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October 28, 1994
BVY 94-103

U.S. Nuclear Regulatory Commission
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References:
(a) License No. DPR-28 (Docket No. 50-271)
(b) Letter, VYNPC to USNRC, BVY 93-64, dated 6/29/93
(c) Letter, USNRC to VYNPC, NVY 93-036, dated 4/29/93
(d) BWR Owners' Group Topical Report NEDO-31558-A, dated 3/29/93
(e) Letter, VYNPC to USNRC, BVY 93-133, dated 12/1/93

Subject: Proposed Change No. 174, Removal of Neutron Flux Instrumentation From Post Accident Monitoring Technical Specifications

Pursuant to Section 50.90 of the Commission's Rules and Regulations, Vermont Yankee Nuclear Power Corporation hereby proposes the following change to Appendix A of the operating license [Reference (a)].

Proposed Change

Replace Pages 53, 55, 70, 74 and 78 of the Vermont Yankee Technical Specifications with the attached revised Pages 53, 55, 70, 74 and 78. A change to these pages is being proposed to remove Neutron Monitoring System (NMS) and Control Rod Position instrumentation from the Vermont Yankee Technical Specifications for post-accident monitoring. Vermont Yankee's intent to submit a proposed Technical Specification change was indicated in Reference (b). In addition, unrelated administrative changes are also proposed to be incorporated to correct equipment identification numbers and instrument ranges on Pages 53, 55 and 78.

The first specific change is to remove both the Neutron Monitor and Control Rod Position parameters from the Post Accident Instrument Tables 3.2.6 and 4.2.6 and to revise the corresponding Notes for these tables.

The second specific change which is administrative in nature only, is to correct the Safety Relief Valve identification numbers in Table 3.2.6 and to provide the correct instrument range (psig in lieu of psia) for the Containment Pressure parameter in Table 3.2.6, corresponding Note 5 and Bases 3.2, and for the Torus pressure parameter in table 3.2.6.

Reason for Change

As described in Reference (c), the NRC stated that, for existing BWRs, neutron flux monitoring instrumentation does not need to meet the Category 1 criteria of R.G. 1.97. Reference (c) further states that since neutron flux is no longer Category 1 instrumentation, licensees may request the removal of this instrumentation from

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their post-accident monitoring Technical Specifications. Accordingly, we are proposing a change to the Technical Specifications to remove this instrumentation from post-accident monitoring. This request includes Control Rod Position instrumentation because this instrumentation is only included in the Technical Specifications to provide redundancy for NMS instrumentation. Control Rod Position instrumentation is considered Category 3 in R.G. 1.97 and as such is required to meet the design and qualification criteria as specified by R.G. 1.97.

The administrative changes to Table 3.2.6, corresponding Note 5 and Bases 3.2 are proposed to correct a typographical error concerning Safety Relief Valve Identification numbers and to provide the correct instrument ranges for Containment and Torus pressure instrumentation. The corrected instrument ranges will make the Technical Specification Sections agree with the FSAR, our R.G. 1.97 submittal and the actual instrument ranges.

Basis for Change

Tables 3.2.6 and 4.2.6 have been revised to remove NMS and Control Rod Position instrumentation from Post-Accident Monitoring instrumentation. In addition, Table 3.2.6, Note 2 and Table 4.2.6, Note 5 have been deleted because they are specific to instrumentation to be removed from these tables. The NRC has stated, in Reference (c), that since NMS instrumentation is no longer considered Category 1 instrumentation by R.G. 1.97, that licensees could request approval to remove this instrumentation from post-accident monitoring. Control Rod Position instrumentation is considered Category 3 instrumentation by R.G. 1.97.

As an alternate to R.G. 1.97 requirements, the BWROG submitted NEDO-31558-A [Reference (d)] which proposes criteria for neutron flux monitoring instrumentation in lieu of Category 1 criteria included in R.G. 1.97. Instrumentation installed at VY satisfies the criteria described in NEDO-31558-A as we stated in Reference (e). Subsequently, the Director of NRR concluded that Category 1 neutron flux monitoring instrumentation is not needed for existing BWRs to cope with Loss-of-Coolant Accident (LOCA), Anticipated Transient Without Scram (ATWS), or other accidents that do not result in severe conditions. Instrumentation to monitor the progression of severe accidents would be best addressed by the current severe accident management program. Likewise, Control Rod Position instrumentation is not required to cope with these events.

