



UNITED STATES
ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION III
799 ROOSEVELT ROAD
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TELEPHONE
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November 28, 1973

Wisconsin Public Service Corporation
ATTN: Mr. E. W. James, Senior Vice President
Power Generation and Engineering
P. O. Box 1200
Green Bay, Wisconsin 54305

Docket No. 50-305

Gentlemen:

The enclosed Directorate of Regulatory Operations Bulletin No. 73-6, "Inadvertent Criticality in a Boiling Water Reactor" has been sent for completion of the requested action to utilities that are presently licensed (or that will be licensed in the near future) to operate boiling water reactors. This bulletin is being sent to you to provide you with information that was reported* to the AEC by the Vermont Yankee Nuclear Power Corporation, concerning an inadvertent criticality incident that was experienced at their Vermont Yankee facility. This bulletin is provided only for your general information.

Very truly yours,

James G. Keppler
Regional Director

Enclosure:
RO Bulletin No. 73-6

bcc: RO Files
DR Central Files
PDR
Local PDR
OGC, Beth, P-506A
R. Renfrow, GC (2)

*Ltr dtd 11-8-73 to Directorate of Regulatory Operations, Region I,
King of Prussia, Pa.

*Ltr dtd 11-14-73 to Directorate of Licensing, USAEC, Washington, D.C.

misc
JB

INADVERTENT CRITICALITY IN A BOILING WATER REACTOR

We recently received an abnormal occurrence report from the Vermont Yankee Nuclear Power Corporation relating to an inadvertent criticality incident that was experienced at their Vermont Yankee facility. A copy of this report is being sent to you under separate cover to provide you with pertinent details of this event.

At the time of the inadvertent criticality incident, the reactor vessel and primary containment heads were removed, the refueling cavity above the reactor vessel was flooded, control rod friction tests were in progress, the rod worth minimizer was bypassed, and core verification had been in progress. As a result of the incident, no measurable radioactivity was released, no fuel damage resulted and no personnel exposures were experienced. The incident is currently under review and evaluation by the Regulatory Staff.

Action requested by this bulletin is contained in Section A.

A. Action Requested by Licensees

In light of this occurrence you are requested to take the following actions. Upon completion of these actions you are requested to inform this office in writing, within 45 days of the date of this letter, of the status of each item identified in each paragraph and subparagraph listed below:

1. Procedural Review

a. Control Rod Drive Operating and Testing Procedures

- (1) Conduct a review of your control rod drive operating and testing procedures to determine that approved procedures exist for all operations and tests.
- (2) Verify that appropriate prerequisites are included in the procedures to require testing of associated interlocking and protection features before control rod testing is permitted.
- (3) Assure that prerequisites and detailed instructions are provided that demonstrate compliance with technical specification requirements and design bases.

b. Bypass Installation Procedures (Jumpers or Lifting of Leads)

Assure that existing bypass installation procedures have been conservatively reviewed for technical adequacy and for administrative controls.

c. Radiation Protection Procedures

Assure that procedures for access control and personnel accountability in areas subject to accidents are current.

d. Shift Transition Procedure (Turnover)

Assure that complete and detailed procedures are in effect that provide instructions for a proper and conservative turnover of shift responsibilities. Such procedures must include requirements for communicating the status of all safety related equipment and conditions.

2. Management Controls

Assure that your management controls that are in effect provide for qualified technical and administrative reviews and approvals of temporary circuitry changes and temporary off-normal plant conditions. This review should assure that the responsibilities and requirements associated with the review and approval, installation, verification, removal, and subsequent testing of temporary circuitry changes and temporary off-normal plant conditions are clearly delineated in station procedures, are understood by the station staff, and are being properly implemented.

3. Licensed Operator Performance

Assure that management provides the necessary opportunities and time so that operators are adequately trained to carry out their assigned responsibilities. In particular, confirm that shift crew members are provided special training for safety related activities that are infrequent, complex, or have unusual safety significance.

If you have any questions concerning this request, please contact this office.

Enclosure:

AO No. 7331 - Ltr dtd 11/14/73 (separate cover)