



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

SAFETY EVALUATION

FLORIDA POWER AND LIGHT COMPANY

ST. LUCIE UNIT 1

SEISMIC QUALIFICATION OF THE

AUXILIARY FEEDWATER SYSTEM

Introduction

Since the accident at Three Mile Island, attention has been focused on the ability of pressurized water reactors to provide reliable decay heat removal capability. While it is recognized that alternate methods may be available to remove decay heat following transients or accidents, heat removal via the steam generators is the first choice for accomplishing a safe shutdown of the plant. Therefore, there should be reasonable assurance that the auxiliary feedwater system (AFWS) can withstand the postulated Safe Shutdown Earthquake (SSE), consistent with other safety-related systems in the plant.

To address this concern, the NRC developed and initiated Multiplant Action C-14, "Seismic Qualification of Auxiliary Feedwater Systems." The objective of this plan is to increase, to the extent practicable, the capability of those plants without seismically qualified AFWS to withstand earthquakes up to the SSE level. This program was implemented with the issuance of NRC Generic Letter 81-14 dated February 10, 1981. Our review of the licensee's responses to this letter is the subject of this evaluation.

Evaluation

The attached report was prepared for us by our consultant, Lawrence Livermore National Laboratory, as part of our technical assistance contract program. The report provides their technical evaluation of the licensee's conformance to the requirements of Generic Letter 81-14. We have reviewed the consultant's report and concur with its conclusions.

Conclusion

Based upon our review of the consultant's technical evaluation report, we conclude that, upon completion of a post-TMI modification to the instrumentation/control portion of the AFWS, there will be reasonable assurance that the auxiliary feedwater system has sufficient capability to withstand a safe shutdown earthquake and accomplish its safety function. Accordingly, we are not contemplating requiring any seismic upgrading of this system under the NRC Multiplant Action C-14 program.

We consider the consultant's technical report to be final, in that no further technical effort is required.

Principal Contributor: J. T. Beard, ORAB

Attachment:

LLL Technical Evaluation Report

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