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October 25, 2000
BVY 00-98

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Subject: **Vermont Yankee Nuclear Power Station**
License No. DPR-28 (Docket No. 50-271)
Technical Specification Proposed Change No. 241
125 Vdc Main Station Battery Chargers

Pursuant to 10CFR50.90, Vermont Yankee (VY) hereby proposes to amend its Facility Operating License, DPR-28, by incorporating the attached proposed change into the VY Technical Specifications. This change revises the main station battery specifications to acknowledge the addition of a second charger to each system.

Attachment 1 to this letter contains supporting information and the safety assessment of the proposed change. Attachment 2 contains the determination of no significant hazards consideration. Attachment 3 provides the marked-up version of the current Technical Specification and Bases pages showing the changes requested. Attachment 4 is the re-typed Technical Specification and Bases pages.

VY has reviewed the proposed Technical Specification change in accordance with 10CFR50.92 and concludes that the proposed change does not involve a significant hazards consideration.

VY also believes that the proposed change satisfies the criteria for a categorical exclusion in accordance with 10CFR51.22(c)(9) and does not require an environmental review. Therefore, pursuant to 10CFR51.22(b), no environmental impact statement or environmental assessment needs to be prepared for this change.

Upon acceptance of this proposed change by the NRC, VY requests that a license amendment be issued by April 2001 for implementation within 60 days of its effective date.

If you have any questions concerning this transmittal, please contact Mr. Jeffrey Meyer at (802) 258-4105.

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Sincerely,

VERMONT YANKEE NUCLEAR POWER CORPORATION

Michael A. Balduzzi
Vice President, Operations

STATE OF VERMONT)
)ss
WINDHAM COUNTY)

Then personally appeared before me, Michael A. Balduzzi, who, being duly sworn, did state that he is Vice President, Operations of Vermont Yankee Nuclear Power Corporation, that he is duly authorized to execute and file the foregoing document in the name and on the behalf of Vermont Yankee Nuclear Power Corporation, and that the statements therein are true to the best of his knowledge and belief.

Sally A. Sandstrum, Notary Public
My Commission Expires February 10, 2003

SALLY A. SANDSTRUM NOTARY PUBLIC WINDHAM COUNTY, VERMONT

Attachments

cc: USNRC Region 1 Administrator
USNRC Resident Inspector – VYNPS
USNRC Project Manager – VYNPS
Vermont Department of Public Service

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Attachment 1

Vermont Yankee Nuclear Power Station

Proposed Technical Specification Change No. 241

125 Vdc Main Station Battery Chargers

Supporting Information and Safety Assessment of Proposed Change

INTRODUCTION

The purpose of this proposed change is to revise the Vermont Yankee (VY) 125 volt (Vdc) station battery system Technical Specifications (TS) to reflect the availability of a second, fully qualified charger, for each main station battery system. The listing of components in this section is to be revised to reflect this.

Specifically, on page 212, TS 3.10.A.2.b.1 will be revised as follows:

> "Battery A1, Battery Charger A and Bus DC-1" will be revised to "Battery A1, Battery Charger A or C, and Bus DC-1."

Similarly, on page 212, TS 3.10.A.2.b.2 would be revised as follows:

> "Battery B1, Battery Charger B and Bus DC-2" would be revised to "Battery B1, Battery Changer B or D, and Bus DC-2."

Bases page 221, second paragraph, will be revised as follows:

> Replace "In addition, the two 125 volt station batteries have a spare charger available" with "In addition, the two 125 volt main station battery systems have two chargers for each system. Either charger is capable of supplying its respective 125 Vdc bus."

BACKGROUND

There are two redundant 125 Vdc main station battery systems at VY. Each system is capable of independently supplying its loads and consists of a battery, associated bus and dedicated charger. The chargers are capable of supplying normal continuous dc loads and maintaining a floating charge on the associated battery. The batteries normally float on the system, supplying any momentary high current demands. The charger is also capable of recharging the battery to full charge if it becomes discharged. A single standby/swing charger is available and can be manually connected to either 125 volt main station battery bus. Recently, issues with cable separation and divisional power supplies to the swing charger in certain configurations have resulted in administrative limits on its use.

A design change is in process to dedicate the existing standby/swing charger to one battery system and add an additional charger to the other battery system. The resulting configuration will result in two, fully qualified, safety class battery chargers available for each 125 Vdc system.

This new configuration will provide a second charger to each 125 Vdc main station battery system and will resolve cable separation and divisional power supply issues with the existing swing charger as well as allowing greater flexibility for charger maintenance and testing.

SAFETY ASSESSMENT

The design change to the 125 Vdc main station battery system will provide additional charging capability to the system. The availability of a second, fully qualified charger to each system is a safety improvement.

The new charger to be installed, as well as the existing spare charger, are both 125 Vdc, 150 amp and safety related, as are the current system chargers. The seismic qualification, cable separation aspects and their capacity will be equivalent for all four chargers.

