

August 14, 2002

Mr. Jay K. Thayer  
Site Vice President - Vermont Yankee  
Entergy Nuclear Vermont Yankee, LLC  
P.O. Box 0500  
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Brattleboro, VT 05302-0500

SUBJECT: VERMONT YANKEE NUCLEAR POWER STATION - ISSUANCE OF  
AMENDMENT RE: OPERABILITY OF ALTERNATE TRAINS (TAC NO.  
MB2760)

Dear Mr. Thayer:

The Commission has issued the enclosed Amendment No. 209 to Facility Operating License DPR-28 for the Vermont Yankee Nuclear Power Station, in response to a Vermont Yankee Nuclear Power Corporation (VYNPC) application dated August 20, 2001, as supplemented on February 13, 2002. On July 31, 2002, VYNPC's interest in the license was transferred to Entergy Nuclear Vermont Yankee, LLC (ENYV) and Entergy Nuclear Operations, Inc. (ENO). On August 6, 2002, ENO requested that the U.S. Nuclear Regulatory Commission (NRC) continue to review and act on all requests before the Commission which had been submitted by VYNPC before the transfer. Accordingly, the NRC staff has acted upon the request.

The amendment changes certain requirements in the Technical Specifications (TSs) associated with demonstrating the operability of alternate trains when redundant equipment is made or found to be inoperable. The TSs revised include: 4.4.B, 4.5.A.2, 4.5.A.3, 4.5.A.4, 4.5.B.2, 4.5.C.2, 4.5.C.3, 4.5.D.2, 4.5.D.3, 4.5.E.2, 4.5.F.2, 4.5.H.1, 4.7.B.3.c, 4.10.B.1, 4.10.B.3.b.2. Some format and typographical errors were also corrected.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

**/RA/**

Robert M. Pulsifer, Project Manager, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosures: 1. Amendment No. 209 to  
License No. DPR-28  
2. Safety Evaluation

cc w/encls: See next page

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AMENDMENT RE: OPERABILITY OF ALTERNATE TRAINS (TAC NO.  
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The Commission has issued the enclosed Amendment No. 209 to Facility Operating License DPR-28 for the Vermont Yankee Nuclear Power Station, in response to a Vermont Yankee Nuclear Power Corporation (VYNPC) application dated August 20, 2001, as supplemented on February 13, 2002. On July 31, 2002, VYNPC's interest in the license was transferred to Entergy Nuclear Vermont Yankee, LLC (ENVY) and Entergy Nuclear Operations, Inc. (ENO). On August 6, 2002, ENO requested that the U.S. Nuclear Regulatory Commission (NRC) continue to review and act on all requests before the Commission which had been submitted by VYNPC before the transfer. Accordingly, the NRC staff has acted upon the request.

The amendment changes certain requirements in the Technical Specifications (TSs) associated with demonstrating the operability of alternate trains when redundant equipment is made or found to be inoperable. The TSs revised include: 4.4.B, 4.5.A.2, 4.5.A.3, 4.5.A.4, 4.5.B.2, 4.5.C.2, 4.5.C.3, 4.5.D.2, 4.5.D.3, 4.5.E.2, 4.5.F.2, 4.5.H.1, 4.7.B.3.c, 4.10.B.1, 4.10.B.3.b.2. Some format and typographical errors were also corrected.

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Sincerely,

**/RA/**

Robert M. Pulsifer, Project Manager, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosures: 1. Amendment No. 209 to  
License No. DPR-28  
2. Safety Evaluation

cc w/encls: See next page

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S. Richards(e-mail SAR)	R. Dennig	G. Hill (2)	C. Anderson, RI
Package:	TSs: ML	**See previous concurrence	
Accession No.: ML021290606	*SE received on 4/30/02. No major changes were made.		

OFFICE	PDI-2/PM	PDI-2/LA	RTSB/SC*	OGC**	PDI-2/SC(A)
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ENTERGY NUCLEAR VERMONT YANKEE, LLC

AND ENTERGY NUCLEAR OPERATIONS, INC.

