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JUN 18 1979

MEMORANDUM FOR: James P. Knight, Assistant Director for Engineering, OSS
FROM: Robert E. Jackson, Chief
Geosciences Branch, OSS
SUBJECT: OVERVIEW OF THE SURRY SITE

On June 13, 1979, you requested that Geosciences Branch provide to you an overview of the SSE at the Surry site. A limited review of the site indicates the following:

1. Based upon limited consideration of current Standard Review Plan Procedures, the Surry site lies in the Coastal Plain Tectonic Province. Based on recent staff decisions, the SSE intensity would be VII (IM) at the Surry site. Using the Trifunac and Brady relationship, the free field ground motion corresponding to intensity VII would be .13g, which would be used as the high-frequency anchor to the Regulatory Guide 1.60 response spectrum.
2. The SSE free field ground motion used in the Surry plant design was a Housner-based spectra anchored at .15g. This spectra falls below a R.G. 1.60 spectrum. For example, at frequencies of 2 to 10 hz and for 5 percent of critical damping, the Surry SSE spectral amplitudes are approximately 50 to 70 percent of the .13g and R.G. 1.60 spectral amplitudes. However, a more detailed analysis would require examination of the original and current damping values.

Summary

Based upon limited consideration of current Standard Review Plan procedures, we conclude that the SSE free field ground motion to be used at the Surry site is a Regulatory Guide 1.60 response spectrum anchored to .13g at high frequencies. This free field ground motion is adequate for the pipe-stress analysis which is being evaluated under the current show cause order.

Original Signed by
R. E. Jackson

Robert E. Jackson, Chief
Geosciences Branch
Division of Systems Safety

cc: R. Jackson
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| DATE | 6/15/79 | 6/1/79 | | | | |