The battery systems will continue to function as they do now. The capability of an additional dedicated charger being available to each system is an enhancement. Only one charger will be connected to the bus at a time, with the second charger serving as a backup. The second chargers will have their own input and output breakers, with the same capacity and features as the existing chargers. Power to each charger will be provided from a divisional, emergency diesel generator (EDG) supplied source. Since only one charger is connected to each bus to recharge each battery, the EDG loading is unchanged.

Thus, there is no significant change in the 125 Vdc main station battery system operation or charging function. The change eliminates the swing charger arrangement and provides an additional, dedicated charger for the each main station battery system that will enhance system reliability and plant safety.

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Attachment 2

Vermont Yankee Nuclear Power Station

Proposed Technical Specification Change No. 241

125 Vdc Main Station Battery Chargers

Determination of No Significant Hazards Consideration

Determination of No Significant Hazards Consideration

Description of Amendment Request:

This proposed change revises 125 volt (Vdc) Main Station Battery Technical Specification 3.10.A.2.b to reflect the availability of two qualified battery chargers for each system. Conforming changes to the Technical Specification Bases are also proposed.

Basis for No Significant Hazards Determination:

Pursuant to 10CFR50.92, Vermont Yankee (VY) has reviewed the proposed change and concludes that the change does not involve a significant hazard consideration since the proposed change satisfies the criteria in 10CFR50.92(c).

1. The operation of the Vermont Yankee Nuclear Power Station in accordance with the proposed amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated.

   There is no change in the method of operation of the 125 Vdc main station battery systems by this change. The battery chargers will function the same, except that an additional battery charger will be available to each system. No change to accident assumptions or precursors are involved with this change. Likewise, no change in system operation or response to analyzed events is affected.

   Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. The operation of Vermont Yankee Nuclear Power Station in accordance with the proposed amendment will not create the possibility of a new or different kind of accident from any accident previously evaluated.

   The new chargers to be installed will provide additional charging capability. No reduction in DC system equipment operation or capability is involved. The methods by which the DC systems perform their safety functions are unchanged and remain consistent with current safety analysis assumptions. There is no change in system or plant operation that involves failure modes other than those previously evaluated.

   Therefore, the proposed change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The operation of Vermont Yankee Nuclear Power Station in accordance with the proposed amendment will not involve a significant reduction in a margin of safety.

   No adverse affect on equipment operation or capability will result from this change. The installation of additional chargers in fact enhances the reliability of the battery charging function. The equipment fed by the DC systems involved in this change will continue to provide adequate power to safety related loads in accordance with analysis assumptions.

   Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

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Attachment 3

Vermont Yankee Nuclear Power Station

Proposed Technical Specification Change No. 241

125 Vdc Main Station Battery Chargers

Marked-up Version of the Current Technical Specifications

3.10 LIMITING CONDITIONS FOR OPERATION	4.10 SURVEILLANCE REQUIREMENTS
	within 13 seconds and accept the emergency loads and start each load within the specified starting time. The results shall be logged.
	c. Each diesel fuel oil transfer pump shall be tested in accordance with Specification 4.6.E.
2. Battery Systems	2. Battery Systems
The following battery systems shall be operable:	a. Every week the specific gravity, temperature, level, and voltage of the pilot cell and overall battery voltage shall be measured and logged.
a. The four Neutron Monitoring and Process Radiation Batteries, associated chargers, and 24 VDC Distribution Panels.	b. Every three months the voltage, temperature, level, and specific gravity of each cell, and overall battery voltage shall be measured and logged.
b. The two main station battery systems consisting of:	
1. Battery A1, Battery Charger A and Bus DC-1.	or C,
2. Battery B1, Battery Charger B and Bus DC-2.	or D,

BASES: 3.10 (Cont'd)

Station service power is supplied to the station through either the unit auxiliary transformer or the startup transformers. In order to start up the station, the startup transformers are required to supply the station auxiliary load. After the unit is synchronized to the system, the unit auxiliary transformer carries the station auxiliary load, except for the station cooling tower loads which are always supplied by one of the startup transformers. The station cooling tower loads are not required to perform an engineered safety feature function in the event of an accident; therefore, an alternate source of power is not essential. Normally one startup transformer supplies 4160 volt Buses 1 and 3, and the other supplies Buses 2 and 4.

A battery charger is supplied for each battery. In addition, the two 125 volt station batteries have a spare charger available.

Power for the Reactor Protection System is supplied by 120 V ac motor generators with an alternate supply from MCC-8B. Two redundant, Class 1E, seismically qualified power protection panels are connected in series with each ac power source. These panels provide overvoltage, undervoltage, and underfrequency protection for the system. Setpoints are chosen to be consistent with the input power requirements of the equipment connected to the bus.

