

February 18, 1987

Docket No. 50-271

Mr. R. W. Capstick
Licensing Engineer
Vermont Yankee Nuclear Power
Corporation
1671 Worcester Road
Framingham, Massachusetts 01701

DISTRIBUTION

Docket File	VRooney
NRC PDR	OGC-Bethesda
Local PDR	EJordan
HDenton/RVollmer	BGrimes
RBernero	JPartlow
GLainas	ORAS
NThompson	SNorris
TBarnhart (4)	ACRS (10)
OPA	LFMB
PD#2 Plant File	DMuller

Dear Mr. Capstick:

SUBJECT: SUPPLEMENT 1 TO NUREG-0737, REQUEST FOR FURTHER MODIFICATION
OF COMMISSION ORDER DATED JUNE 12, 1984

Re: Vermont Yankee Nuclear Power Station

The Commission Confirmatory Order dated June 12, 1984 confirmed the implementation dates for certain items relating to Supplement 1 to NUREG-0737. The Commission Order dated August 29, 1985 modified the June 12, 1984 Order to confirm additional commitments you had made pertaining to the schedules for the Safety Parameter Display System (SPDS) and Regulatory Guide 1.97 requirements. Subsequently, by letter dated December 19, 1986, you requested an additional modification of the August 29, 1985 Order to extend the implementation date for the SPDS and Regulatory Guide 1.97. You are presently required to have the SPDS fully operational prior to startup for Cycle 14 (approximately winter 1988/89) and required to implement Regulatory Guide 1.97 requirements (install or upgrade) prior to startup from Cycle 13 (approximately fall 1987). You requested extension of the schedule such that, although SPDS would be functional at Cycle 14 startup, testing and training would be accomplished during Cycle 14, with full SPDS operability achieved prior to completion of Cycle 14. With respect to Regulatory Guide 1.97 requirements, you requested extension of your commitment for Local Power Range Monitor (LPRM) power supply qualification in accordance with Regulatory Guide 1.97 for one additional outage cycle (prior to startup for Cycle 14), although other Regulatory Guide 1.97 installation/upgrades would be completed prior to startup for Cycle 13.

You also requested that a schedular commitment for implementing all Human Engineering Discrepancy (HED) modifications resulting from the Detailed Control Room Design Review (DCRDR) be changed from prior to Cycle 14 startup to prior to Cycle 15 startup (approximately mid-1990). The above commitment is contained in your letter dated March 31, 1986, and was not confirmed by Order.

Enclosed is our evaluation of your request for schedular extension. Based on this evaluation, in accordance with the terms of the June 12, 1984 and August 29, 1985 Commission Orders, we hereby grant the requested delays for implementing the SPDS requirements and for implementing the Regulatory Guide 1.97 requirements. Also, based on this evaluation we find your proposed schedule for implementing DCRDR modifications to be acceptable.

8702250309 870218
PDR ADOCK 05000271
P PDR

Finally, approval of the foregoing does not commit the Commission to any specific approval or disapproval of the Vermont Yankee plans relative to the Containment Safety Study. A summary of the status of our review will be provided in the spring in response to your September 2, 1986, December 19, 1986, and February 5, 1987 submittals.

Sincerely,

Original Signed by

Robert M. Bernero, Director
Division of BWR Licensing
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc w/enclosure:
See next page

OFFICIAL RECORD COPY

VR
DBL:PD#2
VRooney:cb
2/18/87

DBL:PD#2
DMYler
2/18/87

Mr. R. W. Capstick
Vermont Yankee Nuclear Power Corporation

Vermont Yankee Nuclear Power
Station

cc:

Mr. J. G. Weigand
President & Chief Executive Officer
Vermont Yankee Nuclear Power Corp.
R. D. 5, Box 169
Ferry Road
Brattleboro, Vermont 05301

Mr. W. P. Murphy, Vice President &
Manager of Operations
Vermont Yankee Nuclear Power Corp.
R. D. 5, Box 169
Ferry Road
Brattleboro, Vermont 05301

Mr. Donald Hunter, Vice President
Vermont Yankee Nuclear Power Corp.
1671 Worcester Road
Framingham, Massachusetts 01701

Mr. Gerald Tarrant, Commissioner
Vermont Department of Public Service
120 State Street
Montpelier, Vermont 05602

New England Coalition on
Nuclear Pollution
Hill and Dale Farm
R. D. 2, Box 223
Putney, Vermont 05346