DOCKET NO. 50-271

VERMONT YANKEE NUCLEAR POWER STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 209  
License No. DPR-28

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. (the licensees) dated August 20, 2001, as supplemented on February 13, 2002, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-28 is hereby amended to read as follows:

(B) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 209, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

Jacob I. Zimmerman, Acting Chief, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: August 14, 2002

ATTACHMENT TO LICENSE AMENDMENT NO. 209

FACILITY OPERATING LICENSE NO. DPR-28

DOCKET NO. 50-271

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

<u>Remove</u>	<u>Insert</u>
93	93
98	98
99	99
100	100
101	101
102	102
103	103
104	104
105	105
106	106
108	108
110	110
111	111
111a	111a
112	112
114	114
154	154
215	215
217a	217a
223	223

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 209 TO FACILITY OPERATING LICENSE NO. DPR-28  
ENTERGY NUCLEAR VERMONT YANKEE, LLC  
AND ENTERGY NUCLEAR OPERATIONS, INC.  
VERMONT YANKEE NUCLEAR POWER STATION  
DOCKET NO. 50-271

## 1.0 INTRODUCTION

By letter dated August 20, 2001, as supplemented on February 13, 2002, the Vermont Yankee Nuclear Power Corporation (the licensee) submitted a request to amend the Vermont Yankee Nuclear Power Station (VYNPC) Technical Specifications (TSs). On July 31, 2002, VYNPC's interest in the license was transferred to Entergy Nuclear Vermont Yankee, LLC (ENVY) and Entergy Nuclear Operations, Inc. (ENO). On August 6, 2002, ENO requested that the U.S. Nuclear Regulatory Commission (NRC) continue to review and act on all requests before the Commission which had been submitted by VYNPC before the transfer. Accordingly, the NRC staff has acted upon the request.

The proposed amendment would revise the TSs to change certain requirements associated with demonstrating the operability of alternate trains when redundant equipment is made or found to be inoperable. The TSs revised include: 4.4.B, 4.5.A.2, 4.5.A.3, 4.5.A.4, 4.5.B.2, 4.5.C.2, 4.5.C.3, 4.5.D.2, 4.5.D.3, 4.5.E.2, 4.5.F.2, 4.5.H.1, 4.7.B.3.c, 4.10.B.1, 4.10.B.3.b.2. Some format and typographical errors were also corrected. The February 13, 2002, supplement was within the scope of the original application and did not change the staff's proposed no significant hazards consideration determination.

## 2.0 BACKGROUND

As part of the TSs improvement program, the NRC staff examined all surveillance requirements (SRs) that required testing during power operation. As stated in Generic Letter (GL) 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation," September 27, 1993, "the staff found that, while the majority of testing at power is important, safety can be improved, equipment degradation decreased, and an unnecessary burden on personnel resources eliminated by reducing the amount of testing that the TSs require during power operation." The recommendations of this study, documented in NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements," December 1992, are incorporated into the model TSs contained in the improved standard TSs (STs), NUREG-1433, Revision 2, "Standard Technical Specifications, General Electric Plants, BWR/4," dated October 10, 2001. The STs are applicable to plant

designs such as Vermont Yankee's; however, Vermont Yankee has not adopted STSs. The NRC staff issued GL 93-05 to assist licensees in preparing a license amendment request to implement the recommended applicable TS changes.

NUREG-1366, Section 10.1 states that some nonstandard TSs require that "if a train or subsystem of certain safety systems other than the diesel generators (for example, a low-head safety-injection pump of [an] emergency core cooling system) is declared inoperable, not only the other train of the particular system but also other equipment of the emergency core cooling systems and the diesel generators must be tested. Thus a failed train in one safety system can cause a great deal of testing of apparently unrelated systems. This type of testing is called 'alternate testing.'" NUREG-1366 used Vermont Yankee TS alternate testing requirements, as they existed prior to issuance of Amendment No. 114 on July 21, 1989, as an example of such alternate testing requirements.

