

# VERMONT YANKEE NUCLEAR POWER CORPORATION

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REPLY TO:  
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October 18, 1979

United States Nuclear Regulatory Commission  
Washington, DC 20555

Attention: Office of Nuclear Reactor Regulation  
Mr. Thomas A. Ippolito, Chief  
Operating Reactors Branch No. 3  
Division of Operating Reactors

References: (a) License No. DPR-28 (Docket No. 50-271).  
(b) USNRC Letter to VYNPC dated September 13, 1979.

Attachment: Implementation of NUREG-0578 Recommendations

Dear Sir:

Subject: Followup Actions Resulting From the NRC Staff Reviews Regarding the  
Three Mile Island Unit 2 Accident

In your letter, Reference (b), you requested that we submit our commitment to implement the actions contained in NUREG-0578, as modified and/or supplemented by your letter, on the implementation schedules contained in Enclosure 6 of your letter. The required commitments have been delineated in the attachment to this letter, along with explanatory notations as to status and anticipated problem areas.

Well defined acceptance criteria for many of the recommendations of NUREG-0578 are needed in order to ensure timely implementation. The recent clarification meetings and discussions have been of benefit, but others may be necessary to develop adequate acceptance criteria. These acceptance criteria, when fully developed, may impact implementation schedules due to hardware availability as well as affecting the ability to optimize utilization of scheduled refueling outages for such implementation. Additionally, our response in implementing several of the actions contained in NUREG-0578 will be coupled to generic, industry-wide activities. In these areas scheduler commitments and specific requirements may have to be developed between the generic, industry groups and the Commission. Finally, the inability to secure the increased staff necessary to respond to several action items may act as constraints to prompt resolution, particularly if TMI related Bulletins and Orders continue to escalate. Thus, we believe a degree of flexibility is necessary in the implementation schedules for good cause shown.

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In addition, your letter, Reference (b), required that we provide commitments to implement near-term requirements for improving emergency preparedness on the implementation schedules contained in Enclosure 8 of your letter. Vermont Yankee acknowledges the NRC identification of emergency preparedness improvements discussed in Enclosure 7 and their implementation schedule identified in Enclosure 8. While Vermont Yankee generally commits to accomplishing the improvements in those areas under its control in the time frames specified in Enclosure 8, we are aware of the action recently initiated by the Commission to specifically review overall emergency preparedness on the part of licensee, state, and local emergency preparedness organizations and agencies. This action is under the direction of the Task Force headed by James R. Miller of the NRC staff as presented to us and other Region I licensees on August 20, 1979 in King of Prussia, Pennsylvania.

Vermont Yankee is assessing its existing emergency plans in relation to the various documents and indications of this Task Force and will evaluate the Task Force concerns and address them in a timely manner. Vermont Yankee is aware, however, of the fact these requirements are apparently not finalized to date and will attempt to keep apprised of modifications as they are made. Finally, Vermont Yankee emergency plan changes will be presented to and discussed with the assigned Task Force Review Team when they visit our plant and review our plans in conjunction with those of the appropriate state and local agencies.


With regard to the establishment of an onsite technical support center, Yankee intends to conform to the position set forth in NUREG-0578. It is our understanding that a clarification of this position is being issued, but we have not received it at the time of writing this letter. As we understand the clarification, we believe there may be additional requirements and that we may not be able to conform to the additional requirements in all respects, particularly in the physical size requirement and perhaps in staffing requirements.

Within the constraints described above and/or noted in the attachment, it is our intent to meet the requirements and implementation schedules set forth in Reference (b).

We trust this information is satisfactory; however, if you have any further questions, please contact us.

Very truly yours,

VERMONT YANKEE NUCLEAR POWER CORPORATION

  
D. E. Moody for  
Manager of Operations

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Attachment

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ATTACHMENT

Items labeled A will be implemented by 1/1/80. Items labeled B will be implemented by 1/1/81.

