January 20, 1987

Docket No. 50-271

MEMORANDUM FOR: William Kane, Director
Division of Reactor Projects
Region I

THRU: Robert M. Bernero, Director
Division of BWR Licensing

THRU: Daniel R. Muller, Director
BWR Project Directorate #2
Division of BWR Licensing

FROM: Vernon L. Rooney, Project Manager
BWR Project Directorate #2
Division of BWR Licensing

SUBJECT: NRR SALP INPUT - VERMONT YANKEE NUCLEAR POWER STATION

Enclosed is NRR's input for the February 1987 SALP Board meeting for the Vermont Yankee facility. As discussed in the enclosure, our evaluation was conducted according to NRR Office Letter No. 44, Revision 1, dated December 22, 1986 and NRC Manual Chapter 0516, Systematic Assessment of Licensee Performance. The overall performance rating in the functional area of Licensing Activities is Category 1.

Original Signed by

Vernon L. Rooney, Project Manager
BWR Project Directorate #2
Division of BWR Licensing

Enclosure:
As stated

cc w/enclosure:
W. Raymond, Resident Inspector

DISTRIBUTION
Docket File
NRC PDR
Local PDR
PD#2 Reading File
PD#2 Plant File
RBernero
VRooney
DMuller
SNorris

OFFICIAL RECORD COPY

DBL:PD#2	DBL:PD#2	DBL:PD#2	DBL:DIR
SNorris	VRooney:cb	DMuller	RBernero
1/15/87	1/15/87	1/15/87	1/20/87

Docket No. 50-271

FACILITY: Vermont Yankee Nuclear Power Station

LICENSEE: Vermont Yankee Nuclear Power Corporation (VYNPC)

EVALUATION PERIOD: October 19, 1985 to December 31, 1986

PROJECT MANAGER: Vernon L. Rooney

1.0 INTRODUCTION

This report contains NRR's input to the SALP review for the Vermont Yankee Nuclear Power Station. The assessment of the licensee's performance was conducted according to NRR Office Letter No. 44, Revision 1, NRR inputs to SALP Process, dated December 22, 1986. Office Letter No. 44 incorporates NRC Manual Chapter 0516, Systematic Assessment of Licensee Performance.

2.0 SUMMARY

NRC Manual Chapter 0516 specifies that each functional area evaluated will be assigned a performance category (Category 1, 2 or 3) based on a composite of a number of attributes. The performance of VYNPC in the functional area of Licensing Activities is rated Category 1.

3.0 CRITERIA

The evaluation criteria used in this assessment are given in NRC Manual Chapter 0516 Appendix, Table 1, Evaluation Criteria with Attributes for Assessment of Licensee Performance.

4.0 METHODOLOGY

This evaluation represents the integrated inputs of the Project Manager (PM) and those technical reviewers who expended significant amounts of effort and/or prepared a Safety Evaluation for the Vermont Yankee Nuclear Power Station licensing actions during the current rating period. Using the guidelines of NRC Manual Chapter 0516, the PM and each reviewer applied specific evaluation criteria to the relevant licensee performance attributes, as delineated in Chapter 0516, and assigned an overall rating category (1, 2 or 3) to each attribute. The reviewers included this information as part of each Safety Evaluation transmitted to the PM. The PM, after reviewing the inputs of the technical reviewers, combined this information with his own assessment of licensee performance and arrived at a composite rating for the licensee. This rating also reflects the comments of the NRR Senior Executive assigned to the Vermont Yankee SALP assessment.

