VERMONT YANKEE NUCLEAR POWER CORPORATION

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B.3.2.1
WVY 80-170

REPLY TO
ENGINEERING OFFICE
TURNPIKE ROAD
WESTBORO, MASSACHUSETTS 01581
TELEPHONE 617-366-9011

RECEIVED DISTRIBUTION SERVICES UNIT
1980 DEC 22 PM 12 48

December 15, 1980

United States Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Darrell G. Eisenhut, Director
Division of Licensing

References: (a) License No. DPR-28 (Docket No. 50-271)
(b) USNRC Letter, D. G. Eisenhut to All Licensees of Operating Plants, dated October 31, 1980

Subject: Post-TMI Requirements-Implementation Date Commitments

Dear Sir:

Reference (b) transmitted all TMI-related items approved for implementation by the Commission as of October 31, 1980. Included in this document was an itemized listing of existing, revised and new requirements including implementation, review and licensee submittal dates. Vermont Yankee was requested to reply within forty-five days, documenting our commitment to meet the implementation schedules specified in Enclosure 1 of Reference (b).

The attachment to this letter provides a tabulation by item of the requirements specified in Reference (b) and our specific plans addressing each one.

It must be recognized that the long term commitments made in the attachment to this letter are made under the assumption that no unforeseen difficulties will be encountered in procuring qualified equipment or in qualifying equipment already installed. In addition, it is assumed that the NRC requirements for these items will not change and that no new issues will be raised by the NRC which take precedence over these items. If it becomes apparent that, for any reason, the implementation schedule given for any of these items cannot be met, the NRC will be contacted as soon as possible.

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We trust the information contained in the attachment adequately documents Vermont Yankee's intended actions. If additional clarification of our position is necessary, please contact us as soon as possible in order to allow a timely resolution of any problems to be attained.

Very truly yours,

VERMONT YANKEE NUCLEAR POWER CORPORATION

L. H. Heider
Vice President

Attachment

COMMONWEALTH OF MASSACHUSETTS)
)ss
COUNTY OF WORCESTER)

Then personally appeared before me, L. H. Heider, who, being duly sworn, did state that he is a Vice President of Vermont Yankee Nuclear Power Corporation, that he is duly authorized to execute and file the foregoing request in the name and on the behalf of Vermont Yankee Nuclear Power Corporation, and that the statements therein are true to the best of his knowledge and belief.

Robert H. Groce Notary Public
My Commission Expires September 14, 1984

The following is a list of items contained in NUREG 0737 which pertain to BWRs and which have already been completed by Vermont Yankee:

Item	Title
I.A.1.2	Shift Supervisor Responsibilities
I.C.2	Shift and Relief Turnover Procedures
I.C.3	Shift Supervisor Responsibilities
I.C.4	Control Room Access
II.K.1	I & E Bulletins
II.K.3.46	Michelson Concerns
III.A.1.1	Emergency Preparedness, Short Term
III.D.1.1	Primary Coolant Outside Containment

Item: I.A.1.1

Title: Shift Technical Advisor

I.A.1.1.(1) On-Duty

As of January 1, 1980, Vermont Yankee had placed on shift, STA's consisting of 13 degreed individuals with plant experience. STA specific training was subsequently provided by General Electric Company and the Vermont Yankee staff.

I.A.1.1.(2) Technical Specifications

Proposed Technical Specification changes have been submitted to the NRC:

VYNPC to USNRC dated 9/12/80
VYNPC to USNRC dated 10/7/80

I.A.1.1.(3) Trained per Cat. B

A program has been established to hire and train extensively a new group of engineers to ultimately fill the STA role as a full-time job function. As previously documented in our letter dated September 29, 1980, this program is presently underway with an estimated completion date of June 1, 1981. The training program has been designed to meet the INPO standards published in May 1980. The interim and long-term programs are operating in parallel to ensure a high degree of participation in this rigorous training program without the interruptions attendent with filling the routine on-shift STA function. At the completion of this training program, the newly trained STA group will be placed on shift to fulfill the STA requirement. This program will result in a group of highly trained individuals meeting both NRC requirements and the Vermont Yankee goal of maximizing the STA's contribution to safe operation.