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

Mr. Walter Zaluzny
Chairman, Board of Selectman
Post Office Box 116
Vernon, Vermont 05345

Vermont Yankee Decommissioning
Alliance
Box 53
Montpelier, Vermont 05602-0053

Mr. J. P. Pelletier, Plant Manager
Vermont Yankee Nuclear Power Corp.
Post Office Box 157
Vernon, Vermont 05354

Resident Inspector
U. S. Nuclear Regulatory Commission
Post Office Box 176
Vernon, Vermont 05354

Mr. Raymond N. McCandless
Vermont Division of Occupational
& Radiological Health
Administration Building
10 Baldwin Street
Montpelier, Vermont 05602

Vermont Public Interest
Research Group, Inc.
43 State Street
Montpelier, Vermont 05602

Honorable John J. Easton
Attorney General
State of Vermont
109 State Street
Montpelier, Vermont 05602

Regional Administrator, Region I
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, Pennsylvania 19406

John A. Ritscher, Esquire
Ropes & Gray
225 Franklin Street
Boston, Massachusetts 02110

Ellyn R. Weiss
Harmon & Weiss
2001 S. Street, N. W.
Suite 430
Washington, D.C. 20009-1125

Office of the Attorney General
1 Ashburton Place
19th Floor
Boston, Massachusetts 02108



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

EVALUATION

BY THE OFFICE OF NUCLEAR REACTOR REGULATION
FOR THE VERMONT YANKEE NUCLEAR POWER STATION
VERMONT YANKEE NUCLEAR POWER CORPORATION

DOCKET NO. 50-271

1.0 INTRODUCTION

By letter dated December 19, 1986, the licensee, Vermont Yankee Nuclear Power Corporation (VYNPC), requested relief from the Commission Confirmatory Order dated June 12, 1984, which confirmed the implementation dates for certain items relating to Supplement 1 to NUREG-0737. The Commission Order dated August 29, 1985 modified the June 12, 1984 Order to confirm additional commitments the licensee had made pertaining to the schedules for the Safety Parameter Display System (SPDS) and Regulatory Guide 1.97 requirements. The licensee's December 19, 1986 letter requested an additional modification of the August 29, 1985 Order to extend the implementation date for the SPDS and Regulatory Guide 1.97. VYNPC is presently required to have the SPDS fully operational prior to startup for Cycle 14 (approximately winter 1988/89) and required to implement Regulatory Guide 1.97 requirements (install or upgrade) prior to startup from Cycle 13 (approximately fall 1987). VYNPC requested extension of the schedule such that, although SPDS would be functional at Cycle 14 startup, testing and training would be accomplished during Cycle 14, with full SPDS operability achieved prior to completion of Cycle 14. With respect to Regulatory Guide 1.97 requirements, VYNPC requested extension of its commitment for Local Power Range Monitor (LPRM) power supply qualification in accordance with Regulatory Guide 1.97 for one additional outage cycle (prior to startup for Cycle 14), although other Regulatory Guide 1.97 installation/upgrades would be completed prior to startup for Cycle 13.

VYNPC also requested that a schedular commitment for implementing all Human Engineering Discrepancy (HED) modifications resulting from the Detailed Control Room Design Review (DCRDR) be changed from prior to Cycle 14 startup to prior to Cycle 15 startup (approximately mid-1990). The above commitment is contained in VYNPC's letter dated March 31, 1986, and was not confirmed by Order.

2.0 EVALUATION

In the December 19, 1986 submittal, the licensee stated that in mid-1986 VYNPC undertook an extensive and unanticipated effort in response to NRC initiated concerns regarding the capability of containments such as Vermont Yankee's to withstand severe accidents. VYNPC performed a Containment Safety Study (CSS) which incorporated recent advances in

analytical techniques and accounted for the design features specific to Vermont Yankee which affect the plant's ability to respond to a severe accident.

VYNPC subsequently met several times with the NRC staff and representatives of the State of Vermont and provided responses to NRC staff questions and comments thereby laying the groundwork for Vermont Yankee Containment Safety improvements while advancing the NRC generic Mark I Containment Safety activities by providing a sample case for a typical Mark I reactor containment. The licensee stated that as a result of the resources expended on this effort to date and those anticipated in the future it has concluded that the relative safety importance of the planned containment safety efforts warrant a modification to the remaining NUREG-0737, Supplement 1, commitments involving SPDS, Regulatory Guide 1.97 and DCRDR. Specifically, resources expended to date on the CSS include approximately 1,000 manhours in the PRA disciplines, 1,000 manhours in the System Engineering discipline. VYNPC described planned CSS activities and estimated that resource requirements associated with these planned activities totaled an additional 2,000 manhours.