The basis for this appraisal was the licensee's performance in support of licensing actions that had a significant level of activity during the current rating period. These actions, consisting of amendment requests, exemption requests, code relief requests, responses to generic letters, TMI and Salem ATWS items, and other actions, are listed below:

Multiplant Actions

A-18 Technical Specifications Affected by 50.72 and 50.73 (Generic Letter 83-43)*
B-23 Degraded Grid Voltage Equipment*
B-83 TMI Technical Specifications (Generic Letter 83-36)*
D-20 Mark I Drywell Vacuum Breakers*
F-48 ADS Actuation Study (II.K.3.18)*
F-63 Technical Support Center (III.A.1.2)*
F-71 Detailed Control Room Design Review

Plant Specific Actions

Exemption: Appendix R (separation and suppression)*
Exemption: Appendix R (alternate safe shutdown)*
Technical Specification Change: RHR Wear Ring Replacement*
Technical Specification Change: Single Loop*
Technical Specification Change: Iodine Spike Limit*
Technical Specification Change: New Recirculation Piping*
Technical Specification Change: Nil Ductility Transition Temperature*
ISI relief request*
Review of Control Room Carpet*
Review of Alternate Inspection of Feedwater Nozzles*
Review of Core Spray Safe End Repairs*
Review of Use of PVRC Damping Analysis*
Technical Specification Change: Inservice Inspection
Technical Specification Change: Inservice Testing
Technical Specification Change: Spent Fuel Pool Expansion
Review of Containment Safety Study
Review of Analysis Using RELAP 5Y-A

5.0 ASSESSMENT OF PERFORMANCE ATTRIBUTES

This evaluation of the licensee's performance was based on consideration of five of the six attributes specified in NRC Manual Chapter 0516. These are:

- Management Involvement and Control in Assuring Quality
- Approach to Resoluation of Technical Issues from a Safety Standpoint
- Responsiveness to NRC Initiatives
- Reporting and Analysis of Reportable Events
- Staffing (including Management)

For the remaining attribute, Enforcement History, there is no basis for a rating by NRR.

In addition, this evaluation includes an assessment of the licensee's housekeeping practices and the conduct of control room personnel.

*Indicates action completed

5.1 Management Involvement and Control in Assuring Quality

Vermont Yankee Nuclear Power Corporation and Yankee Atomic Electric Company management have an awareness of the various licensing issues by virtue of extensive experience in the industry, technical expertise, and active participation in industry and professional organization activities. Management takes actions in a timely manner to ensure safety issues are properly addressed. The successful and timely completion of recirculation piping replacement with minimal unforseen problems during this reporting period is due in part to management involvement and control in assuring quality throughout the pipe replacement outage, as well as the extensive planning and preparation noted in the SALP for the previous reporting period.

The fact that no emergency technical specification changes have been requested during the report period evidences consistent planning by management to take into account license requirements. The recent request (12/30/86) for cask lifting device approval within a month of planned use is an exception to usual practice.

In mid-1986 Vermont Yankee at the urging of the Governor of Vermont undertook a Containment Safety Study addressing concerns related to the capability of Vermont Yankee's Mark I containment to withstand severe accidents. The conduct of this study was, in part, guided by the staff's initiative to improve the severe accident performance of BWR Mark I containments; but also has been coordinated with the State of Vermont through the state's Vermont State Nuclear Advisory Panel (VSNAP). On several occasions Vermont Yankee met with and formally responded to questions on the study from the staff and VSNAP. The initiative displayed in undertaking this study and the follow-up activities related to it, as well as the quality and timeliness of the effort, evidences management sensitivity to, and involvement in, safety concerns.

Candid discussions between the Project Manager and licensee management have satisfactorily served to integrate safety and operational interests from the licensing point of view. Integrated scheduling is an option that is available, if the present less formal process becomes unsatisfactory. Since the last SALP the licensee has initiated a practice of regularly informing the Project Manager of the licensee's prioritization of pending licensing actions. At the same time there has been some effort to withdraw from the "pending" list requested actions that no longer are required, or that require revision in order to be acted upon.

In summary, for the last reporting period there was consistent evidence of prior planning, and assignment of priorities that demonstrates close management involvement and control.

Based on the above considerations, this attribute is rated Category 1.