I.A.1.1.(4) Long-Term Program Description

A letter will be submitted to the NRC by January 1, 1981 which describes Vermont Yankee's current training program and our intentions with regard to the long-term STA program.

Item: I.A.1.3

Title: Shift Manning

I.A.1.3.(1) Limit Overtime

Procedures will be revised to the extent allowed by existing labor agreements and work schedules to meet the intent of the NRC's guidance on this item.

These procedures will be implemented on or before 1/1/81. The minor extension in schedule beyond 11/1/80 is reasonable in light of the fact that NUREG-0737 was not received until 11/6/80.

I.A.1.3.(2) Minimum Shift Crew

As documented in Vermont Yankee letter WVY 80-151, dated October 23, 1980, Vermont Yankee to USNRC, we plan to implement the minimum shift crew criteria by July 1, 1982. Revisions to Tech Specs will be developed and submitted to the NRC in a timeframe which will allow sufficient time for your review and approval.

Item: I.A.2.1

Title: Immediate Upgrading of RO and SRO Training and Qualifications

Vermont Yankee is in compliance with the requirements of this item.

Item: I.A.2.3

Title: Administration of Training Programs

Vermont Yankee intends to comply with the implementation requirements of this item.

Item: I.A.3.1

Title: Revise Scope and Criteria for Licensing Exams

The subject item requires that, starting 10/1/81 for facilities without simulators, simulator examinations be included as part of the licensing examinations. Vermont Yankee will make the necessary arrangements with an appropriate simulator training center to provide time for these examinations.

Item: I.C.1

Title: Short-Term Accident and Procedures Review

The BWR Owner's Group is maintaining continual dialogue with appropriate members of the NRC staff with regard to review and approval of the BWR Emergency Procedure Guidelines as well as interfacing directly with the NRC staff on guideline implementation.

Vermont Yankee feels that the Emergency Procedure Guideline Subgroup of the BWR Owner s Group continues to be the appropriate vehicle for responding to this requirement.

Item: I.C.5

Title: Feedback of Operating Experience

Procedures governing feedback of operating experience to the plant staff will be developed and put into effect on or before 1/1/81.

Item: I.C.6

Title: Verify Correct Performance of Operating Activities

We have reviewed the management control system at Vermont Yankee with respect to the five clarification items identified in I.C.6 and conclude that similar, acceptable management controls already exist. Appropriate supervisory review has always been required for valve lineup checks, component retest, system operability and surveillance tests. Although the need for additional independent verification has been previously considered and rejected as being less desirable and less effective than the present system operability tests, Vermont Yankee will commit to an independent verification by a second individual wherever such operability tests do not otherwise provide this assurance.

Item: I.D.1

Title: Control Room Design Reviews

Additional requirements that are yet "to be determined" will be considered when those requirements are issued.

Item: I.D.2

Title: Plant Safety Parameter Display Console

Additional NRC requirements that are yet "to be determined" will be considered when those requirements are issued.

Item: II.B.1

Title: Reactor Coolant System Vents

Vermont Yankee is participating with the BWR Owner's Group on this item. It is expected that another generic position will be submitted by the Owner's Group to address the expanded requirements contained in NUREG-0737.

Item: II.B.2

Title: Plant Shielding

A post-accident radiation shielding survey was prepared to satisfy the requirements of NUREG-0578. BWR plants, including Vermont Yankee, were originally designed to mitigate major design basis events with little or no access outside the control room being required. To specifically design for guaranteed access anytime, in most parts of the reactor building, is not feasible. As such, the thrust of Vermont Yankee's effort has been to determine the probable radiation effects on plant systems and to propose changes to equipment and procedures to assure long-term, post-accident system operation assuming access is not possible. Based on the effort discussed above, it has been concluded that Vermont Yankee can successfully operate during the year following an accident with only minor modifications to some plant systems. These changes will be implemented by 1/1/82.

Documentation and implementation schedules, requirements, and commitments pertaining to safety-related electrical equipment are contained in documents other than NUREG-0737 and as such, will not be addressed here.

Vermont Yankee is unable to commit to any implementation schedules regarding shielding of the TSC because, as documented in Enclosure 1 of NUREG-0737, final criteria for TSC's are yet "to be determined".

The issue of shielding of the main control room will be factored into our resolution of Item III.D.3.4 of NUREG-0737.

