

VERMONT YANKEE NUCLEAR POWER CORPORATION



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FVY 85-22

REPLY TO:

ENGINEERING OFFICE

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March 1, 1985

U.S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region I
631 Park Avenue
King of Prussia, PA 19406

Attention: Mr. Richard W. Starostecki
SALP Board Chairman
Division of Project and Resident Programs

References:

- a) License No. DPR-28 (Docket No. 50-271)
- b) Letter, USNRC to VYNPC, SALP Report No. 50-271/84-25, dated 12/21/84
- c) Letter, USNRC to VYNPC, I&E Inspection Report No. 50-271/84-21, dated 12/6/84
- d) Letter, VYNPC to USNRC, FVY 85-02, dated 1/14/85
- e) Letter, USNRC to VYNPC, I&E Inspection Report No. 50-271/83-26, Enforcement Conference Findings, dated 3/13/84
- f) Letter, USNRC to VYNPC, I&E Inspection Report No. 50-271/83-26, dated 11/2/83
- g) Letter, VYNPC to USNRC, FVY 84-24, dated 3/14/84
- h) Letter, VYNPC to USNRC, FVY 84-53, dated 5/21/84

Dear Sir:

Subject: Systematic Assessment of Licensee Performance
(SALP) Report Comments

The purpose of this letter is to provide you with comments regarding the most recent Systematic Assessment of Licensee Performance (SALP) Report which was issued by letter dated December 24, 1984 [Reference b)]. We appreciated the opportunity to discuss the findings of the report at the January 24, 1985 meeting in King of Prussia. In general, we believe that the report is a fair appraisal of our activities during the May 1983 through October 1984 reporting period; however, as discussed at our meeting, there are certain areas within the report that warrant clarification and/or correction.

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Please note that your December 24, 1984 letter requested that any comments on the report be formally submitted within twenty (20) days of the January 24, 1985 meeting. However, due to the complex nature of some of the areas discussed in the report, we required an additional two (2) weeks to prepare our comments. The need for additional time was discussed with and agreed to by Mr. William Raymond of your staff.

We respectfully submit the following comments for your consideration:

(1) Section IV.A.1, Operations (Page 9)

The SALP Report states that "the management decisions and actions to continue plant operation from September 16-18, 1984 with an anomalous core power-to-flow relationship and in spite of clear indications that the plant was operating in an unanalyzed condition, appeared as a significant deviation from the normally conservative approach taken to assure safe plant operations. NRC considered that the licensee had an insufficient basis to continue operation with the anomaly, and the licensee's decision was neither prudent nor conservative."

We strongly disagree with the NRC's assertion that our decision to continue operation was neither prudent nor conservative. As discussed in our January 14, 1985 [Reference c)] response to I&E Inspection Report 84-21 [Reference d)], we believe that we effectively and prudently analyzed the situation during the entire course of this occurrence (from indication that an anomaly existed through rejection of hypothetical causes to identification of a tentatively identified cause). While we evaluated possible causes of the anomaly, we simultaneously assured to our satisfaction that continued operation was prudent and posed no safety concern.

The details of our engineering assessment of the anomaly is discussed in detail in our January 14, 1985 submittal. We believe the actions taken were consistent with our conservative philosophy of assuring safe plant operations. Thus, we believe that your stated conclusion that Operations declined over the Report period due to a "non-conservative operational philosophy" is unfounded.

(2) Section IV.E.1, Fire Protection and Housekeeping (Pages 25 and 26)

- o The SALP Report states that as a result of the August/September 1983 inspection of Vermont Yankee's compliance to Section III of Appendix R to 10CFR50, Fire Protection Requirements, "one violation is being considered for escalated enforcement action."

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As described in various submittals made to the NRC subsequent to the 1983 Appendix R inspection, Vermont Yankee has performed extensive engineering analyses to demonstrate the adequacy of our fire protection capabilities and is continuing with the installation of additional modifications to enhance our overall fire protection design. We believe our response to the findings of the 1983 inspection have been timely, responsive to the NRC's concerns, and reflect a strong commitment on the part of Vermont Yankee and its management to achieve compliance with the provisions of Appendix R. We recognize the time it has taken to address all of the NRC's concerns; however, the continual issuance of guidance criteria by NRR regarding Appendix R compliance (i.e., Generic Letter 83-33, Generic Letter 85-01, various Information Notices, and information resulting from Regional Workshops) has made the task of achieving literal compliance that much more difficult. Enclosure 1 provides a chronological history of events associated with the Appendix R issue at Vermont Yankee. These events include formal submittals made by us as well as numerous meetings held with various NRC Staff members to resolve this issue. Based on these efforts, we believe that the pending enforcement action should be formally dispositioned with a finding that escalated enforcement action is not warranted.

