

USER'S REQUEST TO S.D.

TO: R. B. Minogue, Director
Office of Standards Development

FROM: H. R. Denton, Director
Office of Nuclear Reactor Regulation

SUBJECT: STANDARD FOR QUALIFICATION OF SAFETY RELATED EQUIPMENT

The Commission's Memorandum and Order of May 23, 1980 (CLI-80-21), directed that the staff initiate a rulemaking on the subject of environmental qualification of safety grade electrical equipment. We understand that this activity will be undertaken by your staff in direct response to the Commission Order. We have discussed the general subject of equipment qualification standards with your people and desire a broader approach.

We request that OSD evaluate the advisability of developing in a broad single rule making action, an amendment to 10 CFR 50 which would include, 1) the rule making directed by the Commission on environmental qualification of electric equipment, 2) the rule making proposed in the Commission paper from I&E, on independent verification testing and inspection program for environmental qualified equipment, and, 3) broadly address the qualification of both electrical and mechanical equipment for seismic and dynamic loadings conditions as well as other environmental conditions. This broad rule might also address qualification ^{in a general approach to} of chemical process equipment, such as hydrogen recombiners, and materials compatibility for service ^{in safety related functions} in other than the above equipment. The rule should address

electrical/mechanical

requirements for operating as well as new facilities. We believe that the broader rule would be of greater benefit to the staff and give better guidance to the industry than one that addresses only one aspect of equipment qualification. We suggest that the proposed new rule be in the form of a new appendix to 10 CFR Part 50 which refers back to appropriate General Design Criteria in Appendix A. We are, however, willing to accept your guidance in this respect.

Your evaluation should consider among other issues, the potential for expediting or delaying issuance of specific portions of the regulation when promulgated separately relative to their being combined in a single broad regulation.

In addition to this request for a proposed new broad rule, we request that it be augmented by Regulatory Guides. A revision of Reg. Guide 1.89 to include the current staff position would probably suffice for electrical equipment qualification. There is no present equivalent guide for mechanical equipment, hence, this would be a new undertaking. We believe that it is a necessary one. We anticipate that these two mother guides would be supplemented as necessary by appropriate supporting or daughter guides.

We recognize that this additional assignment for the Office of Standards will probably impact other ongoing activities, therefore, we will be willing to discuss priorities with you to resolve the budget and schedule matters.

Since we would not want to delay unnecessarily the start of your efforts on portions 1) and 2), we would appreciate receiving your recommendations on this request by October 1, 1980. The staff of the Assistant Director for Materials and Qualifications will assist you by providing whatever information available that you desire in developing your recommendations.

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C.

8/20/50

Gregg
H. ...

... 7) broadly address the qualification of electrical, mechanical, and chemical process (i.e., H_2 recombination) equipment for seismic and dynamic conditions, as well as the environmental compatibility of this equipment and the materials involved.

[Delete, "This broad rule... equipment."]

POOR ORIGINAL

W.S. ... of ... 1/1/80

The following aspects are significant in the application of components to use in safety related systems and therefore should be considered in the development of the sub:

- environmental qualification of mechanical equipment and
- the functional qualification of all types of equipment; eg electrical, mechanical, and electro-mechanical.

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- 1) Comment
- 2) p1 A2 and SECY
me in sub A2 (TE
paper)
- 3) Select and understand the
activities to A2
- 4) p2 remove sexist language

Wick

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| Action | File | Note and Return |
| Approval | For Clearance | For Conversation |
| As Requested | For Correction | Prepare Reply |
| Circulate | For Your Information | See Me |
| Comment | Investigate | Signature |
| Coordination | Justify | |

REMARKS

Attached are the original and my re-draft of the proposed NRR letter to RBM on the subject of the broad rule on qualification of safety related equipment.

I have sent a copy to Rosztoczy and Noonan.

28035

DO NOT use this form as a RECORD of approvals, concurrences, disposes, clearances, and similar actions

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| FROM: (Name, org. symbol, Agency/Post) | Room No.—Bldg. |
| WFAnderson | Phone No. |

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U.S. G.P.O. 1977-241-530/3090

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

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(SECY 80-?)

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in safety related functions

electrical/mechanical

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DRAFT

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We request that the proposed rule and associated regulatory guides address the qualification of both electrical and mechanical equipment for seismic (earthquake induced vibrations) and dynamic (vibrating loads resulting from postulated accidents) conditions as well as the other environmental conditions (temperature, ^{irradiation} ~~inadvantages~~, sprays, etc.) resulting from postulated accidents. The rule should address requirements for operating as well as new facilities. We believe that the broader rule would be of greater benefit to the staff and give better guidance to the industry than one that addresses only one aspect of equipment qualification. We suggest that the proposed new rule be in the form of a new appendix to 10 CFR Part 50 which refers back to appropriate General Design Criteria in Appendix A. We are, however, willing to accept your guidance in this respect.

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directed by the Commission ~~on~~ on environmental qualification of electric equipment, ~~of~~ the rule-making proposed in the Commission paper from I & E, ~~2534~~

~~on~~ on independent verification testing and inspection programs ~~of~~ of qualified ~~personnel~~ ^{equipment} (1 and 3) ^{personnel} address

the qualification of both electrical and mechanical equipment for

seismic ~~loadings~~ ^{and} dynamic loadings conditions as well as other environmental conditions

This broad rule might also address qualification of chemical process equipment such as hydrogen recombiners and

materials compatibility
to address in detail when the equipment

~~Four~~ ~~of~~ ~~the~~ ~~regulations~~ ~~should~~ ~~be~~ ~~considered~~ ~~in~~ ~~the~~ ~~context~~ ~~of~~ ~~the~~ ~~overall~~ ~~evaluation~~ ~~of~~ ~~the~~ ~~regulations~~ ~~and~~ ~~the~~ ~~potential~~ ~~for~~ ~~expediting~~ ~~or~~ ~~delaying~~ ~~the~~ ~~issuance~~ ~~of~~ ~~specific~~ ~~portions~~ ~~of~~ ~~the~~ ~~regulations~~ ~~and~~ ~~the~~ ~~relative~~ ~~value~~ ~~of~~ ~~the~~ ~~regulations~~ ~~when~~ ~~promulgated~~ ~~separately~~ ~~relative~~ ~~to~~ ~~their~~ ~~being~~ ~~combined~~ ~~in~~ ~~a~~ ~~single~~ ~~broad~~ ~~regulation~~

~~to~~

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~~We request our interest to~~

Since we would not want to delay unnecessarily the start of your efforts on portions (a) 1) and 2), we would appreciate receiving your recommendations on this ~~proposal's~~ request by October 1, 1980. ~~As~~ The staff of the Assistant Director for Materials and Qualifications will assist you ~~in any way possible~~ by providing all ~~pertinent~~ whatever information available that you desire in ~~of~~ developing your recommendations.

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STAFF

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