



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

November 17, 1999

Mr. James Davis, Director
Operations Department
Nuclear Energy Institute
1776 I Street, N. W.
Suite 400
Washington, DC 20006-3708

Dear Mr. Davis:

This letter transmits a consolidated draft of Standard Technical Specifications (STS) 3.8.4, "DC Sources - Operating," 3.8.5, "DC Sources - Shutdown," and 3.8.6, "Battery Parameters". These specifications were the subject of a meeting on September 20, 1999, between the industry, the NRC staff, and the IEEE Nuclear Task Force (NTF). Following the meeting, we sent a revised draft of the specifications to the meeting participants for comment in a letter dated September 29, 1999. Subsequently, the IEEE NTF met on October 4, 1999, and reached consensus on the specifications. The IEEE NTF reached technical agreement on the specifications in combination with comments provided by the Technical Specification Task Force (TSTF). The comments of the TSTF and the IEEE NTF have been incorporated into the attached revision, with a few exceptions. Comments 3 and 8 regarding different actions for BWRs were not incorporated into the final draft. We agree with these comments and request that the TSTF incorporate them when it prepares markups of the NUREGs 1433 and 1434. In addition, we have decided to leave the current STS Completion Times of 2 hours for STS 3.8.4, Conditions B and C, in brackets in the final draft. We request that the TSTF prepare Bases that include a reviewer's note that explains that any licensee wishing to request a longer Completion Time will need to demonstrate that the longer Completion Time is appropriate for the plant in accordance with the guidance in Regulatory Guide (RG) 1.177, "An Approach for Plant-Specific, Risk-Informed Decision making: Technical Specifications." Our decision was based on the fact that we had no generic risk analysis available that could support a 12-hour Completion Time for all plants and the desire to avoid introducing inconsistencies between STS 3.8.4 and STS 3.8.9.

We request that the TSTF use the attached specifications as the basis for preparing proposed revisions to the STS, including revised Bases sections, for formal submittal to the NRC under the TSTF process. We also request that you withdraw all previous proposed changes related to these same specifications. The Bases should contain sufficient technical depth and detail to provide a clear understanding of the rationale for the requirements, especially any proposed new relaxations from the current specifications. They should also provide guidance on how to determine plant specific parameters where they are required or referenced in the technical specifications (typically found within notes or brackets). This is necessary because of the large number of changes involved in this revision, to ensure that users outside the circle of the specification developers understand how to properly interpret and implement the requirements. It is also necessary because some changes made in the final stages of the development may not have received a comprehensive evaluation. In order to ensure that these changes are incorporated into Revision 2 of the STS, we request that you submit the proposed changes as soon as possible. The NRC staff is committed to expeditiously complete the review of the proposed changes once submitted.

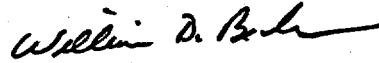
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November 17, 1999

Please contact Nanette Gilles of my staff at (301) 415-1180 or e-mail nvg@nrc.gov if you have any questions or need further information.

Sincerely,



William D. Beckner, Chief
Technical Specifications Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Enclosures: As stated

cc: See attached list

cc:

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Enclosures
Final Draft STS 3.8.4, 3.8.5, and 3.8.6

3.8 ELECTRICAL POWER SYSTEMS

3.8.4 DC Sources – Operating

LC0 3.8.4 The Train A and Train B DC electrical power subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One [or two] battery charger[s on one train] inoperable.</p>	<p>(a) Verify battery[ies] not discharging.</p> <p><u>AND</u></p> <p>(b) Verify battery[ies] terminal voltage is greater than or equal to the minimum required voltage to support OPERABILITY of associated required loads.</p> <p><u>AND</u></p> <p>A.3 Verify associated battery[ies] state of charge is sufficient to perform the design duty cycle.</p> <p><u>AND</u></p> <p>A.4 Restore battery charger[s] to OPERABLE status.</p>	<p>2 hours</p> <p>2 hours and once per 12 hours thereafter</p> <p>Once per 12 hours</p> <p>7 days</p>
<p>B. One [or two] battery[ies on one train] inoperable.</p>	<p>B.1 Restore battery[ies] to OPERABLE status.</p>	<p>[2] hours</p>

