenergized in the specified position to preclude a single failure (including spurious actuation) from adversely affecting the capability of the ECCS. Since the design of the HBRSEP does not include fully independent trains, some piping and valves are shared by both ECCS trains. Since the specified valves affect both trains, the provisions afforded by the ITS Actions for a single train are not applicable. Therefore the provisions afforded by the Note are added to retain the CLB which permits restoring power or air to one valve for maintenance or testing.</p> <p>2) The Note has been replaced with new Required Actions B.1 and B.2 to address a single valve with the control power or air restored. Since only one of the specified valves is permitted to have air or power restored, the Required Actions are structured consistently with Condition B of LCO 3.5.1.</p> <p>Supplement 5 is modified remove the Note, add the Required Actions and provide this additional clarification.</p> |

United States Nuclear Regulatory Commission **HBR ITS 3.5.2 ECCS-OPERATING MODES 1, 2 AND 3**

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|         | DOC<br>or<br>JFD | CTS/STS<br>LCO    | Description of Issue   | COMMENTS  | HBRSEP, Unit No.2<br>Response   |
|---------|------------------|-------------------|--|---|---|
| 3.5.2-5 | No JD            | STS SR<br>3.5.2.3 | STS SR 3.5.2.3 requires verification every 31 days that ECCS piping is full of water. The ITS do not contain this requirement. No justification for deviation from the STS was provided for this change. | Please provide a justification for deviation from the STS for not including this requirement in the HBRSEP ITS. | <p>The ISTS bracketed requirement to verify the ECCS piping is full of water is not a CLB requirement for HBRSEP. The HBRSEP design does not include vents at high points in the system that would enable performance of this SR.</p> <p>Changes to the CTS ECCS requirements were approved without imposing this additional requirement by issuance of amendments 119 and 153 on 6/20/88 and 11/21/94 respectively.</p> <p>JFD 17 added in Supplement 5 to include this clarification.</p> |
| 3.5.2-6 | No JD            | STS SR<br>3.5.2.7 | STS SR 3.5.2.7 requires verification of ECCS throttle valve position. The ITS do not contain this requirement. No justification for deviation from the STS was provided for this change.                 | Please provide a justification for deviation from the STS for not including this requirement in the HBRSEP ITS. | <p>The CTS does not contain a requirement comparable to the bracketed SS SR 3.5.2.7 requirement to verify ECCS throttle valve positions. The HBRSEP design does not include throttle valves with position stops to restrict flow in the ECCS header leading to the LOCA break loop.</p> <p>JFD 18 added in Supplement 5 to provide this clarification.</p>  |

United States Nuclear Regulatory Commission **HBR ITS 3.5.2 ECCS-OPERATING MODES 1, 2 AND 3**

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|         | DOC<br>or<br>JFD | CTS/STS<br>LCO    | Description of Issue   | COMMENTS  | HBRSEP, Unit No.2<br>Response  |
|---------|------------------|-------------------|--|---|--|
| 3.5.2-4 | JD3              | STS SR<br>3.5.2.1 | A note is included in ITS SR 3.5.2.1 which is not included in STS 3.5.2.1 to allow power or air to be restored to one valve for the purpose of testing or maintenance. The note also refers to similar allowances for other ECCS valves. While the intent of the note maintains consistency with the current licensing basis, the note applies to, and includes requirements for ITS SR 3.5.1.5 and ITS SR 3.5.2.7 as well as ITS SR 3.5.2.1 where it is placed. | <p>1) It is not clear why the addition of the note to SR 3.5.2.1 is needed since the completion time for Required Action A.1 would allow 72 hours for this same circumstance without the note.</p> <p>2) The note as is can cause confusion because it also addresses other ECCS valves, some of which are contained in a separate specification. There is no reason for these allowances for other valves in a note for an SR that doesn't address those valves.</p> | <p>1)The specified valves are required to be deenergized in the specified position to preclude a single failure (including spurious actuation) from adversely affecting the capability of the ECCS. Since the design of the HBRSEP does not include fully independent trains, some piping and valves are shared by both ECCS trains. Since the specified valves affect both trains, the provisions afforded by the ITS Actions for a single train are not applicable.</p> <p>2) The Note has been replaced with new Required Actions B.1 and B.2 to address a single valve with the control power or air restored. Since only one of the specified valves is permitted to have air or power restored, the Required Actions are structured consistently with Condition B of LCO 3.5.1.</p> <p>Supplement 5 is modified remove the Note, add the Required Actions and provide this additional clarification.</p> |

|         | DOC<br>or<br>JFD | CTS/STS<br>LCO                       | Description of Issue  | COMMENTS  | HBRSEP, Unit No.2<br>Response   |
|---------|------------------|--------------------------------------|---|---|---|
| 3.5.2-3 | No JD            | STS 3.5.2<br>Applicability<br>Note 2 | The markup of NUREG-1431 indicates that the words "Entry and" are added at the beginning of Applicability Note 2 to STS 3.5.2. No JD is referenced to justify this deviation from the STS. This note is not contained in the CTS. | Please provide a justification for deviation from the wording of the STS for this note, keeping in mind that the proposed change appears to be generic. | At HBRSEP, Unit No. 2, the Applicability for LTOP is the same as the ITS Mode 3 to 4 transition temperature. When in the applicability for LTOP, two ECCS trains cannot be OPERABLE. The addition of the text "Entry and" permits entry into MODE 3 where the requirements of LTOP do not apply, thus permitting restoring the second ECCS train to OPERABLE status.<br><br>JFD 16 is provided in Supplement 5 to provide this clarification. |

United States Nuclear Regulatory Commission **HBR ITS 3.5.2 ECCS-OPERATING MODES 1, 2 AND 3**

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|         | DOC<br>or<br>JFD | CTS/STS<br>LCO   | Description of Issue  | COMMENTS   | HBRSEP, Unit No.2<br>Response   |
|---------|------------------|------------------|---|--|---|
| 3.5.2-1 | A2               | CTS 3.3.1        | CTS 3.3.1.c through CTS 3.3.1.f provide system specific equipment requirements which define an ECCS train. ITS 3.5.1 through 3.5.4 do not contain this level of detail; however the Bases for these specifications do. You state in DOC A2 that this is an administrative change and the ITS do not retain this information since it is generically encompasses within the definition of operability.   | The staff does not believe this is an administrative change but, rather, a less restrictive change which moves details from the LCO to the Bases. Please revise the DOC for this change from an administrative change to a less restrictive change. (NOTE: THIS CHANGE ALSO APPLIES TO ITS 3.5.3.)   | The submittal is modified and LA2 DOC is provided in Supplement 5 to indicate these details are relocated to the Bases.                         |
| 3.5.2-2 | A5 &<br>JD4      | CTS<br>3.3.1.2.e | CTS 3.3.1.2.e permits any one ECCS flow path to be inoperable for up to 24 hours. The note to ITS 3.5.2 Actions permits one SI pump flow path to be isolated for 24 hours to perform required pressure isolation valve (PIV) testing. You state in JFD 4 that this note is similar to the STS Applicability Note 1 which is not used in the ITS. However, the STS note only allows the safety injection flow paths to be isolated for up to 2 hours to perform PIV testing. You state in JFD 4 that the HBRSEP design "is not conducive to performing this testing, requiring up to 24 hours to complete the testing." You also state that you believe a note to the Actions is considered more appropriate than a note to the Applicability. | 1) Please elaborate on your statement that the HBRSEP design is not conducive to performing PIV testing on the SI system and describe the differences from other PWRs that necessitate 24 hours to perform this testing.<br><br>2) Also, the change in the location of the note from the Applicability (in the STS) to the Actions is a generic change. Please justify this deviation from the STS on a plant-specific basis, modify your proposal to retain the STS location of the note, or submit a generic change package to the TSTF. | The submittal is modified in Supplement 5 to retain location of the Note in STS location. Justification for a duration of 12 hours is included. |