Item: II.B.3

Title: Post-Accident Sampling Capability

The new sampling systems required by this item will be installed by 1/1/82.

The NRC's rationale in requiring chloride monitoring and the potential benefits in terms of post-accident monitoring or accident mitigation are not readily obvious to us. Although we expect that the required analysis could be completed by an off-site laboratory, we question whether the radiation exposure associated with performance of a chloride analysis is warranted.

Any additional justification for requiring post-accident chloride samples and methods for performing the analysis at reduced exposure that the NRC has available is requested to allow Vermont Yankee to perform an exposure/benefit ALARA study.

Item: II.B.4

Title: Training for Mitigating Core Damage

Training for mitigating core damage in accordance with the requirements of Enclosure 3 to the March 28, 1980 letter from the NRC was incorporated into the licensee requalification program submitted to the NRC for approval on July 29, 1980. Training in this area will be added to the STA training program as required by the NUREG-0737 clarifications. Training of the plant superintendent, the assistant plant superintendent, and managers and technicians in the instrumentation and control and chemistry and health physics departments may not meet the requirements of the NUREG clarification. All plant personnel, including licensed operators and those listed above, will receive training in the appropriate emergency procedures commensurate with their responsibilities in these procedures.

Item: II.D.1

Title: Relief And Safety Valve Test Requirements

Vermont Yankee feels that the SRV Testing Subgroup of the BWR Owner's Group continues to be the appropriate vehicle for responding to this requirement.

Item: II.D.3

Title: Valve Position Indication

1) Safety Valves - Acoustic accelerometers have been installed on the safety valves. According to the vendor (B&W), the qualification plan being implemented at Wyle Labs will be completed in the fourth quarter of 1981.

   Relief Valves - Equipment to directly monitor relief valve position has been installed. We are awaiting delivery of qualified pressure switches; it is expected that the switches will be received and installed during the second quarter of 1981.

2) Technical Specifications

   A proposed change to the Technical Specifications was submitted as required. See Letter WVY 80-131, VYNPC to USNRC, dated September 12, 1980; Proposed Change #91.

3) The clarification dealing with human factor's analysis is a new requirement and as such, was not specifically addressed during the installation of the subject equipment. The acceptability of this equipment from a human factor's point of view will be addressed in NUREG Item I D.1, Control Room Design Reviews.

Item: II.E.4.1

Title: Dedicated H_2 Penetrations

Vermont Yankee meets the intent of the clarification for this item in that connections already exist on the CAD system which are single failure proof for containment isolation purposes and single-failure proof for operation.

By letter dated 4/11/80, the NRC stated that pending resolution of the post-accident combustible gas control, Vermont Yankee has satisfied the 0578 requirements for this item.

Item: II.E.4.2

Title: Containment Isolation Dependability

Positions 1, 2, 3 & 4 were met with the implementation of software and hardware modification per the requirements of NUREG-0578.

In response to postion #5, Vermont Yankee currently operates with a margin of less than 1 psi between the normal containment operating pressure and the pressure setpoint which initiates containment isolation. Vermont Yankee does not anticipate any additional action on this item.

By letters, dated 10/3/80 and 12/27/79, Vermont Yankee notified the NRC that information had been received from the valve manufacturer which indicated that all purge and vent valves greater than 3" are capable of

operating under the most severe design basis accident flow conditions. As such, Vermont Yankee does not plan to "seal close" the subject valves. To the extent practicable, these valves will be kept in the closed position per procedural and/or administrative controls.

Containment purge and vent valves as listed in Table 4.7.2.a of Vermont Yankee Technical Specifications automatically close as a result of three isolation signals, one of them being high radiation in the reactor building ventilation exhaust plenum or refueling floor. Since this is already identified in station Technical Specifications, no further action is necessary.

Item: II.F.1.1

Title: Noble Gas Effluent Monitor

Vermont Yankee will meet the implementation schedule and requirements for this item. The acceptability of this equipment from a human factors standpoint will be addressed in NUREG Item I.D.1, Control Room Design Reviews.

The NRC's request for Technical Specifications for this Item will be addressed following the receipt of further NRC guidance in the form of model Technical Specification pages as described in D.G. Eisenhut's letter, dated September 19, 1980.

