



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

June 1, 1994

Docket No. 50-271

Mr. Donald A. Reid, Vice President
Operations
Vermont Yankee Nuclear Power Corporation
Ferry Road
Brattleboro, Vermont 05301

Dear Mr. Reid:

SUBJECT: SUPPLEMENTAL SAFETY EVALUATION OF STATION BLACKOUT ANALYSIS -
VERMONT YANKEE NUCLEAR POWER STATION (TAC NO. M87808)

The NRC staff's Supplemental Safety Evaluation (SSE) pertaining to the Vermont Yankee Nuclear Power Corporation's (VYNPC) responses to the Station Blackout (SBO) Rule, 10 CFR 50.63, was transmitted to the licensee by letter dated June 18, 1993. The staff's SSE found the licensee's proposed method of coping with an SBO to be acceptable except that the licensee needed to make additional modifications so that the alternate ac (AAC) power source can be tested initially and once every refueling outage per NUMARC 87-00, Appendix B (B12 and B10).

However, on July 22, 1993, VYNPC representatives met with the NRC staff to discuss the status of Vermont Yankee's SBO implementation plan and schedule. During the meeting, NRC staff members requested Vermont Yankee (VY) to submit additional information regarding: 1) the status of the design upgrade and plans for periodic testing of the AAC power source, 2) the design of the AAC source and how it is protected against the effects of weather related events, 3) the time required to manually load the safety busses from the tie line, and 4) the agreement between VYNPC and New England Power Company regarding the use of the Vernon Station as an AAC source. The licensee provided the requested information by letter from Leonard A. Tremblay to Document Control Desk, dated September 2, 1993.

Subsequently, by telecon dated February 10, 1994, the staff requested additional information on the structural design criteria for the Vernon Hydro switchyard, and the probabilistic wind occurrences (severe and extremely severe weather conditions) for the Vernon Station site. The licensee provided the requested information by letter from Leonard A. Tremblay to Document Control Desk, dated March 11, 1994.

Based on its review, the staff finds the licensee's responses acceptable and the SSE issues regarding the testing of the AAC power source initially and once every refueling outage per NUMARC 87-00, Appendix B (B12 & B10) to be resolved.

By letter dated May 20, 1994, the licensee provided information regarding postulated effects of water hammer in the station service water (SW) system following restart of a SW pump during a SBO event. The licensee stated that, prior to the SBO Rule compliance date of September 10, 1994, it will implement

000005

NRC FIVE CENTER COPY

9406080080 940601
PDR ADOCK 05000271
P PDR

DF01
11

June 1, 1994

operator actions to mitigate the potential for water hammer. The licensee further stated that it was not satisfied with operator actions as a long-term solution for the water hammer issue, and that it plans to implement a hardware modification to the SW system to alleviate the need for operator action. The modification is planned for implementation during the scheduled 1995 refueling outage. The staff finds that operator actions may be adequate to mitigate the postulated effects of a SW water hammer, and therefore accepts the licensee's commitment to implement such actions by September 10, 1994. The adequacy of actions implemented by the licensee will be evaluated through inspection. The staff also agrees that a hardware modification is preferred as a long-term solution for the water hammer issue and accepts the licensee's commitment to implement such a modification during the scheduled 1995 refueling outage. You are requested to notify the staff as soon as practicable if your plans regarding resolution of the water hammer issue change.

This completes the staff's review under TAC No. M87808, and licensing action for the SBO Rule. Further review of SBO compliance at VY will be conducted through audit and inspection.

Original signed by
Daniel H. Dorman, Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosure:
As stated

DISTRIBUTION:
Docket File
NRC & Local PDRs
PDI-3 Reading
SVarga
JCalvo
WButler
SLittle
DDorman
OGC
ACRS (IO)
JLinville, RI
CBerlinger
APal

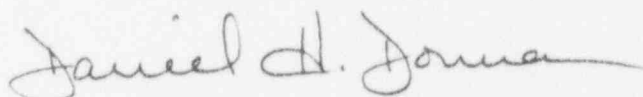
OFFICE	LA: PDI-3	PM: PDI-3	C: EELS EMER	D: PDI-3	
NAME	SLittle	DDorman:mw	CBerlinger	WButler	
DATE	5/24/94	5/24/94	5/26/94	6/1/94	1/1

OFFICIAL RECORD COPY
FILENAME: A:\VYM87808.LTR

June 1, 1994

operator actions to mitigate the potential for water hammer. The licensee further stated that it was not satisfied with operator actions as a long-term solution for the water hammer issue, and that it plans to implement a hardware modification to the SW system to alleviate the need for operator action. The modification is planned for implementation during the scheduled 1995 refueling outage. The staff finds that operator actions may be adequate to mitigate the postulated effects of a SW water hammer, and therefore accepts the licensee's commitment to implement such actions by September 10, 1994. The adequacy of actions implemented by the licensee will be evaluated through inspection. The staff also agrees that a hardware modification is preferred as a long-term solution for the water hammer issue and accepts the licensee's commitment to implement such a modification during the scheduled 1995 refueling outage. You are requested to notify the staff as soon as practicable if your plans regarding resolution of the water hammer issue change.

This completes the staff's review under TAC No. M87808, and licensing action for the SBO Rule. Further review of SBO compliance at VY will be conducted through audit and inspection.



Daniel H. Dorman, Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosure:
Supplemental Safety Evaluation

Mr. Donald A. Reid, Vice President
Station
Operations

Vermont Yankee Nuclear Power

cc:

Mr. Jay Thayer, Vice President
Yankee Atomic Electric Company
580 Main Street
Bolton, Massachusetts 01740-1398

G. Dana Bisbee, Esq.
Office of the Attorney General
Environmental Protection Bureau
State House Annex
25 Capitol Street
Concord, New Hampshire 03301-6937

Regional Administrator, Region I
U. S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

Resident Inspector
Vermont Yankee Nuclear Power Station
U.S. Nuclear Regulatory Commission
P. O. Box 176
Vernon, Vermont 05354

R. K. Gad, III
Ropes & Gray
One International Place
Boston, Massachusetts 02110-2624

Chief, Safety Unit
Office of the Attorney General
One Ashburton Place, 19th Floor
Boston, Massachusetts 02108

Mr. Richard P. Sedano, Commissioner
Vermont Department of Public Service
120 State Street, 3rd Floor
Montpelier, Vermont 05602

Mr. David Rodham, Director
Massachusetts Civil Defense Agency
400 Worcester Rd.
P.O. Box 1496
Framingham, Massachusetts 01701-0317
ATTN: James Muckerheide

Public Service Board
State of Vermont
120 State Street
Montpelier, Vermont 05602

Chairman, Board of Selectmen
Town of Vernon
Post Office Box 116
Vernon, Vermont 05354-0116

Mr. Raymond N. McCandless
Vermont Division of Occupational
and Radiological Health
Administration Building
Montpelier, Vermont 05602

Mr. J. P. Pelletier, Vice President
Vermont Yankee Nuclear Power
Corporation
Ferry Road
Brattleboro, Vermont 05301

Mr. L. A. Tremblay
Senior Licensing Engineer
Vermont Yankee Nuclear Power
Corporation
580 Main Street
Bolton, Massachusetts 01740-1398

Mr. Robert J. Wanczyk, Plant Manager
Vermont Yankee Nuclear Power Plant
P. O. Box 157, Governor Hunt Road
Vernon, VT 05354