| Item #  | DOC<br>or<br>JFD | CTS/STS<br>LCO                  | Description of Issue  | COMMENTS  | HBRSEP No. 2<br>Responses  |
|---------|------------------|---------------------------------|---|---|--|
| 3.5.1-5 | JD2              | STS SRs<br>3.5.1.1 &<br>3.5.1.5 | <p>This JFD addresses two separate issues; one associated with ITS SR 3.5.1.1 and one associated with ITS SR 3.5.1.5. This comment addresses ITS SR 3.5.1.1. STS SR 3.5.1.1 requires verification that each accumulator isolation valve is fully open every 12 hours. ITS SR 3.5.1.1 only requires this verification once prior to removing power from the valve operator, consistent with the current licensing basis. JFD 2 states that removal of power disables remote indication of the valve's position and, to preclude the need for routine entry into containment, position verification is only required once before power is removed. The JFD goes on to state that ITS SR 3.5.1.1 and SR 3.5.1.5 in conjunction provide reasonable assurance that the valves remain open.</p> | <p>ITS SR 3.5.2.1 requires verification of valve position with control power removed for several low head and high head safety injection valves every 12 hours. Explain how these valves are different from the accumulator isolation valves as far as location, functional requirements, and relative importance to the overall ECCS function. If there is no significant difference, provide further explanation to justify the difference in surveillance requirements (i.e., STS SR 3.5.1.5 shouldn't be adopted).</p> <p>Also, it is the staff's understanding that most PWR licensees with requirements similar to STS SR 3.5.1.1 do <u>not</u> make routine containment entries to perform this verification. Explain why HBRSEP operators would need to enter containment to perform this verification.</p> | <p>With control power removed, the accumulator discharge isolation valves do not provide a remote position indication and thus requiring an entry into containment to verify the valve's position. The remaining valves, except for 878A and 878B (SI pump discharge cross-connect valves) are designed to provide remote position indication when there control power is removed. The 878A and 878B valves, although without remote position indication, are located outside containment and are thus accessible for position verification by observation of the valves.</p> <p>JFD2 modified in Supplement 5 to provide this additional clarification.</p> |

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
MATRIX OF RELOCATED TECHNICAL SPECIFICATIONS (TS) REQUIREMENTS AND  
DETAILED TS REQUIREMENTS

| CTS Requirements   | Relocated To the Following Document(s) |
|--|--|
| Table 3.17-2 Table describing reporting levels for radioactivity concentrations in environmental samples   | ODCM                                   |
| Table 3.17-3 Table with maximum values for LLDs  | ODCM                                   |
| 4.10.1.1 Sampling requirements for batch liquid releases   | ODCM                                   |
| 4.10.1.2 Analysis requirements for samples of batch liquid releases  | ODCM                                   |
| 4.10.1.3 Requirement that liquid batch samples be taken and analyzed in accordance with TS Table 4.10-1. Requirement that the concentrations at the point of release be within the limits of TS Section 3.9.1.1        | ODCM                                   |
| 4.10.2.1 Requirement for determining the dose rate due to radioactive materials in gaseous effluents to be within the limits of TS Section 3.9.3.1 by performing sampling and analysis in accordance with Table 4.10-2 | ODCM                                   |
| 4.10.3.1 "Cumulative dose commitments for the current calendar quarter and current calendar year shall be determined in accordance with the ODCM once per 31 days."  | ODCM                                   |
| 4.10.4.1 Requirement to determine cumulative dose contributions for the current quarter and current calendar year for I-131, I-133, tritium, and radionuclides in particulate form with half lives greater than 8 days | ODCM                                   |

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|---|--|
| 3.17.1.3 Actions to be taken when the level of radioactivity in plant effluents as indicated by environmental sampling is greater than the reporting levels of TS Table 3.17-2  | ODCM                                   |
| 3.17.1.4 Requirement to obtain replacement samples of milk and leafy vegetables when the sample locations specified in TS Table 3.17-1 cannot be obtained   | ODCM                                   |
| 3.17.1.5 "The provisions of Specification 3.0 are not applicable."  | ODCM                                   |
| 3.17.1.6 Allowance for deviations from the required environmental sampling schedule   | ODCM                                   |
| 3.17.2.1 Requirement to perform a land use census and related content   | ODCM                                   |
| 3.17.2.2 Reporting requirement for land use census that identifies doses greater than the values currently being calculated in TS Section 4.10.4.1  | ODCM                                   |
| 3.17.2.3.a-c Actions to be taken when the land use census identifies a location which yields an annual calculated dose or dose commitment of a specific pathway which is 20% greater than that at a current sampling location | ODCM                                   |
| 3.17.3.1, 2, 3, and 4 Requirement for analyses supplied by U. S. Environmental Protection Agency (EPA) as a part of Interlaboratory Comparison Program  | ODCM                                   |
| Table 3.17-1 Table and associated notation describing the Radiological Environmental Monitoring Program   | ODCM                                   |

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|--|--|
| 3.16.3.2 Requirement that with the gaseous waste treatment system inoperable and gaseous releases in excess of the limits in 3.16.3.1, prepare and submit a special TS Section report to the NRC in accordance with TS Section 6.9.3.2.b   | ODCM                                   |
| 3.16.6.1 "The Solid Radioactive System shall be used in accordance with a Process Control Program (PCP) to process wet radioactive waste to meet shipping and burial ground requirements."   | TRM                                    |
| 3.16.6.2 "With the provisions of the PCP not satisfied, suspend shipments of defectively processed or defectively packaged solid radioactive waste from the site."   | TRM                                    |
| 3.16.6.3 Requirement that if a test specimen fails to verify solidification, the solidification of the batch under test shall be suspended until such time as additional test specimens can be obtained, alternative solidification parameters can be determined in accordance with the PCP, and a subsequent test verifies solidification | TRM                                    |
| 3.17.1.1 "The Radiological Environmental Monitoring Program shall be conducted as specified in Table 3.17-1."  | ODCM                                   |
| 3.17.1.2 Actions to be taken when the Radiological Environmental Monitoring Program is not in accordance with TS Section 3.17-1  | ODCM                                   |

