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

November 25, 1985

Docket No.: 50-029

LICENSEE: Yankee Atomic Electric Company

FACILITY: Yankee Nuclear Power Station

SUBJECT: MEETING SUMMARY - STATUS OF SEP EVALUATIONS AND PLANT MODIFICATIONS

On November 12-13, 1985, members of the NRC staff met with licensee representatives at the Yankee plant site to discuss the status of SEP evaluations, especially the seismic reevaluation program, and to observe recent plant modifications made in response to SEP issues. A list of attendees is provided in Enclosure 1.

The staff noted that reviews are in progress on the following topics:

III-1	Classification of Components, Systems (Quality)
III-2	Wind and Tornado Loadings
III-4.A	Tornado Missiles
III-5.A	Effects of Pipe Break Inside Containment
III-6	Seismic Design Considerations
III-7.B	Design Codes/Load Combinations
VI-4	Containment Isolation System

For several of these topics, further information is needed; the questions will be formally issued to the licensee in the near future.

The status of the seismic evaluation program was the main topic of discussion for the remainder of the meeting.

The scope, criteria and input motions for the seismic evaluation program have evolved over the last few years. Clarification of several terms that have been used in the licensee submittals was provided during the meeting.

Hot Shutdown Scope - this encompasses all systems, structures, and components required to achieve and maintain a safe shutdown condition, including any items whose failure could impact required equipment.

Safe Shutdown System (SSS) Piping - this refers to existing piping in the reactor coolant system, connected piping and piping in the main steam/feedwater systems whose integrity is needed to attain safe shutdown and to prevent a major piping system failure.

Dedicated Safe Shutdown System - this refers to the new system that has been installed to provide makeup to the steam generators and to the reactor coolant system.

At this time, the licensee's intention is to qualify existing plant systems and structures required for hot shutdown and the dedicated safe shutdown system. Plant systems and structures normally used for cold shutdown and accident mitigation would not be upgraded, consistent with the Integrated Plant Safety Assessment Report (IPSAR), NUREG-0825.

Both the licensee and the staff have developed site-specific input spectra for seismic evaluation, which are referred to as the Yankee Composite Spectra (YCS) and the NRC (or LLL/TERA) site-specific spectra respectively. The staff does not consider YCS by itself to be a sufficiently conservative representation of the safe shutdown earthquake. However, as discussed in the IPSAR, the YCS earthquake in conjunction with linear-elastic analysis methods and comparison to code design-allowables is an acceptable design basis. A demonstration of no loss of function assuming the NRC seismic input is needed to provide a sufficient safety margin and to confirm the staff's judgement concerning the margin provided by the YCS analysis compared to code design-allowables. Additionally, in some cases the licensee used a no loss of function criteria to compare to YCS analyses. The staff does not feel this comparison is appropriate. Comparison of NRC to function is still needed for these cases.

Thus, in the IPSAR the licensee agreed to perform analysis using both spectra. During the November 12, 1985 meeting the licensee stated that these analyses have been performed for almost all of the structures and systems, except for major mechanical equipment.

The staff and its consultants have been reviewing the licensee's submittals and have raised questions regarding which acceptance criteria were used for the YCS and NRC spectra analysis, as well as questions concerning modeling.

The staff will issue to the licensee the questions that have been generated by its consultants. The licensee agreed to assemble a list of what analyses that have been done, which input spectra and criteria were used, and the results. A meeting among the NRC, YAEC and consultants will then be arranged to resolve these concerns.

For electrical equipment anchorage, the licensee intends to use the Seismic Qualification Utility Group (SQUG) walkdown approach. A similar review was performed in 1983 as part of the EQE evaluation.

For cable trays/raceways, the licensee plans to use the work performed by the SEP Owner's Group.

The licensee described the approach that was used to determine which masonry walls require qualification and the modifications that have been made to walls in the turbine building. The staff viewed photographs of the work in progress and observed the completed modifications during the plant tour.

The majority of the large bore piping supports inside the vapor container were installed in a previous outage. Some small bore piping support modifications are being made during the current refueling outage. A licensee representative stated that YAEC plans to use some of the methodology/ criteria endorsed by NUREG-1061, such as PVRC damping, to limit the number of additional pipe supports, using YCS as the seismic input. The staff indicated that the acceptability of this approach needs to be considered in the context of the resolution of the staff's general concern regarding YCS vs NRC spectra analyses.

The dedicated safe shutdown system electrical equipment, piping and instrumentation have been installed. A review by the staff of the dedicated system still needs to be conducted. The turbine building scuppers (for flood protection) and the jet impingement shield on the switchgear room wall are also complete.

The licensee reiterated the desire to resolve both the seismic and tornado issues as soon as possible so that upgrades to the primary auxiliary building and the main steam/feedwater support structure (among others) can be completed during Summer 1986.

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Enclosure:
As Stated

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Enclosure 1

Meeting with Yankee Atomic Electric Company
Attendance List
November 12-13, 1985

Name	Affiliation
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J. Kay	YAEC
J. Hazeltine	YAEC
S. Fournier	YAEC
B. Holmgren	YAEC
J. Clifford	NRC
E. McKenna	NRC