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**Do not include proprietary materials.***

DATE OF MEETING

03/08/2000

The attached document(s), which was/were handed out in this meeting, is/are to be placed in the public domain as soon as possible. The minutes of the meeting will be issued in the near future. Following are administrative details regarding this meeting:

|  |   |
|--|---|
| Docket Number(s)                                 | N/A   |
| Plant/Facility Name                              | N/A   |
| TAC Number(s) (if available)                     | N/A   |
| Reference Meeting Notice                         | Meeting with NEI TS Task Force  |
| Purpose of Meeting<br>(copy from meeting notice) | To discuss proposed Standard Technical Specification<br><br>changes and status/comments on Revision 2 of STS. |

NAME OF PERSON WHO ISSUED MEETING NOTICE

William D. Beckner

TITLE

Chief

OFFICE

Office of Nuclear Reactor Regulation

DIVISION

Division of Regulatory Improvement Programs

BRANCH

Technical Specifications Branch (RTSB)

Distribution of this form and attachments:

Docket File/Central File  
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*Who puts  
this  
into  
Adams?*

*DFO3*

## **Summary of Rev 2 Publication Changes**

1. Reduced the number of Volumes from 3 to 2, one for Specifications and one for Bases.
2. Separate Table of Contents are provided for each Volume, one for Specifications and one for Bases.
3. The page numbering for each section/specification of the STS starts with page 1 preceded by a section/specification prefix. The page number for each TOC entry was removed and was replaced by the Revision number and date.
4. Sections/specifications that were not changed since issued as Rev. 1 04/07/95 will retain this revision and date on the page footer.
5. The TOC heading was changed from "Table of Contents" to "Table of Contents / Revision Summary" (left justified) and "Revision - Date" (right justified).
6. To allow unique page numbering, beginning with page number 1, the two STS sections numbered 3.0 were renumbered 3.0.1 and 3.0.2, LCO Applicability & SR Applicability, respectively.
7. After the publication of Revision 2 of the STS via the Government Printing Office, NRC does not plan to publish subsequent revisions in a complete hard copy set. Subsequent revisions of individual sections/specifications will be issued on an individual basis. The format of NRC Official documents is PDF, where a separate document will be updated for Specifications and another for Bases, upon each issuance of subsequent revisions of individual sections/specifications. NRC will continue to make the individual sections/specifications available in the Corel8 WordPerfect format via its STS Home Page. The frequency at which revisions to the STS will be issued is expected to be frequent, every 2 or 3 months as the need arises rather than every 4 or 5 years as with Revisions 1 and 2.
8. The names of some styles were changed such the style with the same name in different chapters or sections would not be defined differently. This permits the creation of a single file of all Specifications, Bases, or both, without conflicting styles. This simplifies the creation of a single PDF file for all the Specifications and another for all Bases.

## PREFACE

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## 2.0 SAFETY LIMITS (SLs)

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### 2.1 SLs

#### 2.1.1 Reactor Core SLs

In MODES 1 and 2, the combination of THERMAL POWER, Reactor Coolant System (RCS) highest loop average temperature, and pressurizer pressure shall not exceed the limits specified in the COLR in order to preserve the following fuel design criteria:

2.1.1.1 The departure from nucleate boiling ratio (DNBR) shall be maintained  $\geq$  [1.17 for the WRB-1/WRB-2 DNB correlations].

2.1.1.2 The peak fuel centerline temperature shall be maintained  $<$  [5080°F, decreasing by 58°F per 10,000 MWD/MTU of burnup].

#### 2.1.2 Reactor Coolant System Pressure SL

In MODES 1, 2, 3, 4, and 5, the RCS pressure shall be maintained  $\leq$  [2735] psig.

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## 2.2 SAFETY LIMIT VIOLATIONS

2.2.1 If SL 2.1.1 is violated, restore compliance and be in MODE 3 within 1 hour.

2.2.2 If SL 2.1.2 is violated:

2.2.2.1 In MODE 1 or 2, restore compliance and be in MODE 3 within 1 hour.

2.2.2.2 In MODE 3, 4, or 5, restore compliance within 5 minutes.

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LCO Applicability

LCO 3.0.4 (continued)

**- REVIEWER'S NOTE -**

LCO 3.0.4 has been revised so that changes in MODES or other specified conditions in the Applicability that are part of a shutdown of the unit shall not be prevented. In addition, LCO 3.0.4 has been revised so that it is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, 3, and 4. The MODE change restrictions in LCO 3.0.4 were previously applicable in all MODES. Before this version of LCO 3.0.4 can be implemented on a plant-specific basis, the licensee must review the existing technical specifications to determine where specific restrictions on MODE changes or Required Actions should be included in individual LCOs to justify this change; such an evaluation should be summarized in a matrix of all existing LCOs to facilitate NRC staff review of a conversion to the STS.

**LCO 3.0.5**      Equipment removed from service or declared inoperable to comply with ACTIONS may be returned to service under administrative control solely to perform testing required to demonstrate its OPERABILITY or the OPERABILITY of other equipment. This is an exception to LCO 3.0.2 for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY.

**LCO 3.0.6**      When a supported system LCO is not met solely due to a support system LCO not being met, the Conditions and Required Actions associated with this supported system are not required to be entered. Only the support system LCO ACTIONS are required to be entered. This is an exception to LCO 3.0.2 for the supported system. In this event, an evaluation shall be performed in accordance with Specification 5.5.15, "Safety Function Determination Program (SFDP)." If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

When a support system's Required Action directs a supported system to be declared inoperable or directs entry into Conditions and Required Actions for a supported system, the applicable Conditions and Required Actions shall be entered in accordance with LCO 3.0.2.

**LCO 3.0.7**      Test Exception LCOs [3.1.8 and 3.4.19] allow specified Technical Specification (TS) requirements to be changed to permit performance of special tests and operations. Unless otherwise specified, all other TS

### 3.0.2 SURVEILLANCE REQUIREMENT (SR) APPLICABILITY

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**SR 3.0.1** SRs shall be met during the MODES or other specified conditions in the Applicability for individual LCOs, unless otherwise stated in the SR. Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO. Failure to perform a Surveillance within the specified Frequency shall be failure to meet the LCO except as provided in SR 3.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.

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**SR 3.0.2** 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.

For Frequencies specified as "once," the above interval extension does not apply.

If a Completion Time requires periodic performance on a "once per . . ." basis, the above Frequency extension applies to each performance after the initial performance.

Exceptions to this Specification are stated in the individual Specifications.

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**SR 3.0.3** If it is discovered that a Surveillance was not performed within its specified Frequency, then compliance with the requirement to declare the LCO not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified Frequency, whichever is less. This delay period is permitted to allow performance of the Surveillance.

If the Surveillance is not performed within the delay period, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.

When the Surveillance is performed within the delay period and the Surveillance is not met, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.

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**SR 3.0.4** Entry into a MODE or other specified condition in the Applicability of an LCO shall not be made unless the LCO's Surveillances have been met within their specified Frequency. This provision shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

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**B 3.4 REACTOR COOLANT SYSTEM (continued)**

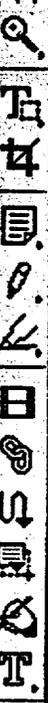
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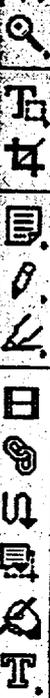
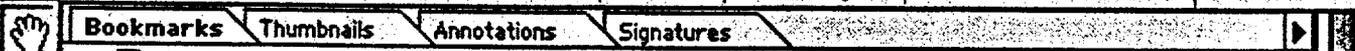
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**3.0.1 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY**

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**LCO 3.0.1** LCOs shall be met during the MODES or other specified conditions in the Applicability, except as provided in LCO 3.0.2 and 3.0.7.

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**LCO 3.0.2** Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6.

If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the Required Action(s) is not required unless otherwise stated.

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**LCO 3.0.3** When an LCO is not met and the associated ACTIONS are not met, an associated ACTION is not provided, or if directed by the associated ACTIONS, the unit shall be placed in a MODE or other specified condition in which the LCO is not applicable. Action shall be initiated within 1 hour to place the unit, as applicable, in:

- a. MODE 3 within 7 hours,
- b. MODE 4 within 13 hours, and
- c. MODE 5 within 37 hours.

Exceptions to this Specification are stated in the individual Specifications.

Where corrective measures are completed that permit operation in accordance with the LCO or ACTIONS, completion of the actions required by LCO 3.0.3 is not required.

LCO 3.0.3 is only applicable in MODES 1, 2, 3, and 4.

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**LCO 3.0.4** When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall not be made except when the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time. This Specification shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

Exceptions to this Specification are stated in the individual Specifications.

LCO 3.0.4 is only applicable for entry into a MODE or others specified condition in the Applicability in MODES 1, 2, 3, and 4.

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Matrix: Table of Sections affected by TSTFs (as of March 7, 2000)

| TSTF NO./#<br>FILES | NUREG-1430 (BWOG)                          |                            | NUREG-1431 (WOG)                                |   | NUREG-1432 (CEOG)  |                          | NUREG-1433 (BWR/4) |                            | NUREG-1434 (BWR/6) |                            |
|---------------------|--|----------------------------|---|---|--|--------------------------|--------------------|----------------------------|--------------------|----------------------------|
|                     | SPEC                                       | BASES                      | SPEC  | BASES                                     | SPEC   | BASES                    | SPEC               | BASES                      | SPEC               | BASES                      |
| 002, R.1/10         | 3.8.3                                      | B3.8.3                     | 3.8.3   | B3.8.3                                    | 3.8.3  | B3.8.3                   | 3.8.3              | B3.8.3                     | 3.8.3              | B3.8.3                     |
| 005, R.1/1          |  |                            |   |   |  | B2.1.1                   |                    |                            |                    |                            |
| 006, R.1/2          | 3.0  |                            | 3.0   |   |  |                          |                    |                            |                    |                            |
| 008, R.2/25         | 3.8.1, 3.8.4                               | B3.0,<br>B3.8.1,<br>B3.8.4 | 3.8.1,<br>3.8.4                                 | B3.0,<br>B3.8.1,<br>B3.8.4                | 3.8.1, 3.8.4   | B3.0, B3.8.1,<br>B3.8.4  | 3.8.1, 3.8.4       | B3.0,<br>B3.8.1,<br>B3.8.4 | 3.8.1,<br>3.8.4    | B3.0,<br>B3.8.1,<br>B3.8.4 |
| 009, R.1/28         | 3.1.1,<br>3.1.4,<br>3.1.5,<br>3.1.8, 3.1.9 | B3.1.8,<br>B3.1.9          | 3.1.1,<br>3.1.2,<br>3.1.6,<br>3.1.7,<br>3.1.10* | B3.1.10*                                  | 3.1.1(A),<br>3.1.2(A),<br>3.1.5(A),<br>3.1.6(A),<br>3.1.7(A),<br>3.1.9(A),<br>3.1.1(D),<br>3.1.2(D),<br>3.1.5(D),<br>3.1.6(D),<br>3.1.7(D),<br>3.1.10(D) | B3.1.9(A),<br>B3.1.10(D) | 3.1.1              | B3.1.1                     | 3.1.1              | B3.1.1                     |
| 012, R.1/10         |  |                            | TOC,<br>3.0.7,<br>3.1.9,<br>3.1.10,<br>3.1.11   | B3.0.7,<br>B3.1.9,<br>B3.1.10,<br>B3.1.11 |  |                          |                    |                            |                    |                            |
| 013, R.1/2          |  |                            | 3.1.4   | B3.1.4                                    |  |                          |                    |                            |                    |                            |
| 014, R.4/2          |  |                            | 3.1.10  | B3.1.10                                   |  |                          |                    |                            |                    |                            |
| 015, R.1/1          |  |                            |   | B3.1.5                                    |  |                          |                    |                            |                    |                            |
| 017, R.1/10         | 3.6.2                                      | B3.6.2                     | 3.6.2   | B3.6.2                                    | 3.6.2  | B3.6.2                   | 3.6.1.2            | B3.6.1.2                   | 3.6.1.2            | B3.6.1.2                   |