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|---|--|
| 3.11.1 "A minimum of 15 total accessible thimbles and at least 2 per quadrant sufficient movable in-core detectors shall be operable during recalibration of the excore symmetrical offset detection system."   | TRM                                    |
| 3.11.2 "Power shall be limited to 90% of rated power if recalibration requirements for the excore symmetrical offset detection system identified in Table 4.1-1 are not met."   | TRM                                    |
| 3.12 Requirement that when the strong motion recorder indicated that the operating basis earthquake has been exceeded, the reactor shall be shut down and shall remain shut down until inspection of the facility shows that no damage has been incurred which would jeopardize safe operation of the facility or until such damage is repaired | TRM                                    |
| 3.16.1.1 Requirement that the radioactive liquid waste system be utilized to minimize offsite doses due to releases of liquid radioactive effluents   | ODCM                                   |
| 3.16.1.2 Requirement that with liquid wastes being discharged without treatment while in excess of the limits in TS Section 3.16.1.1, prepare and submit a report to the NRC in accordance with TS Section 6.9.3.2.b  | ODCM                                   |
| 3.16.3.1 Requirement that the radioactive gaseous waste system be utilized to minimize offsite doses due to releases of liquid radioactive effluents  | ODCM                                   |

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| CTS Requirements   | Relocated To the Following Document(s) |
|--|--|
| 3.9.4.1 Requirement that the air dose commitment due to radionoble gases released in gaseous effluents to areas at and beyond the site boundary shall be limited as stated in (a) and (b)  | ODCM                                   |
| 3.9.4.2 Requirement that with the limits of TS Section 3.9.4.1 exceeded, prepare and submit a report to the NRC in accordance with TS Section 6.9.3.2  | ODCM                                   |
| 3.9.5.1 Requirement that the dose to the public from I-131, I-133, tritium, and radioactive materials in particulate form, with half-lives greater than eight (8) days be limited in accordance with limits stated in (a) and (b)  | ODCM                                   |
| 3.9.5.2 Requirement that with the limits of TS Section 3.9.5.1 exceeded, prepare and submit a report to the NRC in accordance with TS Section 6.9.3.2  | ODCM                                   |
| 3.9.6.1 Requirement that the dose commitment to any member of the public, due to releases of licensed materials and radiation, from uranium fuel cycle sources shall be limited to $\leq 25$ mrem to the total body or any organ except the thyroid, which shall be limited to $\leq 75$ mrem over 12 consecutive months | ODCM                                   |
| 3.9.6.2 Reporting and analysis requirements when any of the limits stated in TS Sections 3.9.2.1.a or b, 3.9.4.1.a or b, or 3.9.5.1.a or b are exceeded by a factor of 2   | ODCM                                   |
| 3.9.6.3 "The provisions of Specification 3.0 are not applicable."  | ODCM                                   |

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| CTS Requirements   | Relocated To the Following Document(s) |
|--|--|
| 3.9.1.3 Requirement that in the event the requirements of TS Section 3.9.1.2 cannot be met the unit shall be placed in the hot shutdown condition.   | ODCM                                   |
| 3.9.1.4 "The provisions of Specification 3.0 are not applicable."  | ODCM                                   |
| 3.9.2.1 Requirement that the dose commitment at all times to a member of the public from radioactive materials in liquid effluents released to unrestricted areas shall be limited as stated in (a) and (b)  | ODCM                                   |
| 3.9.2.2 "With the calculated dose commitment from the release of radioactive materials in liquid effluents exceeding any of the limits prescribed by Specification 3.9.2.1 above, prepare and submit a report to the Commission in accordance with Specification 6.9.3.2." | ODCM                                   |
| 3.9.3.1 Requirement that the dose rate at all times to a member of the public from radioactive materials in gaseous effluents released from the site boundary shall be limited as stated in (a) and (b)  | ODCM                                   |
| 3.9.3.2 "With the dose rate(s) exceeding the above limits, without delay decrease the release rate to within the above limits. In addition, a notification must be made to the Commission in accordance with Specification 6.6."   | ODCM                                   |
| 3.9.3.3 Requirement that in the event the requirements of TS Section 3.9.3.2 cannot be met the unit shall be placed in the hot shutdown condition  | ODCM                                   |

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| CTS Requirements   | Relocated To the Following Document(s)                   |
|--|--|
| Table 3.5-7 "Radioactive Gaseous Effluent Monitoring Instrumentation," which lists those monitors required to monitor the various gaseous radioactive release pathways and the required actions to be taken when the monitoring channel is inoperable. The table also provides the necessary compensatory action that must be taken if it is desired to maintain the release via the pathway with the associated monitor inoperable. | ODCM for all items (except Item 2)<br><br>TRM for Item 2 |
| 3.8.3 Requirements for spent fuel pool water temperature   | TRM  |
| 3.8.4 Spent fuel cask handling crane requirements  | TRM  |
| 3.9.1.1 Requirement that the concentration of radioactive material in liquid effluents released at any time from the site to unrestricted areas shall be limited to the concentrations specified in 10 CFR 20, App. B, Table II, Column 2 for radionuclides other than dissolved or entrained noble gases. For dissolved or entrained noble gases, the concentration shall be limited to $2 \times 10^{-4}$ uCi/ml total activity.   | ODCM   |
| 3.9.1.2 Requirement the with the concentration of liquid effluents in excess of that allowed by TS Section 3.9.1.1, without delay restore the concentration to within limits and notify the NRC in accordance with TS Section 6.6.   | ODCM   |



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| CTS Requirements   | Relocated To the Following Document(s) |
|--|--|
| 3.5.3.1 Requirement that the equipment listed in TS Table 3.5-7 shall be operable with their alarm/trip setpoints set in accordance with the ODCM  | ODCM                                   |
| 3.5.3.2 Requirement that with the channel setpoint less conservative than that required in TS Section 3.5.3.1, immediately suspend releases via the associated pathway and restore the channel setpoint to that required by the ODCM or declare the channel inoperable   | ODCM                                   |
| 3.5.3.3 "With less than the minimum number of radioactive gaseous effluent monitoring instrumentation operable, take the action shown in Table 3.5-6."   | ODCM                                   |
| 3.5.3.4 "The provisions of the Specification 3.0 are not applicable."  | ODCM                                   |
| Table 3.5-6 "Radioactive Liquid Effluent Monitoring Instrumentation," which lists those monitors required to monitor the various liquid radioactive release pathways and the required actions to be taken when the monitoring channel is inoperable. The table also provides the necessary compensatory action that must be taken if it is desired to maintain the release via the pathway with the associated monitor inoperable. | ODCM                                   |

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| CTS Requirements   | Relocated To the Following Document(s) |
|--|--|
| 3.1.6.3 Requirement that if out of specification reactor coolant oxygen or chloride concentration cannot be restored to within specifications within 24 hours the unit shall be placed in the cold shutdown condition using normal operating procedures                | TRM                                    |
| 3.1.2.2 "The secondary side of the steam generator must not be pressurized above 200 psig if the temperature of the vessel is below 120°F."  | TRM                                    |
| 3.1.2.3 "The pressurizer shall neither exceed a maximum heatup rate of 100°F/hr nor a cooldown rate of 200°F/hr. The spray shall not be used if the temperature difference between the pressurizer and the spray fluid is greater than 320°F."                         | TRM                                    |
| 3.5.2.1 Requirement that the equipment listed in TS Table 3.5-6 shall be operable with their alarm/trip setpoints set in accordance with the ODCM  | ODCM                                   |
| 3.5.2.2 Requirement that with the channel setpoint less conservative than that required in TS Section 3.5.2.1, immediately suspend releases via the associated pathway and restore the channel setpoint to that required by the ODCM or declare the channel inoperable | ODCM                                   |
| 3.5.2.3 "With less than the minimum number of radioactive liquid effluent monitoring instrumentation operable, take the action shown in Table 3.5-6."  | ODCM                                   |
| 3.5.2.4 "The provisions of the Specification 3.0 are not applicable."  | ODCM                                   |

