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5 July 1979

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→ Mr. Howard A. Levin
Mr. Charles Hofmayer
Division of Operating Reactors
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Re: Contract NRC-03-78-150
SEP Program - Dresden 2 Report

A suggested short section to be placed in Section 2.2
under "Geology, Seismicity and Site Conditions" is attached.

It is my suggestion that the LLL Chapter 2 be an
Appendix to the report when it is completed.

Sincerely yours,

W. J. Hall
W. J. Hall

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Enclosure

cc: N. M. Newmark

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Insert for page 2 of draft report for Dresden 2 - Replace entire Section.

2.2 Geology, Seismicity and Site Conditions

The Dresden Nuclear Power Station is located in Grundy County, Ill., about 47 mi. southwest of Chicago, and just west of the confluence of the Des Plaines and Kankakee rivers. The geology at the site consists of an upper layer of Pennsylvanian Pottsville sandstone of variable thickness (40 to 50 feet in recent borings), overlying in order 15 to 35 ft of Ordovician Maquoketa Divine limestone, about 65 ft of Maquoketa dolomitic shale, followed by numerous layers of Ordovician rock (limestone, dolomites, and sandstones). The Dresden 2 unit is clearly founded on a rock site.

The only major fault near the site is the Sandwich fault zone passing about 6 miles south of the site. No ground displacement has been observed along the fault in recent times.

A brief summary of the historical seismicity at the site and a more detailed summary of the geology are presented in Appendix A. It is noted therein also that site specific spectra studies are underway for the Dresden 2 site but that the results are not yet available. On the basis of the original seismic investigation, and the reevaluation carried out as part of the SEP program, it was decided to carry out the reevaluation studies for an SSE characterized by 0.2 g zero period horizontal ground acceleration (ZPGA) with a Reg. Guide 1.60 spectra. Vertical effects, in accordance with current NRC criteria, were also to be considered.

Preliminary indications suggest that these criteria may be more severe than those to be suggested by the site specific spectra study.

The seismicity information forms the basis for arriving at the effective peak transient ground motions (acceleration, velocity and displacement) for use in arriving at response spectra, time histories, etc. to be used in the reevaluation. Thus, one important initial basis of reevaluation is concerned with comparison of the original basic seismic design criteria and that selected for reevaluation.