



**North
Atlantic**

Energy Service Corporation

SEABROOK STATION UNIT 1

Facility Operating License NPF-86
Docket No. 50-443

License Amendment Request No. 93-03
Change to Technical Specification Figure 2.1-1,
Reactor Core Safety Limit - Four Loops in Operation

This License Amendment Request is submitted by North Atlantic Energy Service Corporation pursuant to 10CFR50.90. The following information is enclosed in support of this License Amendment Request:

- Section I - Introduction and Description of Proposed Changes
- Section II - Markup of Proposed Changes
- Section III - Retype of Proposed Changes
- Section IV - Safety Evaluation of Proposed Changes
- Section V - Determination of Significant Hazards for Proposed Changes
- Section VI - Environmental Impact Assessment
- Section VII - Supporting Information

Sworn and Subscribed
to before me this

8th day of April, 1993

Tracy A. DeCredico
Notary Public

TRACY A. DeCredico, Notary Public
My Commission Expires October 3, 1995

Ted C. Feigenbaum
Ted C. Feigenbaum

Senior Vice President and Chief Nuclear Officer

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I. Introduction and Description of Proposed Change

A. Introduction

Seabrook Station Licensee Event Report (LER) 92-02-01 reported that the curves of Technical Specification Figure 2.1-1, Reactor Core Safety Limit - Four Loops in Operation, were non-conservative. The non-conservative curves were identified as a result of a North Atlantic review of the Technical Specification values provided to North Atlantic by Westinghouse. It was determined, through a comparison of Westinghouse design documents to the actual curves in Figure 2.1-1, that the curves in the region of 80% to 110% of rated thermal power (RTP) do not accurately represent the loci of points upon which the curves are based. For example, the 1960 psia curve at 100% of RTP should provide a value of 605.0°F, while the actual curve in Figure 2.1-1 is closer to 606.5°F. There are other points in this region that can be determined to be non-conservative when compared to the loci of points.

North Atlantic determined that the non-conservative curves did not constitute a safety hazard because plant operation in the affected area would not have occurred for two reasons. First, normal operation of the plant at power is controlled by Station operating procedures which specify the normal operating band for both Reactor Coolant System (RCS) temperature and pressure. The normal operating pressure is 2235 psig and the Station procedures require that the RCS pressure be maintained between 2205 and 2265 psig. The RCS temperature is maintained within $\pm 4^\circ\text{F}$ of the T_{avg} program and the normal RCS temperature per the T_{avg} program at 100% of RTP is 587°F. The second reason is related to the Reactor Protection System (RPS) reactor trips which are designed to prevent the safety limits from being challenged. These RPS trips are the Overtemperature ΔT trip, Overpower ΔT trip and the Power Range Neutron Flux High trip. These RPS trips are developed using the criteria of Technical Specification 2.2.1, Reactor Trip System Instrumentation Setpoints, and do not utilize the values of the curves in Figure 2.1-1. These RPS trips have not been challenged or exceeded at Seabrook Station and therefore the safety limit as provided in Figure 2.1-1 has not been challenged.

This condition was reported to the NRC in Licensee Event Report 92-02-01. One of the corrective actions specified in LER 92-02-01 was to revise Technical Specification Figure 2.1-1 to include curves which accurately reflect the loci of points upon which they are based. This submittal addresses that corrective action.

B. Description of Proposed Change

The proposed change consists solely of revising Technical Specification Figure 2.1-1 to provide curves which accurately reflect the loci of points upon which the curves are based and is consistent with the Westinghouse design calculations. The revised curves are provided in Section II as a marked Figure 2.1-1 and in Section III as a retyped Figure. The loci of points used to generate the curves are provided in Section VIII.