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One DC electrical power subsystem inoperable for reasons other than Condition A or B.	C.1 Restore DC electrical power subsystem to OPERABLE status.	[2] hours
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3. <u>AND</u>	6 hours
	D.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.8.4.1 Verify battery terminal voltage is greater than or equal to the minimum established float voltage.	7 days

SURVEILLANCE	FREQUENCY
<p>SR 3.8.4.2 Verify each battery charger supplies \geq [400] amps at greater than or equal to minimum float voltage for \geq [4] hours.</p> <p><u>OR</u></p> <p>Verify each battery charger can recharge the battery to the fully charged state within [24] hours while supplying the largest combined demands of the various continuous steady state loads, after a battery discharge to the bounding design basis event discharge state.</p>	<p>[18 months]</p>
<p>SR 3.8.4.3 -----NOTES-----</p> <ol style="list-style-type: none"> 1. The modified performance discharge test in SR 3.8.6.6 may be performed in lieu of SR 3.8.4.3. 2. This Surveillance shall not be performed in MODE 1, 2, 3, or 4. However, credit may be taken for unplanned events that satisfy this SR. <p>-----</p> <p>Verify battery capacity is adequate to supply, and maintain in OPERABLE status, the required emergency loads for the design duty cycle when subjected to a battery service test.</p>	<p>[18 months]</p>

3.8 ELECTRICAL POWER SYSTEMS

3.8.5 DC Sources – Shutdown

LCO 3.8.5 DC electrical power subsystem shall be OPERABLE to support the DC electrical power distribution subsystem(s) required by LCO 3.8.10, "Distribution Systems - Shutdown."

APPLICABILITY: MODES 5 and 6.
During movement of irradiated fuel assemblies.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One [or two] battery charger[s on one train] inoperable.</p>	<p>3. Verify battery[ies] not discharging.</p>	<p>2 hours</p>
	<p><u>AND</u></p>	
	<p>A.2 Verify battery[ies] terminal voltage is greater than or equal to the minimum required voltage to support OPERABILITY of associated required loads.</p>	<p>2 hours</p>
	<p><u>AND</u></p>	
	<p>A.3 Verify associated battery[ies] state of charge is sufficient to perform the design duty cycle.</p>	<p>Once per 12 hours</p>
	<p><u>AND</u></p>	
	<p>A.4 Restore battery charger[s] to OPERABLE status.</p>	<p>7 days</p>

(continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. One DC electrical power subsystem inoperable for reasons other than Condition A.</p>	<p>B.1 Declare affected required feature(s) inoperable.</p>	<p>Immediately</p>
	<p><u>OR</u></p>	
	<p>B.2.1 Suspend CORE ALTERATIONS.</p>	<p>Immediately</p>
	<p><u>AND</u></p>	
	<p>B.2.2 Suspend movement of irradiated fuel assemblies.</p>	<p>Immediately</p>
<p><u>AND</u></p>		
<p>B.2.3 Initiate action to suspend operations involving positive reactivity additions.</p>	<p>Immediately</p>	
<p><u>AND</u></p>		
<p>B.2.4 Initiate action to restore required DC electrical power subsystems to OPERABLE status.</p>	<p>Immediately</p>	

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.8.5.1 -----NOTE----- The following SRs are not required to be performed: SR 3.8.4.2 and SR 3.8.4.3. -----</p> <p>For DC sources required to be OPERABLE, the following SRs are applicable: SR 3.8.4.1, SR 3.8.4.2, and SR 3.8.4.3.</p>	<p>In accordance with applicable SRs</p>

3.8 ELECTRICAL POWER SYSTEMS

3.8.6 Battery Parameters

-----REVIEWER'S NOTE-----
 The adoption of this specification is contingent upon implementation of a program to monitor battery parameters in accordance with IEEE Standard 450-1995, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Vented Lead-Acid Batteries for Stationary Applications."