Among the at power SRs recommended for deletion or relaxation by NUREG-1366 and GL 93-05 were the SRs associated with demonstrating the operability of alternate trains when redundant equipment is made or found inoperable. Although such testing can provide a positive demonstration that a loss of safety function has not occurred due to a common cause, the resulting added assurance of operability of the alternate train components is not sufficient to justify the unintended adverse consequences of alternate train testing. NUREG-1366 identified the following drawbacks to alternate train testing:

- Potential for loss of safety function during testing
- Increased system unavailability during testing
- Increased system unavailability due to repair of demand-related and test-related failures
- Reduced reliability due to degradation from testing
- Increased potential of plant transients initiated from testing
- Increased potential for plant shutdown due to transients resulting from testing
- Diversion of operations and maintenance personnel for testing
- Potential increase in occupational radiation exposure from testing

The NRC staff recommended in NUREG-1366, Section 10.1, "that alternate testing requirements be deleted from technical specifications for all plants so that failure of a train or subsystem of a safety-related system other than an emergency diesel generator would not require testing of the diesel generators or any other equipment."

As previously noted, NUREG-1366 used previous Vermont Yankee TSs alternate testing requirements as an example. On December 7, 1987, Vermont Yankee requested a revision to these alternate testing requirements, and the staff approved the requested changes on July 21, 1989 (Amendment No. 114), prior to the publication of NUREG-1366. In its safety evaluation the staff concluded that the elimination of the requested alternate testing

requirements for Vermont Yankee will contribute to the increase in the standby liquid control (SLC) system and emergency core cooling system (ECCS) reliability. However, this amendment did not eliminate all alternate testing requirements from TSs. At the licensee's request, the amendment added the TS requirements that within 24 hours before or after a safety system component or subsystem failure, the specified redundant component(s) or subsystem shall have been or shall be tested.

In its present application dated August 20, 2001, the licensee stated that alternate train testing was unnecessary except in the case of the emergency diesel generators (EDGs) if a common cause failure could make the alternate EDG inoperable. Thus, the licensee proposed to delete or revise the existing alternate train testing requirements, consistent with the recommendations of NUREG-1366, GL 93-05 (Attachment 1), and the STS. In each case, the existing SR typically requires that the component redundant to the component made or discovered to be inoperable shall be or shall have been demonstrated operable within 24 hours. The TS Bases rationale for these SRs is that whenever one subsystem is inoperable, the potential for extended operation with two subsystems inoperable is reduced by requiring that the redundant subsystem be tested within 24 hours.

In the current Vermont Yankee TSs, the limiting condition for operation (LCO) statement typically specifies other safety equipment (if any) that must be maintained operable to continue plant operation for the time specified to restore the inoperable component to operable status. The associated alternate test SR statement typically specifies only the equipment that must be demonstrated operable within 24 hours of entering the inoperability condition stated in the SR.

The following table lists, by change number (#), the current TS requirements the staff considered in evaluating each change the licensee proposed in its application. The SRs proposed for deletion or revision are listed in the last column. All of the listed SRs are proposed for deletion except those associated with change numbers 15 and 16, which are being revised. Regarding change numbers 12, 15, and 16, the inoperability condition stated in the LCO statement differs from the inoperability condition stated in the associated SR statement; the table indicates such differences by stating the SR inoperability condition in brackets.

Change number 2 addresses two minor administrative changes and change number 17 addresses accompanying conforming Bases changes. Acronyms used in the table are:

ACT	alternate cooling tower
ADS	automatic depressurization system
CC	containment cooling
CS	core spray
EDG	emergency diesel generator
HPCI	high pressure coolant injection
LCO	limiting condition for operation
LPCI	low pressure coolant injection
RCIC	reactor core isolation cooling
RHRSW	residual heat removal service water
SGT	standby gas treatment
SLC	standby liquid control
SR	surveillance requirement
SSW	station service water

