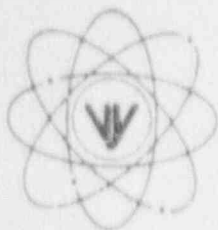


VERMONT YANKEE NUCLEAR POWER CORPORATION



Ferry Road, Brattleboro, VT 05301-7002

BVY 91-49

REPLY TO:
ENGINEERING OFFICE
580 MAIN STREET
BOLTON, MA 01740
(508) 779-6711

April 30, 1991

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Document Control

References: a) License No. DPR-28 (Docket No. 50-271)
b) Letter, USNRC to VYNPC, Examination Report No. 50-271/91-01 (OL), dated 3/21/91
c) Letter, USNRC to VYNPC (CAL No. 91-007), dated 3/11/91
d) Letter, VYNPC to USNRC (BVY 91-25), dated 3/8/91
e) Letter, VYNPC to USNRC (BVY 91-27), dated 3/8/91
f) NUREG-0654, dated November 1980

Attachment: "Root Cause Analysis Summary"

Dear Sir:

Subject: Corrective Actions Related to Unsatisfactory Performance of Licensed Operator Requalification Program

During the week of February 25, 1991 the NRC conducted licensed operator requalification examinations at Vermont Yankee. Based on the results of those examinations, the Vermont Yankee Licensed Operator Requalification (LOR) Program was determined to be unsatisfactory. Vermont Yankee then initiated, per Reference d), a number of corrective actions including an in-depth root cause analysis of the unsatisfactory examination results. Those actions were later acknowledged via NRC Confirmatory Action Letter No. 91-007 [Reference c)]. This letter provides a confirmation of completion of those actions as well as the results of our root cause analysis.

Based on the root cause analysis discussed above, it is our determination that the root cause of the unsatisfactory performance of the LOR program was the failure by management to maintain awareness of NRC examination criteria, to fully comprehend the increased emphasis placed on command and control functions in the conduct of operations, and to translate that emphasis into directives for the operating crews. We have determined that sufficient information regarding the NRC criteria existed, but did not receive an appropriate level of review and disposition. A more comprehensive discussion of our findings and conclusions, as well as a corrective action schedule, are included in the attached "Root Cause Analysis Summary".

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U.S. Nuclear Regulatory Commission
April 30, 1991
Page 2

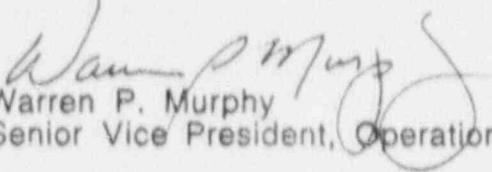
In addition to performance of the root cause analysis, Vermont Yankee committed to development of training for all licensed operators covering lessons learned from the 1991 LOR examination relative to command and control functions and shift supervision communications. We have completed classroom training on these topics and have also reinforced that training by conducting crew exercises in the simulator for all licensed personnel.

Vermont Yankee has also further evaluated the duties of the on-shift communicator that were discussed in Reference d) and confirmed by Reference c). We have concluded that the communicator's duties should include making initial NRC and state notifications and maintaining those communications, but should not include data collection responsibilities. The communicator will continue to be an individual who is in addition to those required to meet the minimum operating shift complement (2 Senior Reactor Operators, 2 Reactor Operators, and the Shift Engineer) and will be capable of responding to the Control Room within ten minutes of being summoned during abnormal and emergency conditions. Non-emergency notifications may be made by members of the operating shift complement. We conclude that this division of duties continues to be responsive to your concerns and is consistent with the guidance contained in Reference f).

We are confident that the actions we have taken to date, in addition to the further corrective actions discussed in Attachment a), will significantly improve our LOR program and will provide a firm basis for recertification of the program. If you have any questions or require additional information concerning our efforts, please do not hesitate to contact us.

Very truly yours,

Vermont Yankee Nuclear Power Corporation


Warren P. Murphy
Senior Vice President, Operations

cc: USNRC Regional Administrator, Region I
USNRC Resident Inspector, VYNPS
USNRC Project Manager, VYNPS

ROOT CAUSE ANALYSIS SUMMARY

A. Root Cause

The root cause of the unsatisfactory performance of the LOR program was the failure of management to maintain awareness of changes in NRC examination criteria, to fully comprehend the increased emphasis placed on command and control functions in the conduct of operations, and to translate those concepts into directives for the operating crews.