Item: II.F.1.2

Title: Sampling and Analysis of Plant Effluents

Vermont Yankee presently has provisions for post-accident sampling of radioiodines and particulates. We feel that certain of the clarifications of NUREG-0737 are unwarranted, for example, application of the "design basis shielding envelope" for the charcoal cartridge is based on a release rate which is several orders of magnitude above the releases expected during a design basis accident. We expect to submit our position by 1/1/81 in accordance with the documentation requirements of 0737. Our ability to meet the 1/1/82 implementation schedule is contingent on obtaining a timely resolution to our position.

Item II.F.1.3

Title: Containment High Range Monitor

Vermont Yankee will meet the implementation requirements for this item. Necessary modifications are presently in progress. Qualification testing for these modifications is in progress and may necessitate additional minor modifications. The acceptability of this equipment from a human factors standpoint will be addressed in NUREG Item I.D.1, Control Room Design Reviews.

Item: II.F.1.4

Title: Containment Pressure Monitor

Vermont Yankee will meet the implementation requirements for this item. Modifications to meet these requirements are in progress. However, the transmitters which have been installed for these modifications are not fully IEEE 323-1974 qualified. They are the best available at this time, however. In addition, new transmitters fully qualified as required have been ordered and will be available prior to the January 1, 1982 implementation date. The indicators which are being used are in the process of being qualified for use at Seabrook Station and the results of that program will be available in 1981. However, it is not possible to make a final determination as to the adequacy of any control board mounted equipment until the plant seismic response spectra are available. The recorders and the power supplies that are used in these channels are qualified to IEEE 323-1971 and are the best available at this time. There are no recorders or power supplies available today which include aging qualification as required by IEEE 323-1974. The acceptability of this equipment from a human factors standpoint will be addressed in NUREG Item I.D.1, Control Room Design Reviews.

Item: II.F.1.5

Title: Containment Water Level

Vermont Yankee will meet the implementation requirements for this item. Modifications to meet these requirements are in progress. However, the qualification status of equipment for these modifications is the same as that delineated in Item II.F.1.4 above. The acceptability of this equipment from a human factors standpoint will be addressed in NUREG Item I.D.1, Control Room Design Reviews.

Item: II.F.1.6

Title: H_2 Monitoring

Vermont Yankee has investigated the requirements of Item 2.1.9 of NUREG-0578 regarding containment hydrogen monitoring. The results of our investigation were submitted to the NRC in References (b), (c) and (d) below. Subsequently, the NRC reviewed our submittals, and agreed with our conclusion, that the presently installed hydrogen monitoring equipment satisfies the requirement (see Reference (e)). As a result of this agreement, VYNPC prepared and submitted a proposed change to the Technical Specifications (Reference (g)) to allow use of the hydrogen monitoring system; this change was approved by the NRC on November 3, 1980, Reference (h).

Vermont Yankee continues to feel that the currently installed system is satisfactory, and therefore, no further modifications are planned.

References:

(a) License No. DPR-28 (Docket No. 50-271).

(b) Letter WVY 80-52, VYNPC to USNRC, dated April 1, 1980.

(c) Letter WVY 80-64, VYNPC to USNRC, dated April 24, 1980.

(d) Letter WVY 80-69, VYNPC to USNRC, dated April 29, 1980.

(e) Letter, USNRC to VYNPC, dated May 20, 1980.

(f) Letter, USNRC to All Licensees of Operating Plants, dated October 31, 1980; NUREG-0737.

(g) Letter WVY 80-123, VYNPC to USNRC, dated August 28, 1980; Proposed Change #90.

(h) Letter, USNRC to VYNPC, dated November 3, 1980; Issuance of Amendment No. 58.

Item: II.F.2

Title: Instrumentation for Detection of Inadequate Core Cooling

Vermont Yankee is participating with the BWR Owner's Group on this item. It is expected that another generic position will be submitted by the Owner's Group to address the expanded requirements contained in NUREG-0737.

Item: II.K.3.3

Title: Reporting SV and RV Failures and Challenges

Vermont Yankee has instituted administrative requirements such that the reporting of safety and relief valve failures and challenges will be included in the 10CFR50.59 annual report. The initial submittal will be made in the first quarter of 1981 and will include data from April 1, 1980.