#	Associated LCO No., Inoperability Condition, and Allowed Time to Restore Component Operability	Components Required by LCO to be Operable	Current SR No. and Components Required to be Demonstrated Operable within 24 Hours
1	3.4.B One redundant SLC system component inoperable - 7 days	Redundant SLC subsystem	4.4.B Operable redundant SLC system component
2	(a) Administrative change to replace "Applied" with "Applies" in Applicability statement of TS 4.5; (b) Administrative change to correct numbering of TS 4.5.G.1.c (page 108) to 4.5.G.1.d.		
3	3.5.A.2 One CS subsystem inoperable - 7 days	All active components of redundant CS subsystem, both LPCI subsystems, and EDGs	4.5.A.2 Redundant CS subsystem active components
4	3.5.A.3 One LPCI pump inoperable - 7 days	Remaining active components of the LPCI CC subsystem and all active components of both CS subsystems, and the EDGs	4.5.A.3 Remaining operable LPCI pumps
5	3.5.A.4.b One LPCI subsystem inoperable - 7 days	All active components of the other LPCI and the CC subsystem, all active components of both CS subsystems, and the EDGs	4.5.A.4 Redundant LPCI subsystem active components (except recirculation system discharge valves)
6	3.5.B.2 One CC subsystem inoperable - 30 days	Remaining CC subsystem	4.5.B.2 Active components of the redundant CC subsystem
7	3.5.C.2 One RHRSW pump inoperable - 30 days	All other active components of the RHRSW subsystem	4.5.C.2 Remaining operable RHRSW pumps
8	3.5.C.3 One RHRSW subsystem inoperable - 7 days	All active components of the other RHRSW subsystem, both CS subsystems, and both DGs	4.5.C.3 Active components of the redundant RHRSW subsystem
9	3.5.D.2 SSW system unable to provide adequate cooling to one of two essential equipment cooling loops - 15 days	All other active components of the remaining essential equipment cooling loop and the SSW and ACT systems	4.5.D.2 Remaining active components of the SSW system, both essential equipment cooling loops, and the ACT fan

#	Associated LCO No., Inoperability Condition, and Allowed Time to Restore Component Operability	Components Required by LCO to be Operable	Current SR No. and Components Required to be Demonstrated Operable within 24 Hours
10	3.5.D.3 ACT system inoperable - 7 days	All active components of the SSW system and both essential equipment cooling loops	4.5.D.3 All active components of the SSW system and both essential equipment cooling loops
11	3.5.E.2 HPCI system inoperable - 14 days	All active components of the automatic depressurization subsystems, the CS subsystems, the LPCI subsystems, and the RCIC system	4.5.E.2 ADS (perform functional test of trip system logic)
12	3.5.F.2 One of four ADS relief valves inoperable due to malfunction of the electrical portion of the valve - 7 days [4.5.F.2 - One ADS relief valve inoperable]	Remaining automatic relief system valves and the HPCI system	4.5.F.2 HPCI system
13	3.5.H.1 One EDG inoperable - 7 days	All of the LPCI, CS and CC subsystems connecting to the operable EDG	4.5.H.1 Remaining EDG
14	3.7.B.3.b One SGT system train inoperable - 7 days	All active components of the other SGT system and the associated EDG	4.7.B.3.c Remaining SGT System train
15	3.10.B.1 One EDG or its associated buses inoperable - 7 days (per TS 3.5.H.1) [4.10.B.1 - one EDG inoperable]	All of the LPCI, CS and CC subsystems connecting to the operable EDG (per TS 3.5.H.1)	4.10.B.1 Remaining EDG (per TS 4.5.H.1) (This TS is replaced with STS 3.8.1 Required Actions B.3.1 and B.3.2.)
16	3.10.B.3.b Either offsite power source and one EDG inoperable [4.10.B.3.b - either offsite power source and one EDG or associated buses unavailable]	Remaining offsite power source, remaining EDG, associated emergency buses and all low pressure core and containment cooling systems	4.10.B.3.b.2 Remaining EDG (This TS is replaced with a requirement to meet TS 4.10.B.1 within 24 hours.)

#	Associated LCO No., Inoperability Condition, and Allowed Time to Restore Component Operability	Components Required by LCO to be Operable	Current SR No. and Components Required to be Demonstrated Operable within 24 Hours
17	<p>(a) Deletion in Bases Sections 3.5.A for the CS and LPCI systems, 3.5.B and 3.5.C for the CS and RHRSW systems, and 4.5. H for the EDGs.</p> <p>(b) Replace the word “demonstrating” with the word “requiring” in Bases Section 3.5.D for the SSW and ACT systems.</p> <p>(c) Clarification of discussion in Bases Section 3.5.H regarding LPCI subsystem operability during shutdown and refueling conditions when aligned to the RHR mode of operation.</p> <p>(d) Clarification of reference to Specification 4.5.I in Bases Section 4.5.I regarding maintenance of Filled Discharge pipe.</p> <p>(e) Addition of basis for revised action requirements for an inoperable DG in revised TS 4.10.B in Bases Section 4.10.B.</p>		

