



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

November 27, 1979

MEMORANDUM FOR: D. M. Crutchfield, Chief  
Systematic Evaluation Program Branch, DOR

FROM: H. A. Levin  
Systematic Evaluation Program Branch, DOR

SUBJECT: MEETING SUMMARY - YANKEE ATOMIC POWER COMPANY

On September 20, 1979, representatives of Yankee Atomic Power Company met with the NRC staff (attendees listed in Enclosure 1) in Bethesda, MD. to discuss details of the following SEP review topics:

- II-3.A Hydrologic Description
- II-3.B Flooding Potential and Protection Requirements
- II-3.B.1 Capability of Operating Plants to Cope with  
Design Basis Flooding Conditions
- II-3.C Safety-Related Water Supply
- II-4.E Dam Integrity

The integrity of the following earth dams under both flood and seismic conditions, was discussed with respect to the potential impact on the plant from flooding or a loss of ultimate heat sink.

1. Sherman - located at the site.
2. Harriman - located approximately six miles upstream  
of the site on the Deerfield River.
3. Somerset - located approximately 13 miles upstream  
of Harriman Dam.

The NRC staff presented preliminary findings which indicate a potential breach of both Sherman and Harriman dams for 100% of the Probable Maximum Flood (PMF). This finding is based upon interpretations of the best data available to the staff at the time of the evaluation. The staff indicated that refinements to the data base may permit a less conservative interpretation of the data which may in turn modify the preliminary conclusion. The staffs analysis indicates no breach of Harriman dam at 65% PMF and no break of Somerset dam at 100% PMF. Sherman dam is not predicted to breach for a flood less than the Standard Project flood.

The following parameters were identified as requiring further study in order to make a more realistic evaluation of the PMF and potential dam failures.

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1. loss rate
2. unit hydrograph
3. shape factor reduction of Probable Maximum  
Precipitation (PMP)
4. starting pool level
5. breach rate

The licensee indicated that he is continuing his study of the issue. His efforts are now directed at providing more definitive data to address the above parameters to further support his July, 1977 conclusion that the Yankee Rowe facility can withstand the effects of the PMF. His findings are documented in Report No. YAEC-1139, "Yankee Nuclear Station - Probable Maximum Flood Analysis", July 1977.

In a related issue, discussions focused on the seismic capability of Harriman dam. The licensee indicated that he was developing a program including a scope of work and schedule for the seismic evaluation of Harriman dam. Details of this program will be submitted to the staff within a few weeks of this meeting.

Howard A. Levin  
Systematic Evaluation Program Branch  
Division of Operating Reactors

Enclosure: As stated

1593 138

ENCLOSURE 1

LIST OF ATTENDEES  
SEP REVIEW OF YANKEE ROWE  
SEPTEMBER 20, 1979

YAECO

R. B. MacPherson  
J. W. Stacey  
J. P. Jacobson  
G. A. Harper

New England Power Service Co.

S. C. Doret

KMC, Inc.

R. E. Schaffstall

Weston Geophysical

R. J. Holt

NRC

C. H. Hofmayer  
D. M. Crutchfield  
P. A. DiBenedetto  
G. Staley  
J. T. Greeves  
D. Segal  
H. Levin  
T. Cheng

1593 139

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R. Reid  
G. Knighton  
V. Noonan  
A. Schwencer  
D. Ziemann  
D. Crutchfield  
G. Lainas  
J. Scinto, OELD  
OI&E (3)  
ACRS (16)  
Licensees  
NRC Participants  
D. Knuth, KMC  
R. Schaffstall, KMC  
SEP Members  
R. B. MacPherson, YAECO  
J. W. Stacey, YAECO  
J. P. Jacobson, YAECO  
G. A. Harper, YAECO  
S. C. Doret, New England Pwr. Service Co.

1593 140