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**RELOCATED ITEMS WITHOUT CORRESPONDING ITS**

| CTS Requirements  | Relocated To the Following Document(s) |
|---|--|
| 3.1.1.4.A Requirement that when the RCS temperature is > 200°F RCS vent paths from the reactor vessel head and pressurizer steam space shall be operable  | TRM                                    |
| 3.1.1.4.B Requirement that when the RCS temperature is > 200°F, valves RC-571 and 572 shall be closed with the allowance that the valves may be cycled periodically in order to depressurize the vent system should the system pressurize due to "root" valve leak-by   | TRM                                    |
| 3.1.1.4.C.1 "With the Reactor Vessel Head vent path inoperable, restore the vent path to operable status within 30 days or be in Hot Shutdown within 6 hours and Cold Shutdown within the following 30 hours."  | TRM                                    |
| 3.1.1.4.C.2 Reporting requirement that with the Pressurizer steam space vent inoperable, restore it to operable status within 30 days or prepare and submit a special report to the NRC within the following 14 days detailing the cause of the inoperability and the action being taken to restore operability | TRM                                    |
| 3.1.6.1 "The concentration of oxygen in the reactor coolant shall not exceed 0.1 ppm when the reactor coolant temperature exceeds 250°F."   | TRM                                    |
| 3.1.6.2 "The concentration of chloride in the reactor coolant shall not exceed 0.15 ppm when the reactor coolant temperature exceeds 250°F."  | TRM                                    |

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|--|---|--|
| ITS 5.0 LA 22  | 6.9.1.2, 6.9.1.2.3, and 6.9.1.3. With regard to reporting requirements for radiological effluents | ODCM   |
| ITS 5.0 LA 23  | 6.9.3.3.a With regard to mathematical terms utilized in the COLR                                  | COLR   |

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|--|--|--|
| ITS 5.0 LA18   | 6.4.1 Requirements for a requalification and replacement training program for the plant staff that shall meet the requirements of Sec. 5.5 of ANSI N18.1-1971 and 10 CFR 55, Appendix A  | UFSAR  |
| ITS 5.0 LA19   | 6.10.1.a-i Listing of facility records that must be retained for at least five years   | Quality Assurance Program Description              |
| ITS 5.0 LA19   | 6.10.2.a-m Listing of facility records that must be retained for the duration of the facility operating license  | Quality Assurance Program Description              |
| ITS 5.0 LA20   | 6.11 Requirement that procedures for personnel radiation protection for the Radiation Protection Program be prepared consistent with the requirements of 10 CFR 20 and that they be approved, maintained, and adhered to for all operations involving personnel radiation exposure | UFSAR  |
| ITS 5.0 LA21   | 6.1.1, 6.5.1.1.4, 6.5.1.2.3, 6.2.1(b), 6.2.3, 6.3.1, 6.16.2, 6.13.1, and 6.13.2, With respect to detailed plant organization titles  | UFSAR  |

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|--|---|--|
| ITS 5.0 LA14   | 6.17.1.2 Major changes to radioactive waste process systems shall become effective upon review and approval by the PNSC   | ODCM   |
| ITS 5.0 LA15   | 6.9.3.3.b Listing of TS requirements applicable to each listed methodology as they pertain to determining core operating limits   | COLR   |
| ITS 5.0 LA16   | 6.9.3.2 Requirement to generate written reports for the listed special radiological effluent reports listed and submit to the NRC within 30 days of the occurrence or event | ODCM   |
| ITS 5.0 LA17   | 1.15 Requirements for the Process Control Program (PCP) to assure compliance with 10 CFR 20, 10 CFR 17, and Federal and State regulations                                   | TRM  |
| ITS 5.0 LA17   | 6.15.1 Requirement that the PCP shall be approved by the NRC prior to implementation  | TRM  |
| ITS 5.0 LA17   | 6.15.2 Reporting and approval requirements for changes to the PCP   | TRM  |

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|--|---|--|
| ITS 5.0 LA12   | 6.5.3.2 Requirement for the NAS to perform assessments in accordance with the Code of Federal Regulations specifically in the areas of Emergency Preparedness, Security, and Radiation Protection                             | Quality Assurance Program Description              |
| ITS 5.0 LA12   | 6.5.4.1 & 6.5.4.2 Requirements for independent fire protection and loss prevention inspection and audit   | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.6.1.b) & 6.6.2.b) Review requirements associated with reportable events   | Quality Assurance Program Description              |
| ITS 5.0 LA13   | 6.9.1.1 Reporting requirements for plant startup and power escalation   | TRM  |
| ITS 5.0 LA14   | 6.9.1.3.7 Reporting and approval requirements for changes to the radioactive waste systems  | ODCM   |
| ITS 5.0 LA14   | 6.17.1.1 Reporting requirements for major changes to the radioactive liquid, gaseous, or solid waste treatment systems. Includes allowance that licensee may submit the required information as part of the next UFSAR Update | ODCM   |

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|--|--|--|
| ITS 5.0 LA10   | 4.20.2.1 Requirement to verify the radioactive material content of tanks listed in TS Section 3.16.2.1 by sampling   | TRM  |
| ITS 5.0 LA10   | 4.20.4.1 Requirement to verify the hydrogen and oxygen concentration in the Waste Gas Decay Tanks to be within limits by monitoring contents with hydrogen and oxygen monitors or sampling | TRM  |
| ITS 5.0 LA10   | 4.20.5.1 Requirement to sample the contents of the Waste Gas Decay Tanks every 24 hours when Reactor Coolant Activity is $\geq 100$ uCi/ml   | TRM  |
| ITS 5.0 LA11   | 6.9.1.4, Details of format of Monthly Operating Report   | TRM  |
| ITS 5.0 LA12   | 6.5.3.1 Requirement to perform certain types of assessments at a frequency not to exceed 24 months, by the NAS as listed in TS Sections 6.5.3.1 a-h  | Quality Assurance Program Description              |