### 3.0 REGULATORY EVALUATION

The licensee identified in its submittal the following regulatory requirements and guidance as applicable to its proposal to delete or modify alternate testing requirements:

- Generic Letter 87-09, “Sections 3.0 and 4.0 of the Standard Technical Specifications on the Applicability of Limiting Conditions for Operation and Surveillance Requirements,” June 4, 1987
- Generic Letter 84-15, “Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability,” July 2, 1984
- Generic Letter 93-05, “Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation,” September 27, 1993
- Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.92

The staff evaluated the regulatory requirements and guidance that the licensee identified and found them appropriate. In addition to the above regulatory requirements and guidance, the staff based its acceptance criteria on:

- The descriptions of LCOs and SRs in 10 CFR 50.36 Sections (c)(2) and (c)(3)

- NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements," December 1992
- Vermont Yankee Final Safety Analysis Report (FSAR)
- The model TSs contained in the Improved Standard Technical Specifications (STSS), NUREG-1433, Revision 2, "Standard Technical Specifications, General Electric Plants, BWR/4," dated October 10, 2001; Specifications:

3.1.7	SLC System
3.5.1	ECCS - Operating
3.6.2.3	RHR Suppression Pool Cooling
3.6.2.4	RHR Suppression Pool Spray
3.6.4.3	SGT System
3.7.1	RHRSW System
3.7.2	Plant Service Water System and Ultimate Heat Sink, and
3.8.1	AC Sources - Operating

#### 4.0 EVALUATION

The staff has reviewed the licensee's regulatory and technical analyses in support of its proposed license amendment, which are described in Attachment 1 of the licensee's submittal.

#### 4.1 Alternate Test Requirements

##### 4.1.1 Alternate Test Requirements Being Deleted

The licensee has proposed to delete the alternate testing requirements for the SLC system, the ECCS systems, CC system, RHRSW system, SSW and ACT systems, and the SGT system. In its application, the licensee stated that these changes would eliminate the requirement for unnecessary component testing in the event a single redundant component is made or discovered to be inoperable. As discussed in NUREG-1366, the staff has previously concluded that meeting the normal periodic SRs provides adequate assurance of operability and availability of the remaining redundant component(s). Specifically, the inservice test (IST) program periodic and post-maintenance testing required by TS 4.6.E.2 and 10 CFR 50.55a, as well as the following periodic surveillance requirements, can be relied upon to ensure operability of the redundant component(s) during the specified time permitted to repair the inoperable component(s) without reliance on alternate testing.

#	<u>Deleted SR</u>	<u>System/Component</u>	<u>Periodic SRs</u>
1	4.4.B	standby liquid control system	4.4.A.1 - 6, 4.6.E.2
3	4.5.A.2	core spray system	4.5.A.1.a - c, 4.6.E.2
4	4.5.A.3	low pressure coolant injection pump	4.5.A.1.a - c, 4.6.E.2
5	4.5.A.4	low pressure coolant injection system	4.5.A.1.a - c, 4.6.E.2
6	4.5.B.2	containment cooling system	4.5.B.1, 4.6.E.2
7	4.5.C.2	residual heat removal service water pumps	4.5.C.1, 4.6.E.2
8	4.5.C.3	residual heat removal service water system	4.5.C.1, 4.6.E.2
9	4.5.D.2	station service water system	4.5.D.1, 4.6.E.2

10	4.5.D.3	alternate cooling tower system	4.5.D.1, 4.6.E.2
11	4.5.E.2	high pressure coolant injection system	4.5.E.1.a - d, 4.6.E.2
12	4.5.F.2	automatic depressurization system	4.5.F.1, 4.6.E.2
14	4.7.B.3.c	standby gas treatment system	4.7.B.1, 4.7.B.2, 4.7.B.3.a, 4.7.B.3.b, 4.6.E.2