Finding #1

Inadequate response to available industry information, including Information Notice No. 90-54 and various INPO and NUMARC publications. This information provides insight into the criteria the NRC is using during requalification examinations.

Corrective Actions

1. Following each industry meeting or workshop attended by the Training Department Management or Staff a meeting summary will be routed to all appropriate individuals. This summary will include an assessment of the impact the information presented may have on Vermont Yankee. These meeting summaries will be considered for inclusion on the agenda of the Operations Curriculum Committee for discussion at the next scheduled meeting. **This practice will be implemented by June 1, 1991.**
2. Methods used for disseminating industry information within the Operations and Training Departments will be reviewed and revised as necessary to assure appropriate and adequate disposition. For example, if the response to this information concludes that "no other action is required", an explanation as to why this is the case should be included. **This review and any identified revisions will be completed by June 1, 1991.**
3. The Operations Curriculum Committee will develop a method for tracking action items to ensure that all items raised receive adequate attention and response. **This item will be included in the agenda of the next meeting and implementation will be accomplished before October 1, 1991.**
4. The Training Manager will participate in the Operations Training Instructor meetings. These meetings will be held on a regular basis with an established agenda.

Finding #2

Lack of direction regarding requirements for administration of the LOR Program. Compounding this problem was the use of inexperienced instructors in the position of LOR program administrator, and the lack of

an SRO from the Operations Department dedicated to the requalification examination preparation.

Corrective Actions

1. The Operations Training Supervisor has overall responsibility for administration of the LOR program. When assigning day-to-day coordination to a subordinate, the assignment should be made to an experienced instructor. **This action will be addressed by July 1, 1991.**
2. Training Department Management will develop written duties and responsibilities for the administration of the LOR program. **These duties and responsibilities will be available by July 1, 1991.**
3. The Training Department will develop training on the requirements of the Examiner Standard (NUREG 1021). This training will be provided to all instructors eligible to teach LOR, the Operations Supervisor, and the Assistant Operations Supervisor. **This Training Plan will be ready coincident with the pre-exam checklist (as discussed in corrective action 1 under Finding #6) such that training can begin on October 1, 1991.**
4. The Training Department will ensure aggressive resolution of inspection findings. **A plan for implementing this action will be presented to the Sr. Vice President, Operations by June 1, 1991.**
5. The Training Department will develop a mechanism to ensure all the requirements of the NUREG, including requirements added by any future revisions **are addressed within 60 days of any revision.**
6. An individual training instructor will be assigned the responsibility for LOR exam preparation. This individual will be an experienced instructor. Also, it is not necessary that the LOR program administrator be the individual responsible for exam preparation. **This individual will be designated six (6) months prior to the scheduled exam date.**
7. During examination cycles in which the Operations Training Supervisor will be a participant, an experienced Operations Instructor will be assigned responsibility for LOR issues. **This item will be included in the pre-exam list, developed by corrective action 1 under Finding #6.**
8. An SRO from the Operations staff will be designated 60 days prior to the NRC exam. This individual's primary responsibility will be exam support for the Training Department.

Finding #3

Training Management failed to maintain accountability for the LOR Training Program.

Corrective Action

1. The Training Manager and Operations Superintendent will review the requirements and objectives of the LOR program. Following this review they will clearly define the responsibilities of the Operations and Training Departments in the LOR Program Description. The Senior Vice President, Operations, will review and approve the LOR Program Description including the description of these responsibilities. The revised LOR Program description will be presented to the Sr. Vice President, Operations by August 1, 1991 for approval.

Finding #4

As the result of the successful 1989 LOR examination, the management of the Training and Operations Departments were content with the preparation for the 1991 LOR examination.

Corrective Action

1. Annually, Training Department Management, with Operations Department input, will develop a set of formal goals and objectives for the LOR program. It should also be recognized that the need for program change may occur in mid-year, based on feedback from industry meetings and/or workshops, and such changes should be anticipated. The goals for the 1992 LOR program will be established by December 1, 1991.

Finding #5

There was a lack of specifically assigned duties and responsibilities for Control Room personnel with a corresponding lack of a standard crew communications policy.