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|--|---|--|
| ITS 5.0 LA10   | 3.16.4.3 Reporting requirements for condition where actions required to be taken by TS do not result in returning the hydrogen or oxygen concentration in the Waste Gas Decay Tank(s) to $\leq 6\%$ within 24 hours | TRM  |
| ITS 5.0 LA10   | 3.16.5.1 Limitation on the amount of radioactive material that may be stored in any one Waste Gas Decay Tank shall be limited to $\leq 1.9 \text{ E} + 4$ curies noble gas (considered as Xe-133)                   | TRM  |
| ITS 5.0 LA10   | 3.16.5.2 Requirement to suspend all additions to any Waste Gas Decay Tank that exceeds the limit in TS Section 3.16.5.1 and within 48 hours reduce the tank contents to within limits                               | TRM  |
| ITS 5.0 LA10   | 3.16.5.3 Reporting requirements if the Waste Gas Decay Tank contents are not reduced to within limits within the time period allowed by TS Section 3.16.5.2   | TRM  |
| ITS 5.0 LA10   | 4.20.2 Note specifying which tanks are to be included in limitations dictated by TS Section 4.20.2.1  | TRM  |

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|--|---|--|
| ITS 5.0 LA10   | 3.16.2.3 Requirement that if the radioactive content of any of the listed tanks cannot be reduced to within limits within 48 hours then the NRC shall be notified in accordance with TS Section 6.6 | TRM  |
| ITS 5.0 LA10   | Definition of "Temporary Tank" as it applies to TS Section 3.16.2.1.f   | TRM  |
| ITS 5.0 LA10   | 3.16.4.1 Restrictions on hydrogen and oxygen content in the Waste Gas Decay Tanks   | TRM  |
| ITS 5.0 LA10   | 3.16.4.1.a Actions to be taken when oxygen or hydrogen concentration in the Waste Gas Decay Tanks exceeds limits  | TRM  |
| ITS 5.0 LA10   | 3.16.4.1.b Actions to be taken when oxygen and hydrogen concentration in the Waste Gas Decay Tanks exceeds limits   | TRM  |
| ITS 5.0 LA10   | 3.16.4.2 Reporting requirements for oxygen and/or hydrogen being out of specification in the Waste Gas Decay Tank(s) for >48 hours  | TRM  |

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|--|---|--|
| ITS 5.0 LA9  | 4.12.2.a Requirement that the Refueling Filter System be tested initially, and at least once per operating cycle prior to each refueling outage or after 720 hours of system operation whichever comes first  | TRM  |
| ITS 5.0 LA9  | 4.12.2.b-e Details concerning how the Refueling System filtration system is to be tested and what tests are to be performed   | TRM  |
| ITS 5.0 LA10   | 3.16.2.1 Restriction on the quantity of radioactive material contained in the listed tanks shall be limited to $\leq 10$ curies excluding tritium and dissolved or entrained noble gases at all times   | TRM  |
| ITS 5.0 LA10   | 3.16.2.2 Requirement that when the quantity of radioactive material in any listed tank exceeds the limit, suspend all additions to the tank, and take actions to reduce the amount of radioactive material in the tank to within limits within 48 hours | TRM  |

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|--|--|--|
| ITS 5.0 LA9  | 4.15.d Requirement that the control room filtration system be tested following any structural maintenance on the filter housings or following painting, fire, or chemical release in the Control Room envelope | TRM  |
| ITS 5.0 LA9  | 4.15.f Requirement that the Control Room filtration system be tested every 18 months   | TRM  |
| ITS 5.0 LA9  | 4.15.g Requirement that the Control Room filtration system HEPA filters be tested after complete or partial replacement and associated test conditions   | TRM  |
| ITS 5.0 LA9  | 4.15.h Requirement that the Control Room filtration system charcoal filters be tested after each partial or complete replacement and associated test conditions  | TRM  |
| ITS 5.0 LA9  | 4.12 Refueling filter systems Applicability and Objective  | TRM  |
| ITS 5.0 LA9  | 4.12.1 Requirement that the Refueling Filter System be demonstrated operable every operating cycle   | TRM  |

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|--|---|--|
| ITS 5.0 LA6  | 4.4.3.a-h Requirement to perform leakage testing and inspections of the Post Accident Recirculation Heat Removal System and the applicable acceptance criteria. Additional requirement to perform repairs as necessary to maintain leakage within the stated criteria | TRM  |
| ITS 5.0 LA7  | 4.4.4.1 Requirement to inspect containment surveillance tendons   | TRM  |
| ITS 5.0 LA7  | 4.4.4.3.a Details describing analysis to be performed on Containment Surveillance Tendons   | TRM  |
| ITS 5.0 LA8  | 4.2.3 Requirement to perform reactor coolant pump flywheel inspections  | Inservice Inspection Program                       |
| ITS 5.0 LA9  | 3.8.2.c Requirement that the spent fuel building and containment building filter fans shall be shown to operate within +10% of design flow  | TRM  |

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|--|--|--|
| ITS 5.0 LA1  | 6.5.2.4 "Results of Nuclear Assessment Section independent safety reviews shall be documented and retained."   | Quality Assurance Program Description              |
| ITS 5.0 LA2  | 6.2.1.e Requirement that the health physics manager have access to the overall unit manager and the health physics technician's "stop work" authority                                | UFSAR  |
| ITS 5.0 LA3  | 6.2.3.h Restriction that minimum shift manning requirements cannot be used to justify adequate shift complement upon shift relief when a required member is not available for relief | UFSAR  |
| ITS 5.0 LA4  | 6.5.1.1.1.j Reference to Regulatory Guide 4.15, Dec. 1977 with regard to the Quality Assurance Program   | Quality Assurance Program Description              |

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|--|---|--|
| ITS 5.0 LA1  | 6.5.2.2.2 Qualifications of the Manager-Nuclear Assessment Section  | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.2.2.3 Qualifications of individuals performing independent safety reviews   | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.2.2.4 Actions to be taken when sufficient expertise does not exist within the NAS. Also allows an individual to be "competent" in more than one specialty | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.2.2.5 Qualifications for individuals performing reviews of documents submitted under TS Section 6.5.2.3   | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.2.2.6 Requirements for independent safety reviews in NAS  | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.2.2.7 Requirement that the NAS Independent Safety Review Program be conducted in accordance with written, approved procedures                             | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.2.3 a-e Listing of items in which the NAS shall perform reviews   | Quality Assurance Program Description              |

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| ITS 5.0 LA1  | 6.5.1.6.2 Requirement for the composition of the PNSC   | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.1.6.3 Requirements for PNSC members and alternate members   | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.1.6.4.a and b Definition of "quorum" as it pertains to the PNSC. Also limits the number of alternates that may compose a quorum | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.1.6.5 Minimum PNSC meeting requirements   | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.1.6.6.a-k Listing of activities requiring PNSC involvement  | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.1.6.7 Required actions to be taken upon disagreement between the PNSC and actions contemplated by the Plant General Manager     | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.1.6.8 Requirement for maintaining minutes of PNSC meetings and their minimum content  | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.2.1 Description of the function of the Nuclear Assessment Section (NAS)   | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.2.2.1 Qualifications of individuals for independent reviews in the NAS  | Quality Assurance Program Description              |