| TSTF NO./#<br>FILES         | NUREG-1430 (BWOG)                               |  | NUREG-1431 (WOG)  |   | NUREG-1432 (CEOG)  |   | NUREG-1433 (BWR/4)                   |  | NUREG-1434 (BWR/6)                   |  |
|-----------------------------|---|--|---|---|--|---|--------------------------------------|--|--------------------------------------|--|
|                             |   |  |   |   |  |   |                                      |  |                                      |  |
| 017, R.2/10                 | 3.6.2   | B3.6.2   | 3.6.2   | B3.6.2  | 3.6.2  | B3.6.2  | 3.6.1.2                              | B3.6.1.2                                 | 3.6.1.2                              | B3.6.1.2                                 |
| 018, R.1/8                  |   |  | 3.6.19  | B3.6.19   | 3.6.11   | B3.6.11   | 3.6.4.1                              | B3.6.4.1                                 | 3.6.4.1                              | B3.6.4.1                                 |
| 019, R.1/13                 | 1.1   | B3.3.1,<br>B3.3.17,<br>B3.3.18                       | 1.1   | B3.3.1,<br>B3.3.3,<br>B3.3.4                                    | 1.1  | B3.3.11(A),<br>B3.3.12(A),<br>B3.3.11(D),<br>B3.3.12(D)             |                                      |  |                                      |  |
| 020/6                       | 3.9.6   | B3.9.6   | 3.9.7   | B3.9.7  | 3.9.6  | B3.9.6  |                                      |  |                                      |  |
| 023, R.3/3                  |   |  | 3.9.2   | B3.9.2,<br>B3.9.3   |  |   |                                      |  |                                      |  |
| 024, R.1/1                  |   |  | 3.2.3(A)  |   |  |   |                                      |  |                                      |  |
| 026/6                       | 3.4.2   | B3.4.2   | 3.4.2   | B3.4.2  | 3.4.2  | B3.4.2  |                                      |  |                                      |  |
| 027, R.3/6                  | 3.4.2   | B3.4.2   | 3.4.2   | B3.4.2  | 3.4.2  | B3.4.2  |                                      |  |                                      |  |
| 028/6                       | 3.4.16  | B3.4.16  | 3.4.16  | B3.4.16   | 3.4.16   | B3.4.16   |                                      |  |                                      |  |
| 030, R.2/10<br>(superseded) | 3.6.3   | B3.6.3   | 3.6.3   | B3.6.3  | 3.6.3  | B3.6.3  | 3.6.1.3                              | B3.6.1.3                                 | 3.6.1.3                              | B3.6.1.3                                 |
| 030, R.3/10                 | 3.6.3   | B3.6.3   | 3.6.3   | B3.6.3  | 3.6.3  | B3.6.3  | 3.6.1.3                              | B3.6.1.3                                 | 3.6.1.3                              | B3.6.1.3                                 |
| 032/4                       |   |  |   |   |  |   | 3.1.3                                | B3.1.3                                   | 3.1.3                                | B3.1.3                                   |
| 033/4                       |   |  |   |   |  |   | 3.1.3                                | B3.1.3                                   | 3.1.3                                | B3.1.3                                   |
| 034/4                       |   |  |   |   |  |   | 3.1.3                                | B3.1.3                                   | 3.1.3                                | B3.1.3                                   |
| 035/4                       |   |  |   |   |  |   | 3.4.10                               | B3.4.10                                  | 3.4.11                               | B3.4.11                                  |
| 036, R.4/50                 | 3.7.13,<br>3.8.2,<br>3.8.5,<br>3.8.8,<br>3.8.10 | B3.7.13,<br>B3.8.2,<br>B3.8.5,<br>B3.8.8,<br>B3.8.10 | 3.7.13,<br>3.8.2,<br>3.8.5,<br>3.8.8,<br>3.8.10,<br>3.3.8 | B3.7.13,<br>B3.8.2,<br>B3.8.5,<br>B3.8.8,<br>B3.8.10,<br>B3.3.8 | 3.8.2, 3.8.5,<br>3.8.8,<br>3.8.10,<br>3.3.10(D),<br>3.7.14 | B3.8.2,<br>B3.8.5,<br>B3.8.8,<br>B3.8.10,<br>B3.3.10(D),<br>B3.7.14 | 3.8.2,<br>3.8.5,<br>3.8.8,<br>3.8.10 | B3.8.2,<br>B3.8.5,<br>B3.8.8,<br>B3.8.10 | 3.8.2,<br>3.8.5,<br>3.8.8,<br>3.8.10 | B3.8.2,<br>B3.8.5,<br>B3.8.8,<br>B3.8.10 |

| TSTF NO./#<br>FILES         | NUREG-1430 (BWOG)     |                    | NUREG-1431 (WOG)     |                   | NUREG-1432 (CEOG)                      |                                      | NUREG-1433 (BWR/4)     |                       | NUREG-1434 (BWR/6)              |                                    |
|-----------------------------|-----------------------|--------------------|----------------------|-------------------|--|--------------------------------------|------------------------|-----------------------|---------------------------------|------------------------------------|
|                             |                       |                    |                      |                   |  |                                      |                        |                       |                                 |                                    |
| 037, R2/28                  | 3.3.17,<br>3.8.1, 5.6 | B3.3.17,<br>B3.8.1 | 3.3.3,<br>3.8.1, 5.6 | B3.3.3,<br>B3.8.1 | 3.3.11(A),<br>3.3.11(D),<br>3.8.1, 5.6 | B3.3.11(A),<br>B3.3.11(D),<br>B3.8.1 | 3.3.3.1,<br>3.8.1, 5.6 | B3.3.3.1,<br>B3.8.1   | 3.3.3.1,<br>3.8.1, 5.6          | B3.3.3.1,<br>B3.8.1                |
| 038/10                      | 3.8.4                 | B3.8.4             | 3.8.4                | B3.8.4            | 3.8.4                                  | B3.8.4                               | 3.8.4                  | B3.8.4                | 3.8.4                           | B3.8.4                             |
| 040/2                       | 1.1                   |                    |                      |                   | 1.1                                    |                                      |                        |                       |                                 |                                    |
| 042/1                       | 3.0                   |                    |                      |                   |  |                                      |                        |                       |                                 |                                    |
| 043/1                       | B3.0                  |                    |                      |                   |  |                                      |                        |                       |                                 |                                    |
| 045, R.1/10<br>(superseded) | 3.6.3                 | B3.6.3             | 3.6.3                | B3.6.3            | 3.6.3                                  | B3.6.3                               | 3.6.1.3                | B3.6.1.3              | 3.6.1.3                         | B3.6.1.3                           |
| 045, R.2/16                 | 3.6.3                 | B3.6.3             | 3.6.3                | B3.6.3            | 3.6.3                                  | B3.6.3                               | 3.6.1.3,<br>3.6.4.2    | B3.6.1.3,<br>B3.6.4.2 | 3.6.1.3,<br>3.6.4.2,<br>3.6.5.3 | B3.6.1.3,<br>B3.6.4.2,<br>B3.6.5.3 |
| 046, R.1/16                 | 3.6.3                 | B3.6.3             | 3.6.3                | B3.6.3            | 3.6.3                                  | B3.6.3                               | 3.6.1.3,<br>3.6.4.2    | B3.6.1.3,<br>B3.6.4.2 | 3.6.1.3,<br>3.6.4.2,<br>3.6.5.3 | B3.6.1.3,<br>B3.6.4.2,<br>B3.6.5.3 |
| 047/1                       |                       |                    |                      |                   | 1.1                                    |                                      |                        |                       |                                 |                                    |
| 053, R.1/1                  |                       | B3.4.11            |                      |                   |  |                                      |                        |                       |                                 |                                    |
| 054, R.1/3                  |                       | B3.4.13            |                      | B3.4.13           |  | B3.4.13                              |                        |                       |                                 |                                    |
| 055/1                       |                       |                    |                      |                   |  | B3.4.12                              |                        |                       |                                 |                                    |
| 056/2                       |                       | B3.4.11            |                      |                   |  | B3.4.11                              |                        |                       |                                 |                                    |
| 057/2                       |                       | B3.4.10            |                      |                   |  | B3.4.10                              |                        |                       |                                 |                                    |
| 058, R.1/2                  |                       |                    |                      |                   | 3.5.2                                  | B3.5.2                               |                        |                       |                                 |                                    |
| 059, R.1/2                  |                       |                    |                      |                   | 3.5.1                                  | B3.5.1                               |                        |                       |                                 |                                    |
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| TSTF NO./#<br>FILES | NUREG-1430 (BWOG)               |         | NUREG-1431 (WOG)                |         | NUREG-1432 (CEOG)   |  | NUREG-1433 (BWR/4)              |        | NUREG-1434 (BWR/6)              |        |
|---------------------|---------------------------------|---------|---------------------------------|---------|---|--|---------------------------------|--------|---------------------------------|--------|
| 062/1               |                                 |         |                                 |         | 3.4.1   |  |                                 |        |                                 |        |
| 063/1               | 3.4.7                           |         |                                 |         |   |  |                                 |        |                                 |        |
| 065, R.1/34         | 2.0, 5.1,<br>5.2, 5.5,<br>[5.7] | B2.1.1  | 2.0, 5.1,<br>5.2, 5.5,<br>[5.7] | B2.1.1  | 2.0(A),<br>2.0(D), 5.1,<br>5.2, 5.5,<br>[5.7]   | B2.1.1(A),<br>B2.1.2(A),<br>B2.1.1(D),<br>B2.1.2(D)  | 2.0, 5.1,<br>5.2, 5.5,<br>[5.7] | B2.1.1 | 2.0, 5.1,<br>5.2, 5.5,<br>[5.7] | B2.1.1 |
| 066/1               |                                 |         |                                 |         | 3.4.16  |  |                                 |        |                                 |        |
| 067/23              |                                 |         |                                 |         | 1.1, 3.1.5(A),<br>3.1.6(A),<br>3.1.7(A),<br>3.1.8(A),<br>3.1.9(A),<br>3.1.5(D),<br>3.1.6(D),<br>3.1.7(D),<br>3.1.9(D),<br>3.1.10(D) | B3.1.1(A),<br>B3.1.5(A),<br>B3.1.6(A),<br>B3.1.7(A),<br>B3.1.8(A),<br>B3.1.9(A),<br>B3.1.1(D),<br>B3.1.5(D),<br>B3.1.6(D),<br>B3.1.7(D),<br>B3.1.9(D),<br>B3.1.10(D) |                                 |        |                                 |        |
| 068, R.2/6          | 3.9.3                           | B3.9.3  | 3.9.4                           | B3.9.4  | 3.9.3   | B3.9.3   |                                 |        |                                 |        |
| 069/1               |                                 |         |                                 |         | 3.3.1(D)  |  |                                 |        |                                 |        |
| 070, R.1/6          | 3.7.15                          | B3.7.15 | 3.7.16                          | B3.7.16 | 3.7.17  | B3.7.17  |                                 |        |                                 |        |
| 071, R.2/5          |                                 | B3.0    |                                 | B3.0    |   | B3.0   |                                 | B3.0   |                                 | B3.0   |
| 072/2               |                                 |         |                                 |         | 3.3.1   | B3.3.1   |                                 |        |                                 |        |
| 073/1               |                                 |         |                                 |         | 3.3.1   |  |                                 |        |                                 |        |
| 074/1               |                                 |         |                                 |         | 3.3.5   |  |                                 |        |                                 |        |
| 075/1               |                                 |         |                                 |         | 3.3.3   |  |                                 |        |                                 |        |

