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Docket No. 50-270

Mr. H. B. Tucker
Vice President - Nuclear
Production Department
Duke Power Company
Post Office Box 33189
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Tucker:

In the staff's report to the Commissioners dated November 1, 1982 (SECY 82-465) we recommended a proposed rule which would: establish a RT_{NDT} screening criterion; require licensees to submit present and projected values of RT_{NDT}; require early analysis and implementation of such flux reduction programs as are reasonably practicable to avoid reaching the screening criterion; and require plant-specific PTS safety analyses before plants are within three calendar years of reaching the screening criterion. The staff's proposed screening values are a RT_{NDT} of 270°F for plates and axial welds, and 300°F for circumferential welds.

We noted that most plants can avoid reaching the screening criterion throughout their service life by timely implementation of flux reduction programs, but that for some plants early attention to this matter was appropriate to avoid foreclosure of the flux reduction option with the passage of time. The staff indicated that it planned to meet with licensees of plants which appeared to need near-term flux reduction factors greater than two to ensure that the screening criterion would not be exceeded throughout service life. Meetings were held in early 1983 to discuss those licensee's plans for flux reduction programs. Subsequent to these meetings submittals were received from the licensees of the following plants: Oconee 2, Fort Calhoun, Maine Yankee, H. B. Robinson 2, Rancho Seco, Turkey Point 3, Turkey Point 4, and Three Mile Island 1.

We have reviewed the licensees' submittals. For all eight plants the licensees have calculated that the flux reduction achieved, planned, or under study will extend substantially the time at which the screening criterion will be reached, and provide time for detailed study of additional flux reduction measures, without foreclosure of the option.

Each of the above licensees also has under consideration measures, in addition to the flux reduction programs, to address the PTS issue. The additional measures consist of various combinations of the following: refinements in surveillance and critical material property information; PRA studies; thermal hydraulics and fracture mechanics considerations; plant modifications, operating procedure evaluations; and plant-specific analyses.

The staff concludes that this effort to focus attention on flux reduction option at the lead plants has been successful. All of the involved licensees have committed to what appear to be reasonable and practical near-term flux reduction options.

Except for staff reviews necessary to approve plant specific core reloads with low leakage cores, we have concluded that further staff generic activity with regard to flux reduction measures will be in the context of our reviews of the flux reduction analyses that the proposed new PTS rule will require from all plants projected to exceed the screening criterion before end-of-license. The staff is now in the process of auditing all eight reactors that appear to need flux reduction factors greater than a factor of two in order to evaluate and verify the flux reduction achieved by the licensees. In some cases the review is concurrent with the core reload reviews in progress. For those licensees of these eight plants who have not provided the information, the staff is requesting that the licensee provide the integral neutron source of future core configurations which affect the critical weld areas of the pressure vessel. Duke Power Company has already submitted the requested information for Oconee Unit 2 and the NRC staff is reviewing your supporting calculations for your claimed 1.17 flux reduction factor.

The reporting and/or recordkeeping requirements of this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

"ORIGINAL SIGNED BY
JOHN F. STOLZ"

John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing

cc: See next page

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