The SRs proposed for deletion actually constitute action requirements for the condition of one redundant component or subsystem inoperable. However, these actions only provide marginal additional assurance of the operability of the tested components, and may have an overall cumulative negative effect on plant safety for reasons noted in Section 2.0 of this SE. Other LCO actions (described in Section 2.0) require other components or subsystems to be operable as a condition of continuing plant operation for the specified operability restoration completion time. For inoperable ECCS systems, the LCO-required operable systems ensure adequate core cooling in the event of a design-basis accident. For the other systems listed, the LCO-required operable equipment and subsystems ensure that the intended mitigative or support function(s) of the inoperable component or subsystem can be accomplished if needed. The proposed deletions of the above listed SRs for alternate testing are acceptable because (a) the associated LCOs require the operability of the other components and subsystems required for plant safety (without assuming a single active failure) as a condition for continuing plant operation for the specified repair time, and (b) meeting the specified periodic SRs for the LCO-required operable components and subsystems provides adequate assurance of their operability.

#### 4.1.2 Alternate Test Requirements Being Revised

The licensee proposed to revise the following alternate test requirements for the remaining emergency diesel generator (EDG) in the event an EDG is inoperable, or an offsite source and an EDG or associated buses are inoperable. The revised requirements are similar to the action requirements of STS 3.8.1, AC Sources - Operating.

#	<u>Revised SR</u>	<u>Component Tested</u>	<u>Inoperable Component</u>	<u>Periodic SRs</u>
13	4.5.H.1	Remaining EDG	Inoperable EDG	4.6.E.2
15	4.10.B.1	Remaining EDG	Inoperable EDG	4.10.A
16	4.10.B.3.b.2	Remaining EDG	Either offsite power source and EDG or associated buses	4.10.A

##### 4.1.2.1 Changes to Specifications 4.5.H.1 and 4.10.B.1

In the event one EDG is inoperable, TS 4.10.B.1 specifies alternate testing of the remaining EDG by requiring that Specification 4.5.H.1 be satisfied. TS 4.5.H.1 requires that the remaining EDG shall have been or shall be demonstrated to be operable within 24 hours in the event one EDG is inoperable. The licensee proposed to delete TS 4.5.H.1 and replace the reference to it in TS 4.10.B.1 with an explicit action to test the EDG as currently required, but only if a common cause failure of the other EDG cannot be ruled out.

The revised action requirement of TS 4.10.B.1 is consistent with STS 3.8.1 Required Actions B.3.1 and B.3.2, for the condition of one inoperable EDG, except that the STS would not permit taking credit for an EDG test within the 24-hour period prior to entering the condition:

When one of the emergency diesel generators is made or found to be inoperable:

- a. Within 24 hours determine that the remaining diesel generator is not inoperable due to common cause failure; or
- b. The remaining EDG shall have been or shall be demonstrated to be operable within 24 hours.

Drawing from the Bases for STS 3.8.1 Required Action B.3, the proposed Bases for revised Specification 4.10.B.1 state that this specification “provides an allowance to avoid unnecessary testing of the operable EDG. If it can be determined that the cause of the inoperable EDG (e.g., removal from service to perform routine maintenance or testing) does not exist on the operable EDG, demonstration of operability of the remaining EDG does not have to be performed. If the cause of inoperability exists on the other EDG, it is declared inoperable upon discovery, and LCO 3.5.H.1 requires reactor shutdown within 24 hours. Once the failure is repaired, and the common cause failure no longer exists, Specification 4.10.B.1.a is satisfied. If the cause of the initial inoperable EDG cannot be confirmed not to exist on the remaining EDG, performance of SR 4.10.B.1.b suffices to provide assurance of continued operability of that EDG.” The operability demonstration of Specification 4.10.B.1.b may consist of successfully performing the test required by TS 4.10.A.1.a, which corresponds to STS SR 3.8.1.2, and is referenced in STS 3.8.1 Required Action B.3.2.

The proposed Bases for Specification 4.10.B.1.a also state, “According to Generic Letter 84-15, 24 hours is a reasonable time to confirm that the operable EDG is not affected by the same problem as the inoperable EDG.” This is also consistent with the STS Bases.

The revised Specification 4.10.B.1 is acceptable because (a) it will eliminate the requirement for performing unnecessary EDG testing thereby reducing degradation from testing, (b) LCO 3.5.H.1 will require the operability of the other components and subsystems required for plant safety (without assuming a single active failure) as a condition for continuing plant operation for the specified repair time of 7 days, and (c) having met the specified periodic SRs for the EDGs provides adequate assurance of the operability of the remaining EDG, provided the cause of the EDG failure could not affect the other EDG.