| TSTF NO./#<br>FILES                       | NUREG-1430 (BWOG) |        | NUREG-1431 (WOG) |                   | NUREG-1432 (CEOG)             |   | NUREG-1433 (BWR/4) |  | NUREG-1434 (BWR/6) |  |
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| 077/4                                     |                   |        |                  |                   | 3.2.1, 3.2.4                  | B3.2.1,<br>B3.2.4                       |                    |  |                    |  |
| 078/5                                     |                   |        |                  |                   | 3.5.2,<br>3.6.6A,<br>3.6.6B   | B3.6.6A,<br>B3.6.6B                     |                    |  |                    |  |
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| 080, R.1 / 2<br>(Integrate<br>w/085, R.1) |                   |        |                  |                   | 3.3.1(A)                      | B3.3.1(A)                               |                    |  |                    |  |
| 081/2                                     |                   |        |                  |                   | 3.3.1(A)                      | B3.3.1(A)                               |                    |  |                    |  |
| 082, R.1/4                                |                   |        |                  |                   | 3.3.2(A),<br>3.3.2(D)         | B3.3.2(A),<br>B3.3.2(D)                 |                    |  |                    |  |
| 083/4                                     |                   |        |                  |                   | 3.3.3(A),<br>3.3.4(D)         | B3.3.3(A),<br>B3.3.4(D)                 |                    |  |                    |  |
| 084/2                                     |                   |        |                  |                   | 3.3.9                         | B3.3.9                                  |                    |  |                    |  |
| 085, R.1/2<br>(Integrate<br>w/080, R.1)   |                   |        |                  |                   | 3.3.1(A)                      | B3.3.1(A)                               |                    |  |                    |  |
| 087, R.2/4                                |                   |        | 3.4.5,<br>3.4.9  | B3.4.5,<br>B3.4.9 |                               |   |                    |  |                    |  |
| 089/2                                     |                   |        | 3.1.8            | B3.1.8            |                               |   |                    |  |                    |  |
| 090/4                                     | 3.5.3             | B3.5.3 | 3.5.3            | B3.5.3            |                               |   |                    |  |                    |  |
| 093, R.3/4                                |                   |        | 3.4.9            | B3.4.9            | 3.4.9                         | B3.4.9                                  |                    |  |                    |  |

| TSTF NO./#<br>FILES | NUREG-1430 (BWOG)                                    |   | NUREG-1431 (WOG)                                |  | NUREG-1432 (CEOG)     |                         | NUREG-1433 (BWR/4) |      | NUREG-1434 (BWR/6) |      |
|---------------------|--|---|---|--|-----------------------|-------------------------|--------------------|------|--------------------|------|
|                     |  |   |   |  |                       |                         |                    |      |                    |      |
| 094, R.1/4          |  |   | 3.4.9   | B3.4.9   | 3.4.9                 | B3.4.9                  |                    |      |                    |      |
| 095/6               |  | 3.2.1A,<br>3.2.1B,<br>3.2.2                                   | B3.2.1A,<br>B3.2.1B,<br>B3.2.2                  |  |                       |                         |                    |      |                    |      |
| 096, R.1/6          | 3.9.2  | B3.9.2  | 3.9.3   | B3.9.3   | 3.9.2                 | B3.9.2                  |                    |      |                    |      |
| 097/2               |  |   | 3.2.1B  | B3.2.1B  |                       |                         |                    |      |                    |      |
| 098, R.2/2          |  |   | 3.2.1B  | B3.2.1B  |                       |                         |                    |      |                    |      |
| 099/2               |  |   | 3.2.1B  | B3.2.1B  |                       |                         |                    |      |                    |      |
| 100/3               | 3.7.4  |   | 3.7.4   |  | 3.7.4                 |                         |                    |      |                    |      |
| 101/6               | 3.7.5  | B3.7.5  | 3.7.5   | B3.7.5   | 3.7.5                 | B3.7.5                  |                    |      |                    |      |
| 104/10              | 3.0  | B3.0  | 3.0   | B3.0   | 3.0                   | B3.0                    | 3.0                | B3.0 | 3.0                | B3.0 |
| 106, R.1/5          | 5.5  |   | 5.5   |  | 5.5                   |                         | 5.5                |      | 5.5                |      |
| 107, R.4/8          | 3.1.4  | B3.1.4  | 3.1.5   | B3.1.5   | 3.1.5(A),<br>3.1.5(D) | B3.1.5(A),<br>B3.1.5(D) |                    |      |                    |      |
| 108, R.1/4          |  |   | 3.1.10 <sup>1</sup> ,<br>3.4.19                 | B3.1.10,<br>B3.4.19                                  |                       |                         |                    |      |                    |      |
| 109/2               |  |   | 3.2.4   | B3.2.4   |                       |                         |                    |      |                    |      |
| 110, R.2/22         | 3.1.4,<br>3.1.6,<br>3.1.7,<br>3.2.1,<br>3.2.3, 3.2.4 | B3.1.4,<br>B3.1.6,<br>B3.1.7,<br>B3.2.1,<br>B3.2.3,<br>B3.2.4 | 3.1.5,<br>3.1.7,<br>3.2.3A,<br>3.2.3B,<br>3.2.4 | B3.1.5,<br>B3.1.7,<br>B3.2.3A,<br>B3.2.3B,<br>B3.2.4 |                       |                         |                    |      |                    |      |

<sup>1</sup>Westinghouse section 3.1.10 and it's Bases were renumbered as 3.1.9 and B3.1.9; the original Westinghouse section 3.1.9 and it's Bases was deleted (see TSTF-012, R.1, approved 10/29/96).

| TSTF NO./#<br>FILES | NUREG-1430 (BWOG) |                     | NUREG-1431 (WOG)          |                              | NUREG-1432 (CEOG) |                     | NUREG-1433 (BWR/4) |      | NUREG-1434 (BWR/6) |      |
|---------------------|-------------------|---------------------|---------------------------|------------------------------|-------------------|---------------------|--------------------|------|--------------------|------|
| 111, R.6/3          |                   |                     | 1.1                       | B3.3.1,<br>B3.3.2            |                   |                     |                    |      |                    |      |
| 112, R.1/2          |                   |                     | 3.2.3A                    | B3.2.3A                      |                   |                     |                    |      |                    |      |
| 114/2               |                   |                     |                           | B3.4.7                       |                   | B3.4.7              |                    |      |                    |      |
| 116, R.2/12         | 3.4.13,<br>3.4.15 | B3.4.13,<br>B3.4.15 | 3.4.13,<br>3.4.15         | B3.4.13,<br>B3.4.15          | 3.4.13,<br>3.4.15 | B3.4.13,<br>B3.4.15 |                    |      |                    |      |
| 117/2               |                   |                     | 3.5.1                     | B3.5.1                       |                   |                     |                    |      |                    |      |
| 118/5               | 5.5               |                     | 5.5                       |                              | 5.5               |                     | 5.5                |      | 5.5                |      |
| 122/5               |                   | B3.0                |                           | B3.0                         |                   | B3.0                |                    | B3.0 |                    | B3.0 |
| 123, R.1/1          | 4.0               |                     |                           |                              |                   |                     |                    |      |                    |      |
| 124/1               | 1.1               |                     |                           |                              |                   |                     |                    |      |                    |      |
| 125/2               | 1.1               | B3.2.2              |                           |                              |                   |                     |                    |      |                    |      |
| 126/1               | 2.0               |                     |                           |                              |                   |                     |                    |      |                    |      |
| 127, R.1/2          |                   |                     |                           |                              | 3.1.5(A)          | B3.1.5(A)           |                    |      |                    |      |
| 128, R.1/2          |                   |                     |                           |                              | 3.5.5             | B3.5.5              |                    |      |                    |      |
| 129/2               |                   |                     |                           |                              | 3.4.1             | B3.4.1              |                    |      |                    |      |
| 130, R.1/2          |                   |                     |                           |                              | 3.3.11(D)         | B3.3.11(D)          |                    |      |                    |      |
| 132/1               |                   |                     |                           |                              | 3.3.1(D)          |                     |                    |      |                    |      |
| 133, R.1/1          |                   |                     |                           |                              |                   | B3.5.5              |                    |      |                    |      |
| 134, R.1/4          |                   |                     |                           |                              | 3.1.8, 3.1.9      | B3.1.8,<br>B3.1.9   |                    |      |                    |      |
| 135, R.3/6          |                   |                     | 3.3.1,<br>3.3.2,<br>3.3.9 | B3.3.1,<br>B3.3.2,<br>B3.3.9 |                   |                     |                    |      |                    |      |

