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28 October 1968

Dr. Peter A. Morris, Director
Division of Reactor Licensing
U. S. Atomic Energy Commission
Washington, D.C. 20545

Re: Contract No. AT(49-5)-2667
Dresden Nuclear Power Station Units 2 and 3
Docket Nos. 50-237 and 50-249

Dear Dr. Morris:

In recent weeks we have reviewed the material submitted to us in answer to our earlier questions on the above noted project and have discussed the situation with your staff. We have also reviewed material recently submitted on other reactor projects that have a bearing on the questions on this project, and have been able to infer the answers to some of our questions in this way. As a result of this study and discussion, we feel that we can resolve a number of the points raised in our set of questions dated 9 September 1968. Thus, in connection with the request for additional information on this particular facility, you may consider this set of questions to supersede the earlier questions asked. Our questions and comments follow.

1. With reference to the time history input used in the dynamic analyses, we should like additional information concerning the following points:

(a) The type of input that was employed. If a specific earthquake record was employed in a scaled form, this should be identified.

(b) The length of record time that was employed.

(c) Evidence, if it exists, as to the response spectra that result from employing this particular time history, for at least one degree of damping.

2. The information which we have reviewed concerning the analysis of the stack indicates that the base of the stack was considered to be fixed. It would appear that, because of the weight of the stack and the size of the base, some overturning or rotational effect might be important and perhaps was considered in the analysis. We should like to know if these effects were considered and if so how they were incorporated in the analysis.

3. In connection with the analysis of the drywell, from the sketches that we possess, it appears that a rigid linkage was assumed between the drywell and the reactor building at elevation 575 ft.- 2 in. Other information available to us suggests that the drywell model was analyzed independently of the entire drywell-reactor building-turbine building system. If so, how was the interaction force between the reactor building and drywell brought into the analysis.

Likewise, with regard to the entire drywell-reactor building-turbine building analysis, how was the interaction between the various elements carried out in the analyses of the three components noted? The results of the analyses presented suggest that there must indeed be interaction by virtue of the fact, for example, that there are deflections, and even differences in deflections at connecting levels.

In the east-west direction it would appear, in addition to interaction between the drywell-reactor building and turbine building, that there should be interaction between the drywell and reactor building for Units 2 and 3. How was this brought into the analysis?

4. In the answer to Question 2.16b it is noted for the analysis of the reactor pressure vessel that each mode was assumed to be "participating equally." We should like to know the meaning of this statement.

Also, in connection with the analysis of the stack, drywell, and reactor building, we should like to have additional information as to how the participation factors for the various modes were calculated, and if possible the specific values of the participation factors that were employed in the analysis.

Respectfully submitted,

N. M. Newmark

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bjw
cc: W. J. Hall
W. H. Walker