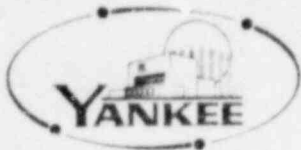


YANKEE ATOMIC ELECTRIC COMPANY

Telephone 617 872-8100



1671 Worcester Road, Framingham, Massachusetts 01701

2.C.2.1

February 10, 1981

FYR 81-26

U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Mr. Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
Division of Licensing

References: (a) License No. DPR-3 (Docket No. 50-29)
(b) USNRC Letter to YAEC dated December 17, 1980

Subject: Yankee Rowe - SEP Topic II-2.A

Dear Sir:

As requested in Reference (b), we are hereby forwarding our assessment of SEP Topic II-2.A, Severe Weather Phenomena, for the Yankee Rowe site.

Since receipt of your letter, our staff has conducted a preliminary review of those meteorological parameters outlined in Enclosure 1, which have been designated as (1) extreme temperatures, (2) thunderstorm/lightning strikes, (3) design wind speed, (4) radial ice thickness, (5) snow loading, and (6) tornado loading. In general, we concur with the NRC specifics for the first four items.

We do not agree, however, with the NRC's evaluation of the snow and tornado loading, items five and six. The snow load, for instance, is based on the maximum winter precipitation derived from Hydrometeorological Report No. 33. But neither this report nor its updated version, Hydrometeorological Report No. 51, is entirely applicable to the Rowe site because, as pointed out in each document, the data have not been evaluated with respect to terrain effects and, therefore, might be deficient in estimating maximum precipitation. Our staff recognized this limitation when responding to SEP Topic II-3.B, Flooding Potential. Work conducted for this topic demonstrated that terrain effects must be accounted for at the Rowe site. When applied to maximum precipitation, the terrain effects resulted in values considerably less than those contained in Hydrometeorological Report 33. Accordingly, we feel that the snow load parameter should be re-evaluated to include information on site specific terrain effects.

In a similar light, we feel that the tornado frequency and resultant wind loading on plant structures as derived in Enclosure 2 of your letter may be high. The tornado probability model in Enclosure used tornado data from an area representing tens of thousands of square miles in the Northeast. But our review of National Weather Service tornado data within 125 miles of the Rowe site (see enclosed figure) indicates that tornadoes generally occur less frequently in mountainous terrain. In addition, Rowe's location within the steep and narrow Deerfield River Valley should also offer the plant protection from the more intense tornado wind speeds outlined in Enclosure 2. We therefore feel that by considering site specific terrain characteristics



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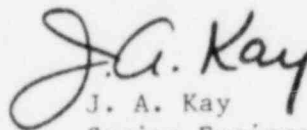
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not only will the likelihood of a tornado in the valley be reduced considerably, but also its intensity. We feel your consultant should make a site specific review of terrain effects and reevaluate the potential of tornadoes and maximum wind speeds at the Rowe site. In this manner, the risks related to the plant and its design parameters may be better established.

If you have any questions or desire additional information, please contact us.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY



J. A. Kay
Senior Engineer - Licensing

JHS/sec

REPORTED TORNADO EVENTS
125 N. MILE RADIUS
NATIONAL WEATHER DATA SERVICE