| TSTF NO./#<br>FILES | NUREG-1430 (BWOG) |         | NUREG-1431 (WOG)  |  | NUREG-1432 (CEOG)  |  | NUREG-1433 (BWR/4) |        | NUREG-1434 (BWR/6) |        |
|---------------------|-------------------|---------|---|--|--|--|--------------------|--------|--------------------|--------|
| 136/81              |                   |         | 3.0,<br>3.1.1,<br>3.1.2,<br>3.1.3,<br>3.1.4,<br>3.1.5,<br>3.1.6,<br>3.1.7,<br>3.1.8,<br>3.1.9 <sup>2</sup> ,<br>3.1.10,<br>3.1.11 | B3.0,<br>B3.1.1,<br>B3.1.2,<br>B3.1.3,<br>B3.1.4,<br>B3.1.5,<br>B3.1.6,<br>B3.1.7,<br>B3.1.8,<br>B3.1.9,<br>B3.1.10,<br>B3.1.11,<br>B3.2.1B,<br>B3.2.2,<br>B3.2.4,<br>B3.4.1,<br>B3.4.2,<br>B3.9.1 | 3.1.1(A),<br>3.1.2(A),<br>3.1.3(A),<br>3.1.4(A),<br>3.1.5(A),<br>3.1.6(A),<br>3.1.7(A),<br>3.1.8(A),<br>3.1.9(A),<br>3.2.2(A),<br>3.2.3(A),<br>3.3.13(A),<br>3.1.1(D),<br>3.1.2(D),<br>3.1.3(D),<br>3.1.4(D),<br>3.1.5(D),<br>3.1.6(D),<br>3.1.7(D),<br>3.1.8(D),<br>3.1.9(D),<br>3.1.10(D),<br>3.3.3(D),<br>3.3.13(D) | B3.1.1(A),<br>B3.1.2(A),<br>B3.1.3(A),<br>B3.1.4(A),<br>B3.1.5(A),<br>B3.1.6(A),<br>B3.1.7(A),<br>B3.1.8(A),<br>B3.1.9(A),<br>B3.2.1(A),<br>B3.2.2(A),<br>B3.2.3(A),<br>B3.2.4(A),<br>B3.2.5(A),<br>B3.3.1(A),<br>B3.1.1(D),<br>B3.1.2(D),<br>B3.1.3(D),<br>B3.1.4(D),<br>B3.1.5(D),<br>B3.1.6(D),<br>B3.1.7(D),<br>B3.1.8(D),<br>B3.1.9(D),<br>B3.1.10(D),<br>B3.4.1,<br>B3.9.1 |                    |        |                    |        |
| 137/4               |                   | B3.4.16 |   | B3.4.16  |  | B3.4.16  |                    |        |                    | B3.4.8 |
| 139, R.1/5          |                   | B3.7.14 |   | B3.7.15  |  | B3.7.16  |                    | B3.7.8 |                    | B3.7.7 |
| 140/6               | 3.7.6             | B3.7.6  | 3.7.6   | B3.7.6   | 3.7.6  | B3.7.6   |                    |        |                    |        |
| 142/8               | 3.1.2             | B3.1.2  | 3.1.3   | B3.1.3   | 3.1.3(A),<br>3.1.3(D)  | B3.1.3(A),<br>B3.1.3(D)  |                    |        |                    |        |

<sup>2</sup>See Footnote 1.

| TSTF NO./#<br>FILES | NUREG-1430 (BWOG)                          |  | NUREG-1431 (WOG)  |   | NUREG-1432 (CEOG)                       |  | NUREG-1433 (BWR/4)               |   | NUREG-1434 (BWR/6)                   |  |
|---------------------|--|--|---|---|---|--|----------------------------------|---|--------------------------------------|--|
| 143/6               | 3.1.4, 3.1.6                               |  |   |   | 3.1.5(A),<br>3.1.5(D)                   | B3.1.5(A),<br>B3.1.5(D)  |                                  |   |                                      |  |
| 144/2               |  |  |   |   | 2.0(A)                                  | B2.1.1(A)  |                                  |   |                                      |  |
| 146/2               |  |  |   |   | 3.9.4                                   | B3.9.4   |                                  |   |                                      |  |
| 148/2               |  |  |   |   | 3.3.1                                   | B3.3.1   |                                  |   |                                      |  |
| 149/1               |  |  |   |   | 3.2.1(D)                                |  |                                  |   |                                      |  |
| 150/2               |  |  |   |   | 3.2.4(D)                                | B3.2.4(D)  |                                  |   |                                      |  |
| 151, R.1/1          |  |  | B3.4.11   |   |   |  |                                  |   |                                      |  |
| 152/5               | 5.6  |  | 5.6   |   | 5.6                                     |  | 5.6                              |   | 5.6                                  |  |
| 153/48              | 3.4.5,<br>3.4.6,<br>3.4.7,<br>3.4.8, 3.9.4 | B3.4.5,<br>B3.4.6,<br>B3.4.7,<br>B3.4.8,<br>B3.9.4 | 3.4.5,<br>3.4.6,<br>3.4.7,<br>3.4.8,<br>3.5.2,<br>3.9.5 | B3.4.5,<br>B3.4.6,<br>B3.4.7,<br>B3.4.8,<br>B3.5.2,<br>B3.9.5 | 3.4.5, 3.4.6,<br>3.4.7, 3.4.8,<br>3.9.4 | B3.4.5,<br>B3.4.6,<br>B3.4.7,<br>B3.4.8,<br>B3.9.4               | 3.4.8,<br>3.4.9,<br>3.9.8, 3.9.9 | B3.4.8,<br>B3.4.9,<br>B3.9.8,<br>B3.9.9 | 3.4.9,<br>3.4.10,<br>3.9.8,<br>3.9.9 | B3.4.9,<br>B3.4.10,<br>B3.9.8,<br>B3.9.9 |
| 154, R.2/11         |  | B3.1.8,<br>B3.1.9                                  |   | B3.1.9,<br>B3.1.10,<br>B3.1.11,<br>B3.4.19                    |   | B3.1.8(A),<br>B3.1.9(A),<br>B3.1.9(D),<br>B3.1.10(D),<br>B3.4.17 |                                  |   |                                      |  |
| 156, R.1/2          | 3.1.9                                      | B3.1.9   |   |   |   |  |                                  |   |                                      |  |
| 158, R.1/2          | 3.1.5                                      | B3.1.5   |   |   |   |  |                                  |   |                                      |  |
| 159, R.1/2          | 3.1.6                                      | B3.1.6   |   |   |   |  |                                  |   |                                      |  |
| 160, R.1/10         | 3.1.4,<br>3.1.8,<br>3.2.1,<br>3.2.2, 3.2.5 | B3.1.4,<br>B3.1.8,<br>B3.2.1,<br>B3.2.2,<br>B3.2.5 |   |   |   |  |                                  |   |                                      |  |

| TSTF NO./#<br>FILES    | NUREG-1430 (BWOG) |         | NUREG-1431 (WOG) |                   | NUREG-1432 (CEOG)     |                         | NUREG-1433 (BWR/4) |        | NUREG-1434 (BWR/6) |        |
|------------------------|-------------------|---------|------------------|-------------------|-----------------------|-------------------------|--------------------|--------|--------------------|--------|
| 161, R.1/4             |                   |         | 3.3.6,<br>3.3.7  | B3.3.6,<br>B3.3.7 |                       |                         |                    |        |                    |        |
| 162/1                  |                   |         |                  | B3.4.9            |                       |                         |                    |        |                    |        |
| 163, R.2/10            | 3.8.1             | B3.8.1  | 3.8.1            | B3.8.1            | 3.8.1                 | B3.8.1                  | 3.8.1              | B3.8.1 | 3.8.1              | B3.8.1 |
| 164/2                  |                   |         | 3.2.3A           | B3.2.3A           |                       |                         |                    |        |                    |        |
| 165/5                  |                   | B3.0    |                  | B3.0              |                       | B3.0                    |                    | B3.0   |                    | B3.0   |
| 166/5                  | 3.0               |         | 3.0              |                   | 3.0                   |                         | 3.0                |        | 3.0                |        |
| 169/2*<br>(superseded) |                   |         | 3.3.1            | B3.3.1            |                       |                         |                    |        |                    |        |
| 170/4                  |                   |         |                  |                   | 3.3.3(A),<br>3.3.4(D) | B3.3.3(A),<br>B3.3.4(D) |                    |        |                    |        |
| 172/1                  |                   |         |                  |                   | 3.1.4(A)              |                         |                    |        |                    |        |
| 173/3                  |                   | B3.7.17 |                  | B3.7.18           |                       | B3.7.19                 |                    |        |                    |        |
| 174/3                  |                   | B3.7.6  |                  | B3.7.6            |                       | B3.7.6                  |                    |        |                    |        |
| 175/1                  |                   |         |                  |                   |                       | B3.7.8                  |                    |        |                    |        |
| 176, R.2/2             |                   |         |                  |                   | 3.1.4(D),<br>3.1.4(A) |                         |                    |        |                    |        |
| 177/1                  |                   |         |                  |                   |                       | B3.4.5                  |                    |        |                    |        |
| 178/2                  |                   |         |                  |                   | 3.3.1(A),<br>3.3.4(A) |                         |                    |        |                    |        |
| 179/1                  |                   |         |                  |                   | 3.3.1(A)              |                         |                    |        |                    |        |
| 180/2                  |                   |         |                  |                   | 3.3.2(A)              | B3.3.2(A)               |                    |        |                    |        |
| 181/4                  |                   |         |                  |                   | 3.3.3(A),<br>3.3.4(D) | B3.3.3(A),<br>B3.3.4(D) |                    |        |                    |        |

| TSTF NO./#<br>FILES | NUREG-1430 (BWO) |                   | NUREG-1431 (WOG) |                   | NUREG-1432 (CEOG)                  |                                       | NUREG-1433 (BWR/4) |                   | NUREG-1434 (BWR/6) |                   |
|---------------------|------------------|-------------------|------------------|-------------------|------------------------------------|---------------------------------------|--------------------|-------------------|--------------------|-------------------|
|                     |                  |                   |                  |                   |                                    |                                       |                    |                   |                    |                   |
| 182/4               |                  |                   |                  |                   | 3.3.3(A),<br>3.3.4(D)              | B3.3.3(A),<br>B3.3.4(D)               |                    |                   |                    |                   |
| 184/2               |                  |                   |                  |                   | 3.3.7(A)                           | B3.3.7(A)                             |                    |                   |                    |                   |
| 185/1               |                  |                   |                  |                   | 3.3.7(A)                           |                                       |                    |                   |                    |                   |
| 186/2               |                  |                   |                  |                   | 3.3.7(A),<br>3.3.8(A)              |                                       |                    |                   |                    |                   |
| 187/6               |                  |                   |                  |                   | 3.3.5(A),<br>3.3.9(A),<br>3.3.6(D) | B3.3.5(A),<br>B3.3.9(A),<br>B3.3.6(D) |                    |                   |                    |                   |
| 188/1               |                  |                   |                  |                   | 3.3.11(A)                          |                                       |                    |                   |                    |                   |
| 189/1               |                  |                   |                  |                   |                                    | B3.3.1(A)                             |                    |                   |                    |                   |
| 190/3               |                  |                   |                  |                   |                                    | B3.3.1(A),<br>B3.3.2(A),<br>B3.3.4(A) |                    |                   |                    |                   |
| 191/1               |                  |                   |                  |                   |                                    | B3.3.1(A)                             |                    |                   |                    |                   |
| 192/1               |                  |                   |                  |                   |                                    | B3.3.3(A)                             |                    |                   |                    |                   |
| 193/2               |                  |                   |                  |                   | 3.1.5(A)                           | B3.1.5(A)                             |                    |                   |                    |                   |
| 194/4               |                  |                   |                  |                   | 3.1.8(A),<br>3.1.9(D)              | B3.1.8(A),<br>B3.1.9(D)               |                    |                   |                    |                   |
| 195/1               |                  |                   |                  |                   |                                    | B3.4.6                                |                    |                   |                    |                   |
| 197, R.2/12         | 3.9.4, 3.9.5     | B3.9.4,<br>B3.9.5 | 3.9.5,<br>3.9.6  | B3.9.5,<br>B3.9.6 | 3.9.4, 3.9.5                       | B3.9.4,<br>B3.9.5                     |                    |                   |                    |                   |
| 204,R3/20           | 3.8.5,<br>3.8.8  | B3.8.5,<br>B3.8.8 | 3.8.5,<br>3.8.8  | B3.8.5,<br>B3.8.8 | 3.8.5,<br>3.8.8                    | B3.8.5,<br>B3.8.8                     | 3.8.5,<br>3.8.8    | B3.8.5,<br>B3.8.8 | 3.8.5,<br>3.8.8    | B3.8.5,<br>B3.8.8 |

