New Hampshire
Yankee

Ted C. Feigenbaum
Vice President

NYN-89085

July 10, 1989

United States Nuclear Regulatory Commission
Washington, DC 20555

Attention: Document Control Desk

References: (a) Facility Operating License No. NPF-67, Docket No. 50-443

(b) PSNH Letter (SBN-1098) dated June 6, 1986, "Accident Monitoring Instrumentation Review and Compliance with Regulatory Guide 1.97"

(c) NUREG-0896, Supplement No. 5 dated July 1986, "Safety Evaluation Report Related to the Operation of Seabrook Station, Units 1 & 2"

(d) Regulatory Guide 1.97, Revision 3, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident"

Subject: Safety Injection Accumulator Pressure and Containment Sump Water Temperature Instrumentation

Gentlemen:

To resolve NRC Staff concerns regarding accident monitoring instrumentation for Seabrook Station, New Hampshire Yankee (NHY) committed to install environmentally qualified instrumentation to monitor safety injection accumulator tank level or pressure and containment sump water temperature [Reference (b)]. The NRC Staff review of this commitment is reflected in Reference (c).

New Hampshire Yankee plans to satisfy these commitments by upgrading safety injection ('I) accumulator pressure instrumentation to satisfy the criteria of Design Category 2 Accident Monitoring Instrumentation (AMI). The containment sump water temperature will be monitored by upgrading an existing containment building spray heat exchanger inlet temperature instrument to satisfy the criteria of Design Category 2 AMI. The justification for this deviation from RG 1.97 along with a minor deviation concerning the range of the SI accumulator pressure instrument is provided in Enclosure 1.

A001
1/1

New Hampshire Yankee believes that Appendix L of Reference (c) supports using the existing heat exchanger inlet temperature instrumentation to monitor containment sump water temperature. To avoid impacting the implementation schedule for these instruments, NHY requests the NRC Staff's concurrence with this revised commitment as soon as is possible.

If you require additional information regarding this matter, please contact Mr. Richard R. Belanger at (603) 474-9521, extension 4048.

Very truly yours,

Ted C. Feigenbaum

cc: Mr. William T. Russell
Regional Administrator
United States Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

Mr. Victor Nerses, Project Manager
Project Directorate I-3
United States Nuclear Regulatory Commission
Division of Reactor Projects
Washington, DC 20555

NRC Senior Resident Inspector
P. O. Box 1149
Seabrook, NH 03874

CONTAINMENT SUMP WATER TEMPERATURE

Regulatory Guide 1.97 Position

Provide Design Category 2 containment sump water temperature instrumentation to monitor the containment cooling system.

Deviations from regulatory Guide 1.97

1. Containment sump water temperature is monitored at the inlet to the containment spray heat exchanger.

Justification

1. The net positive suction head (NPSH) calculations for the Containment Building Spray (CBS) and Residual Heat Removal (RHR) Pumps assume saturated conditions in the containment sump [Seabrook FSAR, Section 6.2.2.2 and 6.3.2.2]. Saturated conditions result in the maximum possible sump temperature. There is no containment sump water temperature limit for RHR or CBS pump starting or operation; therefore, the temperature sensor for monitoring system performance can be located outside of the containment. The instrument located in the containment spray piping at the inlet to each CBS heat exchanger is not required for emergency response. Its function is to provide the temperature required for containment energy balance calculations and for monitoring containment spray heat exchanger performance.

ACCUMULATOR TANK LEVEL AND PRESSURE

Regulatory Guide 1.97 Position

Provide Design Category 2 accumulator tank level and pressure instrumentation to monitor the accumulator tank.

Deviations from Regulatory Guide 1.97

1. The accumulator tank pressure range deviates from the recommended range of 0 to 750 psig.

2. Accumulator tank level is not classified as AMI.

Justification

1. The actual range 0 to 700 psig is sufficient to monitor the design pressure of 630 psig. This is the standard range of the instrument as supplied by the NSSS vendor.

2. The NHY commitment is to provide either accumulator tank level or pressure [Reference (b)]. Accumulator tank pressure has been selected as the variable to be monitored.