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

MAY 16 1980

Generic Task No. A-12

The Honorable Gary Hart, Chairman
Subcommittee on Nuclear Regulation
Committee on Environment and Public Works
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

Enclosed for the information of the Subcommittee on Nuclear Regulation is the "For Comment" edition of NUREG-0577, "Potential for Low Fracture Toughness and Lamellar Tearing on PWR Steam Generator and Reactor Coolant Pump Supports". This report provides the staff's resolution of the NRC's Generic Technical Activity A-12, which had been declared an "Unresolved Safety Issue" pursuant to Section 210 of the Energy Reorganization Act of 1974. NUREG-0577 describes the technical issues, the technical studies performed by an NRC contractor, the NRC staff's technical positions on fracture toughness of steam generator and reactor coolant pump support materials based on these studies, and the staff's plans for implementing its technical positions. It also provides recommendations for further generic research regarding lamellar tearing. The Electric Power Research Institute has been asked to fund and manage such research.

We intend a 60 day public comment period for NUREG-0577. Also enclosed for your information is a Federal Register Notice we have issued on this matter.

Sincerely,

Harold R. Denton

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Enclosures:
1. NUREG-0577
2. Federal Register Notice

cc: The Honorable Alan Simpson

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NUCLEAR REGULATORY COMMISSION

NUREG-0577

NOTICE OF ISSUANCE AND AVAILABILITY

POTENTIAL FOR LOW FRACTURE TOUGHNESS AND LAMELLAR TEARING ON PWR STEAM GENERATOR AND REACTOR COOLANT PUMP SUPPORTS

A task force with members from the Nuclear Regulatory Commission (NRC) staff has prepared a report entitled "Potential for Low Fracture Toughness and Lamellar Tearing on PWR Steam Generator and Reactor Coolant Pump Supports" (NUREG-0577), dated August 1979. The report provides the staff's resolution of the NRC's Generic Technical Activity A-12, which was an "Unresolved Safety Issue" pursuant to Section 210 of the Energy Reorganization Act of 1974.

The generic study resulted from questions raised during the licensing review of two pressurized water reactors. The specific concern was the capability of the supports to maintain their structural integrity under accident conditions.

NUREG-0577 describes the technical issues, the technical studies performed by an NRC consultant, the NRC staff's technical positions on fracture toughness of steam generator and reactor coolant pump support materials based on these studies, and the staff's tentative plans for implementing its technical positions. It also provides recommendations for further generic research into the subject of lamellar tearing. The Electric Power Research Institute has been requested to fund and manage such research.

The NRC staff has concluded that, of the 38 PWRs reviewed during the generic study, six were designed and constructed satisfactorily with adequate materials and thus no further review is required. Eleven plants will require

review of a less immediate nature than those that will be reviewed initially as described below. It is possible that, based on results of the review of the initial group, these eleven plants may not require additional review. The staff has concluded that 21 plants require further plant-specific investigation to assure adequate fracture toughness of their component supports. Resolution of this issue for many of these plants could be achieved on the basis of licensee investigation in response to the questions of Appendix D of NUREG-0577. Some, however, may require much more extensive study. An implementation review plan and procedure are provided in NUREG-0577. Subsequent to issuance of NUREG-0577, the implementation plan has been modified to place more of the burden for the review of the supports on the licensees and applicants. Proposed guidance for doing this will be provided to licensees and applicants by letter in the near future.

Public comments on the report, including proposed requirements and the implementation schedule, are being solicited from interested organizations, groups and individuals. Public comments will be considered before taking final action on any particular case. The staff will evaluate the comments received and, if needed, will issue a supplement or revision to NUREG-0577.

Copies of the report are available. Copies have been sent to utilities, utility industry groups and associations and environmental and public interest groups. Other copies are available for review at the NRC Public Document Room, 1717 H Street, N.W., Washington, D.C., and the Commission's local public document rooms located in the vicinity of existing nuclear power plants. Addresses of these local public document rooms can be obtained by contacting the Chief,

Local Public Document Rooms Branch, Mail Stop 309, Nuclear Regulatory Commission, Washington, D.C. 20555, telephone 301/492-7536.

Comments should be forwarded to Mr. Richard P. Snaider, Generic Issues Branch, Nuclear Regulatory Commission, Washington, D.C. 20555 by July 7, 1980.

Dated at Bethesda, Maryland, this May 5, 1980.

FOR THE NUCLEAR REGULATORY COMMISSION

Darrell G. Eisenhut, Acting Director
Division of Operating Reactors
Office of Nuclear Reactor Regulation

SUMMARY STATEMENT

Notice

NUREG-0577 - The Nuclear Regulatory Commission has issued for public comment its report No. NUREG-0577, entitled "Potential for Low Fracture Toughness and Lamellar Tearing on PWR Steam Generator and Reactor Coolant Pump Supports". This report provides the NRC staff's resolution of Generic Technical Activity A-12, which was identified as an "Unresolved Safety Issue" in the 1978 NRC Annual Report pursuant to Section 210 of the Energy Reorganization Act of 1974.

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A-12 Subject File