



**North
Atlantic**

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The Northeast Utilities System

February 12, 2001

Docket No. 50-443
NYN-01010

CR 00-08123-02

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

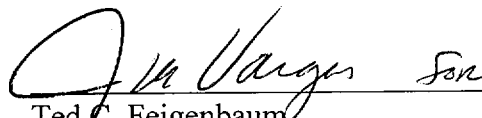
Seabrook Station
Reporting of Changes to, or Errors In
Emergency Core Cooling System Models or Applications

In accordance with the requirements of 10CFR 50.46(a)(3)(i), Enclosure 1 includes a tabulation of the current Large Break LOCA Peak Clad Temperature (PCT) margin utilization table applicable to Seabrook Station. The Large Break LOCA utilization table provides notification of a reduction in PCT value of more than 50 degrees F. The new Large Break LOCA PCT value of 1945 F° is 90 F° lower than the previous PCT value reported on August 30, 2000. The new PCT value reflects Seabrook Station's Cycle 8 core design and error adjustments as indicated in the enclosure. The enclosed Small Break LOCA utilization table is provided for completeness and is consistent with the table provided in North Atlantic's 2000 10CFR 50.46 Report, NYN-00077, dated August 2000.

Should you have any questions regarding this report, please contact Mr. James M. Peschel, Manager-Regulatory Programs at (603) 773-7194.

Very truly yours,

NORTH ATLANTIC ENERGY SERVICE CORP.



Ted C. Feigenbaum
Executive Vice President and
Chief Nuclear Officer

Acc 1

cc: H. J. Miller, NRC Region I Administrator
V. Nerses, NRC Project Manager, Project Directorate 1-3
R. K. Lorson, NRC Senior Resident Inspector

ENCLOSURE TO NYN-01010

Large Break Peak Clad Temperature Margin Utilization

ECCS EVALUATION MODEL REVISIONS/ERRORS 10 CFR 50.46 ANNUAL REPORT

Evaluation Model : BASH Fuel: 17x17 V5H FQ=2.5
F Δ H=1.65 SGTP=13% 3411MWt
Line Break Size: Cd = 0.6

ANALYSIS OF RECORD Clad Temperature (F°)
MARGIN ALLOCATIONS (Delta PCT) 1889

A. PRIOR PERMANENT ECCS MODEL ASSESSMENTS

- | | |
|--|----|
| 1. LOCBART Spacer Grid Single-Phase Heat Transfer Error,
LOCBART Zinc-Water Oxidation Error and Reanalysis of
Limiting AOR Case (9/99) | 24 |
|--|----|

B. 10 CFR 50.59 SAFETY EVALUATIONS

- | | |
|---------|---|
| 1. None | 0 |
|---------|---|

C. 2000 10 CFR 50.46 MODEL ASSESSMENTS (Permanent Assessments of PCT Margin)

- | | |
|--|-----|
| 1. LOCBART Vapor Film Flow Regime Heat Transfer Error | 9 |
| 2. LOCBART Dispersed Flow Regime Wall Emissivity Error | -12 |
| 3. LOCBART Cladding Emissivity Errors | 6 |

D. TEMPORARY ECCS MODEL ISSUES

- | | |
|---------|---|
| 1. None | 0 |
|---------|---|

E. OTHER

- | | |
|---|-----|
| 1. Increased T-Avg Uncertainty for RTD Bypass Elimination | 5 |
| 1. +/-3°F T-Avg Window | 15 |
| 3. Increase of 2°F to T-Avg Window | 10 |
| 4. V5H AOR Limiting Case w/IFMs Reanalysis | -51 |
| 5. Transition Core Penalty | 50 |

LICENSING BASIS PCT + MARGIN ALLOCATIONS

PCT Total = 1945°F

**Small Break Peak Clad Temperature Margin Utilization
ECCS EVALUATION MODEL REVISIONS/ERRORS
10 CFR 50.46 ANNUAL REPORT**

Evaluation Model : NOTRUMP Fuel: 17x17 V5H FQ=2.5
F Δ H=1.65 SGTP=13% 3411 MWt

ANALYSIS OF RECORD Clad Temperature (°F)
MARGIN ALLOCATIONS (Delta PCT) 1082

A. PRIOR PERMANENT ECCS MODEL ASSESSMENTS	
1. Effect of SI in Broken Loop	150
2. Effect of Improved COSI	-150
3. Drift Flux Flow Regime Errors	-13
4. LUCIFER Error Corrections	-16
5. Boiling Heat Transfer Correlation Error	-6
6. Steam Line Isolation Logic Error	30
7. Axial Nodalization, RIP Model Revision and SBLOCTA Error Corrections	13
8. NOTRUMP Specific Enthalpy Error	20
9. SBLOCTA Fuel Rod Initialization Error	10
B. 10 CFR 50.59 SAFETY EVALUATIONS	
1. None	0
C. 2000 10 CFR 50.46 MODEL ASSESSMENTS (Permanent Assessments of PCT Margin)	
1. NOTRUMP Mixture Level Tracking / Region Depletion Errors	13
D. TEMPORARY ECCS MODEL ISSUES	
1. None	0
E. OTHER	
1. Increased T-Avg Uncertainty for RTD Bypass Elimination	8
2. +/-3°F T-Avg Window	24
3. Increase of 2°F to T-Avg Window	16
4. AFW Actuation on SI Signal Only	5

LICENSING BASIS PCT + MARGIN ALLOCATIONS

PCT Total = 1186°F