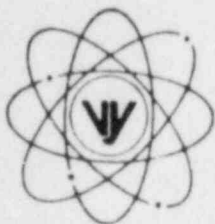


# VERMONT YANKEE NUCLEAR POWER CORPORATION



RD 5, Box 169, Ferry Road, Brattleboro, VT 05301

FVY 85-109  
REPLY TO:

ENGINEERING OFFICE

1671 WORCESTER ROAD  
FRAMINGHAM, MASSACHUSETTS 01701  
TELEPHONE 617-872-8100

November 22, 1985

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

Attn: Office of Nuclear Reactor Regulation  
Mr. Domenic B. Vassallo, Chief  
Operating Reactors Branch No. 2  
Division of Licensing

References: a) License No. DPR-28 (Docket No. 50-271)  
b) Letter, USNRC to VYNPC, NPY 85-210, dated 10/7/85  
c) Letter, VYNPC to USNRC, FVY 83-11, dated 10/26/83  
d) Letter, USNRC to VYNPC, NPY 83-133, dated 6/3/83

Dear Sir:

Subject: NUREG 0737, Item II.K.3.18, Modifications to the  
Automatic Depressurization System Logic

By your letter dated October 7, 1985 [Reference b)], you notified Vermont Yankee (VY) that our proposed action of maintaining the current ADS logic design and relying instead upon symptom-oriented emergency procedures to address the concerns of NUREG 0737, Item II.K.3.18 was unacceptable. You further determined that VY should implement one of the two staff-approved ADS logic modifications specified in your June 3, 1983 letter [Reference d)] and requested that VY provide you with our plans and schedule for such modifications. We herein respond to your determination and request.

The Vermont Yankee Automatic Depressurization System (ADS) relay logic actuates the relief valves to depressurize the reactor vessel upon coincident signals of low water level in the vessel, high drywell pressure and evidence of any low pressure ECCS pump running. NUREG 0737, Item II.K.3.18 identifies situations where ADS should automatically actuate without a high drywell pressure signal.

Vermont Yankee has reviewed the NRC modification options available to satisfy the intent of NUREG 0737, Item II.K.3.18. The two options are essentially to either: 1) eliminate the high drywell pressure permissive and add a manual switch to inhibit automatic depressurization; or 2) add a manual inhibit switch in conjunction with a timer to bypass the high drywell pressure permissive after a sustained low water level. VY has determined that both of the options require further careful engineering and procedural evaluations to specifically assess the impacts on the associated safety/analysis system.

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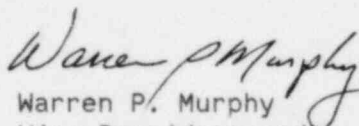
Vermont Yankee's initial evaluation of the two modification options has concluded that either option might increase the likelihood of automatically depressurizing the reactor vessel during a larger number of abnormal operating events than presently exists, thus unnecessarily challenging plant safety systems and placing the plant in a potentially less safe condition. Therefore, VY continues to believe that the implementation of symptom-based Emergency Operating Procedures is the preferred resolution of the NUREG 0737, Item II.K.3.18 concern for our facility.

Of the two staff-approved options, however, VY prefers the modification option wherein a new time delay relay is added to the ADS logic to actuate ADS upon a sustained low water level since our existing equipment logic could be maintained. However, we request additional time be approved to allow us to complete a limited plant-specific Probabilistic Risk Assessment which will provide a more complete and quantitative basis for making a final determination concerning this issue. We believe that the additional time necessary to incorporate the results of such an evaluation into a final decision in this matter is appropriate given the safety significant impacts on the Vermont Yankee facility associated with either of the modification options. We are willing to meet with you and your staff to discuss our concerns and the scope of our PRA regarding this issue. Our schedule for completing the PRA and providing you with our position is November 1, 1986. This schedule will allow sufficient time for the design and installation of any modification identified as necessary for Vermont Yankee by our next outage, currently scheduled for June 1987. This review will ensure that any adverse safety impacts are considered and evaluated for Vermont Yankee prior to implementing required design changes.

We trust that the above is responsive to your request; however, should you have any questions, please contact us.

Very truly yours,

VERMONT YANKEE NUCLEAR POWER CORPORATION

  
Warren P. Murphy  
Vice President and  
Manager of Operations