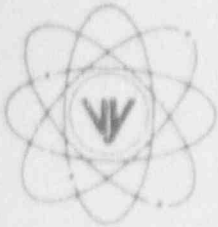


VERMONT YANKEE NUCLEAR POWER CORPORATION



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July 24, 1992
BVY 12-092

U.S. Nuclear Regulatory Commission
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References: (a) License No. DPR-28 (Docket No. 50-271)
(b) NRC Bulletin 92-01, Failure of Thermo-Lag 330 Fire Barrier System to Maintain Cabling in Wide Cable Trays and Small Conduits Free From Fire Damage, dated 6/24/92
(c) Memo, WH Rasin (NUMARC) to NUMARC Administrative Points of Contact, NRC Meeting with NUMARC on Thermo-Lag Fire Barrier Issue, dated 7/8/92

Subject: NRC Bulletin 92-01 Response

Dear Sir:

On 6/25/92, Vermont Yankee was notified by reference b) that the fire protection qualification of Thermo-Lag 330 (TL) fire barrier material was indeterminate, based upon testing performed independently by another utility. Reference b) further instructed all nuclear facilities utilizing this material to compensate as if the fire barriers were degraded, and to provide, within 30 days of receipt, a written notification describing whether Thermo-Lag barriers were installed and what actions would be taken to ensure or restore fire barrier integrity. This letter is submitted as our response to NRC Bulletin 92-01.

IMMEDIATE CORRECTIVE ACTIONS:

After consideration of the information contained in Bulletin 92-01, five conduits, consisting of two 3/4", one 3" and two 4" were identified as incorporating this type of barrier. Thermo-Lag 330 fire wrap is installed on these conduits in the 3-hour configuration. No cable tray applications were identified. As an interim measure, the following compensatory measures were instituted immediately:

- 1) A continuous fire watch was established for the 3/4" conduit, based on the results of the testing that indicated the material may not withstand the required fire endurance rating.
- 2) An hourly fire watch was established for the 3" and 4" conduit, based on the relatively low combustible loading in the subject areas and the testing results that indicated that larger size conduit (5" was tested) may not be subject to the same concerns raised about the smaller conduits.

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It should be noted that none of the subject conduit applications at Vermont Yankee are specified in the Vermont Yankee Technical Specifications. Therefore, no Technical Specification required compensatory measures were necessary.

ANALYSIS:

A more detailed review of the specific Thermo-Lag 330 applications at Vermont Yankee has subsequently been performed for these conduits, which are considered Appendix "R" fire barriers. The following are the results of this review:

- 1) The basis for originally protecting the 3/4" conduits has since been eliminated due to subsequent design evolution/equipment upgrades, specifically Reg. Guide 1.97 suppression chamber water level and temperature upgrades. Therefore, concern for these small diameter conduits are no longer applicable and compensatory measures are not required.
- 2) Based upon NUMARC guidance contained in reference c), which states that Bulletin 92-01 should only address conduit smaller than 4 inches, the two 4" conduits wrapped with TL-330 located in the Radwaste Hallway are considered outside the scope of Bulletin 92-01 and therefore do not require compensatory measures.
- 3) The one 3" conduit that is wrapped with Thermo-Lag 330 is the only application at Vermont Yankee within the scope of Bulletin 92-01. The conduit is wrapped in two Reactor Building locations with TL-330 and houses the dc power feed from the Alternate Shutdown Battery to the RCIC system for shutdown outside of the control room. Considered in our evaluation of appropriate compensatory measures were the following:
 - a) There is no test evidence that properly installed TL-330, 3" conduit fire wrap is unacceptable.
 - b) The Texas Utilities testing was based upon a one-hour fire barrier. Vermont Yankee's configuration is a three-hour barrier. Therefore the testing performed to date is inconclusive with regard to our particular configuration.
 - c) Fire detection exists in the areas where this fire wrap is present and would immediately alert the Control Room in the unlikely event of a fire in the area.
 - d) Ignition sources are not present near the location of the conduit wraps. Additionally, no junction box is included in the protected cable/conduit routing.
 - e) The conduit is located in a Fire Control Area, and thus subject to the administrative controls that limit combustibles and impose strict requirements for "hot-work".

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- f) Based upon VY's particular conduit routing/configuration, a review of installation procedures developed from TSI Installation Instructions, the use of TSI trained/certified installers, and considerable quality control oversight, Vermont Yankee is confident that the fire wrap was properly and adequately installed.

Following careful engineering review in consideration of the above, Vermont Yankee has determined that a once per shift walkdown of the areas that contain the 3" fire wrap is sufficient to ensure that no additional combustibles have been introduced, and that this conduit is adequately protected.

SUMMARY:

The Thermo-Lag 330 fire barrier material in question is utilized to a very limited extent at Vermont Yankee. We believe we have appropriately addressed the issue with the information currently available to the industry. Vermont Yankee is aware of an industry program being coordinated by NUMARC to establish a test database, develop guidance for applicability of tests, develop generic installation guidance and consider/coordinate additional testing as appropriate. We have a high confidence level that the installed 3" conduit fire wrap will provide protection equivalent to a three hour fire barrier. We intend to monitor further developments with this product and will take additional actions if warranted.

We trust that the actions proposed are responsive to your concerns; however, should you have any further questions, please do not hesitate to contact us.

Very truly yours,

Vermont Yankee Nuclear Power Corporation



Warren P. Murphy
Senior Vice President, Operations

cc: USNRC Region I Administrator
USNRC Resident Inspector - VYNPS
USNRC Project Manager - VYNPS
William H. Rasin, NUMARC