| TSTF NO./#<br>FILES | NUREG-1430 (BWOG) |  | NUREG-1431 (WOG) |   | NUREG-1432 (CEOG) |   | NUREG-1433 (BWR/4) |  | NUREG-1434 (BWR/6) |  |
|---------------------|-------------------|--|------------------|---|-------------------|---|--------------------|--|--------------------|--|
| 205, R.3/94         | 1.1               | B3.3.1,<br>B3.3.2,<br>B3.3.3,<br>B3.3.4,<br>B3.3.5,<br>B3.3.6,<br>B3.3.7,<br>B3.3.8,<br>B3.3.11,<br>B3.3.12,<br>B3.3.13,<br>B3.3.14,<br>B3.3.15,<br>B3.3.16,<br>B3.4.12,<br>B3.4.15,<br>B3.7.5 | 1.1              | B3.3.1,<br>B3.3.2,<br>B3.3.4,<br>B3.3.5,<br>B3.3.6,<br>B3.3.7,<br>B3.3.8,<br>B3.3.9,<br>B3.4.12,<br>B3.4.15,<br>B3.4.19 | 1.1               | B3.1.5A,<br>B3.3.1A,<br>B3.3.2A,<br>B3.3.3A,<br>B3.3.4A,<br>B3.3.5A,<br>B3.3.6A,<br>B3.3.7A,<br>B3.3.8A,<br>B3.3.9A,<br>B3.3.10A,<br>B3.3.12A,<br>B3.3.13A,<br>B3.3.1D,<br>B3.3.2D,<br>B3.3.3D,<br>B3.3.4D,<br>B3.3.5D,<br>B3.3.6D,<br>B3.3.7D,<br>B3.3.8D,<br>B3.3.9D,<br>B3.3.10D,<br>B3.3.12D,<br>B3.3.13D,<br>B3.4.12,<br>B3.4.15,<br>B3.4.17 | 1.1                | B3.3.1.1,<br>B3.3.1.2,<br>B3.3.2.1,<br>B3.3.2.2,<br>B3.3.4.1,<br>B3.3.4.2,<br>B3.3.5.1,<br>B3.3.5.2,<br>B3.3.6.1,<br>B3.3.6.2,<br>B3.3.6.3,<br>B3.3.6.4,<br>B3.3.7.1,<br>B3.3.8.1,<br>B3.3.8.2,<br>B3.4.6,<br>B3.9.2 | 1.1                | B3.3.1.1,<br>B3.3.1.2,<br>B3.3.2.1,<br>B3.3.4.1,<br>B3.3.4.2,<br>B3.3.5.1,<br>B3.3.5.2,<br>B3.3.6.1,<br>B3.3.6.2,<br>B3.3.6.3,<br>B3.3.6.4,<br>B3.3.6.5,<br>B3.3.7.1,<br>B3.3.8.1,<br>B3.3.8.2,<br>B3.4.7,<br>B3.9.1 |
| 206/4               |                   |  |                  |   |                   |   | 3.6.2.1            | B3.6.2.1   | 3.6.2.1            | B3.6.2.1   |
| 208/1               |                   |  |                  |   |                   |   | 3.0                |  |                    |  |
| 209, R.1/1          | 3.7.2             |  |                  |   |                   |   |                    |  |                    |  |
| 210/1               |                   | B3.7.16  |                  |   |                   |   |                    |  |                    |  |
| 211/4               | 3.3.3, 3.3.4      | B3.3.3,<br>B3.3.4  |                  |   |                   |   |                    |  |                    |  |

| TSTF NO./#<br>FILES | NUREG-1430 (BWOG)                    |  | NUREG-1431 (WOG)  |  | NUREG-1432 (CEOG) |        | NUREG-1433 (BWR/4) |          | NUREG-1434 (BWR/6) |          |
|---------------------|--------------------------------------|--|---|--|-------------------|--------|--------------------|----------|--------------------|----------|
| 212, R.1/4          | 3.3.3, 3.3.4                         | B3.3.3,<br>B3.3.4                        |   |  |                   |        |                    |          |                    |          |
| 214/2               | 3.9.1                                | B3.9.1                                   |   |  |                   |        |                    |          |                    |          |
| 216/4               | 3.1.5, 3.2.1                         | B3.1.5,<br>B3.2.1                        |   |  |                   |        |                    |          |                    |          |
| 217, R.1/8          | 3.3.1,<br>3.3.3,<br>3.3.5,<br>3.3.11 | B3.3.1,<br>B3.3.3,<br>B3.3.5,<br>B3.3.11 |   |  |                   |        |                    |          |                    |          |
| 218/2               | 3.3.1                                | B3.3.1                                   |   |  |                   |        |                    |          |                    |          |
| 219/2               | 3.4.12                               | B3.4.12                                  |   |  |                   |        |                    |          |                    |          |
| 220/2               | 3.1.6                                | B3.1.6                                   |   |  |                   |        |                    |          |                    |          |
| 221/1               |                                      |  |   |  |                   |        | 3.10.8             |          |                    |          |
| 222, R.1/4          |                                      |  |   |  |                   |        | 3.1.4              | B3.1.4   | 3.1.4              | B 3.1.4  |
| 225/4               |                                      |  |   |  |                   |        | 3.9.1              | B3.9.1   | 3.9.1              | B3.9.1   |
| 227/3               |                                      |  |   |  |                   |        | 3.3.4.1            | B3.3.4.1 |                    | B3.3.4.1 |
| 229/2               |                                      |  |   |  |                   |        | 3.2.2              | B3.2.2   |                    |          |
| 230, R.1/4          |                                      |  |   |  |                   |        | 3.6.2.3            | B3.6.2.3 | 3.6.2.3            | B3.6.2.3 |
| 233/12              |                                      |  | 1.1,<br>3.4.6,<br>3.4.7,<br>3.4.10,<br>3.4.12,<br>3.5.2 | B3.4.6,<br>B3.4.7,<br>B3.4.10,<br>B3.4.12,<br>B3.5.2,<br>5.6 |                   |        |                    |          |                    |          |
| 234, R.1/2          |                                      |  | 3.1.8   | B3.1.8   |                   |        |                    |          |                    |          |
| 235, R.1/6          | 3.7.1                                | B3.7.1                                   | 3.7.1   | B3.7.1   | 3.7.1             | B3.7.1 |                    |          |                    |          |
| 237, R.1/1          |                                      |  | 5.5   |  |                   |        |                    |          |                    |          |

| TSTF NO./# FILES | NUREG-1430 (BWOG)               |                   | NUREG-1431 (WOG)                |                                | NUREG-1432 (CEOG)            |         | NUREG-1433 (BWR/4)              |         | NUREG-1434 (BWR/6)              |         |
|------------------|---------------------------------|-------------------|---------------------------------|--------------------------------|------------------------------|---------|---------------------------------|---------|---------------------------------|---------|
| 238/2            |                                 |                   | 3.1.7                           | B3.1.7                         |                              |         |                                 |         |                                 |         |
| 239/2            |                                 |                   | 3.1.6                           | B3.1.6                         |                              |         |                                 |         |                                 |         |
| 241, R.4/6       |                                 |                   | 3.2.1A,<br>3.2.1B,<br>3.2.4     | B3.2.1A,<br>B3.2.1B,<br>B3.2.4 |                              |         |                                 |         |                                 |         |
| 242, R.1/2       |                                 |                   | 3.3.1.8                         | B3.3.1.8                       |                              |         |                                 |         |                                 |         |
| 243/1            |                                 |                   | 3.4.12                          |                                |                              |         |                                 |         |                                 |         |
| 245/2            |                                 |                   | 3.7.5                           | B3.7.5                         |                              |         |                                 |         |                                 |         |
| 246/2            |                                 |                   | 3.3.1                           | B3.3.1                         |                              |         |                                 |         |                                 |         |
| 247/4            |                                 |                   | 3.4.11                          | B3.4.11                        | 3.4.11                       | B3.4.11 |                                 |         |                                 |         |
| 249/3            |                                 | B3.1.8,<br>B3.1.9 |                                 | B3.1.9 <sup>3</sup>            |                              |         |                                 |         |                                 |         |
| 253/10           | 3.8.1                           | B3.8.1            | 3.8.1                           | B3.8.1                         | 3.8.1                        | B 3.8.1 | 3.8.1                           | B 3.8.1 | 3.8.1                           | B 3.8.1 |
| 255, R.1/6       | 3.7.16                          | B3.7.16           | 3.7.17                          | B3.7.17                        | 3.7.18                       | B3.7.18 |                                 |         |                                 |         |
| 256/4            | 3.1.9                           | B3.1.9            | 3.1.9                           | B3.1.9                         |                              |         |                                 |         |                                 |         |
| 258, R.4/5       | 5.2, 5.3,<br>5.5, 5.6,<br>[5.7] |                   | 5.2, 5.3,<br>5.5, 5.6,<br>[5.7] |                                | 5.2, 5.3, 5.5,<br>5.6, [5.7] |         | 5.2, 5.3,<br>5.5, 5.6,<br>[5.7] |         | 5.2, 5.3,<br>5.5, 5.6,<br>[5.7] |         |
| 261/3            | 3.4.5, 3.4.6                    |                   |                                 |                                | 3.4.6                        |         |                                 |         |                                 |         |

<sup>3</sup>In a March 18, 1998 telephone conversation with Jim Davis, NEI, the SA determined that the change to WOG section B3.1.10 in this traveler, would consider approved travelers TSTF-012, R.1 (approved 10/96), and TSTF-014, R.4 (approved 5/97). TSTF-012, R.1, deleted LCO 3.1.9 and LCO 3.1.11 and their associated Bases, and renumbered LCO 3.1.10, and it's associated Bases, to 3.1.9. TSTF-014, R.4, added SR 3.1.10.3 (now SR 3.1.9.3) to WOG B3.1.10 (now B3.1.9) and renumbered SR 3.1.10.3 (now 3.1.9.3) to 3.1.10.4 (now 3.1.9.4).

