

VERMONT YANKEE NUCLEAR POWER CORPORATION

SEVENTY SEVEN GROVE STREET

RUTLAND, VERMONT 05701

July 11, 1979

REPLY TO: B.3.2.1

ENGINEERING OFFICE

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

Attention: T. A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

References: (a) License No. DPR-28 (Docket No. 50-271)
(b) USNRC letter to VYNPC dated January 13, 1978,
Subject: Amendment No. 43 to Facility Operating License

Dear Sir:

Subject: Fire Barrier Penetration Seals

In reference (b) above, Vermont Yankee committed to a completion date of "end of 1979 refueling outage" for the installation of fire barrier penetration seals. We have recently reviewed the completion date and our progress toward job completion, and have concluded that we cannot meet the schedule. Therefore, we must establish a new date for this work. The date we suggest is the end of the 1980 refueling outage. We realize that this is a significant change, but feel that it is justified. Our bases for this change follow here:

It should be realized that there are presently many different products or systems on the market for sealing fire barrier penetrations. The process of evaluating each of these is a long and arduous one. The evaluation is made more difficult because no one product meets all criteria developed for the different types of penetrations in a plant. These criteria include among others ampacity derating, flexibility, method of application and ease of application. A closer look at just one of these, required derating on cable ampacity, will indicate the problems and decisions we are faced with.

A material used as a penetration seal on electrical cables must stop a fire from going through a penetration. It must also stop heat from passing through it and building up the temperature on the non-fire side of the penetration. This requires that the material be a good thermal insulator. However, this same material must conduct heat away from the cable that it surrounds in the penetration. If it does not, a hot spot could develop, causing a fire or a cable failure. Products have been developed which claim to meet the criteria, but some are un-tested to date. Others can be used only on new installations. This problem of required cable derating is a significant one for Vermont Yankee and for other older plants. It cannot be ignored; and, in fact, must be looked at for every penetration. This is a lengthy process.

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Vermont Yankee is approaching the end of this evaluation process. It is felt that a decision on the materials to be used will be made within the next two months, after reviewing the results of tests presently being made.

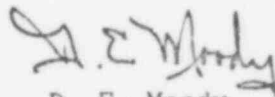
As you are aware, Vermont Yankee presently has seals on many penetrations. Our original estimate on the time required to either remove these older seals and/or prepare the area for the new seal arrangement was low. After conferring with contractors that could do that job, our estimate on time has increased substantially. In addition, all the contractor's time estimates for re-sealing the penetrations are far higher than our original ones. The reason for this is readily apparent. Vermont Yankee was one of the first plants to be evaluated by the NRC Fire Hazard Review Team. Almost no work had been done in the industry using the newly developed seal materials or systems. Therefore, estimates were based on theory rather than experience. As experience builds, time estimates increase. Vermont Yankee is faced with contractors who say they cannot do the work by the presently scheduled completion date.

We therefore propose a schedule completion date change to the end of the 1980 refueling outage. We intend to proceed rapidly on this job, and will finish it as soon as practicable. It is hoped that the actual completion date will be sooner than our new schedule allows. However, because of the difficulty in working in some areas of the plant at power, the requested date is necessary.

We wish to point out that other major modifications to the plant fire protection systems have been completed on schedule. We feel this is indicative of the effort we have put on the job to date, and the effort which will be put toward meeting this new date.

If you have any question on the above, please contact us.

Very truly yours,



D. E. Moody
Manager of Operations

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