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| ITS 5.0 LA1  | 6.5.1.2.3 Requirements concerning approval of modifications that do not involve an unreviewed safety question or a change to the TS  | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.1.2.4 Requirements concerning approval of modifications that either constitute an unreviewed safety question or a change to the TS                                       | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.1.3.1 "Each proposed Technical Specification or Operating License change shall be reviewed by the Plant Nuclear Safety Committee and submitted to the NRC for approval." | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.1.4.1 Requirements concerning Technical Specification violations   | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.1.5.1 Qualification requirements for Nuclear Safety Reviewers  | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.1.6.1.a and b Requirements for establishing a Plant Nuclear Safety Committee (PNSC) and the advisory role it plays to the Plant General Manager                          | Quality Assurance Program Description              |

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|---|---|---|
| ITS 5.0 LA1   | 6.5.1.1.4 Requirements for approval of procedures that do not involve an unreviewed safety question as defined in 10 CFR 50.59 nor a change to the TS | Quality Assurance Program Description                 |
| ITS 5.0 LA1   | 6.5.1.1.5 Requirements concerning approval of temporary changes to procedures and the maximum time it may be in effect i.e., 21 days                  | Quality Assurance Program Description                 |
| ITS 5.0 LA1   | 6.5.1.1.6 Requirements concerning changes to procedures that constitute an unreviewed safety question, or involve a change to the TS                  | Quality Assurance Program Description                 |
| ITS 5.0 LA1   | 6.5.1.1.7 Requirements concerning changes which constitute a change to the facility as described in the UFSAR   | Quality Assurance Program Description                 |
| ITS 5.0 LA1   | 6.5.1.2.1 Requirements concerning plant modifications that affect nuclear safety  | Quality Assurance Program Description                 |
| ITS 5.0 LA1   | 6.5.1.2.2 Requirement concerning the second safety review on all modifications that affect nuclear safety   | Quality Assurance Program Description                 |

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|--|---|--|
| ITS 4.0 LA5  | 5.5 Descriptive information concerning the design of the containment building, auxiliary building, ASME B&PV Code Class I turbine bay, and all contained Engineered Safety Feature (ESF) systems be designed for a maximum credible earthquake with an acceleration of 0.20 g | UFSAR  |
| ITS 4.0 LA6  | 1.19 Definition of Site Boundary and Figure 1.1-1, "Plant Site Boundary and Exclusion Zone."  | UFSAR  |
| ITS 5.0 LA1  | 6.5.1.1.2 Requirements concerning how safety analysis shall be prepared for all procedures, tests, and experiments covering procedures identified in TS Section 6.5.1.1.1 and procedures that affect nuclear safety   | Quality Assurance Program Description              |
| ITS 5.0 LA1  | 6.5.1.1.3 Requirements concerning when a second safety review shall be performed on procedures affecting nuclear safety   | Quality Assurance Program Description              |

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|--|---|--|
| ITS 4.0 LA4  | 5.2.1.1 Descriptive information concerning the purposes of the containment building   | UFSAR  |
| ITS 4.0 LA4  | 5.2.1.2 Descriptive information concerning the design pressure ratings of the containment building  | UFSAR  |
| ITS 4.0 LA4  | 5.2.2.1 Descriptive information concerning the design of the containment penetrations for electrical and mechanical systems   | UFSAR  |
| ITS 4.0 LA4  | 5.2.2.2 Descriptive information concerning the Phase A and Phase B containment isolation signals and the fact that they must be capable of withstanding a single component failure and still maintain containment isolation | UFSAR  |
| ITS 4.0 LA4  | 5.2.3.1 Descriptive information concerning the containment spray system and its purpose   | UFSAR  |
| ITS 4.0 LA4  | 5.2.3.2 Descriptive information concerning the containment internal air recirculation system and its heat removal capability  | UFSAR  |

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|--|---|--|
| ITS 4.0 LA3  | 5.4.2.1 Details describing features of the new fuel storage facilities that maintain $K_{eff} < 0.95$ assuming the racks are flooded with pure water i.e., "...additional separation is maintained by use of the storage rack secured location restrictions"... "in order to establish a geometry which ensures that..."              | UFSAR  |
| ITS 4.0 LA3  | 5.4.2.2 Details describing features that maintain $K_{eff}$ less than 0.95 in the spent fuel pool i.e., "a combination of nominal assembly spacing, neutron absorber material between the assemblies, and restrictions on fuel design, integral burnable absorber content, reconstitution, and storage is required to assure that..." | UFSAR  |

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|--|---|--|
| ITS 4.0 LA2  | 5.3.1.3 Descriptive details of reload fuel  | UFSAR  |
| ITS 4.0 LA2  | 5.3.2.1 Design code requirements of the RCS   | UFSAR  |
| ITS 4.0 LA2  | 5.3.2.2 Descriptive information concerning the piping and components of the RCS meet American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (B&PV) Class I requirements                                  | UFSAR  |
| ITS 4.0 LA2  | 5.3.2.3 Descriptive information concerning the nominal volume of coolant contained in the RCS at rated operating conditions   | UFSAR  |
| ITS 4.0 LA3  | 5.4.1 "The new and spent fuel pit structures are designed to withstand the anticipated earthquake loadings as ASME B&PV Code Class I structures. The spent fuel pit has a stainless steel liner to ensure against loss of water." | UFSAR  |

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|--|---|--|
| ITS 3.9 R1   | 3.8.1.g Requirement that whenever core geometry is being changed, direct communications between the control room and the refueling cavity manipulator crane shall be available  | TRM  |
| ITS 4.0 LA1  | 5.1 Specifics describing the location of H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2 in relation to HBRSEP Unit No. 1 and the fact that Unit No. 2 is owned and operated by Carolina Power & Light Co. In addition the statement describing site exclusion boundary (per 10 CFR 100.3) as being a circle of 1400 ft radius from the reactor center line. | UFSAR  |
| ITS 4.0 LA2  | 5.3.1.1 Specifics describing the reactor core i.e. "approximately 68 metric tons", fuel rods "which are pre pressurized," and fuel assemblies each contain "204 fuel rod locations occupied by rods consisting of natural or slightly enriched uranium pellets, solid inert materials, or a combination of the aforementioned"  | UFSAR  |

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|--|---|--|
| ITS 3.9 LA5  | 3.8.1.i Requirement that during refueling operations, when the containment purge system is in operation, the system shall discharge through High Efficiency Particulate Air (HEPA) and impregnated charcoal filters | Bases  |
| ITS 3.9 LA6  | 3.8.1.e Requirement that during refueling operations, $T_{ave}$ shall be maintained $\leq 140^{\circ}$ F  | TRM  |
| ITS 3.9 LA7  | 3.8.1.h "Movement of fuel within the core shall not be initiated prior to 100 hours after shutdown."  | TRM  |
| ITS 3.9 R1   | 3.8.1.c Requirement that during refueling operations "Radiation levels in the containment and spent fuel storage areas shall be monitored continuously."  | TRM  |



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|--|---|--|
| ITS 3.8 LA9  | 3.7.1.b Regarding 480 V buses E1 and 2 energized  | Bases  |
| ITS 3.8 LA10   | 3.7.1.e Regarding details of the batteries and battery charger  | Bases  |
| ITS 3.9 LA1  | 3.8.1.f Reference to specific boron concentration of 1950 ppm to be maintained during head removal or movement of fuel in the reactor   | COLR   |
| ITS 3.9 LA2  | Table 4.1-3 Item No. 6 Requirement to test refueling system interlocks prior to each refueling system shutdown  | TRM  |
| ITS 3.9 LA3  | 3.10.8.3 "When the reactor is in the refueling operation mode, the shutdown margin shall be a least 6 percent $\Delta k/k$ ."   | COLR   |
| ITS 3.9 LA4  | 3.8.1.d Requirement that whenever core geometry is being changed that the source range channels provide "continuous visual indication in the control room and one with audible indication available in the containment" | Bases  |