| TSTF NO./#<br>FILES         | NUREG-1430 (BWOG)                   |   | NUREG-1431 (WOG)                    |   | NUREG-1432 (CEOG)                   |   | NUREG-1433 (BWR/4)  |                       | NUREG-1434 (BWR/6)              |                                    |
|-----------------------------|-------------------------------------|---|-------------------------------------|---|-------------------------------------|---|---------------------|-----------------------|---------------------------------|------------------------------------|
|                             |                                     |   |                                     |   |                                     |   |                     |                       |                                 |                                    |
| 263, R.3/24                 | 3.4.5,<br>3.4.6,<br>3.4.7,<br>3.4.8 | B3.4.5,<br>B3.4.6,<br>B3.4.7,<br>B3.4.8 | 3.4.5,<br>3.4.6,<br>3.4.7,<br>3.4.8 | B3.4.5,<br>B3.4.6,<br>B3.4.7,<br>B3.4.8 | 3.4.5,<br>3.4.6,<br>3.4.7,<br>3.4.8 | B3.4.5,<br>B3.4.6,<br>B3.4.7,<br>B3.4.8 |                     |                       |                                 |                                    |
| 264/11                      | 3.3.9,<br>3.3.10                    | B3.3.1,<br>B3.3.9,<br>B3.3.10           |                                     |   |                                     |   | 3.3.1.1             | B3.3.1.1,<br>B3.3.1.2 | 3.3.1.1                         | B3.3.1.1,<br>B3.3.1.2              |
| 265, R.2/14                 | 3.4.5,<br>3.4.6,<br>3.4.7           | B3.4.5,<br>B3.4.6,<br>B3.4.7            | 3.4.5,<br>3.4.7                     | B3.4.5,<br>B3.4.7                       | 3.4.5,<br>3.4.7                     | B3.4.5,<br>B3.4.7                       |                     |                       |                                 |                                    |
| 266, R.3/12                 | 3.3.18                              | B3.3.18                                 | 3.3.4                               | B3.3.4                                  | 3.3.12A,<br>3.3.12D                 | B3.3.12A,<br>B3.3.12D                   | 3.3.3.2             | B3.3.3.2              | 3.3.3.2                         | B3.3.3.2                           |
| 268/6                       | 3.7.5                               | B3.7.5                                  | 3.7.5                               | B3.7.5                                  | 3.7.5                               | B3.7.5                                  |                     |                       |                                 |                                    |
| 269, R.1/10<br>(superseded) | 3.6.3                               | B3.6.3                                  | 3.6.3                               | B3.6.3                                  | 3.6.3                               | B3.6.3                                  | 3.6.3               | B3.6.3                | 3.6.3                           | B3.6.3                             |
| 269, R.2/16                 | 3.6.3                               | B3.6.3                                  | 3.6.3                               | B3.6.3                                  | 3.6.3                               | B3.6.3                                  | 3.6.1.3,<br>3.6.4.2 | B3.6.1.3,<br>B3.6.4.2 | 3.6.1.3,<br>3.6.4.2,<br>3.6.5.3 | B3.6.1.3,<br>B3.6.4.2,<br>B3.6.5.3 |
| 271, R.1/6                  | 3.4.12                              | B3.4.12                                 | 3.4.12                              | B3.4.12                                 | 3.4.12                              | B3.4.12                                 |                     |                       |                                 |                                    |
| 272, R.1/6                  | 3.9.1                               | B3.9.1                                  | 3.9.1                               | B3.9.1                                  | 3.9.1                               | B3.9.1                                  |                     |                       |                                 |                                    |
| 273, R.2/10                 | 5.5                                 | B3.0                                    | 5.5                                 | B3.0                                    | 5.5                                 | B3.0                                    | 5.5                 | B3.0                  | 5.5                             | B3.0                               |
| 275/4                       |                                     |   |                                     |   |                                     |   | 3.3.5.1             | B3.3.5.1              | 3.3.5.1                         | B3.3.5.1                           |
| 278/5                       | 3.8.6                               |   | 3.8.6                               |   | 3.8.6                               |   | 3.8.6               |                       | 3.8.6                           |                                    |
| 279/5                       | 5.5                                 |   | 5.5                                 |   | 5.5                                 |   | 5.5                 |                       | 5.5                             |                                    |
| 280, R.1/6                  | 3.4.12                              | B3.4.12                                 | 3.4.12                              | B3.4.12                                 | 3.4.12                              | B3.4.12                                 |                     |                       |                                 |                                    |

| TSTF NO./#<br>FILES | NUREG-1430 (BWOG)                   |                                 | NUREG-1431 (WOG)                                 |   | NUREG-1432 (CEOG)  |  | NUREG-1433 (BWR/4)              |                                    | NUREG-1434 (BWR/6) |          |
|---------------------|-------------------------------------|---------------------------------|--|---|--|--|---------------------------------|------------------------------------|--------------------|----------|
| 284, R.3/38         | 1.4,<br>3.1.11,<br>3.4.12,<br>3.7.5 | B3.1.11,<br>B3.4.12,<br>B3.7.5  | 1.4,<br>3.1.11,<br>3.4.11                        | B3.1.11,<br>B3.4.11                                 | 1.4,<br>3.1.4A,<br>3.1.4D,<br>3.1.7A,<br>3.1.7D,<br>3.2.1A,<br>3.2.1D,<br>3.2.3D,<br>3.2.4D,<br>3.3.8.3D,<br>3.3.8.3D,<br>3.4.11,<br>3.7.5 | B3.1.4A,<br>B3.1.4D,<br>B3.1.7A,<br>B3.1.7D,<br>B3.2.1A,<br>B3.2.1D,<br>B3.2.4D,<br>B3.3.8.3D,<br>B3.3.8.3D,<br>B3.4.11,<br>B3.7.5 | 1.4                             |                                    | 1.4                |          |
| 285, R.1/6          | 3.4.12                              | B3.4.12                         | 3.4.12   | B3.4.12   | 3.4.12   | B3.4.12  |                                 |                                    |                    |          |
| 287, R.4/26         | 3.7.10,<br>3.7.12,<br>3.7.13        | B3.7.10,<br>B3.7.12,<br>B3.7.13 | 3.7.10,<br>3.7.12,<br>3.7.13,<br>3.7.14          | B3.7.10,<br>B3.7.12,<br>B3.7.13,<br>B3.7.14         | 3.7.11,<br>3.7.13,<br>3.7.14,<br>3.7.15  | B3.7.11,<br>B3.7.13,<br>B3.7.14,<br>b3.7.15  | 3.7.4                           | B3.7.4                             | 3.7.3              | B3.7.3   |
| 289/12              | 3.7.2, 3.7.3                        | B3.7.2,<br>B3.7.3               | 3.7.2,<br>3.7.3                                  | B3.7.2,<br>B3.7.3                                   | 3.7.2, 3.7.3   | B3.7.2,<br>B3.7.3  |                                 |                                    |                    |          |
| 290/6               |                                     |                                 | 3.2.1A,<br>3.2.1B,<br>3.2.1C<br>(new<br>section) | B3.2.1A,<br>B3.2.1B,<br>B3.2.1C<br>(new<br>section) |  |  |                                 |                                    |                    |          |
| 291/2               | 3.3.10,                             | B3.3.10                         |  |   |  |  |                                 |                                    |                    |          |
| 292/1               |                                     | B3.3.1                          |  |   |  |  |                                 |                                    |                    |          |
| 293/1               | B3.3.9                              |                                 |  |   |  |  |                                 |                                    |                    |          |
| 295/10              | 3.3.1.7                             | B3.3.1.7                        | 3.3.3  | B3.3.3  | 3.3.11   | B3.3.11  | 3.3.3.1                         | B3.3.3.1                           | 3.3.3.1            | B3.3.3.1 |
| 297, R.1/8          |                                     |                                 |  |   |  |  | 3.3.2.2,<br>3.3.4.1,<br>3.3.4.2 | B3.3.2.2,<br>B3.3.4.1,<br>B3.3.4.2 | 3.3.4.2            | B3.3.4.2 |

| TSTF NO./#<br>FILES | NUREG-1430 (BWOG) |        | NUREG-1431 (WOG) |                   | NUREG-1432 (CEOG)  |                      | NUREG-1433 (BWR/4) |                   | NUREG-1434 (BWR/6) |                   |
|---------------------|-------------------|--------|------------------|-------------------|--------------------|----------------------|--------------------|-------------------|--------------------|-------------------|
|                     |                   |        |                  |                   |                    |                      |                    |                   |                    |                   |
| 298/4               |                   |        |                  |                   |                    |                      | 3.4.3              | B3.4.3            | 3.4.4              | B3.4.4            |
| 300/10              | 3.8.2             | B3.8.2 | 3.8.2            | B3.8.2            | 3.8.2              | B3.8.2               | 3.8.2              | B3.8.2            | 3.8.2              | B3.8.2            |
| 301/8               |                   |        |                  |                   |                    |                      | 3.5.1, 3.5.3       | B3.5.1,<br>B3.5.3 | 3.5.1,<br>3.5.3    | B3.5.1,<br>B3.5.3 |
| 303/2               |                   |        |                  |                   | 3.1.8A,<br>3.1.9D  |                      |                    |                   |                    |                   |
| 305/4               |                   |        |                  |                   | 3.1.9A,<br>3.1.10D | B3.1.9A,<br>B3.1.10D |                    |                   |                    |                   |
| 307/2               |                   |        |                  |                   | 3.4.10             | B3.4.10              |                    |                   |                    |                   |
| 309, R.2/2          |                   |        | 3.4.11           | B3.4.11           |                    |                      |                    |                   |                    |                   |
| 311/2               |                   |        | 3.3.1            | B3.3.1            |                    |                      |                    |                   |                    |                   |
| 312, R.1/6          | 3.9.3             | B3.9.3 | 3.9.4            | B3.9.4            | 3.9.3              | B3.9.3               |                    |                   |                    |                   |
| 314/4               |                   |        | 3.1.5,<br>3.2.4  | B3.1.5,<br>B3.2.4 |                    |                      |                    |                   |                    |                   |
| 315/2               |                   |        | 3.1.10           | B3.1.10           |                    |                      |                    |                   |                    |                   |
| 316, R.1/3          |                   | B3.5.1 |                  | B3.5.1            |                    | B3.5.1               |                    |                   |                    |                   |
| 318/2               |                   |        |                  |                   |                    |                      | 3.5.1              | B3.5.1            |                    |                   |
| 319/4               |                   |        |                  |                   |                    |                      | 3.7.7              | B3.7.7            | 3.7.6              | B3.7.6            |
| 322,R.2/8           |                   |        | 3.6.19           | B3.6.19           | 3.6.11             | B3.6.11              | 3.6.4.1            | B3.6.4.1          | 3.6.4.1            | B3.6.4.1          |
| 323/2               |                   |        |                  |                   |                    |                      | 3.6.1.3            | B3.6.1.3          |                    |                   |
| 324, R.1/4          |                   |        |                  |                   | 3.3.1D,<br>3.3.2D  | B3.3.1D,<br>B3.3.2D  |                    |                   |                    |                   |
| 325/6               | 3.5.2             | B3.5.2 | 3.5.2            | B3.5.2            | 3.5.2              | B3.5.2               |                    |                   |                    |                   |
| 326/1               |                   |        |                  |                   |                    | B3.7.10              |                    |                   |                    |                   |