LC0 3.8.6 Battery parameters for the Train A and Train B batteries shall be within limits.

APPLICABILITY: When associated DC electrical power subsystems are required to be OPERABLE.

ACTIONS

-----NOTE-----
 Separate Condition entry is allowed for each battery.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more batteries with one or more battery cell float voltages < [2.07] V.	A.1 Perform SR 3.8.4.1. <u>AND</u>	2 hours
	A.2 Perform SR 3.8.6.1. <u>AND</u>	2 hours
	A.3 Restore affected cell voltages to within limit.	24 hours

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. One or more batteries with float current \leq 0 amps or \geq 2 amps.</p>	<p>B.1 Restore battery float current to within limits.</p>	<p>24 hours</p>
<p>-----NOTE----- Required Action C.2 shall be completed if electrolyte level was below the top of plates. -----</p> <p>C. One or more batteries with one or more cells electrolyte level less than minimum established design limits.</p>	<p>C.1 Restore electrolyte level to above top of plates.</p> <p><u>AND</u></p> <p>C.2 -----NOTE----- Only applicable if electrolyte level is below the top of plates. -----</p> <p>Perform SR 3.8.6.5 for affected cell(s).</p> <p><u>AND</u></p> <p>C.3 Restore electrolyte level to greater than or equal to minimum established design limits.</p>	<p>8 hours</p> <p>Once per 12 hours for 7 days</p> <p>31 days</p>

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>D. One or more batteries with pilot cell electrolyte temperature less than minimum established design limits.</p>	<p>D.1 Restore battery pilot cell temperature to greater than or equal to minimum established design limits.</p>	<p>12 hours</p>
<p>E. Required Actions and associated Completion Time of Condition A, B, C, or D not met.</p> <p><u>OR</u></p> <p>One or more batteries float current > 10 amps.</p>	<p>E.1 Declare associated battery inoperable.</p>	<p>Immediately</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.8.6.1 -----NOTE----- Not required to be met when battery terminal voltage is less than the minimum float voltage recommended by the battery manufacturer. ----- Verify each battery float current is > 0 amps and < [2] amps.</p>	7 days
<p>SR 3.8.6.2 Verify each battery pilot cell voltage is \geq [2.07] V.</p>	31 days
<p>SR 3.8.6.3 Verify each battery connected cell electrolyte level is greater than or equal to minimum established design limits.</p>	31 days
<p>SR 3.8.6.4 Verify each battery pilot cell temperature is greater than or equal to minimum established design limits.</p>	31 days
<p>SR 3.8.6.5 Verify each battery connected cell voltage is \geq [2.07] V.</p>	92 days

SURVEILLANCE	FREQUENCY
<p>SR 3.8.6.6 -----NOTE----- This Surveillance shall not be performed in MODE 1, 2, 3, or 4. However, credit may be taken for unplanned events that satisfy this SR. ----- Verify battery capacity is \geq [80]% of the manufacturer's rating when subjected to a performance discharge test or a modified performance discharge test.</p>	<p>60 months AND 12 months when battery shows degradation or has reached [85]% of the expected life with capacity < 100% of manufacturer's rating AND 24 months when battery has reached [85]% of the expected life with capacity \geq 100% of manufacturer's rating</p>

November 17, 1999

Please contact Nanette Gilles of my staff at (301) 415-1180 or e-mail nvg@nrc.gov if you have any questions or need further information.

Sincerely,

Original Signed By

William D. Beckner, Chief
Technical Specifications Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Enclosures: As stated

cc: See attached list

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November 17, 1999

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Sincerely,

Original Signed By

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Technical Specifications Branch
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