Mr. Neil S. Carns
Senior Vice President
and Chief Nuclear Officer
Northeast Nuclear Energy Company
c/o Ms. Patricia A. Loftus
Director - Regulatory Affairs
P.O. Box 128
Waterford, CT 06385

July 30, 1997

SUBJECT: MILLSTONE NUCLEAR POWER STATION, UNIT 3 - CORRECTION TO AMENDMENT NO. 142 (TAC NO. M98456)

Dear Mr. Carns:

By letter dated June 24, 1997, the Commission issued Amendment No. 142 to Facility Operating License No. NPF-49 for the Millstone Nuclear Power Station, Unit 3, in response to your application dated April 15, 1997. As part of the amendment, Technical Specification (TS) Bases pages 3/4 6-3, 6-3a, and 6-3b were revised. We have recently become aware that changes, not associated with the requested changes, were included with the retyped pages submitted by the licensee. Specifically (1) the word humidity was inappropriately corrected in TS B 3/4.6.4, (2) a TS Bases calculation (TS B 3/4.6.4.3.b) contained errors which were introduced due to a computer font change, (3) the word postaccident was inappropriately changed in TS B 3/4.6.4.4, and (4) a TS Bases calculation (TS B 3/4.6.4.4.a) contained an error which was introduced due to a computer font change. Enclosed are the correct Technical Specification Bases pages 3/4 6-3, 6-3a, and 6-3b.

Sincerely,

Original signed by:
James W. Andersen, Project Manager
Special Projects Office - Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-423

Enclosure: As stated

cc w/encl: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 30, 1997

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James W. Andersen, Project Manager
Special Projects Office - Licensing
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3/4.6.3 CONTAINMENT ISOLATION VALVES

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment and is consistent with the requirements of General Design Criteria 54 through 57 of Appendix A to 10 CFR Part 50. Containment isolation within the time limits specified for these isolation valves designed to close automatically ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA. FSAR Table 6.2-65 lists all containment isolation valves. The addition of deletion of any containment isolation valve shall be made in accordance with Section 50.59 of 10CFR50 and approved by the Plant Operation Review Committee.

3/4.6.4 COMBUSTIBLE GAS CONTROL

Hydrogen Monitors are provided to detect high hydrogen concentration conditions that represent a potential for containment breach from a hydrogen explosion. Containment hydrogen concentration is also important in verifying the adequacy of mitigating actions. The requirement to perform a hydrogen sensor calibration at least every 92 days is based upon vendor recommendations to maintain sensor calibration. This calibration consists of a two point calibration, utilizing gas containing approximately one percent hydrogen gas for one of the calibration points, and gas containing approximately four percent hydrogen gas for the other calibration point.

The OPERABILITY of the equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-LOCA conditions. Either recombiner unit or the Mechanical Vacuum Pumps are capable of controlling the expected hydrogen generation associated with: (1) zirconium-water reactions, (2) radiolytic decomposition of water, and (3) corrosion of metals within containment. These Hydrogen Control Systems are consistent with the recommendations of Regulatory Guide 1.7, "Control of Combustible Gas Concentrations in Containment Following a LOCA," March 1971.

The Post-LOCA performance of the hydrogen recombiner blowers is based on a series of equations supplied by the blower manufacturer. These equations are also the basis of the acceptance criteria used in the surveillance procedure. The required performance was based on starting containment conditions before the LOCA of 10.59 psia (total pressure), 120°F and 100% relative humidiy.

The surveillance procedure shall use the following methods to verify acceptable blower flow rate:

3/4.6.4 COMBUSTIBLE GAS CONTROL (Continued)

1. Definitions and constants

   CFM = cubic feet per minute

   RPM = revolutions per minute

   Blower RPM = 3550

   Blower ft^3/revolution = .028 ft^3

   Standard CFM = gas volume converted to conditions of 68°F and 14.7 psia.

2. Measure and record the following information:

   Pcontainment--Average of 3LMS*P934, 935, 936, and 937 (psia)

   Pout--From 3HCS-PI1A or B (psia)

   Tc--Containment temperature (°F)

   Pin--Measure with a new inlet gauge or calculate from Equation 3a below (psia)

   scfm measured--See Procedure/Form 3613A.3-1

   ΔP_f--From Table 2 (psi)

   A--As found Slip Constant

   Accuracy--Instrument accuracy range from Table 1.

3. Calculate as found slip constant (A)

   a. Pin = Pcontainment - ΔP_f

   b.

$$A = \frac{3550 - \left(\left[\frac{\text{scfm measured} - \text{Accuracy}}{0.028 * 0.95}\right] * \left[\frac{14.7}{\text{Pin}} * \frac{\text{Tc} + 460}{528}\right]\right)}{\left(\left[\frac{\text{Pout}}{\text{Pin}} * 14.7\right] - 14.7\right)^{\frac{1}{2}} * \left(\frac{14.7}{\text{Pin}} * \frac{\text{Tc} + 460}{528}\right)^{\frac{1}{2}}}$$

3/4.6.4 COMBUSTIBLE GAS CONTROL (Continued)

4. Calculate expected postaccident flow rate using A calculated in Step 3.

   a. Slip RPM

      = A * $(4.937)^{\frac{1}{2}}$ * 1.218

   b. Actual Inlet CFM

      ACFM = .028 (3550 - Slip RPM)

   c. Standard CFM

      scfm = ACFM 0.725

   d. Postaccident scfm Minimum = scfm * 0.95

   e. Acceptance Flow Rate

      Postaccident scfm minimum $\geq$ 41.52 scfm.

Table 1 Accuracy Range (Ref. 2)

scfm (measured)	Accuracy Range
40 to 50	5.8 scfm
50 to 80	4.7 scfm

Table 2 Inlet Piping Loss (Ref. 1)

scfm Measured (Unadjusted)	ΔP_f (psi)
30	.21
40	.31
50	.52
60	.73
70	.98
80	1.28

References: 1. Calculation 90-RPS-722GM, "Flow Acceptance Criteria for 3HCS*RBNR 1A/B Blowers 3HCS*C1A/B."

2. Calculation PA 90-LOE-0132GE, "Hydrogen Recombiner Flow Error Analysis."

The acceptance flow rate is the required flow rate at the worst case containment conditions 24 hours after the LOCA. The analysis assumes the recombiners are started no later than 24 hours after the accident. The 18-month surveillance shall verify the gas temperature and blower flow rate concurrently.