MAINE YANKEE ATOMIC POWER COMPANY •

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November 24, 1982
MN-82-237 JHG-82-221

United States Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Attention: Mr. Ronald C. Haynes, Regional Administrator

References: (a) License No. DPR-36 (Docket No. 50-309)
(b) USNRC Letter to MYAPCo, dated July 22, 1982, CAL 82-20
(c) MYAPCo Letter to USNRC dated July 27, 1982, MN-82-146

Subject: Refueling Water Storage Tank (RWST) Temperature Upper Limit and Water Level Lower Limit

Dear Sir:

This letter addresses actions 2-5 of Reference (b). Since these actions have been completed prior to startup from the cycle 6/7 refueling outage as required, this completes our response to that letter.

ACTION #2

Conduct an evaluation to confirm and redefine refueling water tank level and temperature limits which will ensure adequate net positive suction head (NPSH) for all safeguards pumps.

RESPONSE TO ACTION #2

This evaluation has been completed and indicates that the limits we have adopted ensure that adequate net position suction head (NPSH) exists for all safeguards pumps.

Previous calculations were based upon NPSH curves provided by the manufacturer and extrapolated to cover the maximum possible pump flows.

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Tests conducted on the pumps indicated that maximum flow is limited by pump design and discharge head losses and is not influenced by increase in NPSH. The tests also indicate that the NPSH curves and extrapolations are overly conservative and would support far less restrictive limits than adopted and currently maintained. We may, in the future, pursue modification of the limits to gain additional margin for pressurized thermal shock or other reasons.

ACTION #3

Provide a description of how the limits defined by the evaluation performed in Item 2 are to be implemented, for both:

(a) automatic switchover from TK-4 to the containment sump, and
(b) manual transfer by operator action using administrative controls.

RESPONSE TO ACTION #3

Automatic switchover is set to occur when the usable volume in the RWST decreases to 96,350 gallons. Manual transfer is called for by procedure to take place at 100,000 gallons usable volume in the RWST. The tank temperature is currently limited to 80°F.

The evalaution discussed in Action #2 above assumed 86°F and 94,000 gallons usable volume remaining in the RWST. Thus, the evaluation bounds both manual and automatic switchover.

ACTION #4

Complete appropriate procedural revisions and conduct operator adequate training instructions necessary to ensure that redefined refueling tank temperature and level limits are identified and maintained which provide adequate safeguards pump NPSH requirements.

RESPONSE TO ACTION #4

This action has been completed.

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ACTION #5

Propose methods for detecting similar deficiencies which may exist due to discrepancies between plant operating conditions or limits, and system parameters or restrictions assumed in safety analyses. Such methods should address potential impact of these concerns on separate but related issues such as pressurized thermal shock.

RESPONSE TO ACTION #5

Consistency between systems parameters or restrictions and plant operating limits or conditions will be ensured by development and usage of a limitations and setpoints document.

This document will relate setpoints, precautions and, limitations contained in plant procedures to values of key parameters assumed in safety analyses. It will provide a control mechanism for ensuring that changes to assumptions or setpoints are reflected in safety analyses and plant operations.

The approach will focus first on the ECCS, then will be expanded to cover other systems important to safety. 1. We plan on developing this document by mid 1983 and utilizing it on an ongoing basis as a control system.

We trust this information is satisfactory.

Very truly yours,

MAINE YANKEE ATOMIC POWER COMPANY

for John H. Garrity, Senior Director,
Nuclear Engineering and Licensing

JHG:pjp

cc: Mr. Robert A. Clark
Mr. Paul A. Swetland

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