

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATING TO AMENDMENT NO. 89 TO FACILITY OPERATING LICENSE NO. DPR-36

MAINE YANKEE ATOMIC POWER COMPANY

MAINE YANKEE ATOMIC POWER STATION

DOCKET NO. 50-309

INTRODUCTION

By letters dated April 23, 1985 and October 7, 1985, Maine Yankee Atomic Power Company (the licensee) proposed changes to Technical Specification 3.11.B that would: (1) add blowdown and body vent valves on instrumentation lines to the list of manual containment isolation valves that may be repositioned under administrative control without prior compensatory measures, and (2) add manual containment isolation valves to the remedial action statement for containment integrity.

BACKGROUMD

Blowdown and Body Vent Valves

Technical Specification 3.11.8 lists certain containment isolation valves which may be repositioned under administrative controls. The proposed change would add blowdown and body vent valves on instrumentation lines to this list as follows:

"3. Blowdown and body vent valves associated with instrumentation lines may be repositioned under administrative control without compensatory measures to isolate the penetration."

The purpose of this change is to allow the occasional manipulation of instrument vent and blowdown valves, for brief periods during surveillance testing and maintenance, which is necessary to meet the requirements of the Maine Yankee Technical Specifications in order to ensure the instruments are operable in accordance with assumptions made in the Final Safety Analysis Report. During normal calibration, when the calibration tester is attached to the blowdown valve and the valve is open, the isolation valve of the instrumentation line maintains the containment boundary conditions. The body vent or blowdown valve is opened for only brief periods of time with the associated instrument isolation valves open. Written procedures have been established that address the operation and manipulation of these valves during maintenance and calibration. Although one of two containment integrity barriers are being breached, the period of time that the valves are open is very short, the size of the opening is very small (0.25 - 0.5 inch diameter), and a technician in close proximity could quickly shut the valve,



if required. Thus, in the unlikely event a design basis accident occurs with the values open and the technician were to fail to close the values, the effects would be minimal because of the small size of the lines. Also, as noted previously, because the values are normally only fully opened for very brief periods to blow down the associated lines, the probability of any impact on containment integrity is extremely small.

Based on the above evaluation, we conclude that the proposed change has a negligible effect on plant safety and is, therefore, acceptable.

Manual Containment Isolation Valves

The proposed change would add manual containment isolation valves to the list of valves in the remedial action statement. This addition is a clerical change which makes the remedial action statement consistent with the technical specification and corrects the previous inadvertent omission of manual valves from the remedial action statement.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change in a surveillance requirement or in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

CONCLUSION

We have concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Exception:

- Manual containment isolation valves may be repositioned under administrative controls provided prior compensatory measures are taken to isolate the penetration. Compensatory measures which may be taken include closing other valves or installing blind flanges to isolate a penetration. Compensatory measures which are in effect for longer than seventy-two hours must meet the same design criteria as the original containment isolation valve.
- The following manual containment isolation valves may be repositioned under administrative control without compensatory measures to isolate the penetration:

RH-4, 6, 7, 26 MS-48, 50, 68, 70, 88, 90, 239, 241, 243 PAP-1, 4, 23, 24, 25 HPD-4, 5, 9, 10, 14, 15 IA-212, 213, 218, 219, 220

 Blowdown and body vent valves associated with instrumentation lines may be repositioned under administrative control without compensatory measures to isolate the penetration.

Remedial Action:

With one or more automatic, remotely operated, or manual containment isolation valves inoperable, maintain at least one automatic, remotely operated, or manual isolation valve operable in each affected penetration that is open, and within 4 hours either:

- 1. Restore the inoperable valve to operable status, or
- Isolate the affected penetration by use of at least one manual, remotely operated or deactivated automatic isolation valve secured (tagged) in the closed position or by use of a blind flange. Compensatory measures which are in effect for longer than seventytwo hours must meet the same design criteria as the original containment integrity valve.
- C. The reactor shall not be critical if the containment internal pressure exceeds 3 psig.
- D. On-line containment purge.

On-Line purging of containment is not allowed under the conditions of Specification 3.11.B above, unless the following conditions are satisfied:

 Prior to the depressurization of the containment for on-line purge, the two purge supply, two exhaust valves and one exhaust bypass valve will be cycled to test the automatic closure feature using both the Containment Gaseous Activity and Primary Vent Stack Gaseous Activity closure signals. The operation of the inner and outer supply and exhaust

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Basis (continued)

Manual containment integrity valves may be repositioned provided that actions are taken to isolate the penetration by alternate means. As soon as practicable, but within seventy-two hours, the alternate means utilized, including associated piping, will be verified to meet the same design criteria as the original isolation.

Certain valves are allowed to be repositioned under administrative controls (e.g., written procedures) to effect required periodic tests and to allow certain required evolutions during startup and shutdown, including main steam line warmup, steam trap blowdown, and Residual Heat Removal (RHR) system operation. Examples of uses of these valves are provided below. These examples are not all inclusive.

The calorimeter isolation valves, MS-239, 241 and 243, are opened in order to perform planned calorimetrics.

The steam line vents, MS-48, 68 and 88, are open for several hours during heatup between reactor coolant temperatures of approximately 210°F and 300°F.

The steam trap drains, HPD-5, 10 and 15, are cycled open briefly during steam line warmup to blow down the steam trap.

The isolation values to the blowdown tank, HPD-4, 9 and 14, are open during heatup and are closed prior to entering power operation.

The steam generator non-return valve bypasses, MS 50, 70 and 90, are opened during steam line warmup.

The Residual Heat Removal System valves, RH-4, 6, 7 and 26, are utilized when the Residual Heat Removal System is in service or when low temperature overpressure protection is in service.

PAP 1 and 4 are opened monthly to perform periodic surveillance of the hydrogen purge system in accordance with Technical Specifications (TS 4.11).

The inner door O-ring test valves, IA-218, 219 and 220, are opened to allow testing of the inner containment door O-ring.

Hydrogen analyzer inlet valves, PAP-23 and 24, return valves, IA-212 and 213, and stop valve PAP-25 are opened briefly during flow testing and during operation of the post accident hydrogen purge and analysis system.

During the time that the steam line or steam trap isolation valves are open, the reactor is either subcritical or at low power conditions. A membrane barrier separates the main steam system from the containment atmosphere and the reactor coolant system at all times.

The RHR system containment isolation valves are opened only with the primary coolant temperature (TS 3.4) equal to or less than minimum pressurization temperature. There is a membrane barrier between the containment atmosphere and the RHR system.

Blowdown and body vent valves on instrumentation lines are allowed to be repositioned under administrative controls (e.g., written procedures) to effect required calibration and maintenance. These administrative controls ensure containment boundary conditions are maintained following calibration and maintenance.

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