The NRC's request for Technical Specifications for this item will be addressed following receipt of further NRC guidance in the form of model Technical Specification pages as described in D.G. Eisenhut's letter dated September 19, 1980.

Item: II.K.3.13

Title: Separation of HPCI and RCIC System Initiation Levels

Vermont Yankee is participating with the BWR Owner's Group on this item. By letter, R.H. Buchholz to D.G. Eisenhut dated 10/1/80, a report was forwarded to the Commission which presented analysis, conclusions and recommendations regarding the separation of HPCI and RCIC initiation levels. That report concluded that separating the RCIC and HPCI setpoints would provide negligible benefit and recommended that no changes be made. As

such, no additional submittals are planned regarding HPCI/RCIC setpoint separation. (See Letter WVY 80-136, VYNPC to USNRC, dated 10/1/80). The modification to allow RCIC restart on low water level is currently being designed. It is undesirable to perform this modification at power, therefore, the installation of this modification will take place during the first scheduled outage of sufficient duration following receipt of equipment.

The NRC's request for Technical Specifications for this item will be addressed following receipt of further NRC guidance in the form of model Technical Specification pages as described in D.G. Eisenhut's letter dated September 19, 1980.

Item: II.K.3.15

Title: HPCI/RCIC Break Detection Logic Modifications

A design change is currently being developed and will be installed to minimize inadvertent HPCI/RCIC isolation due to pressure transients during system initiation. It is undesirable to perform this modification at power, therefore, the installation of this modification will take place during the first scheduled outage of sufficient duration following receipt of equipment. A proposed change to Vermont Yankee Technical Specifications is currently being prepared. This change requires approval by the NRC prior to installation of this modification.

Item: II.K.3.16

Title: Reduction of Challenges and Failures of Relief Valves

This item is being evaluated by the BWR Owner's Group and NSSS vendor. We anticipate endorsing the results of their evaluation. The results of the feasibility study and proposed modifications will be developed by the Owner's Group.

Vermont Yankee's commitment to meet the implementation date for this item is contingent upon three factors:

1) Timely receipt of information from the BWR Owner's Group,

2) The acceptability of the information received,

3) Timely review and approval of our submittal by the NRC if required.

Item: II.K.3.17

Title: Report on Outages of Emergency Core Cooling Systems

The required report has been developed and submitted to the NRC. See Letter WVY 80-165, VYNPC to USNRC, dated 12/2/80.

This item is considered closed.

Item: II.K.3.18

Title: ADS Actuation

Vermont Yankee is participating with the BWR Owner's Group on this item. It is expected that a generic position will be submitted by the Owner's Group to address the requirements contained in NUREG-0737.

Vermont Yankee's commitment to meet the implementation date for this item is contingent upon three factors:

1) Timely receipt of information from the BWR Owner's Group,

2) The acceptability of the information received,

3) Timely review and approval of our submittal by the NRC, if required.

Item: II.K.3.21

Title: Restart of CS and LPCI

Vermont Yankee is participating with the BWR Owner's Group on this item. We share the Owner's Group's conclusion that design changes are not advisable. Analysis supporting this conclusion will be submitted to the NRC by the BWR Owner's Group.

Item: II.K.3.22

Title: Automatic Switchover of RCIC Suction

Vermont Yankee will meet the necessary hardware and procedural requirements within the prescribed timeframes. Vermont Yankee has verified that clear and cogent procedures exist for the manual switchover of the RCIC system suction.

The NRC's request for Technical Specifications for this Item will be addressed following the receipt of further guidance in the form of model Technical Specification pages as described in D.G. Eisenhut's letter of September 19, 1980.

Item: II.K.3.24

Title: Adequacy of HPCI/RCIC Space Cooling

Vermont Yankee will complete a design review of this area. Any necessary modifications will be completed within the prescribed timeframes.

The NRC's request for Technical Specifications for this Item will be addressed following the receipt of futher guidance in the form of model Technical Specification pages as described in D.G. Eisenhut's letter of September 19, 1980.

Item: II.K.3.25

Title: Effect of Loss of AC on Pump Seals

Vermont Yankee will complete a design review of this area. Any necessary information will be completed within the prescribed timeframes.