5.2 Approach to Resolution of Technical Issues from a Safety Standpoint

Favorable evaluations from the technical reviewers are indicative of the licensee's technical understanding of most issues and that Vermont Yankee's engineering staff, in concert with support from the Yankee Atomic Electric Company, assures that most engineering work, either done inhouse or performed under its direction by contractors, has adequately addressed complex technical issues. An example of the licensee's initiative and technical capability is the Containment Safety Study referred to in Section 5.1. Thus multi-discipline activity was reviewed both by the NRC staff and by an independent consultant hired by the State of Vermont. Vermont Yankee also has under review a unique technical effort in the qualification of the RELAP-5YA code for BWR analysis. The licensee frequently forms technical judgements independently from the industry. These judgements are well-thought out with adequate technical bases. For example, the exemptions granted on December 1, 1986 to Vermont Yankee for Appendix R are the result of the licensee's persistence in convincing the staff of the validity of certain special technical considerations pertaining to Vermont Yankee.

Safety evaluations submitted by the licensee in support of proposed technical specification changes, or to resolve technical issues, have been clear and substantive. The licensee has demonstrated a clear understanding of the issues, and its approach in resolving issues has been technically sound and thorough in almost all cases.

Based on the above considerations, the rating for this attribute is Category 1.

5.3 Responsiveness to NRC Initiatives

Open and effective communication channels exist between the NRC and Vermont Yankee licensing staff in Framingham with involvement of management in Brattleboro as appropriate. The effectiveness of this communication has improved since the last SALP period. The licensee meets established commitment dates or provides a written submittal explaining the circumstances and establishing a new firm date. Conference calls with the staff are promptly established and include appropriate engineering and plant personnel. An example of licensee responsiveness to NRC initiatives is the recent resolution of TMI Action Plan Item II.K.3.18 pertaining to the ADS logic.

Based on the above considerations, the rating for this attribute is Category 1.

5.4 REPORTING AND ANALYSIS OF REPORTABLE EVENTS

During this rating period, the licensee submitted 24 non-security reportable events in accordance with 10 CFR 50.72 and the Licensee Event Reports (LER) in accordance with 10 CFR 50.73. During this period, events or problems specific to Vermont Yankee were discussed at four NRR Operating Reactor Events Briefings. These four events were each of a different nature (i.e., recirculation flow instability, problems with scram solenoid valves, failure of

standby liquid control system and pipe support problems.) A study of reported events shows no pattern of repetition, indicating that corrective actions are effective. Events were generally identified and analyzed properly and there were few subsequent revisions of the LERs. The licensee has been diligent in submitting LERs within the prescribed time limit.

Occupational Dose

The Vermont Yankee Nuclear Power Plant is a 504 Mwe BWR which started commercial operation in November 1972. Since 1973, the plant's average total yearly dose has been approximately 622 person-rem, which is lower than the corresponding average for other operating BWR's. More recently, for the period from January 1983 to October 1986, the plant's average yearly dose has been approximately 1137 person-rem, which is significantly higher than it's overall average and higher than most operating BWRs for the same time period. The principal contributor to this worker dose is the plant pipe replacement project recently completed in June 1986 (approximately 1800 person-rem in the 1985-1986 time interval). On the basis of Vermont Yankee's dose history since the beginning of commercial operation in 1972, and for the year 1986, the staff concludes that the licensee occupational doses are lower than for most currently operating BWR's, but has been increasing slightly in recent years.

Conclusion

Based on the above considerations, the rating for this attribute is Category 1.

5.5 STAFFING

No changes in Vermont Yankee licensing staff have occurred during this rating period. The Licensing Engineer in Framingham has gained licensing experience thereby increasing effectiveness. Both the Framingham and Brattleboro offices have supported licensing discussions in a professional manner. The involvement of Brattleboro staff in licensing discussions have been somewhat greater than in the previous reporting period.

The rating for this attribute is Category 1.

5.6 HOUSEKEEPING AND CONTROL ROOM CONDUCT

Observations made by the NRR project manager while visiting the site on several occasions during this rating period indicate that the licensee's housekeeping practices are good. The cleanliness and orderliness which prevailed during a major plant modification outage was adequate. The expansion of office facilities following the pipe replacement outage should reduce congestion and enhance housekeeping. In all observed instances control room personnel appeared to conduct themselves in a professional manner.

The rating for this attribute is Category 2.

