



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

TERA

July 9, 1980

Docket No. 50-219

Mr. I. R. Finfrock, Jr.
Vice President - Generation
Jersey Central Power & Light Company
Madison Avenue at Punch Bowl Road
Morristown, New Jersey 07960

Dear Mr. Finfrock:

By letter dated June 27, 1980, Jersey Central Power and Light Company submitted an evaluation of two possible cracks in the Emergency Core Spray piping within the reactor vessel between the inlet nozzle and the vessel shroud. These indications or discontinuities were discovered during the scheduled television inspection of the Core Spray Piping while the reactor vessel head was off for core refueling. Review of the televised video tapes made during the visual inspection resulted in the classification of two linear indications as "possible" cracks.

There are two independent core spray headers within the reactor vessel. Both observed indications are on the outer surfaces of the two 6 X 5 inch eccentric reducers in one of the two emergency core spray headers. For the safety analysis, it was assumed that the linear indications in each reducer are cracks that are 4 1/2 inches long by .030 inch maximum width.

On June 30, 1980 your representatives met with NRC representatives in Bethesda, Maryland for further review and discussion of this evaluation. By letter dated July 2, 1980, you provided responses to specific NRC questions raised at the meeting related to the probable cause of the indication. Also included in that submittal was a summary of the worst case safety analysis that assumes failure of the piping containing the linear indications and a guillotine break outside of the reactor vessel in the line to the second core spray header.

By letter dated July 7, 1980, you provided five replacement pages for the June 27, 1980 letter to reflect the results of the evaluation of the stress conditions which may exist in the piping.

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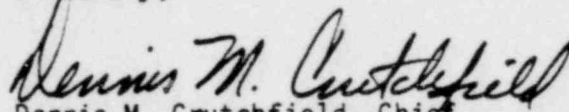
Your evaluation shows that normal and seismic stresses are not excessive in the region of the cracks and that crack propagation due to five heat up and cool down cycles is of no concern. Even if the cracks grow to eight inches due to vibratory loading, your calculations show that the integrity of the core spray system will be maintained. You have also concluded that these conditions will not be exceeded during the next fuel cycle (approximately one year of operation).

In addition your analysis of thermal expansion stresses during core spray injection and hydraulic forces which could open cracks show that the core spray effectiveness will not be degraded below original design values.

The results of our evaluation indicate that if it is assumed that the linear indications are cracks and if the piping fails at these locations (inside the reactor vessel), addition of water to the reactor vessel through the affected core spray header reactor vessel nozzle would not restrict flooding capability. We tentatively agree with your evaluation that following rupture of the second core spray inlet, the clad temperatures and metal-water reaction calculated in accordance with Appendix K requirements are below 10 CFR 50.46 limits. Our final approval is contingent upon submittal and review of the detailed analysis which was presented in summary form. We further agree with your plans to complete a quantitative evaluation on low-low-low water level by August 1, 1980, re-inspect the piping crack indications using the most effective methods during the next refueling outage and provide for possible replacement of the reducers if more extensive inspection during the next outage confirms the presence of cracking.

We have concluded, based on the considerations discussed above, that there is reasonable assurance that the health and safety of the public will not be endangered by operation, for one fuel cycle, of the Oyster Creek Nuclear Power Plant.

Sincerely,


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

cc: See next page

Mr. I. R. Finrock, Jr.

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cc:

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