NORTHEAST UTILITIES
THE CONNECTICUT LIGHT AND POWER COMPANY
THE HARTFORD ELECTRIC LIGHT COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

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December 20, 1979

Docket No. 50-245

Director of Nuclear Reactor Regulation
Attn: Mr. R. Reid, Chief
Operating Reactors Branch #4
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

References: (1) W. G. Counsil letter to D. L. Ziemann dated January 2, 1979.
(2) W. G. Counsil letter to D. L. Ziemann dated April 27, 1979.
(3) R. W. Reid letter to W. G. Counsil dated October 30, 1979.

Gentlemen:

Millstone Nuclear Power Station, Unit No. 1
Containment Purging During Normal Operation

Your letter of October 30, 1979 identified several generic concerns related to containment purging. After review of our previous correspondence (References (1) and (2)), the Staff concluded that further information and an interim commitment were needed from Northeast Nuclear Energy Company (NNECO). This letter responds to your request, by addressing the items listed in the attachment to your October 30, 1979 letter.

Most of the items in the required interim positions attached to your letter (Reference (3)) were previously identified and evaluated by NNECO in References (1) and (2). However, all items are again summarized below for clarity. Item 2.b. was not previous addressed by NNECO.

Item 1 - Staff Interim Position

Whenever the containment integrity is required, emphasis should be placed on operating the containment in a passive mode as much as possible and on limiting all purging and venting times to as low as achievable. To justify venting or purging, there must be an established need to improve working conditions to perform a safety-related surveillance or safety-related maintenance procedure. (Examples or improved working conditions would include deinerting, reducing temperature, humidity, and airborne activity sufficiently to permit efficient performance or to significantly reduce occupational radiation exposures.)

NNECO Response

Reference (1) provided justification for continuing the purging operations, in order to provide flexibility to the operators in control of containment oxygen level and drywell pressure. Since BWR containments are not normally

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accessible during operation, the primary need for purging is not to improve working conditions, but rather to enable compliance with Technical Specifications. The two specifications of concern are 3.7.A.6, Oxygen Concentration, and 3.7.A.2, Drywell to Suppression Chamber Differential Pressure. Containment purging and venting is performed only when necessary to ensure compliance with Technical Specifications.

Item 2.a - Staff Interim Position

Maintain the containment purge and vent isolation valves closed whenever the reactor is not in the cold shutdown or refueling mode until such time as you can show that: all isolation valves greater than 3" nominal diameter used for containment purge and venting operations are operable under the most severe design basis accident flow condition loading and can close within the time limit stated in your Technical Specifications, design criteria, or operating procedures. The operability of butterfly valves may, on an interim basis, be demonstrated by limiting the valve to be no more than 30° to 50° open (90° being full open). The maximum opening shall be determined in consultation with the valve supplier. The valve opening must be such that the critical valve parts will not be damaged by DBA-LOCA loads and that the valve will tend to close when the fluid dynamic forces are introduced.

NNECO Response

Reference (1) showed that the atmospheric control system valves (used for containment purging) are operable under the most severe design basis accident flow condition loading and can close within the time limits stated in the design criteria and within Technical Specifications. Since the valves can close and seat against pressures far in excess of the accident pressures, NNECO has no need or interest in attempting to limit the valves to a partially open position.

Item 2.b - Staff Interim Position

Maintain the containment purge and vent isolation valves closed whenever the reactor is not in the cold shutdown or refueling mode until such time as you can show that: modifications, as necessary, have been made to segregate the containment ventilation isolation signals to ensure that, as a minimum, at least one of the automatic safety injection actuation signals is uninhibited and operable to initiate valve closure when any other isolation signal may be blocked, reset, or overridden.

NNECO Response

This item was discussed, in part, in Reference (1). The purge isolation valves have segregated isolation signals such that at least one actuation signal is uninhibited and able to initiate valve closure when any other isolation signal

may be blocked, reset, or overridden. For the 2" containment vent valves, a procedure change was necessary to meet this condition. As described in Reference (1), the vent valves have a key lock switch to allow purging of the containment following an accident situation where high pressure still exists. This key lock switch allows bypass of a high drywell pressure isolation signal to the vent valves and allows the vent valves to be opened. Due to the post-accident necessity to operate this valve, we must maintain this override capability.. The compensatory measures to ensure isolation integrity of the vent valves when operating in run, hot standby, or startup are:

(1) Operation of the key lock switch is administratively controlled.

(2) There is continuous annunciation on the main control board whenever the key switch is operated.

(3) Operating procedures have been revised to require that if any vent valve is open when it is not required to vent a drywell high pressure condition, then:

a. Reset the containment isolation bypass if the bypass has been selected, or

b. Manually close the vent valves.

Conclusions

With the exception to certain requirements in the Staff's Interim Position 2.b which are necessary for compliance with Technical Specifications, NNECO is operating Millstone Unit No. 1 in conformance with the Staff interim positions attached to Reference (3). In addition, since valve operability has been verified as described in Reference (1), and in accordance with the Staff's interim positions of Reference (3), we conclude that unlimited venting and purging of the containment may continue, as necessary, to control drywell pressure and containment oxygen concentration.

Should you have any questions, please contact us.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

W. G. Counsil
Vice President

By: D. C. Switzer
D. C. Switzer
President

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