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|--|--|--|
| ITS 3.8 LA5  | 4.6.1.4.b Details describing the short-term load limitations of the EDGs and restriction preventing the operation above this limit   | Bases  |
| ITS 3.8 LA5  | 4.6.1.5 Details describing how the EDG is started and synchronized to the bus in preparation for the 24 hour full load test  | Bases  |
| ITS 3.8 LA6  | Table 4.1-2 Items No. 11 and 12 details of EDG fuel oil testing (tanks to which testing requirements apply).   | Bases  |
| ITS 3.8 LA7  | 4.6.3.2 Detail describing the precision at which the cell voltage must be determined and the requirement that the amount of water added to each cell be measured and recorded. | Bases  |
| ITS 3.8 LA7  | 4.6.3.4 Requirement that when battery data is recorded, the new data shall be compared to previous data in order to detect signs of abuse or deterioration.                    | Bases  |
| ITS 3.8 LA8  | 3.7.1.a and 3.7.1.c Regarding 110 KU-4160 V startup transformer in service and 4160 V buses 2 and 3 energized.   | Bases  |

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| ITS 3.8 LA1  | 3.7.2.e and 4.6.1.3<br>Description of specific automatic trips that are required to be bypassed for an operable EDG. (As referenced to CTS 3.7.1.d)  | Bases  |
| ITS 3.8 LA2  | 3.7.3 Restriction allowing the back-feeding of the emergency busses via the unit auxiliary transformer only while the reactor is in cold shutdown unless nuclear safety considerations require it to be done during hot shutdown | Bases  |
| ITS 3.8 LA3  | 4.6.1.3 Details describing how the testing of the EDG automatic trips "trips defeat" feature is accomplished   | Bases  |
| ITS 3.8 LA4  | 4.6.1.3 "Each diesel generator shall be inspected at least once every refueling interval."   | USFAR  |
| ITS 3.8 LA5  | 4.6.1.4.a Details describing the continuous load limits of the EDGs and restriction preventing the continuous operation of the EDGs above these limits   | Bases  |

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| ITS 3.7 LA2  | 3.13.1.b "If a snubber is determined to be inoperable while the reactor is in cold shutdown, the snubber (if needed for a supported component protection) shall be repaired and reinstalled or replaced prior to reactor startup." | TRM  |
| ITS 3.7 LA2  | 4.13 Snubber Testing Requirements  | TRM  |
| ITS 3.7 LA3  | 4.15.a Requirements to verify Control Room air temperature every 12 hrs.   | TRM  |
| ITS 3.7 LA4  | 5.4.3 "This minimum boron concentration ensures subcriticality under worst case design events," and references   | UFSAR  |
| ITS 3.7 LA5  | 3.12 Seismic shutdown  | TRM  |
| ITS 3.7 LA6  | 5.4.2.1 New Fuel Storage Rack secured location restrictions  | UFSAR  |
| ITS 3.8 LA1  | 3.7.1.d Description of specific automatic trips that are required to be bypassed for an operable Emergency Diesel Generator (EDG).   | Bases  |

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| ITS 3.6 LA5  | 1.7.d "all automatic trip valve required to be closed during accident condition are operable or are secured closed."   | Bases  |
| ITS 3.6 LA6  | 1.7.b "Equipment door is properly closed and sealed" and 1.7.c "One airlock door is properly closed and sealed."   | Bases  |
| ITS 3.6 R1   | 3.3.5 "The reactor shall not be made critical unless the valves of the post accident containment venting system are operable."   | TRM  |
| ITS 3.7 LA1  | Table 4.1-3 Item No. 12. requirement to check closure of Turbine Steam Stop, Control, Reheat Stop, and Interceptor Valves on a quarterly frequency   | TRM  |
| ITS 3.7 LA2  | 3.13.1.a Requirement that when the reactor is at power or hot shutdown, if a snubber is determined to be inoperable and an engineering evaluation cannot validate the operability of the supported component then the supported component shall be declared inoperable. If operability can be validated then the snubber shall be returned to operable status within 72 hours. | TRM  |

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| ITS 3.4 LA12   | 3.2.2.b,c,e. & f requirements for boric acid transfer pump, boric acid tanks, heat tracing, and primary water storage tank                           | TRM  |
| ITS 3.5 LA1  | 3.3.1.2.e Specific exclusion of the safety injection hot injection pathways and valves from the requirements of TS Section 3.3.1.2                   | Bases  |
| ITS 3.5 LA2  | 3.3.1.1.c, d, e, & f Details of ECCS Operability   | Bases  |
| ITS 3.6 LA1  | 1.7.a Details specifying non-automatic isolation valves be closed and blind flanges be properly installed  | Bases  |
| ITS 3.6 LA2  | 4.5.1.3 "The test shall be performed with the isolation valves in the spray supply lines at the containment and spray additive tank blocked closed." | Bases  |
| ITS 3.6 LA3  | 1.7.d "Manual valves qualifying as automatic containment isolation valves are secured closed."   | Bases  |
| ITS 3.6 LA4  | 3.6.4.3 Details of testing of 42 inch purge valves   | Bases  |

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| ITS 3.4 LA7  | Table 4.1-2 Item No. 4<br>Requirement to perform Boric Acid Tank boron concentration test on a twice/week frequency  | TRM  |
| ITS 3.4 LA8  | Table 4.1-3 Item No. 14<br>Requirement to perform fan functional test and laboratory tests of filter media on a once per operating cycle frequency   | TRM  |
| ITS 3.4 LA9  | Table 4.1-2 Item No. 10<br>Requirement to perform S/G samples 5 days/week  | TRM  |
| ITS 3.4 R1   | Table 4.1-2 Item No. 1<br>Requirement to sample the reactor coolant system for Chloride and Oxygen on a frequency of 5 times per week  | TRM  |
| ITS 3.4 LA10   | Table 4.1-2 Note (3)<br>Requirement to sample Stack Gas Iodine and Particulate on a weekly basis when iodine or particulate radioactivity levels exceed 10% of the limit in TS Section 3.9.2.1, the sampling frequency shall be increased to a minimum of once per day | ODCM   |
| ITS 3.4 LA11   | 3.2.1 requirement for an injection flow path and boric acid equivalent to that supplied from the RWST in all plant conditions with fuel in the vessel.   | TRM  |

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| ITS 3.4 LA5  | Table 3.1-1 Listing of safety injection system PIVs  | Bases  |
| ITS 3.4 LA6  | Table 4.1-2 Item No. 1 Requirement to perform reactor coolant radiochemical test on a monthly frequency          | TRM  |
| ITS 3.4 LA6  | Table 4.1-2 Item No. 2 Requirement to perform reactor coolant boron concentration test on a twice/week frequency | TRM  |
| ITS 3.4 LA6  | Table 4.1-2 Note (1) Description of a gross activity analysis.   | Bases  |
| ITS 3.4 LA6  | Table 4.1-2 Note (2) Description of a radiochemical analysis   | TRM  |