#### 4.1.2.2 Changes to Specification 4.10.B.3.b.2

In the event either offsite power source and one EDG or associated buses are unavailable (interpreted to mean inoperable), TS 4.10.B.3.b.2 requires that the remaining EDG shall have been or shall be demonstrated operable within 24 hours. The licensee proposed to replace this action with “[When either offsite power source and one diesel or associated buses are unavailable] The requirements of Specification 4.10.B.1 shall be met within 24 hours.” This action is acceptable for the reasons given above for revised TS 4.10.B.1, and because TS 4.10.B.3.b.1, consistent with STS 3.8.1 Required Action A.1, requires that the other offsite power source shall have been or shall be verified operable within 1 hour and once per 8 hours thereafter. In addition, the specification also requires verifying at the same frequency the

operability of all low pressure core and containment cooling systems. Further, LCO 3.10.B.3.b permits continued operation for just 24 hours in this condition as long as the remaining offsite power source, the remaining EDG, associated emergency buses and all low pressure core and containment cooling systems are operable.

The revised Specification 4.10.B.3.b.2 is acceptable because (a) it will preclude performing unnecessary EDG testing thereby reducing degradation from testing, (b) LCO 3.10.B.3.b will require the operability of the other components and subsystems required for plant safety (without assuming a single active failure) as a condition for continuing plant operation for the specified repair time of 24 hours, (c) TS 4.10.B.3.b.1 will require frequent periodic verification of the operability of the remaining offsite source and all low pressure core and containment cooling systems, and (d) having met the specified periodic SRs for the EDGs provides adequate assurance of the operability of the remaining EDG, provided the cause of the EDG failure could not affect the other EDG.

#### 4.1.2.3 Conflicting TS Requirements

When both an offsite source and an EDG are inoperable, the condition that all low pressure core and containment cooling systems be operable cannot be met because of the Vermont Yankee TS definition of operability, which requires both normal and emergency power. Because the affected supported safety equipment would be inoperable, LCO 3.10.B.3.b effectively requires placing the plant in cold shutdown in 24 hours any time both an offsite source and an EDG are simultaneously inoperable. (The staff noted that LCO 3.10.B.3.a, for an inoperable offsite source, would also effectively require placing the plant in cold shutdown in 24 hours.)

By application dated February 26, 2002, the licensee proposed TS changes (Proposed Change No. 254) to correct this and other similar conflicting TS requirements. Such conflicts follow from the current TS definition of operability during operation within LCO action requirements for inoperable AC sources. The licensee's proposed TS changes are currently under staff review. Such inconsistent TS requirements do not alter the conclusion that the proposed change to TS 4.10.B.3.b.2 is acceptable.

#### 4.2 Administrative Changes

The licensee proposed two editorial corrections as change number 2:

- Replace "Applied" with "Applies" in Applicability statement of TS 4.5;
- Correct numbering of TS 4.5.G.1.c (page 108) to 4.5.G.1.d.

The two editorial corrections are acceptable because they are purely administrative.

#### 4.3 Bases Changes

The licensee proposed appropriate conforming changes to the TS Bases, as described in Section 2.0 under change number 17. The staff verified that the associated changes to the TS Bases adequately explained the technical basis for the revised requirements. Therefore, the staff has no objection to the proposed Bases changes.

#### 4.4 Conclusion

The proposed changes to the alternate test requirements will eliminate the requirement for unnecessary testing of safety equipment there by reducing its potentially adverse consequences from unnecessary testing. The Vermont Yankee TSs will continue to provide adequate assurance of the operability of the remaining redundant components or subsystems needed to ensure plant safety in the event of a design-basis accident (without assuming a single failure) during the specified allowed outage times. The two editorial corrections are acceptable because they are purely administrative. The staff, therefore, finds that the changes proposed by the licensee regarding alternate testing requirements are acceptable.

#### 5.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Vermont State official was notified of the proposed issuance of the amendment. The State official had no comments.

#### 6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in amounts, and no significant change in the types of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (66 FR 48292). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

#### 6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: C. Harbuck

Date: August 14, 2002