| TSTF NO./#<br>FILES | NUREG-1430 (BWOG) |                    | NUREG-1431 (WOG)        |                   | NUREG-1432 (CEOG) |         | NUREG-1433 (BWR/4) |           | NUREG-1434 (BWR/6) |          |
|---------------------|-------------------|--------------------|-------------------------|-------------------|-------------------|---------|--------------------|-----------|--------------------|----------|
| 327/4               | 3.3.9,<br>3.3.10  | B3.3.9,<br>B3.3.10 |                         |                   |                   |         |                    |           |                    |          |
| 328/1               |                   |                    | 3.3.2                   |                   |                   |         |                    |           |                    |          |
| 329/1               |                   |                    |                         | B3.4.17           |                   |         |                    |           |                    |          |
| 331/1               |                   |                    |                         | B3.1.5            |                   |         |                    |           |                    |          |
| 338/2               |                   |                    | 3.2.1A                  | B3.2.1A           |                   |         |                    |           |                    |          |
| 339, R.1/5          |                   |                    | 2.0,<br>3.3.1,<br>3.4.1 | B2.1.1,<br>B3.4.1 |                   |         |                    |           |                    |          |
| 348/5               | 5.6               |                    | 5.6                     |                   | 5.6               |         | 5.6                |           | 5.6                |          |
| 350/1               |                   |                    |                         |                   |                   | B3.1.5D |                    |           |                    |          |
| 351/2               |                   |                    |                         |                   | 3.7.10            | B3.7.10 |                    |           |                    |          |
| 353/4               |                   |                    |                         |                   |                   |         | 3.4.10             | B3.4.10   | 3.4.11             | B3.4.11  |
| 355/8               |                   | B3.3.1             | 3.3.1,<br>3.3.2         | B3.3.1,<br>B3.3.2 |                   | B3.3.1  |                    | B3.3.1.1. |                    | B3.3.1.1 |
|                     |                   |                    |                         |                   |                   |         |                    |           |                    |          |

| EDIT NO./#<br>FILES | NUREG-1430 (BWOG) |      | NUREG-1431 (WOG) |  | NUREG-1432 (CEOG) |   | NUREG-1433 (BWR/4) |  | NUREG-1434 (BWR/6) |  |
|---------------------|-------------------|------|------------------|--|-------------------|---|--------------------|--|--------------------|--|
| 011/5               |                   |      |                  |  | 3.3.1             | B3.3.1,<br>B3.3.2,<br>B3.3.3,<br>B3.3.5 |                    |  |                    |  |
| 012/2               | 3.0               | B3.0 |                  |  |                   |   |                    |  |                    |  |

| EDIT NO./#<br>FILES | NUREG-1430 (BWOG) |  | NUREG-1431 (WOG) |  | NUREG-1432 (CEOG)  |   | NUREG-1433 (BWR/4) |  | NUREG-1434 (BWR/6) |  |
|---------------------|-------------------|--|------------------|--|--|---|--------------------|--|--------------------|--|
| 013/12              |                   |  |                  |  | 3.1.4(A),<br>3.1.4(D),<br>3.2.1(A),<br>3.2.3(A),<br>3.2.5(A) | B3.2.1(A),<br>B3.2.2(A),<br>B3.2.3(A),<br>B3.2.4(A),<br>B3.2.5(A),<br>B3.2.1(D),<br>B3.2.2(D) |                    |  |                    |  |

DOCUMENT NAME: C:\WP\ISTS\MATRIX.WPD

**Proposed New Actions for UHS TS**  
**Establish Periodic Remedial Actions to Permit Continued Operation Indefinitely**

| CONDITION                            | REQUIRED ACTION   | COMPLETION TIME   |
|--------------------------------------|---|---|
| B. [ Water level of UHS below limit. | B.1 Verify required cooling capacity maintained.        | [1] hour<br><u>AND</u><br>Once per [8] hours thereafter |
|                                      | <u>AND</u><br>B.2 Verify UHS level $\geq$ [ ] ft.       | Once per [8] hours ]                                    |
| C. [ Temperature of UHS above limit. | C.1 Verify required cooling capacity maintained.        | [1] hour<br><u>AND</u><br>Once per [8] hours thereafter |
|                                      | <u>AND</u><br>C.2 Verify UHS temperature $\leq$ [ ] °F. | Once per [8] hours ]                                    |

**Issue 1 Restrictions on the Evaluation to Verify Required Cooling Capacity is Maintained**

Details of what constitutes maintaining the required cooling capacity should be described in the Bases for the Actions; for example, it should utilize the analysis of record. More specifically, we need to somehow capture the criteria that when the primary temperature and level requirements are not met, the evaluation justifying continued operation must be consistent with the analysis of record. The only difference being that during the period when the primary level and temperature requirements are not met, the licensee can credit the actual conditions that exist (e.g., number of heat exchanger tubes plugged and tube fouling conditions if known, bulk UHS level and temperature, air temperature and humidity, wind conditions, containment temperature, etc.), but no changes in analytical methodology or in other assumptions would be allowed. The worst-case single failure would also have to be assumed.

**Issue 2 Basis for Secondary Level and Temperature Limits**

The secondary level and temperature limits in Required Actions B.2 and C.2, respectively, would be based on plant-specific limitations and would have to be justified in the amendment application. Specifically, these secondary UHS level and temperature limits should be established based on the limitations imposed by plant equipment.

**Issue 3 Basis for Periodic Completion Times**

The periodic Completion Times should reflect reasonable rates of level and temperature changes based on plant experience.

**Issue 4 Option: Relief from Assuming a Single Failure**

If the evaluation justifying continued operation allows an exception to the single failure criteria, then there should be a limitation on the amount of time that could be allowed in this condition. In other words, an Action would have to be constructed to allow operation for only a limited time period.

## TSTF 016 BASES REVIEW

In response to a Modification request by NRC for TSTF 016 Rev 1, the TSTF argued that the existing bases adequately defined "subsystem" for the purposes of 3.8.9. A review of the WOG standard provided the material cited below, which does appear to do an adequate job with one small exception as noted by the bold italics prefix added at one location. (Other NUREGS will have to be reviewed to see if similar material is provided.) However, the Bases for 3.8.9 need to be modified to state precisely why the specification as worded is acceptable. The following replacement for the first sentence in the Bases is suggested:

*"With one or more AC electrical power distribution subsystems inoperable, the minimum safety functions can still be accomplished, assuming no single failure, as long as one set of redundant required equipment (AC buses, distribution panels, motor control centers, load centers) supporting each safety function remains energized to their proper voltages. Redundant required equipment is listed in Table \_\_\_\_\_."*

### WOG B 3.8-1 AC Sources

"The onsite Class 1E AC Distribution System is divided into redundant load groups (trains) so that the loss of any one group does not prevent the minimum safety functions from being performed. Each train has connections to two preferred offsite power sources and a single DG."

### WOG Background, Distribution Systems - Operating (B3.8-79)

"The onsite Class 1E AC, DC and AC Vital bus electrical power distribution systems are divided by train into [two] redundant and independent AC, DC and AC Vital bus electrical power distribution subsystems."

"The AC electrical power subsystem for each train consists of a primary ESF 4.16 kv bus, and secondary [480 and 120] V buses, distribution panel, motor control centers and load centers."

"The secondary AC electrical power distribution *subsystem* for each train includes the safety related load centers, motor control centers, and distribution panels shown in Table B3.8.9-1."

"The list of all required distribution buses is presented in Table B3.8.9-1".

### WOG LCO B3.8-81

"OPERABLE" AC electrical power distribution subsystems require the assorted buses, load centers, motor energized to their proper voltages."

TSTF - 16 STS Comparisons

| BWO (NUREG-1430)  | WOG (NUREG1431)   | CEOG (NUREG1432)  | BWR4 (NUREG1433)  | BWR6 (NUREG1434)   |
|---|---|---|---|--|
| <b>3.8.1 BASES BACKGROUND</b>   |   |   |   |  |
| <p>The onsite Class 1E AC Distribution System is divided into redundant load groups (trains) so that the loss of any one group does not prevent the minimum safety functions from being performed. Each train has connections to two preferred offsite power sources and a single DG.</p> | <p>The onsite Class 1E AC Distribution System is divided into redundant load groups (trains) so that the loss of any one group does not prevent the minimum safety functions from being performed. Each train has connections to two preferred offsite power sources and a single DG.</p> | <p>The onsite Class 1E AC Distribution System is divided into redundant load groups (trains) so that the loss of any one group does not prevent the minimum safety functions from being performed. Each train has connections to two preferred offsite power sources and a single DG.</p> | <p>The Class 1E AC distribution system is divided into redundant load groups, so loss of any one group does not prevent the minimum safety functions from being performed. Each load group has connections to two preferred offsite power supplies and a single DG.</p> | <p>The Class 1E AC distribution system supplies electrical power to three divisional load groups, with each division powered by an independent Class 1E 4.16 kV ESF bus (refer to LCO 3.8.9, "Distribution Systems - Operating"). Each ESF bus has three separate and independent offsite sources of power. Each ESF bus has a dedicated onsite DG. The ESF systems of any two of the three divisions provide for the minimum safety functions necessary to shut down the unit and maintain it in a safe shutdown condition.</p> |

| BWOG (NUREG-1430)   | WOG (NUREG1431)   | CEOG (NUREG1432)  | BWR4 (NUREG1433)   | BWR6 (NUREG1434)   |
|---|---|---|--|--|
| <b>3.8.9 BASES BACKGROUND</b>   |   |   |  |  |
| <p>The onsite Class 1E AC, DC, and AC vital bus electrical power distribution systems are divided by train into [two] redundant and independent AC, DC, and AC vital bus electrical power distribution subsystems.</p>      | <p>The onsite Class 1E AC, DC, and AC vital bus electrical power distribution systems are divided by train into [two] redundant and independent AC, DC, and AC vital bus electrical power distribution subsystems.</p>      | <p>The onsite Class 1E AC, DC, and AC vital bus electrical power distribution systems are divided by train into [two] redundant and independent AC, DC, and AC vital bus electrical power distribution subsystems.</p>  | <p>The onsite Class 1E AC and DC electrical power distribution system is divided into redundant and independent AC, DC, and AC vital bus electrical power distribution subsystems.</p>                       | <p>The onsite Class 1E AC and DC electrical power distribution system is divided by division into three independent AC, DC, and AC vital bus electrical power distribution subsystems.</p>   |
| <p>The AC electrical power subsystem for each train consists of a primary Engineered Safety Feature (ESF) 4.16 kV bus and secondary [480 and 120] V buses, distribution panels, motor control centers and load centers.</p> | <p>The AC electrical power subsystem for each train consists of a primary Engineered Safety Feature (ESF) 4.16 kV bus and secondary [480 and 120] V buses, distribution panels, motor control centers and load centers.</p> | <p>The AC primary electrical power distribution system consists of two 4.16 kV Engineered Safety Feature (ESF) buses, each having at least [one separate and independent offsite source of power] as well as a dedicated onsite diesel generator (DG) source.</p> | <p>The primary AC distribution system consists of three 4.16 kV Engineered Safety Feature (ESF) buses each having an offsite source of power as well as a dedicated onsite diesel generator (DG) source.</p> | <p>The primary AC distribution system consists of each 4.16 kV Engineered Safety Feature (ESF) bus that has at least one separate and independent offsite source of power, as well as a dedicated onsite diesel generator (DG) source.</p> |