Item: II.K.3.27

Title: Common Reference Level

Vermont Yankee has complied with the documentation requirements for this item. See Letter WVY 80-166, VYNPC to USNRC dated December 1, 1980; Proposed Change #93.

Our ability to meet the implementation date is contingent on the NRC's timely review and approval of our submittal.

Item: II.K.3.28

Title: ADS Accumulator Qualification

Based on extensive research conducted during the preparation of our response to IEB 80-1, we question the accuracy of the qualification requirements specified in this item. We intend to pursue this matter. The results of our evaluation, along with justification for the qualifications we feel are appropriate, will be submitted to the NRC by 1/1/82.

Item: II.K.3.30

Title: Revised Small Break LOCA Methods

Refer to our letter WVY 80-161, VYNPC to USNRC dated 11/17/80 for information related to this item. That letter requested the NRC staff to direct their questions regarding scope and schedule to General Electric.

Item: II.K.3.31

Title: Plant Specific Calculations - 10CFR50.46

Vermont Yankee will meet the implementation requirements for this item.

Item: II.K.3.44

Title: Evaluation of Transients With Single Failure

Vermont Yankee is participating with the BWR Owner's Group on this item. The required analysis is being prepared by General Electric for Owner's Group use.

Item: II.K.3.45

Title: Manual Depressurization

Vermont Yankee is participating with the BWR Owner's Group on this item and based on our preliminary review, we anticipate endorsing their position. The required analysis will be submitted by the Owner's Group on Vermont Yankee's behalf.

Item: II.K.3.57

Title: Manual Actuation of ADS

Per NUREG-0737, no additional licensee action is required until symptomatic guidelines developed by the BWR Owner's Group are approved by the NRC staff.

Item: III.A.1.2

Title: Upgrade Emergency Support Facilities

Vermont Yankee has satisfied the interim requirements of NUREG-0578 regarding emergency support facilities.

Commitments relative to additional and/or clarified NRC requirements that are yet to be determined will be considered upon receipt of those documents.

Item: III.A.2

Title: Emergency Preparedness

1. Emergency Plans

   Vermont Yankee will meet the implementation schedule requirements regarding emergency plans.

2. Meteorological Data

   Vermont Yankee is continuing to review the requirements for this item. At this time, we expect that the implementation schedule requirements will be met with the exception of milestone(3)c. It does not appear that we will be able to meet the April 1, 1980 implementation date for this milestone due to the long lead time involved in ordering the necessary equipment and the high potential for inclement weather conditions which would hinder any outdoor implementation effort. For these reasons, Vermont Yankee proposes to defer implementation of this milestone until July 1, 1981. In the interim, if the primary source of onsite meteorological data becomes inoperable, we will utilize the best available source of offsite meteorological data. The NRC's request for Technical Specifications for this item will be addressed following the receipt of further NRC guidance in the form of model Technical Specification pages as described in D.G. Eisenhut's letter dated September 19, 1980.

Item: III.D.3.3

Title: In-Plant Radiation Monitoring

Vermont Yankee presently has provisions for sampling and analysis of inplant iodine cartridges containing charcoal. Proper techniques for purging and analysis of these cartridges preclude the necessity of using collection media such as silver zeolite. We will submit our position on this item by January 1, 1981.

Technical Specifications for this item are being submitted in response to the NRC's request for Technical Specifications concerning Category "A" Lessons Learned Items. This request was made in D.G. Eisenhut's letter to all Boiling Water Reactor Licensees dated July 2, 1980.

Item: III.D.3.4

Title: Control Room Habitability

Control Room Habitability is currently being analyzed considering the effects of both toxic gases and radioactivity. This analysis will be completed by 1/1/81 in accordance with NUREG-0737. A system design description is being prepared for Vermont Yankee by an outside consultant and their schedule for completing the scope of our request is mid-January. As a result of the consultant's schedule and because system modifications do not have to be completed until 1/1/83, we feel that deferring submittal of the modification descriptions and schedule until 7/1/81 is reasonable.

The NRC's request for Technical Specifications for this Item will be addressed following the receipt of further NRC guidance in the form of model Technical Specification pages as described in D.G. Eisenhut's letter dated September 19, 1980.