



**North
Atlantic**

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The Northeast Utilities System

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NYN- 94077

July 15, 1994

United States Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Document Control Desk

Reference: Facility Operating License No. NPF-86, Docket No. 50-443

Subject: 10CFR50.46 Annual Report

Gentlemen:

North Atlantic Energy Service Corporation (North Atlantic) has enclosed herein, pursuant to 10CFR50.46(a)(3), the 1994 Annual Report of Emergency Core Cooling System (ECCS) Evaluation Model Revisions/Errors. The enclosure includes a tabulation of the limiting Large Break LOCA and limiting Small Break LOCA Peak Cladding Temperature (PCT) margin allocations applicable to Seabrook Station. The PCT margin allocations reported in the enclosure represent permanent PCT margin allocations attributable to ECCS evaluation model revisions/errors and plant specific input assumption allocations through the period of January 21, 1994 as reported to North Atlantic by Westinghouse on February 8, 1994.

The enclosure demonstrates North Atlantic's compliance with the requirements of 10CFR50.46 and thus no additional analyses or further actions are required. Should you have any questions regarding this letter, please contact Mr. James M. Peschel, Regulatory Compliance Manager at (603) 474-9521 extension 3772.

Very truly yours,

Ted C. Feigenbaum

TCF:ALL/sm

Enclosure

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cc: Mr. Thomas T. Martin
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North Atlantic
July 15, 1994

ENCLOSURE TO NYN-94077

ECCS EVALUATION MODEL REVISIONS/ERRORS
10CFR50.46 ANNUAL REPORT 1994

PEAK CLAD TEMPERATURE (PCT) MARGIN ALLOCATION
LARGE BREAK LOCA

A.	Analysis of Record (Updated Final Safety Analysis Report, Rev. 2, Sec. 15.6*)	PCT =	1965.2 °F
B.	ECCS Evaluation Model Allocations (thru 1/21/94 as reported in Westinghouse letters dated 6/20/91, 6/23/92, 1/25/93 and 2/8/94)		
a.	Fuel Rod Initial Conditions Inconsistency	Δ PCT =	+25.0 °F
b.	Steam Generator Seismic/LOCA Assumption	Δ PCT =	+40.0 °F
c.	Containment Purge	Δ PCT =	+1.0 °F
d.	Containment Hi-1 Pressure Setpoint Increase	Δ PCT =	+1.0 °F
C.	Plant Specific Input Assumption Allocations		
a.	Chamfered Pellet	Δ PCT =	+10.0 °F
b.	Tube Plugging	Δ PCT =	+8.0 °F**
c.	RTD Bypass Elimination	Δ PCT =	+4.0 °F***

Analysis of Record PCT + Δ PCT Margin Allocation = 2054.2 °F

- * The Large Break LOCA analysis was performed utilizing the February 1978 version of the Westinghouse Large Break Evaluation Model.
- ** The 1991 10CFR50.46 Annual Report specified a 1 °F PCT margin allocation for steam generator tube plugging based on the number of tubes plugged in the as-shipped steam generators for Unit 1. Currently, less than .25% of the tubes are plugged in the steam generator with maximum plugging. Westinghouse allocated 8 °F for each 1% of steam generator tubes plugged. For conservatism, 8 °F is reported herein.
- *** License Amendment Request 92-01 and Supplement 1 thereto dated June 19, 1992 proposed Seabrook Station Technical Specification changes relating to the proposed elimination of the RTD Bypass System. The changes were approved by the NRC on August 10, 1992 (Ref. Amendment 12 to Facility Operating License NPF-86). The Reactor Coolant System temperature measurement system uncertainty value for Reactor Coolant System average temperature increases from ± 4 °F to ± 5 °F. The attendant increase in PCT is reported herein.

ECCS EVALUATION MODEL REVISIONS/ERRORS
10CFR50.46 ANNUAL REPORT 1994

PEAK CLAD TEMPERATURE (PCT) MARGIN ALLOCATION
SMALL BREAK LOCA

A.	Analysis of Record (Updated Final Safety Analysis Report, Rev. 2, Sec. 15.6*)	PCT =	1790.0 °F
B.	ECCS Evaluation Model Allocations (thru 1/21/94 as reported in Westinghouse letters dated 6/20/91, 6/23/92, 1/25/93) and 2/8/94)		
a.	Fuel Rod Initial Conditions Inconsistency	Δ PCT =	+37.0 °F
C.	Plant Specific Input Assumption Allocations		
a.	Chamfered Pellet	Δ PCT =	+10.0 °F
b.	Emergency Feedwater Enthalpy Switchover	Δ PCT =	+136.2 °F
c.	RTD Bypass Elimination	Δ PCT =	+8.0 °F**
d.	PSV/MSSV Setpoint Tolerance Relaxation	Δ PCT =	+5.0 °F***
e.	Average Rod Burst Strain	Δ PCT =	+10.0 °F
f.	Fuel Rod Burst Strain Limit	Δ PCT =	-10.0 °F

Analysis of Record PCT + Δ PCT Margin Allocation = 1986.2 °F

* The Small Break LOCA analysis was performed utilizing the October 1975 version of the Westinghouse ECCS Small Break Evaluation Model.

** License Amendment Request 92-01 and Supplement 1 thereto dated June 19, 1992 proposed Seabrook Station Technical Specification changes relating to the proposed elimination of the RTD Bypass System. The changes were approved by the NRC on August 10, 1992 (Ref. Amendment 12 to Facility Operating License NPF-86). The proposed Reactor Coolant System temperature measurement system uncertainty value for Reactor Coolant System average temperature increases from ± 4 °F to ± 5 °F. The attendant increase in PCT is reported herein.

*** License Amendment Request 92-11 dated May 5, 1992 proposed Seabrook Station Technical Specification changes relating to the proposed relaxation in the Pressurizer Safety Valve and Main Steam Safety Valve setpoints tolerances to $\pm 3\%$. The changes were approved by the NRC on September 3, 1992 (Ref. Amendment 15 to Facility Operating License NPF-86). The attendant PCT increase reported herein is 5 °F for the small break LOCA only. The large break LOCA analysis results were not affected by the setpoint tolerance relaxation.