B. Adequate power is available to operate the emergency safeguards equipment from the immediate access source or for minimum engineered safety features from either of the emergency diesel generators. Therefore, reactor operation is permitted for up to seven days with the delayed-access off-site power source unavailable.

Each of the diesel generator units is capable of supplying 100 percent of the minimum emergency loads required under postulated design basis accident conditions. Each unit is physically and electrically independent of the other and of any off-site power source. Adequate power is also available to operate the emergency safeguards equipment from the immediate access source or from the delayed access source of off-site power. Therefore, one diesel generator can be allowed out of service for a period of seven days without jeopardizing the safety of the station.

In the event that the immediate access source is unavailable, adequate power is available to operate the emergency safeguards equipment from the emergency diesel generators or from the delayed-access off-site power source. Therefore, reactor operation is permitted for up to 7 days with the immediate access source unavailable.

In the event that both emergency diesel generators are lost, adequate power is available to operate the emergency safeguards equipment from the immediate access source or from the delayed-access off-site power source within one hour.

The plant is designed to accept one hundred percent load rejection without adverse effects to the plant or the transmission system. Network stability analysis studies indicate that the loss of the Vermont Yankee unit will not cause instability and consequent tripping of the connecting 345 kV and 115 kV lines. Thus, the availability of the off-site power sources is assured in the event of a turbine trip.

Vdc Main station battery systems — have two chargers for each system. Either charger is capable of supplying its respective 125Vdc bus.

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Attachment 4

Vermont Yankee Nuclear Power Station

Proposed Technical Specification Change No. 241

125 Vdc Main Station Battery Chargers

Re-typed Technical Specification Pages

3.10 LIMITING CONDITIONS FOR OPERATION

2. Battery Systems

The following battery systems shall be operable:

a. The four Neutron Monitoring and Process Radiation Batteries, associated chargers, and 24 VDC Distribution Panels.

b. The two main station battery systems consisting of:

1. Battery A1, Battery Charger A or C, and Bus DC-1.

2. Battery B1, Battery Charger B or D, and Bus DC-2.

4.10 SURVEILLANCE REQUIREMENTS

within 13 seconds and accept the emergency loads and start each load within the specified starting time. The results shall be logged.

c. Each diesel fuel oil transfer pump shall be tested in accordance with Specification 4.6.E.

2. Battery Systems

a. Every week the specific gravity, temperature, level, and voltage of the pilot cell and overall battery voltage shall be measured and logged.

b. Every three months the voltage, temperature, level, and specific gravity of each cell, and overall battery voltage shall be measured and logged.

BASES: 3.10 (Cont'd)

Station service power is supplied to the station through either the unit auxiliary transformer or the startup transformers. In order to start up the station, the startup transformers are required to supply the station auxiliary load. After the unit is synchronized to the system, the unit auxiliary transformer carries the station auxiliary load, except for the station cooling tower loads which are always supplied by one of the startup transformers. The station cooling tower loads are not required to perform an engineered safety feature function in the event of an accident; therefore, an alternate source of power is not essential. Normally one startup transformer supplies 4160 volt Buses 1 and 3, and the other supplies Buses 2 and 4.

A battery charger is supplied for each battery. In addition, the two 125 Vdc main station battery systems have two chargers for each system. Either charger is capable of supplying its respective 125 Vdc bus.

Power for the Reactor Protection System is supplied by 120 V ac motor generators with an alternate supply from MCC-8B. Two redundant, Class 1E, seismically qualified power protection panels are connected in series with each ac power source. These panels provide overvoltage, undervoltage, and underfrequency protection for the system. Setpoints are chosen to be consistent with the input power requirements of the equipment connected to the bus.

B. Adequate power is available to operate the emergency safeguards equipment from the immediate access source or for minimum engineered safety features from either of the emergency diesel generators. Therefore, reactor operation is permitted for up to seven days with the delayed-access off-site power source unavailable.

Each of the diesel generator units is capable of supplying 100 percent of the minimum emergency loads required under postulated design basis accident conditions. Each unit is physically and electrically independent of the other and of any off-site power source. Adequate power is also available to operate the emergency safeguards equipment from the immediate access source or from the delayed access source of off-site power. Therefore, one diesel generator can be allowed out of service for a period of seven days without jeopardizing the safety of the station.

In the event that the immediate access source is unavailable, adequate power is available to operate the emergency safeguards equipment from the emergency diesel generators or from the delayed-access off-site power source. Therefore, reactor operation is permitted for up to 7 days with the immediate access source unavailable.

In the event that both emergency diesel generators are lost, adequate power is available to operate the emergency safeguards equipment from the immediate access source or from the delayed-access off-site power source within one hour.

The plant is designed to accept one hundred percent load rejection without adverse effects to the plant or the transmission system. Network stability analysis studies indicate that the loss of the Vermont Yankee unit will not cause instability and consequent tripping of the connecting 345 kV and 115 kV lines. Thus, the availability of the off-site power sources is assured in the event of a turbine trip.