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September 10, 1982

Dr. Z. Rosztoczy
Nuclear Regulatory Commission
7920 Norfolk Av.
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Subject: Specific Criteria for the Qualification
of Mild Environment Electrical Components

Dear Zoltan:

In followup to our recent discussion, please provide me with specific criteria acceptable to the Staff that will allow for the use of unaged components in qualification type testing of mild environment electrical equipment.

BACKGROUND

Several utilities have formed an owners group for the joint qualification of diesel generators and diesel driven pumps to the level of 323-74 and 344-75. The qualification plan already developed for this program calls for the preaging of electrical components prior to subjecting them to seismic testing. Based on comments contained within proposed rule 50.49 and regulatory guide 1.89, revision 2 in regards to the qualification of mild environment equipment it is not clear whether this class of equipment must be preaged prior to type testing.

Because of the status of our joint qualification efforts i.e. components are on hand and will soon be placed in the baking ovens, your timely response to this request for alternatives to preaging will be greatly appreciated.

SPECIFIC CRITERIA

Please respond in the most specific terms possible to the following particular points:

1. The EPRI sponsored research program on Aging/Seismic Correlation has proved conclusively that the operability of certain components during and after seismic testing was acceptably demonstrated for identical items where one was new and the other was aged to an end-of-life condition.

What credit can be taken for the favorable results of this research project? Can we conclude that those classes of components and devices included in that project need not be preaged prior to seismic testing?

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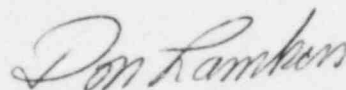
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2. The staff repeatedly has stated that a thorough material analysis of a component to define materials would be an acceptable substitute to preaging. However, discussions with the test labs who would perform such analysis indicate that this effort probably would take much more analysis time and be more of a "black magic" type area than merely determining the activation energy of the weak link material and defining the times and temperatures for an aging program.

Rather than being so heavily device specific whereby the analyzer must work with the manufacturer to find out the most minute particulars about the materials used, could we instead take credit for known aging mechanism of generic classes of material?

The industry is looking for relief from the present rigid requirements of "preaging" and "thorough material analysis" in qualification programs for mild environment equipment.

Your comments on the two points raised in this letter and your comments in regards to the increased use of engineering judgment as a viable alternative will be greatly appreciated.



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