

DCS 115-014

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Docket No. 50-309

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Mr. John H. Garrity, Senior Director
 Nuclear Engineering and Licensing
 Maine Yankee Atomic Power Company
 83 Edison Drive
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Dear Mr. Garrity:

SUBJECT: COMPLETION OF REVIEW OF NUREG ITEM II.E.4.2.6 FOR MAINE YANKEE

We have reviewed your submittals dated December 10, 1979, May 16, 1980, May 1, 1981 and August 10, 1982 relating to TMI Action Plan, Item II.E.4.2.6. This item requires that containment purge/vent isolation valves that do not satisfy the operability criteria must be sealed closed during reactor operation.

We conclude that the requirements of NUREG-0737 Item II.E.4.2.6 for Maine Yankee have been met.

Note that our request for additional information dated September 1, 1982 still stands, as it concerns the review of long term valve operability. Our Safety Evaluation covering this item and NUREG-0737 Item II.E.4.2.7 is enclosed. Note that Item II.E.4.2.7 was closed by our letter dated August 27, 1982.

Sincerely,

Original signed by:

Robert A. Clark, Chief
 Operating Reactors Branch #3
 Division of Licensing

Enclosure as stated

cc: See next page

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SAFETY EVALUATION BY THE
OFFICE OF NUCLEAR REACTOR REGULATION
MAINE YANKEE ATOMIC POWER COMPANY
MAINE YANKEE ATOMIC POWER STATION
PURGE/VENT VALVE ISOLATION DEPENDABILITY CRITERIA
(ITEM II.E.4.(6&7) OF NUREG-0737)

1.0 INTRODUCTION

As a consequence of the accident at TMI-2, implementation of a number of new requirements has been recommended for operating reactors. These new requirements are described in NUREG-0737, "Clarification of TMI Action Plan Requirements," November 1980. The staff has requested licensees to verify that these TMI action plan requirements have been met. This report provides an evaluation of the response to Action Plan Item II.E.4.2, positions 6 & 7 for the Maine Yankee Atomic Power Station.

2.0 REVIEW CRITERIA

Position 6 requires that containment purge/vent isolation valves that do not satisfy the operability criteria set forth in Branch Technical Position CSB 6-4 or the Staff Interim Position of October 23, 1979, must be sealed closed during operating conditions 1, 2, 3, and 4, as defined in SRP 6.2.4, item II.6.f (NUREG 0800). These valves must be verified closed at least every 31 days.

Sealed-closed isolation valves may be closed manual valves, closed remote-manual valves, and closed automatic valves which remain closed after a loss-

of-coolant accident. Sealed-closed purge isolation valves should be under administrative control to assure that they cannot be inadvertently opened. Administrative control includes mechanical devices to seal or lock the valve closed or to prevent power from being supplied to the valve operator.

Key-locked switches in the control room are also acceptable administrative control devices to assure that the purge/vent valves are not inadvertently opened. Checking the valve position light in the control room every 31 days is an acceptable method for verifying that the purge valves are closed.

Position 7 requires that containment purge/vent isolation valves must close on a high radiation signal. The radiation monitor(s) that provide the high radiation signal to purge/vent isolation valves must sense primary containment atmosphere. However, the location of the monitor does not have to be inside primary containment, but can be downstream of the purge exhaust valves or in a separate system that directs primary containment atmosphere to radiation monitors located outside containment and then exhausts the containment air back into containment.

The NRC staff has determined that any purge/vent isolation valves sealed closed during plant operating modes 1 through 4, in accordance with SRP 6.2.4, Item II.6.f (NUREG 0800) satisfy the requirements of Position 7 without a radiation closure signal, since these valves are not expected to be open during an accident. Purge/vent lines that are very small and that are used very infrequently also satisfy the requirements of Position 7 without a radiation closure signal, since the amount of containment atmosphere that can be released to the environment is small and since these valves are highly reliable and also unlikely to be open if an accident releasing radiation should occur.

Those plants that elect to seal closed the purge/vent valves to meet the provisions of II.E.4.2(6&7) will be required to identify this operational restriction in the plant Technical Specifications.

The evaluation of licensee compliance with Position 7 does not include a review of radiation monitor quality, setpoint, redundancy, or isolation/separation from safety systems.

3.0 Evaluation and Conclusions

Based on our review of the documentation listed in the reference section of this report, the Maine Yankee Atomic Power Station can be categorized as meeting Item II.E.4.2. (6 and 7). It is noted for Maine Yankee that the containment radiation signal actuates the closure of the containment purge/vent valves.

References

Maine Yankee Letters Dated:

December 10, 1979
May 16, 1980
May 1, 1981
August 10, 1982

Principal Contributor:

M. Fields (Generic)
K. Heitner (Plant Specific)