<u>Section Number</u>	<u>Abbreviated Title</u>	<u>Requirement</u>	<u>Implementation Requirement</u>	<u>Commitment/Notes</u>
2.1.1	Emergency Power Supply Requirement	Complete Implementation	A	Vermont Yankee meets the intent of this recommendation. The power operated reactor vessel safety/relief valves are powered from emergency sources. Redundant valves are provided. No block valves are or will be provided because this would be detrimental to safety. Vessel level instruments are powered from emergency sources.
2.1.2	Relief and Safety Valve Testing	Submit program description and schedule	A	Vermont Yankee meets the intent of this recommendation as defined in the BWR owners group position.
		Complete test program	By July 1981	
2.1.3.a	Direct Indication of Valve Position	Complete implementation	A	Vermont Yankee will meet this recommendation. Pressure switches will be installed to indicate pressure changes in the SRV discharge pipes as a direct indication of flow. Safety valve operation is indicated by a prompt increase in containment pressure.
				The bases for why the above positions meet the intent of NUREG 0578 on this issue are contained in BWR Owners Group position being forwarded to M. D. Eisenhut by the Chairman of the Owners Group.
2.1.3.b	Instrumentation for Inadequate Core Cooling	Develop procedures and describe existing inst.	A	Vermont Yankee will meet the intent of this recommendation. Existing instrumentation and procedures have already been described in responses to Bulletin 79-08. The need for adequate core cooling instrumentation
		New level instrument design submitted	A	

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<u>Section Number</u>	<u>Abbreviated Title</u>	<u>Requirement</u>	<u>Implementation Requirement</u>	<u>Commitment/Notes</u>
		Subcooling meter installed	A	of a new design is being reviewed generically by the BWR owners group and the reactor vendor. Vermont Yankee expects to concur with the findings of these groups. BWR coolant systems operate at saturated temperatures, consequently a sub-cooling meter is of no value and will not be installed.
		New level instrument installed	B	
2.1.4	Diverse Containment Isolation	Complete implementation	A	Vermont Yankee intends to comply with the intent of this recommendation. The details will be in accordance with the position taken by the BWR owners group.
2.1.5.a	Dedicated H <sub>2</sub> Control Penetrations	Description and implementation schedule	A	Vermont Yankee meets the intent of their recommendation regarding single failure criteria. In addition connections already exist on the CAD system which could be used for additional H <sub>2</sub> control penetrations.
		Complete installation	B	
2.1.5.c	Recombiners	Review procedures and bases for recombiner use	A	The requirement for recombiners has been placed in abeyance.
2.1.6.a	Systems Integrity for High Radioactivity	Immediate leak reduction program	A	Vermont Yankee intends to meet this recommendation. A review of systems will be conducted with the purpose of identifying methods of minimizing leakage of radioactive fluids. In addition, a preventative maintenance program will be implemented. We anticipate endorsing the BWR Owners Group position on this matter when submitted.
		Preventive maintenance program	A	
2.1.6.b	Plant Shielding Review	Complete the design review	A	Vermont Yankee intends to meet this recommendation. A preliminary shielding review will be conducted with the objective of defining required systems and shielding requirements to enable operation and maintenance of these required systems.
		Implement plant modifications	B	

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				Modifications to plant systems will be dependent upon the results of the design review. The schedule for completion of the modifications will then be consistent with any associated constraints imposed by labor and material availability, with the objective of completion of the modifications by the January 1, 1981 date. We anticipate endorsing the BWR Owners Group position on this matter when submitted.
2.1.7.a	Auto Initiation of Auxiliary Feed	Complete implementation of control grade	A	This NUREG 0578 position does not pertain to BWRs.
		Complete implementation of safety grade	B	
2.1.7.b	Auxiliary Feed Flow Indication	Complete implementation	A	This NUREG 0578 position does not pertain to BWRs.
2.1.8.a	Post Accident Sampling	Design review complete	A	Vermont Yankee takes exception to the requirement for improved sampling. Experience at TMI has shown that these samples can be extremely radioactive. It may not be wise to remove this material from containment because of the potential for unnecessary plant personnel exposure and exposure of the public.
		Preparation of revised procedures	A	
		Implement Plant modifications	B	
		Description of proposed modification	A	

In addition we are installing additional post-accident monitors with increased ranges. These monitors will be used to follow the course of an accident on a real-time basis, i.e., monitor readings will be correlated to the extent of core damage. Installation of these improved monitors raise serious questions about the need and usefulness of improved high radioactivity sampling. Sampling