6.0 CONCLUSION

An overall performance rating of Category 1 has been assigned in the licensing area.

Section 043 of the Manual Chapter 0516 defines the meaning of rating the licensee's performance Category 1 as follows:

"Reduced NRC attention may be appropriate. Licensee management attention and involvement are aggressive and oriented toward nuclear safety; licensee resources are ample and effectively used so that a high level of performance with respect to operational safety and construction quality is being achieved."

Even though the Vermont Yankee Nuclear Power Corporation is rated Category 1, no less management effort on the part of the licensee or NRC attention in the licensing category can be accommodated.

Information to be Added to Section 5 of SALP Report

"Supporting Date and Summary"

1. NRC/Licensee Meetings/Site Visits

Site Visits: November 7-8, 1985, January 9-10, July 28 - August 11, September 29-30, and October 9-10, 1986

Meetings: January 10, 1985 SALP Management Meeting
April 10, 1986 Licensing Counterparts Meeting
September 11, 1986 Discussed Containment Safety Study Progress
July 29, 1986 Discussed RELAP 5YA Code Review
November 17, 1986 Discussed Responses to Containment Safety Study Questions

2. Commission Briefings

None

3. Schedular Extensions Granted

None

4. Relief Granted

December 19, 1986; Certain inservice inspection requirements

5. Exemptions Granted

December 1, 1986; Certain requirements of Appendix R

6. License Amendments Issued

Amendment No. 91, issued October 24, 1985; revises TS regarding iodine spiking

Amendment No. 92, issued March 27, 1986; revises TS to reflect changes in recirculation system piping

Amendment No. 93, issued June 24, 1986; revises TS regarding Nil Ductility Transition Temperature

Amendment No. 94, issued August 8, 1986; revises TS regarding Single Loop Operation

Amendment 95, issued August 11, 1986; revises TS concerning reporting (50.72 and 50.73)

Amendment 96, issued August 11, 1986; revises TS pertaining to NUREG-0737 modifications (G.L. 83-36)

Amendment No. 97, issued December 3, 1986; revises TS to permit RHR wear ring replacement during fuel Cycle 13.

7. Emergency/Exigent Technical Specifications

None

8. Orders Issued

None

9. NRR/Licensee Management Conferences

None

B. Facility Performance

	Functional Area	Category Last Period (5/1/83 - 10/31/84)	Category This Period 11/1/84 - 10/18/85)	Recent Trend
A.	Plant Operations	1	1	Consistent
B.	Radiological Controls	2	2	Consistent
C.	Maintenance	2	1	Consistent
D.	Surveillance	1	1	Consistent
	Fire Protection/ Housekeeping	2	N/A*	N/A
E.	Emergency Preparedness	1	2	Improving
F.	Security and Safeguards	1	2	Declining
G.	Outages	1	1	Consistent
H.	Training and Qualification Effectiveness	N/A**	N/A**	No Basis
I.	Licensing Activities	1	1	Consistent
J.	Assurance of Quality	2	2	N/A

Notes:

* Not assessed as a distinct functional area this period. Assessments are incorporated within other functional areas as appropriate.

** Not assessed as distinct functional area last period.

B. Facility Performance

	Functional Area	Category Last Period (5/1/83 - 10/31/84)	Category This Period (11/1/84 - 10/18/85)	Recent Trend
A.	Plant Operations	1	1	Consistent
B.	Radiological Controls	2	2	Consistent
C.	Maintenance	2	1	Consistent
D.	Surveillance	1	1	Consistent
	Fire Protection/ Housekeeping	2	N/A*	N/A
E.	Emergency Preparedness	1	2	Improving
F.	Security and Safeguards	1	2	Declining
G.	Outages	1	1	Consistent
H.	Training and Qualification Effectiveness	N/A**	N/A**	No Basis
I.	Licensing Activities	1	1	Consistent
J.	Assurance of Quality	2	2	N/A

Notes:

* Not assessed as a distinct functional area this period. Assessments are incorporated within other functional areas as appropriate.

** Not assessed as distinct functional area last period.