- o The SALP Report also states that, "the licensee did not take the initiative to assure that his assumptions for the Reactor Building were consistent with the NRC staff's positions. Licensee exceptions to the requirements were not properly identified to the NRC staff."

This statement reflects the basic misunderstanding between the NRC and Vermont Yankee with respect to compliance with Section III.G to Appendix R. As discussed at the January 10, 1984 Enforcement Conference held in King of Prussia, we had received various correspondence from the NRC which indicated to us that to comply with Section III.G, we need only provide alternate safe shutdown capability for the Control Room, Cable Vault and Switchgear Room. This correspondence, discussed in detail in the March 13, 1984 Enforcement Conference Meeting Minutes [see Reference e)], was the basis for our conclusion that our overall Fire Protection Program satisfied the intent of Section III.G with respect to our Reactor Building and that the NRC was cognizant of our assumptions and positions which were documented in our 1978 Fire Hazards Analysis Report.

- o The SALP Report states that "The licensee took considerable time to respond to the issues identified by the inspection team. The NRC positions regarding the Appendix R requirements were clearly presented

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to the licensee by the NRC review team in August 1983, but the licensee did not become fully committed to address the identified deficiencies and differences between his and the NRC staff's position until March 1984. Considerable NRC effort was required to get the licensee to perform the reanalysis and implement the actions necessary to correct the violation."

In addition, the Report states that "the lower rating this assessment period is due to the licensee's incorrect implementation of the Appendix R rule and the licensee's slowness in responding to the NRC initiatives once deficient areas were identified."

As discussed above, we believe our response to the findings were timely and appropriate. Immediately following the 1983 inspection, we initiated a re-review of the requirements of Appendix R to 10CFR Part 50 and initiated a re-survey of our Reactor Building to ensure we met the separation criteria of Section III.G.2. It should be noted that our re-survey was performed assuming a fire induced loss of off-site power which was consistent with our original interpretation of the loss of off-site power provisions of Appendix R. We also initiated a breaker coordination study and an engineering analysis of plant safe shutdown systems against the separation and fire protection criteria of Section III.G.2 of Appendix R.

Once the formal findings of the inspection were issued in the November 2, 1983 Inspection Report [see Reference f)], we performed an analysis of the safety significance of the inspection's findings. The results of our analysis were presented to the NRC at a November 22, 1983 meeting at King of Prussia where it was concluded that there were no findings that would preclude our ability to safely shut down the plant in the event of a fire. At that meeting, we also presented a draft report entitled "Analysis to Demonstrate Safe Shutdown Capability During and After Fires," which documented our analysis.

Following the November 22, 1983 meeting, we continued with our engineering efforts to address the deficiencies cited in the November 2, 1983 Inspection Report. We reported the scope and status of our efforts to the NRC at an Enforcement Conference held in King of Prussia on January 10, 1984. We also discussed differences between Vermont Yankee and the NRC in interpreting certain provisions of Appendix R. Specifically, the NRC stated that Appendix R implies the need for safe shutdown capability for the plant, assuming a loss of off-site power for 72 hours concurrent with a fire in any area of the

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plant. Vermont Yankee's assumption, both in the pre-Appendix R Fire Hazards Survey and the post-inspection re-survey was that a non-mechanistic loss of off-site power need not be considered. The NRC also stated that Vermont Yankee's use of "fire zone boundaries" in the Reactor Building did not meet Appendix R requirements for physical "fire area boundaries." Vermont Yankee's position was that the inherent spatial separation between areas of the Reactor Building, coupled with physical barriers and extensive fire protection features installed in the Reactor Building met the intent of the "fire area boundaries."

At the January 10 Conference, Vermont Yankee committed to submit the results of the Section III.G.2 re-survey (including an associated circuits study), docket formal requests for exemption from the specific separation criteria of Section III.G.2, and submit the details of fire protection system enhancements and/or corrective actions deemed necessary as a result of the re-survey. At the time, we still believed our loss of off-site power and fire area boundary positions were justifiable.

On March 14, 1984 [see Reference g)], we submitted requests for exemption for certain areas of the Reactor Building that did not meet the specific separation criteria of Section III.G.2. The exemption requests included the technical basis for justification as well as descriptions of specific fire protection system enhancements/modifications which we deemed were necessary as a result of our III.G.2 re-survey.

In April 1984, our design engineers attended an NRC sponsored Regional Workshop held to discuss and clarify NRC positions regarding compliance with the provisions of Appendix R. Following the Regional Workshop, a meeting was held between Vermont Yankee and Yankee Atomic Electric Company engineers and management to discuss the results of the workshop and the status of our Appendix R compliance efforts. Based on an assessment from engineers who attended the Regional Workshop that the NRC was adamant on the need to assume a random loss of off-site power coincident with a fire, Vermont Yankee management directed the engineering staff to expand the scope of the III.G.2 re-survey (including the associated circuits study) to include a random loss of off-site power. In addition, based on the results of the workshop and discussions with NRR fire protection engineers, it was recognized that additional detailed engineering would be necessary to support Vermont Yankee's position that "fire zone boundaries" in the Reactor Building were an acceptable alternative to the NRC's "fire area boundaries." It was agreed that the report documenting the expanded III.G.2 re-survey would include detailed justification of the acceptability of "fire zone boundaries."