Requirements for NMS instrumentation pertaining to the scram function still exists in the Technical Specifications under the sections relative to the Reactor Protection System (RPS). Present surveillance procedures pertaining to Control Rod Drive Technical Specification requirements include the use and the resultant verification of operation of the Control Rod Position instrumentation. The instrumentation to be removed from the Post-Accident Monitoring Technical Specifications perform a monitoring function only. This change will not pose any change to hardware or to the design basis, protective function, redundancy, trip point, or logic of the original system.

The subject administrative changes which correct a typographical error and the listing of actual instrument ranges are to be incorporated to enhance the accuracy of the Technical Specifications.

Safety Considerations

The removal of limiting conditions of operation and surveillance requirements for NMS and Control Rod Position instrumentation for post-accident monitoring instrumentation will not change the function of any equipment. Current maintenance and functional testing will assure component operability of this equipment. NEDO-31558-A [Reference (d)] evaluated the impact on the outcomes of accident and transient events if the NMS and Control Rod Position System were to fail. It was determined that these postulated failures do not result in a threat to plant safety.

Per the VY FSAR, the safety function of NMS instrumentation is to detect conditions in the core that threaten the overall integrity of the fuel barrier due to excessive power generation and provide signals to the reactor protection system, so that the release of radioactive material from the fuel barrier is limited. NMS

instrumentation is still included in the Technical Specifications for the Reactor Protection System (RPS) which is consistent with the intent of the original design basis for this equipment. The original intention for the neutron flux indication function was for use during normal operation. The Control Rod Position instrumentation does not perform any safety function. However, rod position information will continue to be utilized in plant procedures to perform surveillances on the Control Rod Drive (CRD) System. The CRD System continues to be included in the Technical Specifications.

The removal of NMS and Control Rod Position instrumentation from the Technical Specifications for post-accident monitoring does not impact any FSAR safety analysis nor does it involve any change in Technical Specification setpoints, plant operation, protective function or design basis of the plant. Assurance of equipment operation is still provided by the functional tests, calibrations and maintenance, which will continue to be performed.

The changes to correct the identification and instrument range errors on Table 3.2.6, corresponding Note 5 and Bases 3.2 are administrative in nature. Approval of these proposed changes will have no affect on plant safety.

The proposed change has been reviewed by the Plant Operations Review Committee and the Vermont Yankee Nuclear Safety Audit and Review Committee.

Significant Hazards Considerations

The standards used to arrive at a determination that a request for amendment involves no significant hazards consideration are included in the Commission's regulations, 10CFR50.92, which state that the operation of the facility in accordance with the proposed amendment would not: 1) involve a significant increase in the probability or consequences of an accident previously evaluated, 2) create the possibility of a new or different kind of accident from any accident previously evaluated, or 3) involve a significant reduction in a margin of safety.

The discussion below addresses the proposed changes with respect to these three criteria and demonstrates that the proposed amendment involves a no-significant-hazards consideration:

1. The proposed change to remove the NMS and Control Rod Position instrumentation from the Technical Specifications for post-accident monitoring is consistent with NRC requirements concerning this instrumentation.

   Wide Range Neutron Flux (NMS Instrumentation) is presently included in the BWR Standard Technical Specifications, but the NRC has recently determined [Reference (c)] that this instrumentation need not meet R.G. 1.97 Category 1 criteria and that licensees may request the removal of this instrumentation from their post-accident monitoring Technical Specifications. Control Rod Position instrumentation is considered R.G. 1.97 Category 3 which is required to meet the least stringent design and qualification criteria as specified in this regulatory guide.

   Testing, calibration and maintenance of this instrumentation will continue to assure operability of instrumentation. The portions of the NMS and the Control Rod Position instrumentation systems to be removed from the post-accident monitoring Technical Specifications do not perform any automatic control or trip function. In addition, this instrumentation does not provide information that is required to permit the control room operator to take manual actions that are required for safety systems to accomplish their safety functions for design basis accident events.

