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DOCKET NUMBER
PETITION RULE PRM-51-6 (13)
(45 FR 25557)

June 20, 1980

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attention: Docketing & Service Branch

Subject: Comments on Petition for Rulemaking by Catherine Quigg (45FR25557-4/15/80)

Dear Sir:

Yankee Atomic Electric Company appreciates the opportunity to comment on the subject petition for rulemaking. Yankee Atomic owns and operates a nuclear power generating plant in Rowe, Massachusetts. The Yankee Nuclear Services Division also provides engineering services for other nuclear power plants in the northeast including Vermont Yankee, Maine Yankee, and Seabrook 1 and 2.

Yankee Atomic believes that the preparation of a generic environmental impact statement for high burnup nuclear fuel is unwarranted and the petition should be denied. High burnup fuel constitutes a technological and economic improvement in nuclear fuel with relatively minor environmental impact.

High burnup fuel is economically attractive to the consumer from the standpoint of fuel cycle costs. Its only environmental impact is positive since more effective uranium utilization implies a reduction in mining requirements, reduced spent fuel pool requirements, and a reduction in the number of assemblies shipped to reprocessing or ultimate storage. The petitioner suggests, however, that an adverse impact on the environment accompanies these. We believe this is not so.

The petitioner states that extended burnup produces inferior grade fuel. This determination is best ascertained through the same programs that the petitioner appears to be criticizing. One of the objectives of the DOE/Utility high burnup programs is to demonstrate good fuel integrity at extended burnups. Industry data to date does not suggest such degradation as the petitioner implies. Furthermore, all licensees have Technical Specifications that place limitations on coolant activity resulting from fuel damage. These are in force during any demonstration and therefore, upper bounds are placed on radioisotopes which could be released in the extremely remote event of an accident.

Acknowledged by card. 6/26/80 mdv.

The petitioner's concern over higher fission gas activities and, therefore, the potential increased impact due to accidents, appear to be without basis. The bulk of dose producing activity is associated with short-lived isotopes. Extending fuel burnup negligibly alters the short-lived isotope concentration and therefore has an insignificant affect on accident dose rates.

Finally, it seems compellingly reasonable that fuel which survives the relatively harsh in-reactor environment will maintain its integrity indefinitely in the comparatively mild pool storage environment. Extended burnup fuel storage concerns, therefore, appear to be without basis.

If you have any questions regarding our comments, please contact us.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY

D. W. Edwards

D. W. Edwards, Director
Operational Projects

JHM/ncj