Corrective Actions

1. The Operations Department developed a description of the duties and responsibilities of crew personnel following the 1991 exam. A clear and consistent crew communications policy will be developed and added to this document. This document will be reviewed and approved by Senior Management by the beginning of the third LOR cycle scheduled to begin August 6, 1991.
2. The Operations Training Curriculum Committee identified a follow item developed at the April 27, 1989 meeting. The recommendations from that meeting regarding the incorporation of

Vermont Yankee management expectations during simulator evaluations in the areas of crew management and communications will be assigned and completed. This will be accomplished by the beginning of the third LOR cycle scheduled to begin August 6, 1991.

3. To further promote improved command and control functions and to enhance crew communications, the spare Shift Supervisor will be required to observe and comment on simulator scenarios at least once per year during LOR training. The Senior Reactor Operator, Control Room Operator and Shift Engineer will be encouraged to observe simulator training scenarios. This practice will be implemented during the second LOR cycle scheduled to begin June 11, 1991.

Finding #6.

Failure to establish a dialogue with other plants that have recently been examined by the NRC prior to the NRC LOR examination at Vermont Yankee.

Corrective Actions

1. The Training Department will develop a pre-exam checklist for use in preparing for NRC exams to ensure all required items are accomplished in a timely manner. This checklist will include the requirement to call some recently examined plants, including plants that may have recently been determined unsatisfactory, if possible. To ensure the checklists remain current, the list will be reviewed periodically. This review will also be conducted following each revision of NUREG 1021. This checklist will be available by October 1, 1991.
2. Training Department Management will consider sending Operations Training Instructors to visit other plants in the region to observe simulator training and review results of NRC administered LOR exams at other plants.

B. Additional Crew Problems

It was also determined that another factor contributed to the problems the crews experienced during the NRC LOR exams.

Finding #1

Insufficient training in the use of the latest revision of the Emergency Operating Procedures (EOPs).

Corrective Action

1. Annually, Training Department Management, with Operations Department input, will develop a set of formal goals and objectives for the LOR program. These goals will ensure an appropriate amount of time is devoted to EOP training. The adequacy of EOP training will be evaluated on a continuous basis, considering crew and instructor input.
2. Since EOP training forms the core of operators emergency response capabilities, their complete understanding of these procedures is critical. To facilitate this understanding, Operations will publish a revised basis document and incorporate it into licensed operator training concurrent with the approved revision to the EOPs.

C. Secondary Causal Factors

Some factors regarding the interface between the Vermont Yankee staff and the NRC examination team may have contributed to the overall problem and definitely led to some discord between the Vermont Yankee exam team and the NRC exam team.

Finding #1

Poor quality examination preparation material was sent to the NRC for their use during the preparation for the exam.

Corrective Action

1. The checklist discussed in the corrective action number 1 for item A. 6. should include specific requirements for the content and format of the reference materials to be sent to the NRC during examination preparation. The NRC should be contacted prior to each exam to discuss their expectations regarding the content and format of reference material. This checklist will be available by October 1, 1991.

Finding #2

A lack of knowledge regarding the revisions to the Examiner Standard (NUREG 1021) in the area of individual Simulator Critical Tasks (ISCTs).

Corrective Actions

1. The Training Department will develop training on the requirements of the Examiner Standard (NUREG 1021). This training will be provided to all instructors eligible to teach LOR, the Operations Supervisor, and the Assistant Operations Supervisor. This training will be completed by October 1, 1991.
2. The Operations Training Supervisor and his staff will conduct a thorough review of all LOR training and examination material, with emphasis on simulator scenarios, to ensure this material meets the existing NUREG requirements. This review will be completed by October 1, 1991.

Finding #3

The defensive nature in which the Vermont Yankee staff responded to the changes the NRC desired during the exam and simulator scenario review process.

Corrective Action

1. Training Department Management will standardize the method for interfacing with the NRC. Contact with the NRC will be the responsibility of the Operations Training Supervisor, or the designee during exams in which he is a candidate. **This method will be established by July 1, 1991.**

Finding #4

A difference existed between Vermont Yankee and the NRC regarding the process for validation of simulator scenarios.

Corrective Action

1. The Vermont Yankee simulator scenario validation procedure will be presented to the NRC as part of the 60 day letter Vermont Yankee is required to send to NRC. The intent of this approach is to seek NRC concurrence with our validation process well in advance of the examination date.