   At a BWR, when all control rods are inserted, these control rods cannot be withdrawn without deliberate operator action. The proposed change does not result in any system hardware modification or new plant configuration. The requested change to post-accident monitoring instrumentation does not impact any FSAR safety analysis involving the NMS or Control Rod Position System. These

monitoring functions are not contributors to the initiation of accidents.

The administrative changes to correct a typographical error and instrument ranges will have no effect on plant hardware, plant design, safety limit setting or plant system operation and therefore, do not modify or add any initiating parameters that would significantly increase the probability or consequences of any previously analyzed accident.

Therefore, it is concluded that there is not a significant increase in the probability or consequence of an accident previously evaluated.

2. The function of the instrumentation to be removed from the Technical Specifications is for monitoring only. These indications are not necessary for operators to accomplish any safety functions.

The proposed change does not involve any change in hardware, Technical Specification setpoints, plant operation, redundancy, protective function or design basis of the plant. There is no impact on any existing safety analysis or safety design limits. NMS and Control Rod Position monitoring functions do not initiate nuclear system parameter variations which are considered potential initiating causes of threats to the fuel and the nuclear system process barrier.

As discussed above, the proposed administrative change only corrects a typographical error concerning equipment identification numbers and listed instrument ranges. This change does not affect any equipment and they do not involve any potential initiating events that would create any new or different kind of accident.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The proposed change to remove the NMS and Control Rod Position instrumentation from the Technical Specifications for post-accident monitoring does not affect any existing safety margins. The original NMS design basis for BWRs never required a post-accident neutron monitoring function since there are no design basis accidents that rely on operator action to control reactor power. This is also true for Control Rod Position monitoring.

Existing Technical Specifications requirements for automatic trip functions are unaffected. Failure of the indication of reactor power from the NMS or the Control Rod Position System does not preclude the ability of the reactor operator to determine reactor power levels. Alternate indications are available to ascertain reactor power. These include reactor coolant boron concentrations, flux levels from the Traversing Incore Probe (TIP) System and the status of plant parameters which are ninkedto reactor power. In addition, alternate means of determining reactor power have been incorporated into the Emergency Operating Procedures (EOPs).

Operation, testing and maintenance of this instrumentation will remain the same. System functions are the same. Post-accident functional design criteria as described in Reference (d) and approved by the

NRC are satisfied by present equipment installed at VY. NMS instrumentation is still included in the Technical Specifications for the RPS. Control Rod Position Instrumentation does not perform any safety function.

As discussed above, the proposed administrative changes do not affect any equipment involved in potential initiating events or safety limits. In addition, the Commission has provided guidance for the application of the standards in 10CFR50.92 by providing certain examples (51FR7751, dated March 6, 1986) of actions likely to involve no significant hazards consideration. One of these examples (i) is a purely administrative change to the technical Specifications; for example, a change to achieve consistency throughout the Technical Specifications, correction of an error, or a change in

nomenclature. The proposed administrative changes fall within the scope of this Commission example since they involve the correction of a typographical error and the correction of the listing of actual instrument ranges.

Based upon the above, it is concluded that the proposed change does not involve a significant reduction in a margin of safety.

Based upon the above, we conclude that the proposed change does not constitute a significant hazards consideration as defined in 10CFR50.92(c).

Schedule of Change

The proposed change will be incorporated into the Vermont Yankee Technical Specifications as soon as practicable following receipt of your approval.

We trust that the information provided above adequately supports our request, however, should you have any questions on this matter, please contact us.

Sincerely,

VERMONT YANKEE NUCLEAR POWER CORP.

Donald A. Reid
Vice President, Operations

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

STATE OF VERMONT)
) SS
WINDHAM COUNTY)

Then personally appeared before me, Donald A. Reid, who, being duly sworn, did state that he is Vice President, Operations of Vermont Yankee Nuclear Power Corporation, that he is authorized to execute and file the foregoing document 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.

Sally A. Sandstrum Notary Public
My Commission Expires February 10, 1995

SALLY A. SANDSTRUM NOTARY PUBLIC WINDHAM COUNTY VERMONT