

NUCLEAR UTILITY GROUP
ON EQUIPMENT QUALIFICATION

Ref. EDO 13724

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December 2, 1983

Nunzio J. Palladino
Chairman
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Dear Mr. Chairman:

The Nuclear Utility Group on Equipment Qualification (Group)^{1/} respectfully submits these additional views on the recommended final rule regarding hydrogen control requirements (SECY-83-357). The Group previously expressed its concerns with this recommended rule in a letter to the Chairman dated October 26, 1983. The Commission subsequently met in open session, on November 9, 1983, to receive a briefing from the Staff and obtain the Staff's views on several issues associated with the rule. At that briefing session, certain views were expressed by the Staff that have caused us to become even more concerned about the requirements of the hydrogen rule and its possible implications.

Our chief concern with the recommended rule relates to the imposition of qualification requirements for essential systems and components, as opposed to the survivability standard envisioned by the proposed rule. This change to a qualification standard is wholly inappropriate. All testing and analyses to

- ^{1/} The Group, which was formed in 1980 to participate actively in all equipment qualification matters, is composed of these 23 utilities: American Electric Power, Arkansas Power & Light Company, Baltimore Gas & Electric Company, Boston Edison Company, Carolina Power & Light Company, Commonwealth Edison Company, Detroit Edison Company, Duke Power Company, Duquesne Light Company, Iowa Electric Light & Power Company, Mississippi Power & Light Company, New York Power Authority, Northeast Utilities, Northern States Power Company, Omaha Public Power District, Public Service Electric & Gas, Southern California Edison Company, Texas Utilities Generating Company, Toledo Edison Company, Virginia Electric & Power Company, Washington Public Power Supply System, Wisconsin Electric Power Company and Yankee Atomic Electric Company.

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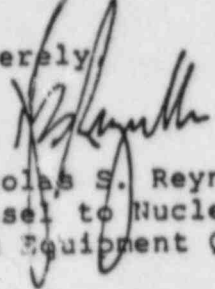
date indicate that the conditions associated with a large-scale hydrogen burn are bounded by the conditions associated with design basis events. This demonstrates that a survivability analysis similar to that presented in the McGuire licensing case is sufficient to ensure that essential equipment will be able to function in the event of a hydrogen burn. (See our October 26 letter at 2-3.) Thus the imposition of a qualification standard would be a costly and unnecessary measure that would yield no comparable enhancement of reactor safety.

It is evident that some members of the Staff have not fully focused on the critical distinction between qualification and survivability. (See esp. SECY-83-357, Enclosure F, p. 12, and transcript pages 49-55 of the November 9 briefing, Discussion of Hydrogen Ignition System and Final Rule.) With a qualification standard, the level of effort and expense will be greatly increased, since generic testing is not acceptable in most instances and strict documentation is required. The clear demonstration of survivability in the McGuire case suggests that the benefits to be gained by any further requirements are far outweighed by the costs. The Commission should therefore establish survivability as the appropriate standard for purposes of the hydrogen control rule or, at a minimum, explicitly recognize in the rule and the statement of considerations that any "qualification" requirement is equated with and satisfied by the survivability analysis presented in the McGuire case.

There is a further reason why the adoption of a qualification standard here is inappropriate. As we pointed out in our previous letter, qualification requirements have never before been imposed for events that exceed the design basis. The fundamental reason for this is that the safety margins associated with design basis events are broad enough to account for other accident scenarios. The hydrogen rule, if adopted in its present form, would represent the first instance in which qualification has been extended beyond the design basis context, and now it appears that the Staff is also considering imposing qualification standards for other accident scenarios beyond the design basis (see pp. 36-39 and 55-56 of the transcript of the November 9 briefing (remarks of Mr. Mattson)). Before permitting such an extension of qualification requirements, the Commission should review the matter thoroughly on the basis of a record that addresses whether such an extension is necessary and proper. There is no technical justification in the record of the hydrogen rulemaking for imposing a qualification standard. Accordingly, the Commission should not now establish a precedent which could open the way for the imposition of qualification requirements for other events that exceed the design basis.

We thank you for the opportunity to express our views and hope that they will be given full consideration prior to any final action on the hydrogen rulemaking.

Sincerely,


Nicholas S. Reynolds
Counsel to Nuclear Utility Group
On Equipment Qualification

cc: Commissioner Asselstine
Commissioner Bernthal
Commissioner Gilinsky
Commissioner Roberts