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Vermont Yankee then requested that a meeting be held with the NRC (NRR and I&E) to discuss the status of our engineering efforts and establish a means to close out Appendix R for Vermont Yankee. On May 21, 1984 [see Reference h)], we issued a comprehensive response to the findings detailed in the November 2, 1983 Inspection Report. This letter also included a proposed schedule for the completion of the expanded III.G.2 re-survey (including the associated circuits study), provided schedules for completing enhancements/modifications known to be necessary as a result of our initial re-survey, and committed to certain interim compensatory measures until the enhancements/modifications were completed.

We met with the NRC in King of Prussia on May 24, 1984 to discuss and clarify the contents of our May 21, 1984 Inspection Report response, as well as other correspondence recently submitted by Vermont Yankee (i.e., a request for exemption from the 72-hour cold shutdown requirement). At that time, we restated our intention to conduct a complete III.G.2 re-survey of the plant including a circuits separation and associated circuits study. At the meeting we also stated our intention to keep the NRC informed as to our progress and findings as the study progressed, focusing on any additional compensatory measures which may be deemed necessary. Finally, at the request of the staff, we agreed to consider additional compensatory measures beyond those committed to in our May 21, 1984 Inspection Report response.

The expanded III.G.2 re-survey and associated circuits study was performed during June and July 1984 culminating in a draft report which detailed the findings. During August 1984, we performed an engineering evaluation of the findings to scope the necessary modifications and corrective measures to address additional areas that did not meet the specific separation criteria of Section III.G.2 of Appendix R. We also began drafting a comprehensive report which would be submitted to the NRC. In early September we informed the NRC of the status of our efforts and committed to implement additional interim compensatory measures based on the findings of the expanded re-survey. On November 26, 1984, we submitted the results of the expanded re-survey in a report entitled "Safe Shutdown Capability Analysis". This report was submitted in draft form at the request of the NRC so as to ensure that the format and technical content were sufficient for NRC review purposes. This report contains the re-survey results, associated circuits analysis, basis for acceptability of "fire zone boundaries," and identifies all corrective actions required for ultimate compliance with Appendix R.

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We had scheduled a meeting with the NRC for December 21, 1984 to discuss their comments on the report, but the NRC was unable to support the meeting. Because of the subsequent difficulty in trying to reschedule the meeting, it is our intent to finalize and formally docket the report in the near future. We will also be submitting additional requests for exemption from the provisions of Section III.G of Appendix R (as described in Appendix A of the "Safe Shutdown Capability Analysis Report"), and will continue with the completion of necessary fire protection enhancements/modifications and other corrective actions (i.e., procedural revisions).

As discussed above, we believe Vermont Yankee has been responsive to the concerns identified by the NRC and is committed to closing out the Appendix R issue at the earliest possible time. Although we had philosophical differences with the staff with respect to the need to assume a random loss of off-site power coincident with a fire as part of our reanalysis and the acceptability of fire zones in lieu of fire areas, we believe these differences in interpreting the requirements of Appendix R should not be characterized as failure to respond to the NRC's concerns in a timely manner. We also believe that based on the extensive efforts we have made to achieve full compliance with Appendix R, a strong case can be made for a better performance rating than the one received for the Fire Protection and Housekeeping functional area. At a minimum, we expect the text of the final SALP Report to more accurately reflect the high degree of management attention and true level of responsiveness to this issue that Vermont Yankee has displayed.

Vermont Yankee took and continues to take an aggressive leadership position in completing compliance with Appendix R and looks forward to a prompt review by NRC of the "Safe Shutdown Capability Analysis Report" such that the steps we are now taking based on that report can be concluded as acceptable in meeting the provisions of Section III.G of Appendix R.

(3) Section III.A, Overall Facility Evaluation (Page 6)

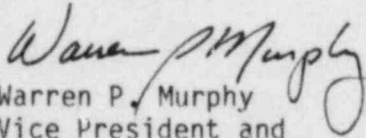
The SALP Report states that, "this assessment noted numerous personnel errors during the performance of routine duties in the surveillance radiological controls, operating and refueling functional areas. The errors resulted from either a lack of attention to details during performance of routine duties or an over-reliance on experience as a substitute for strict adherence to established procedures."

We clearly recognize the need for continued management attention and involvement to minimize the instances of human error. Events resulting from human error are and will continue to be evaluated to determine if procedural, policy, programmatic, or design changes are warranted. We will continue to focus our attention at minimizing the instances and consequences of human error.