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| ITS 3.4 LA5  | Table 4.1-3 Item No. 17.1<br>Note b. Minimum test differential pressure for PIVs shall be $\geq 150$ psid.                                       | Bases  |
| ITS 3.4 LA5  | Table 4.1-3 Item No. 17.1<br>Note c. Allowance that more than one PIV may be tested in parallel provided the total leakage does not exceed 5 gpm | Bases  |

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| ITS 3.4 LA5  | 3.1.5.4.a Requirement that all pressure isolation valves listed in Table 3.1-1 be functional as a pressure isolation device except as specified in TS Section 3.1.5.4.b during reactor operation and hot shutdown conditions   | Bases  |
| ITS 3.4 LA5  | 3.1.5.4.b The compensatory measure for a non-functional pressure isolation valve; "Manual valves shall be locked in the closed position."  | Bases  |
| ITS 3.4 LA5  | Table 4.1-3 Item No. 17 Requirement to perform Primary Coolant System check valve tests after maintenance, repair or replacement work is performed   | Bases of ITS SR 3.0.1                              |
| ITS 3.4 LA5  | Table 4.1-3 Item No. 17.1 Note a. Allowance that Pressure Isolation Valve (PIV) leakage may be measured indirectly if accomplished in accordance with approved procedures and supported by computations showing that the method is capable of demonstrating valve leakage compliance | Bases  |

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| ITS 3.4 LA2  | 3.1.1.1.a.1 The specific 4% shutdown margin when < 2% Rated Thermal Power (RTP) and < 2 reactor coolant pumps operating   | COLR   |
| ITS 3.4 LA3  | 3.1.1.3.a "At least one [Pressurizer] Pzr code safety valve shall be operable whenever the Reactor Head is on the vessel and the [Reactor Coolant System] RCS is not open for maintenance." | TRM  |
| ITS 3.4 LA4  | 4.2.4.1.a Requirement that each Pressurizer Power Operated Relief Valve (PORV) be demonstrated operable by performing a channel calibration at each refueling                               | TRM  |
| ITS 3.4 LA4  | 4.2.4.3 Requirement to demonstrate that the nitrogen accumulators for the Pressurizer PORVs are operable by cycling the PORVs through one complete cycle at each refueling                  | Bases  |

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| ITS 3.4 LA1  | 3.1.2.1.b "Allowable combinations of pressure and temperature for a specific cooldown rate are below and to the right of the limit lines for that rate as shown on Figure 3.1-2. This rate shall not exceed 100°F/hr in any one hour. The limit lines for cooling rates between those shown in Figure 3.1-2 may be obtained by interpolation." | Bases  |
| ITS 3.4 LA1  | 3.1.2.1.c "Primary system hydrostatic leak tests may be performed as necessary, provided the temperature limitation as noted on Figure 3.1-1 is not violated. Maximum hydrostatic test pressure should remain below 2350 psia."  | Bases  |
| ITS 3.4 LA1  | 3.1.2.4.a Requirements for maintaining the pressure-temperature limit curves in TS Figures 3.1-1 and 3.1-2   | UFSAR  |
| ITS 3.4 LA1  | 3.1.2.4.b Reporting requirements of results of irradiated specimen samples analysis and updated heatup and cooldown curves   | UFSAR  |

**H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2**  
**MATRIX OF RELOCATED TECHNICAL SPECIFICATIONS (TS) REQUIREMENTS AND**  
**DETAILED TS REQUIREMENTS**

| CTS Requirements  | Relocated To the Following Document(s) |
|---|--|
| 4.10.5.1 Requirement to determine cumulative dose contributions from liquid and gaseous effluents in accordance with TS Sections 3.9.2.1, 3.9.4.1, and 3.9.5.1                                      | ODCM                                   |
| 4.10.5.2 Requirement to determine cumulative dose contributions from direct radiation from the reactor unit and from radwaste storage tanks as set forth in the applicability of TS Section 3.9.6.2 | ODCM                                   |
| Table 4.10-1 Table and associated notation describing the Radioactive Liquid Waste Sampling and Analysis Program  | ODCM                                   |
| Table 4.10-2 Table and associated notation describing the Radioactive Gaseous Waste Sampling and Analysis Program   | ODCM                                   |
| 4.16 Requirements for Radioactive Source Leakage Testing  | TRM                                    |
| 4.19.1.1 Requirement to perform radioactive liquid effluent monitoring instrumentation operability surveillances in accordance with TS Table 4.19-1   | ODCM                                   |
| 4.19.2.1 Requirement to perform radioactive gaseous effluent monitoring instrumentation operability surveillances in accordance with TS Table 4.19-2  | ODCM                                   |
| Table 4.19-1 Table and associated notation describing the radioactive liquid effluent monitoring instrumentation surveillance requirements  | ODCM                                   |
| Table 4.19-2 Table and associated notation describing the radioactive gaseous effluent monitoring instrumentation surveillance requirements   | ODCM                                   |

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
MATRIX OF RELOCATED TECHNICAL SPECIFICATIONS (TS) REQUIREMENTS AND  
DETAILED TS REQUIREMENTS

| CTS Requirements   | Relocated To the Following Document(s) |
|--|--|
| 4.20.1.1 Requirements to perform projected dose commitments at least every 31 days to ensure the requirements of TS Section 3.16.1.1 are satisfied when the Liquid Radwaste Treatment System is not used | ODCM                                   |
| 4.20.3.1 Requirements to perform projected dose commitments for gaseous releases at least every 31 days to ensure the requirements of TS Section 3.16.3.1 are satisfied                                  | ODCM                                   |
| 4.20.6.1 "The PCP shall be used to verify the solidification of one representative test specimen from every tenth batch of wet radioactive waste."   | TRM                                    |
| 4.20.6.2 Actions to be taken when a test specimen from a batch of waste fails to verify solidification   | TRM                                    |
| 4.21.1.1 Requirement to collect environmental samples in accordance with TS Table 3.17-1 and analyze them in accordance with TS Tables 3.17-2 and 3.17-3   | ODCM                                   |
| 4.21.2.1 Specification of how the land use census shall be conducted   | ODCM                                   |
| 4.21.3.1 Requirement to perform analyses as part of the EPA Interlaboratory Comparison Program   | ODCM                                   |
| TS Appendix B "Radioactive Effluent Releases" requirement to report on a monthly basis the quantities of radioactive effluents released from the plant   | ODCM                                   |

United States Nuclear Regulatory Commission  
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H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING  
THE TECHNICAL SPECIFICATIONS CHANGE REQUEST TO CONVERT TO THE  
IMPROVED STANDARD TECHNICAL SPECIFICATIONS

MATRIX OF RELOCATED TECHNICAL SPECIFICATIONS (TS)  
REQUIREMENTS AND DETAILED TS REQUIREMENTS