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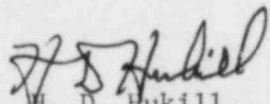
Office of Nuclear Reactor Regulation  
Attn. J. F. Stolz, Chief  
Operating Reactors Branch #4  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Mr. Stolz:

Three Mile Island Nuclear Station, Unit I (TMI-1)  
Operating License No. DPR-50  
Docket No. 50-289  
Environmental Qualification of Electrical Equipment (Supp. 2)

On March 8, 1984 members of the GPUN staff met again with members of your staff to further clarify our responses of February 10, 1984 (5211-84-2038) and February 22, 1984 (5211-84-2044) and to address more generally compliance with 10 CFR 50.49. Documented clarifications discussed in that meeting will be provided to NRC by May 1, 1984. Also requested at that meeting was a specific letter addressing outstanding deficiencies in the December 10, 1982 Technical Evaluation Report on Environmental Qualification of Electrical Equipment at TMI-1 for the Emergency Feedwater System. This information, attached, supplements the visit to the GPUN corporate office on March 20 and 21, 1984 at which time this information was reviewed.

Sincerely,

  
H. D. Hukill,  
Director, TMI-1

HDH:CWS:mle  
Attachments

cc: J. Van Vliet  
R. Conte

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PDR ADOCK 05000289  
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Emergency Feedwater System -  
Qualification of Electrical Equipment

A. Limiterorque Motor Operators

TER Items 11 & 15 [EFV-2,1]

These motor operators are qualified per 10CFR50.49 sections F and K. These TER items should be placed in the NRC SER qualification category IA "Equipment Qualified".

The basic environmental qualification is provided in Limitorque reports B0058 and B0003. Report B0027 provides thermal lag data on the motor operators.

These Limitorques are similar by review of the similarity description in B00058 and were verified to be the same model installed at TMI-1 by documentation (purchase order or letter from Limitorque) or visual inspection.

B. Westinghouse Motors

TER Item 51 [EFP-2]

These motors are qualified per 10CFR50.49 sections F and K. This TER items should be placed in the NRC SER qualification category IA "Equipment Qualified".

These motors are similar by review of the TMI-1 EFP Motor Test Report and were verified to be the same model installed at TMI-1 by documentation.

The basic environmental qualification is provided in Westinghouse Reports WCAP 8754 and WCAP 7829. Supporting information includes:

1. WCAP 8754 aging-analysis-included the silicon rubber lead wires.
2. Bearing analysis - are provided in GPUN calculation 1101X-5350-000 and GPUN memo R. Spragg to D. Slear dated 5/14/81.
3. Lubrication - Exxon Terisctic 32 is controlled within the preventative maintenance program and is rated by Exxon at a radiation of  $10^8$  rads with a flash point of 410°F, (Source: vendor specification sheet for terisctic 32).

4. Insulation life Analysis - Westinghouse report dated 1/81 envelopes the thermal lag peak for the Intermediate Building temperature of 322°F.
5. Lead Splices - are controlled within the corrective maintenance program by GPUN procedure 1420-Y-15.

We have reviewed a recent steam and temperature test (WCAP 7829) report which demonstrates the motors to be qualified.

We are being sent a letter from Westinghouse saying that these reports are applicable to our motors, confirming information which has been provided already by telephone conversation.

C. Bailey E/P Converters

TER Item 60 [SP-V5]

These converters will be replaced prior to June 1984 with I/P units [Conoflow] qualified to IEEE 323-1974 and IEEE 344-1975. The failure mode for the I/P converter will fail open on loss of control power which varies from the E/P converter presently installed which is mid position. The EFV-30 fail open on loss of air [LBP-81-59, 14 NRC 2111, 1362 (para. 1030) (1981)].

D. Fisher Limit Switch [LS/EFV-30]

Not a TER Item

These switches are used for diagnostic purposes only. Flow indication for the emergency feedwater system is provided by the qualified redundant flow indicators sensed by FT-779, 782, 788 & 791. They have been installed in accordance with the requirements of Item II.E.1.2 of NUREG 0737. A secondary indication of emergency feedwater flow is provided by the qualified steam generator level indication system.

E. Kerite Cable [Common Item]

TER Item 106

These cables are qualified per 10CFR50.49 section F & K. This TER item should be placed in the NRC SER qualification category IA "Equipment Qualified".

Plant records are traceable to Procurement Specifications, Purchase Order, Reel No., pull slip and Certificate of Conformance (C of C) from Kerite.

F. Continental Wire

TER Item 107

These cables are qualified per 10CFR 50.49 section F & K. This TER item should be placed in the NRC SER qualification category IA "Equipment Qualified".

Plant records are traceable to Procurement Specifications, Purchase Order, Reel No., pull slip and Certificate of Conformance (C of C) from Continental Wire.

G. Foxboro Transmitter [FT 779, 782, 788 & 791]

No TER Item

The safety grade EFW flow transmitters are fully qualified to 10CFR 50.49 Section F based on Wyle Report 45592-4, and should be placed in the NRC SER qualification category IA "Equipment Qualified".