

May 31, 1984

Docket No. 50-271

Mr. J. B. Sinclair  
Licensing Engineer  
Vermont Yankee Nuclear Power Corporation  
1671 Worcester Road  
Framingham, Massachusetts 01701

Dear Mr. Sinclair:

SUBJECT: ENVIRONMENTAL QUALIFICATION OF  
EQUIPMENT IMPORTANT TO SAFETY

Re: Vermont Yankee Nuclear Power Station

DISTRIBUTION  
Docket File  
NRC PDR  
Local PDR  
ORB#2 Reading  
DEisenhut  
OELD  
ELJordan  
JNGrace  
ACRS (10)  
Gray File  
SNorris  
VRooney

In order to complete our review of the environmental qualification of equipment important to safety for Vermont Yankee, we find that we require certain additional information, as described in the enclosure to this letter. We discussed the need for this information with your staff during our meeting of April 18, 1984, and we understand that you are presently preparing to submit this information. Please provide this information by June 30, 1984.

This request for information was approved by the Office of Management and Budget under clearance number 3150-0011 which expires April 30, 1985. Comments on burden and duplication may be directed to the Office of Management and Budget, Reports Management Room 3208, New Executive Office Building, Washington, D. C. 20503.

Sincerely,

Original signed by:

Domenic B. Vassallo, Chief  
Operating Reactors Branch #2  
Division of Licensing

Enclosure:  
As stated

cc w/enclosure:  
See next page

DL:ORB#2  
SNorris:ajs  
05/31/84

DL:ORB#2  
VRooney  
05/31/84

DL:ORB#2  
DVassallo  
05/31/84

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PDR ADOCK 05000271  
P PDR

Mr. J. B. Sinclair  
Vermont Yankee Nuclear Power Corporation  
Vermont Yankee Nuclear Power Station

cc:

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President & Chief Executive Officer  
Vermont Yankee Nuclear Power Corp.  
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Brattleboro, Vermont 05301

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Regional Administrator  
Region I Office  
U. S. Nuclear Regulatory Commission  
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King of Prussia, Pennsylvania 19406

Mr. Richard Saudek, Commissioner  
Vermont Department of Public Service  
120 State Street  
Montpelier, Vermont 05602

ENCLOSURE

REQUEST FOR ADDITIONAL INFORMATION  
VERMONT YANKEE NUCLEAR POWER STATION  
ENVIRONMENTAL QUALIFICATION OF EQUIPMENT

1. Submit all applicable justifications for continued operation (JCOs) that are currently being relied upon and certify the following for each JCO associated with equipment that is assumed to fail:

No significant degradation of any safety function or misleading information to the operator as a result of failure of equipment under the accident environment resulting from a design basis event will occur.

2. The licensee should certify that in performing its review of the methodology to identify equipment within the scope of 10 CFR 50.49(b)(2) that the following steps have been addressed:
  - (a) A list was generated of safety-related electric equipment as defined in paragraph (b)(1) of 10 CFR 50.49 required to remain functional during or following design-basis Loss of Coolant Accident (LOCA) or High Energy Line Break (HELB) Accidents. The LOCA/HELB accidents are the only design-basis accidents which result in significantly adverse environments to electrical equipment which is required for safe shutdown or accident mitigation. The list was based on reviews of the Final Safety Analysis Report (FSAR), Technical Specifications, Emergency Operating Procedures, Piping and Instrumentation Diagrams (P&IDs), and electrical distribution diagrams;
  - (b) The elementary wiring diagrams of the safety-related electrical equipment identified in (a) were reviewed to identify any auxiliary devices electrically connected directly into the control or power circuitry of the safety-related equipment (e.g., automatic trips) whose failure due to postulated environmental conditions could prevent required operation of the safety-related equipment and;
  - (c) The operation of the safety-related systems and equipment were reviewed to identify any directly mechanically connected auxiliary systems with electrical components which are necessary for the required operation of the safety-related equipment (e.g., cooling water or lubricating systems). This involved the review of P&IDs, component technical manuals, and/or systems descriptions in the FSAR.
  - (d) Nonsafety-related electrical circuits indirectly associated with the electrical equipment identified in Step (a) by common power supply or physical proximity were considered by a review of the electrical design including the use of applicable industry

standards (e.g., IEEE, NEMA, ANSI, UL, and NEC) and the use of properly coordinated protective relays, circuit breakers, and fuses for electrical fault protection.

3. Certify that the electrical equipment within the scope of 10 CFR 50.49(b)(3) is all Regulatory Guide 1.97 Category 1 and 2 equipment or that justification has been provided for any such equipment not included in the environmental qualification program.