



ATOMIC POWER COMPANY
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July 1, 1980

B.3.2.1.
WY 80-104

United States Nuclear Regulatory Commission
Washington, DC 20555

Attention: Office of Nuclear Reactor Regulation

References: (a) License No. DPR-36 (Docket No. 50-309)
(b) MYAPC Letter to USNRC dated May 2, 1980

Subject: Maine Yankee Asymmetric LOCA Loading Evaluation

Dear Sir:

Maine Yankee has completed its evaluation of asymmetric LOCA loadings on the reactor pressure vessel, reactor internals, primary support system, control rod drive assemblies (control element assemblies - CEAs) and ECCS and branch piping systems attached to the reactor coolant system. Conclusions resulting from our evaluation are summarized as follows:

- (a) Upper bound asymmetric LOCA loads applied to the reactor pressure vessel supports are less than those used in original design calculations,
- (b) primary support system stresses due to normal operating, maximum hypothetical seismic and upper bound asymmetric LOCA conditions, computed using the methodology and conservatism employed in original design analyses, are within original allowable stress limits stipulated in the Maine Yankee FSAR,
- (c) maximum reactor internals loadings due to asymmetric LOCA are less than those originally considered for Maine Yankee,
- (d) ECCS piping systems attached to the intact reactor coolant system loops are structurally adequate to withstand loadings due to normal operating, maximum seismic and applied transient displacement loadings due to RPV response to asymmetric LOCA loads,
- (e) branch piping attached to the intact reactor coolant system loops do not degrade ECCS function when subjected to normal operating, maximum seismic and transient displacement loadings, the latter due to RPV response to asymmetric LOCA loads, and

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- (f) maximum stresses at critical points of CEAs due to normal operating, maximum seismic and transient displacement loading due to reactor pressure vessel response to asymmetric LOCA are within original Maine Yankee FSAR allowable stress limits.

The conclusions stated in items (a), (b), and (c) are those which have been previously reported. Conclusions stated in items (d), (e) and (f) are based upon the results of dynamic analyses in which:

1. structural system representations were developed to conservatively characterize the structural response to applied transient loadings,
2. upper bound loadings were applied to the structural models and maximum stresses due to the applied transient displacements were combined with those due to normal operating and maximum seismic conditions,
3. resulting combined stresses were evaluated with respect to the conservative acceptance criteria defined in the Maine Yankee FSAR and original design calculations. In those cases where FSAR stress limits for the specified loading criteria and corresponding functionality requirements did not exist, suitable acceptance criteria consistent with current code requirements and industry practice were established.

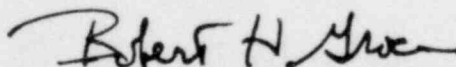
Detailed descriptions of methodology, evaluation criteria and summary of results are forthcoming in a final version of the evaluation report.

In summary, Maine Yankee has completed its evaluation of the effects of asymmetric LOCA loadings and has concluded that the design basis, and safety evaluations described in the Maine Yankee FSAR are not adversely affected by asymmetric loadings resulting from a postulated LOCA. This letter, along with the forthcoming documenting report, serves as final resolution of the January 25, 1978 letter to Maine Yankee Atomic Power Company concerning Asymmetric LOCA Loads.

Should you have any questions or wish to discuss the contents of this letter, please feel free to call.

Very truly yours,

MAINE YANKEE ATOMIC POWER COMPANY



Robert H. Groce
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