

SEP 26 1983

Mr. Eugene P. Wilkinson
President
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, GA 30339

Dear Mr. Wilkinson:

Subject: Case Study Report - Low Temperature Overpressure Events At
Turkey Point Unit 4

On November 28 and 29, 1981 during the filling and venting process while restarting the reactor after a refueling outage, two overpressure events occurred at Turkey Point Unit 4 which exceeded by a factor of two the technical specification limits. Both trains of the overpressure protection system were inoperable and operator actions were required to mitigate the pressure transients to prevent a more severe pressure excursion. The safety significance of the events is the possibility of the reactor vessel failure by brittle fracture as a consequence of the overpressure transients during low temperature operation. These overpressurization transients were the first events to occur at an operating pressurized water reactor which exceeded the technical specification limits since the NRC staff resolved the generic issue of low temperature overpressure transients in 1979. The events were identified to Congress as Abnormal Occurrences which indicate that the events involved a major reduction in the degree of protection to the public health and safety. Because of the safety significance of the events, AEOD performed a detailed case study of the event sequences, the causes and the corrective actions taken, and the generic implications of the events. A preliminary report of our investigation is enclosed.

The purpose of this letter is to provide you with the opportunity to review the report, particularly with regard to its completeness and accuracy, prior to the issuance of the AEOD final report. Changes to the findings, conclusions and recommendations will be considered only if the underlying information concerning the details of plant design, systems operation or event sequence is in error. Therefore, comments are being solicited on the technical accuracy of the report. The findings, conclusions, and recommendations are provided for your information in order that you understand the significance AEOD places on this event and therefore obtain a more complete picture of the total report.

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You will note that there is an activity identified for INPO to consider developing a Recommended Operating Practice for pressurized water reactors concerning filling and venting of the reactor coolant system. We would appreciate your specific comments on the issue and whether INPO may be receptive to pursuing this activity.

We would welcome your comments either informally by phone or formally by letter. Since we wish to finalize and issue the report shortly, we ask that any comments you may wish to make be brought to our attention within 30 days from receipt of this letter.

As you may know, AEOD reports do not represent an official NRC position or the position of the responsible NRC program office. Our reports are one input to an ongoing review and evaluation process, and any recommendation contained in our final report will be considered and perhaps modified or eliminated by the responsible NRC office.

A copy of the preliminary report and this letter are being placed in the Public Document Room at 1717 H Street, N.W., Washington, D.C. 20555.

If you have any questions regarding this matter, please feel free to contact Wayne Lanning of my staff. Mr. Lanning can be reached at 301/492-4433.

Sincerely,

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C. J. Heltemes, Jr., Director
Office for Analysis and Evaluation
of Operational Data

Enclosure:
As stated

Distribution

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