In the December 19, 1986 submittal VYNPC stated that it has identified significant resource shortages in concurrently developing containment initiative tasks, and SPDS design and Installation and Test Procedure packages. Additionally, due to further developed design details, it can now identify significant amounts of SPDS work which can be completed during plant operation. The licensee therefore requested that the schedular commitment for SPDS be modified. The licensee stated that, as previously required, the SPDS would be installed and functional at the end of Cycle 14. The change in SPDS requirements which the licensee proposed is that startup testing, system verification and validation, and operator training be conducted during Cycle 14 rather than prior to the initiation of Cycle 14. We find that the delay of these testing and training activities is compensated for by the importance of the planned containment safety activities. Therefore, the staff concludes that there is adequate justification for modification of the Commission Order.

The licensee stated that during the 1986 refueling outage, VYNPC completed all Regulatory Guide 1.97 installation/upgrades associated with their Environmental Qualification Program. The previously planned work scope for the 1987 refueling outage included completion of all remaining Regulatory Guide 1.97 installation/upgrades. Recently the licensee determined that the LPRM power supplies should have been included in the work scope for the remaining Regulatory Guide 1.97 modifications. However, due to the difficulty of including this recently determined upgrade in the 1987 outage work scope in view of the containment resource commitments previously discussed and based on the fact that, with the exception of this one item, all Regulatory Guide 1.97 installation/upgrades will be completed in accordance with the existing schedule commitment; the licensee requested that the subject Order be modified to extend the Regulatory Guide 1.97 schedular commitment for this specific

item by one additional fuel cycle (prior to startup for Cycle 14, approximately winter 1988/89). The staff finds that the licensee's proposal is reasonable in view of the safety significance of the containment safety activities. Therefore, the staff concludes that there is adequate justification for modification of the Commission Order.

In the licensee's submittal of August 29, 1986 it states that Vermont Yankee has completed the NUREG-0737, Supplement 1, commitment relating to DCRDR requirements, but that by letter, dated March 31, 1986, Vermont Yankee provided a proposed schedule for implementing all DCRDR HED modifications, assuming no "unforeseen difficulties in the design, procurement and installation efforts associated with each of the respective modifications," during the next two successive outages (i.e., prior to Cycle 13 and 14 startup). In the licensee's letter dated December 19, 1986, it stated that VYNPC believes that the HED modifications proposed from the DCRDR effort for Vermont Yankee are of relatively minor operational significance and generally relate to modifications necessary to conform to specific human factors criteria and that its belief has been substantiated by the results of VYNPC's Control Room Dynamic Evaluation performed in the fall of 1986. Due to the higher safety significance the licensee has placed on the Containment Safety Study, the licensee's limited resources to support Vermont Yankee's continuing CSS effort and completion of all DCRDR tasks, the licensee foresees a one cycle schedular extension to its commitment for DCRDR HED modifications. This will result in completing these modifications prior to startup for Cycle 15. The staff finds the proposed schedule for implementing DCRDR modifications is acceptable.

The Containment Safety activities which VYNPC described involve engineering preparatory to implementing the alternate drywell spray path, improving the capability of the diesel fire pump for drywell spray and core cooling, and hardening the containment wetwell vent path. By letter dated February 5, 1987, the licensee has committed to installation of these containment safety improvements, if the requested relief is granted, and has committed to provide a schedule for implementation upon completion of the engineering design effort in July 1987.

3.0 CONCLUSION

With respect to the relief requested in the letter dated December 19, 1986:

1. The staff finds the request for extending the schedular requirement for the SPDS to be fully operational and operators trained to be acceptable. The SPDS is to be functional at startup for Cycle 14. The SPDS is to be fully operational prior to the end of Cycle 14 (including startup testing, system verification and validation, and operators trained).

2. The staff finds the request for extending the schedular requirement for Regulatory Guide 1.97 implementation with respect to LPRM power supplies to prior to startup for Cycle 14 to be acceptable. Regulatory Guide 1.97 schedular requirements for other items are to remain unchanged (prior to startup for Cycle 13).
3. The staff finds the licensee's proposed schedule for implementing DCRDR modifications to be acceptable.

Dated: February 18, 1987