Again, we appreciate meeting with you and the Board to discuss the subject report and to reaffirm Vermont Yankee management's continued commitment to the safe and efficient operation of the Vermont Yankee Nuclear Power Station. Be assured that although we do not always agree with your assessment findings, we will always be responsive to your concerns of safety and/or compliance. We view your assessment of our performance as positive input to enable us to carry out our commitments and responsibilities. We hope you consider our feedback as positive input into your evaluation/assessment process.

Very truly yours,

VERMONT YANKEE NUCLEAR POWER CORPORATION


Warren P. Murphy
Vice President and
Manager of Operations

WPM/dm

VERMONT YANKEE/NRC CHRONOLOGY OF
EVENTS REGARDING APPENDIX R TO 10CFR50

Since the inspection of August 29/September 2, 1983, Vermont Yankee has taken many steps in its attempt to comply with NRC requirements. These steps include:

1. September 1983 - Began a review of Appendix R and the licensing correspondence in order to understand why part III.G had not been applied to the Reactor Building.
2. October 1983 - Concluded that, per Appendix R, the entire plant should have been re-examined for compliance with III.G. Began re-survey. Generic Letter 83-33 issued.
3. November 1983 - Received written results of inspection. Studies and reviewed inspection results in detail with management.

Completed first draft of "Analysis to Demonstrate Safe Shutdown Capability During and After Fires".

Held internal meetings to consider safety implications of the inspection findings.

Attended meeting with Region I staff to demonstrate that continued safe operation of the plant was possible and justified, based on the low probability of the adverse safety effects from the non-conforming areas and the redundant safe shutdown capabilities of the plant. The plant was allowed to continue operating. The NRC Region I Report confirming continued safe operation was received in January 1984.

4. December 1983 - Continued to examine re-survey. Scoped design changes and exemptions to correct inspection deficiencies. Held internal management and engineering meeting to discuss status of Appendix R.
5. January 1984 - Attended Enforcement Conference at Region I. Committed to completing design changes to correct inspection deficiencies by December 1984.
6. February 1984 - Plant and NSD engineers attended the Fire Protection Seminar in Washington, D.C. These engineers met informally with NRC staff the day before the seminar to review draft exemption requests relative to inspection items.
7. March 1984 - Formally submitted exemption requests relative to Inspection Report 83-26 commitments.

8. April 1984 - Engineers attended Region I Regional Workshop and also met informally with NRR staff for scoping comments, as the workshop indicated that drafts of studies on III.G compliance were to be informally submitted to the staff and discussed before formal submittal.
9. April 1984 - Meeting on Appendix R was held during which management directed the engineering staff to expand the scope of the III.G.2 re-survey to include random loss of off-site power.
10. May 1984 - Held scheduled and follow-up conference with Region I staff. The NRC minutes of this meeting note that the meeting was at Vermont Yankee's request. Vermont Yankee was only required to commit to a schedule within thirty days of the meeting with NRR staff to review the draft work on III.G. The NRR meeting has not yet taken place.

Vermont Yankee committed to Interim Compensatory Measures at this time. The need for these measures had only been clarified at the Regional Workshop.

11. Mid-July 1984 - Conducted formal re-survey, circuit separation, and associated circuit analyses.
12. July 1984 - Completed minor changes to Alternate Shutdown System and declared it operational per required schedule.

Made changes to two plant circuits so that plant would conform to the inspection and associated circuits study. One change addressed an inspection finding. One change resulted from the associated circuits study.
13. August 1984 - Completed design scoping of corrective measures based on re-survey and associated circuits study. Began drafting report and optimizing solutions.
14. September 1984 - Informed NRC Region I of progress. Implemented additional Interim Compensatory Measures.
15. November 1984 - Submitted draft "Safe Shutdown Capability Analysis" to NRR and Region I staffs, per process indicated at regional workshops. Extensive color photographs included.
16. January 1985 - Completing installation of design changes to address Inspection Report commitments. Began design change on additional emergency lighting, made necessary by findings of draft "Safe Shutdown Capability Analysis Report".

17. February 1985 - Completed installation of all modifications detailed in March 14, 1984 Inspection Report response letter.
18. In Progress - Completing installation of additional modifications detailed in the "Safe Shutdown Capability Analysis Report". Preparing formal exemption requests for submittal to NRR. Completing necessary procedural changes as detailed in the Analysis Report. Continuing with interim compensatory measures until all actions complete.
19. September 1983 through Present - Scope and status of engineering efforts to address Appendix R inspection findings were discussed at routine monthly meetings held between Vermont Yankee and Yankee Atomic Electric Company engineers and management. These monthly meetings are held to discuss the scope and status of ongoing engineering activities.