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				<p>results will not be real-time nor will they be representative. Additionally operating decisions will not be based on the results of these analyses. The requirement to analyze for chlorides is totally unnecessary. Even if chlorides are above specification, nothing can be done about it during the accident; this information would be totally irrelevant.</p> <p>Finally, modifications to the present onsite counting facility (or the provision of a completely new facility) with spectral analysis capability for highly radioactive samples will be extremely costly and provide no benefit. We anticipate endorsing the BWR Owners Group position on this when submitted.</p>
2.1.8.b	High Range Radiation Monitors	Installation complete	B	Vermont Yankee will install extended range noble gas effluent monitors and high range containment radiation monitors by January 1, 1981, subject to instrument qualification and availability. We endorse the BWR Owners Group position on this item.
2.1.8.c	Improved Iodine Instrumentation	Complete implementation	A	Vermont Yankee presently has the capability to determine airborne iodine concentrations. Procedures presently in effect require the use of charcoal for iodine sampling and the use of plant's GeLi detector for gamma ray energy spectrum analysis which can discriminate iodine from noble gases. We endorse the BWR Owners Group position on this item.

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<u>Section Number</u>	<u>Abbreviated Title</u>	<u>Requirement</u>	<u>Implementation Requirement</u>	<u>Commitment/Notes</u>
2.1.9	Transient and Accident Analysis	Complete analysis procedures, and training in areas of: small break LOCA, inadequate core cooling accidents and transients		To accomplish this action item, Vermont Yankee will utilize generic work produced by the NSSS vendor in accordance with commitments made between the BWR Owners' Group, and the Commission. Implementation of emergency procedures and initiation of training programs will be accomplished expeditiously, consistent with the intent of Reference (b) of the cover letter. In addition, within one year of completion of the generic analytical work, Vermont Yankee will validate independently the applicability of the generic guidelines and analyses for the Vermont Yankee plant.
	Containment Pressure Monitor	Installation complete	B	Vermont Yankee will meet the intent of these recommendations. Containment pressure, level, and hydrogen monitoring equipment will be in service by the scheduled date.
	Containment Water Level Monitor	Installation complete	B	Additional discussion on these items is presented in the BWR Owners Group positions.
	Containment Hydrogen Monitor	Installation complete	B	
	RCS Venting	Design submitted	A	
		Installation complete	B	VY meets the intent of this recommendation. The details are discussed in the BWR Owners Group position on this item. There are 4 SRV's located on the main steam lines which are safety grade and are operable individually or collectively from the control room. In addition the vessel head is vented to one steam line and vent valves, operable

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				from the main control room, are provided which vent to the drywell. Venting occurs also with operation of the RCIC or HPCI turbine.
<u>NOTE:</u> On the following items Vermont Yankee specifically endorses the BWR Owners Group positions and will use them as guidelines for implementation.				
2.2.1.a	Shift Supervisor Responsibilities	Complete implementation	A	Vermont Yankee will meet this recommendation. Procedures defining SS responsibilities will be in effect on schedule.
2.2.1.b	Shift Technical Advisor	Shift technical advisor on duty	A	Vermont Yankee will have a shift technical advisor on duty by January 1, 1980
		Complete Training	B	Vermont Yankee will implement the necessary procedures and complete the training of the shift technical advisor by January 1, 1981.
2.2.1.c	Shift Turnover Procedures	Complete implementation	A	Vermont Yankee will meet this recommendation. Procedures defining the requirements for shift turnover will be in effect on schedule.
2.2.2.a	Control Room Access Control	Complete implementation	A	Vermont Yankee will meet the intent of this recommendation. Procedures controlling access to the control room will be in effect on schedule.
2.2.2.b	Onsite Technical Support Center	Establish center	A	Vermont Yankee will meet the intent of this recommendation. A technical support center will be designated on site and appropriate equipment made available.
2.2.2.c	Onsite Operational Support Center	Complete implementation	A	Vermont Yankee will meet the intent of this recommendation. An operational support center will be established on the site and will be provided with appropriate equipment.

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