| BWO (NUREG-1430)  | WOG (NUREG1431)   | CEOG (NUREG1432)  | BWR4 (NUREG1433)   | BWR6 (NUREG1434)  |
|---|---|---|--|---|
| The secondary AC electrical power distribution system for each train includes the safety related load centers, motor control centers, and distribution panels shown in Table B 3.8.9-1.   | The secondary AC electrical power distribution system for each train includes the safety related load centers, motor control centers, and distribution panels shown in Table B 3.8.9-1.   | The secondary AC electrical power distribution system for each train includes the safety related load centers, motor control centers, and distribution panels shown in Table B 3.8.9-1.   | The secondary plant distribution system includes 600 VAC emergency buses 2C and 2D and associated load centers, and transformers.              | The secondary plant AC distribution system includes 480 V ESF load centers and associated loads, motor control centers, and transformers. |
| The list of all required distribution buses is presented in Table B 3.8.9-1.  | The list of all required distribution buses is presented in Table B 3.8.9-1.  | The list of all required distribution buses is presented in Table B 3.8.9-1.  | The list of all distribution buses is presented in Table B 3.8.9-1.  | The list of all distribution buses is located in Table [8.1.X.X].   |
| <b>3.8.9 BASES LCO</b>  |   |   |  |   |
| OPERABLE AC electrical power distribution subsystems require the associated buses, load centers, motor control centers, and distribution panels to be energized to their proper voltages. | OPERABLE AC electrical power distribution subsystems require the associated buses, load centers, motor control centers, and distribution panels to be energized to their proper voltages. | OPERABLE AC electrical power distribution subsystems require the associated buses, load centers, motor control centers, and distribution panels to be energized to their proper voltages. | The AC electrical power distribution subsystems require the associated buses and electrical circuits to be energized to their proper voltages. | OPERABLE AC, electrical power distribution subsystems require the associated buses to be energized to their proper voltages.              |

### TSTF STATUS as of March 7, 2000

| <u>TSTF #</u> | <u>Subject</u>                         | <u>Status</u>                |
|---------------|--|------------------------------|
| 016 R.2       | RA added for LCO 3.0.3 Entry on LOF    | TSB reviewing                |
| 052 R.2       | 10CFR50 App J Opt B                    | OG reviewing                 |
| 076 R.1       | Req't for onsite review deleted        | Approved                     |
| 204 R.3       | DC Sources S/D & Inverters             | Approved                     |
| 207 R.3       | CT to Restore Excess Leak Rate         | OG reviewing                 |
| 242 R.1       | SR Freq change to perform PR & IR COT  | Approved; TGD proposes edits |
| 275 R.0       | EDG Start Signals                      | Approved                     |
| 276 R.2       | DG Full Load Rejection Test            | TSB reviewing                |
| 283 R.3       | 3.8 Mode Restriction Notes             | TSB reviewing                |
| 284 R.3       | Met vs Performed                       | Approved                     |
| 286 R.2       | OPS Involving Pos reactivity Additions | TSB reviewing                |
| 287 R.4       | Vent Syst Envelope AOT                 | Approved                     |
| 295 R.0       | PAM Note                               | Approved; TGD proposes edits |
| 297 R.1       | 3.3.2.2 RA; FW-Mn Turb Hi Water Lvl    | Approved                     |
| 306 R.0       | 3.3.6.1 added Action                   | OG to mod Bases              |
| 322 R.2       | Secondary Containment SR Mod           | Approved; TGD proposes edits |
| 330 R.0       | UHS TS Changes                         | OG reviewing                 |
| 332 R.0       | ECCS RTT                               | OG reviewing                 |
| 333 R.1       | DG Performance Time Test               | Rejected                     |
| 334 R.0       | Excess Flow Check Valve SR Freq        | To Be Modified; OG reviewing |
| 340 R.3       | Turb AFW Pump, ADT                     | Approved                     |
| 342 R.0       | SR 3.3.1.5 on PR Cals                  | OG reviewing                 |
| 352 R.0       | Revise CT to reach Mode 4              | Mod required                 |

**TSTF STATUS as of March 7, 2000 (Continued)**

| <u>TSTF #</u> | <u>Subject</u>                       | <u>Status</u>                          |
|---------------|--------------------------------------|--|
| 355 R.0       | RTS & ESF Tables Changes             | Approved                               |
| 356 R.1       | Ice Condenser SR                     | Approved                               |
| 357 R.0       | BWR MCPR SL to COLR                  | Rejected; BWROG Chmn to appeal;        |
| 360 R.0       | Consolidated 3.8 Changes             | Under negotiation (critical path item) |
| 361 R.0       | Note on TS Suspension during SR Perf | SRXB reviewing                         |

## Integrated Industry / NRC Priority List for Travelers to be Incorporated into Revision 2

(Includes all Active Travelers that are not Approved, Withdrawn, or Rejected with Rejection Accepted)

| Traveler #       | Short Title  | Traveler Status               | Responsibility for Next Action/<br>Target Date |            | NRC Contact/<br>Date Sent to<br>NRC                           | Industry<br>Contact |
|------------------|--|-------------------------------|--|------------|---|---------------------|
| TSTF-16, Rev. 2  | Add Action to LCO 3.8.9 to require entry into LCO 3.0.3 when there is a loss of function | NRC Action Pending            | NRC  | Unassigned | Tomlinson, Ed<br>11/23/99                                     | Pontious, Harry     |
| TSTF-52, Rev. 3  | Implement 10 CFR 50, Appendix J, Option B  | Under TSTF Consideration      | TSTF   | Unassigned | Giardina, Bob<br>With TSTF                                    | Buschbaum, Denny    |
| TSTF-207, Rev. 4 | Completion Time for Restoration of Various Excessive Leakage Rates                       | Under TSTF Consideration      | TSTF   | Unassigned | Giardina, Bob<br>With TSTF                                    | Pontious, Harry     |
| TSTF-276, Rev. 2 | Revise DG full load rejection test   | NRC Action Pending            | NRC  | Unassigned | Tomlinson, Ed<br>8/31/99                                      | Pontious, Harry     |
| TSTF-283, Rev. 3 | Modify Section 3.8 Mode restriction Notes  | NRC Action Pending            | NRC  | Unassigned | Tomlinson, Ed<br>1/11/00                                      | Buschbaum, Denny    |
| TSTF-286, Rev. 2 | Define "Operations Involving Positive Reactivity Additions"                              | NRC Action Pending            | NRC  | Unassigned | Tomlinson, Ed<br>1/11/00                                      | Buschbaum, Denny    |
| TSTF-287, Rev. 5 | Ventilation System Envelope Allowed Outage Time  | NRC Action Pending            | NRC  | Unassigned | Giardina, Bob<br>1/11/00                                      | Buschbaum, Denny    |
| TSTF-306, Rev. 1 | Add Action to LCO 3.3.6.1 to give option to isolate the penetration                      | Under TSTF Consideration      | TSTF   | Unassigned | Schulten, Carl<br>With TSTF                                   | Pontious, Harry     |
| TSTF-332, Rev. 0 | ECCS Response Time Testing   | Reviewer Recommends Changes   | TSTF   | Unassigned | <sup>Carl Schulten</sup><br><del>Giltes, Nan</del><br>4/30/99 | Pontious, Harry     |
| TSTF-333, Rev. 1 | Allowed performance time for testing Diesel Generators                                   | NRC Rejects: TSTF Considering | TSTF   | Unassigned | Tomlinson, Ed<br>10/20/99                                     | Pontious, Harry     |
| TSTF-334, Rev. 0 | Relaxed Surveillance Frequency for Excess Flow Check Valve Testing                       | NRC Action Pending            | NRC  | Unassigned | Giardina, Bob<br>6/23/99                                      | Pontious, Harry     |
| TSTF-340, Rev. 3 | Allow 7 day Completion Time for a turbine-driven AFW pump inoperable                     | NRC Action Pending            | NRC  | Unassigned | Harbuck, Craig<br>2/25/00                                     | Weber, Tom          |

## Integrated Industry / NRC Priority List for Travelers to be Incorporated into Revision 2

(Includes all Active Travelers that are not Approved, Withdrawn, or Rejected with Rejection Accepted)

| Traveler #       | Short Title  | Traveler Status                        | Responsibility for Next Action/<br>Target Date |            | NRC Contact/<br>Date Sent to<br>NRC             | Industry<br>Contact |
|------------------|--|--|--|------------|---|---------------------|
| TSTF-342, Rev. 0 | Revise SR 3.3.1.5, Calibration, and associated requirements for power range channels | NRC Requests Changes: TSTF Considering | TSTF   | Unassigned | Schulten, Carl<br>7/20/99                       | Clarkson, Noel      |
| TSTF-352, Rev. 0 | Provide Consistent Completion Time to Reach MODE 4                                   | NRC Requests Changes: TSTF Considering | TSTF   | Unassigned | <del>Weston, Mag</del><br>Tjader, Bob<br>8/4/99 | Weber, Tom          |
| TSTF-355, Rev. 0 | Make changes to RTS and ESF Tables   | Reviewer Recommends Approval           | NRC  | Unassigned | Schulten, Carl<br>1/11/00                       | Buschbaum, Denny    |
| TSTF-357, Rev. 0 | Relocate value for CPR safety limit to the COLR                                      | NRC Action Pending                     | NRC  | Unassigned | Tjader, Bob<br>10/20/99                         | Pontious, Harry     |
| TSTF-360, Rev. 0 | DC Electrical Rewrite  | NRC Action Pending                     | NRC  | Unassigned | Tomlinson, Ed<br>2/25/00                        | Clarkson, Noel      |
| TSTF-361, Rev. 0 | Allow standby SDC/RHR/DHR loop to inoperable to support testing                      | NRC Action Pending                     | NRC  | Unassigned | Weston, Mag<br>12/27/99                         | Weber, Tom          |
| TSTF-362, Rev. 0 | Change to the VFTP in ITS Section 5.0 in accordance with GL 99-02                    | Under TSTF Consideration               | TSTF   | Unassigned | Tjader, Bob<br>With TSTF                        | Weber, Tom          |
| TSTF-363, Rev. 0 | Revise Topical Report references in ITS 5.6.5, COLR                                  | Under TSTF Consideration               | TSTF   | Unassigned | Tjader, Bob<br>With TSTF                        | Pontious, Harry     |

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