

**North
Atlantic**

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The Northeast Utilities System

February 7, 1997

Docket No. 50-443
NYN-97012

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

Seabrook Station
Response to the NRC's Request for Information
Pursuant to 10 CFR 50.54(f) Regarding
Adequacy and Availability of Design Bases Information

In a letter dated October 9, 1996¹, the NRC requested that North Atlantic Energy Service Corporation (North Atlantic) provide information, pursuant to 10 CFR 50.54(f), regarding the adequacy and the availability of design bases information at Seabrook Station. This letter and the attached report² are being submitted in response to this request.

The purpose of the NRC's letter was to obtain information that will provide added confidence and assurance that Seabrook Station is operated and maintained within the design bases and that any deviations are reconciled in a timely manner. In support of our response, we have conducted a detailed self-assessment that includes the following:

- A review of Seabrook Station's historical performance including past audits, assessments and inspections;
- Vertical Slice reviews of seven risk significant systems;
- A review of the Updated Final Safety Analysis Report (UFSAR) Chapter 15;
- A review of selected portions of the Technical Specifications;
- A review of nine important Engineering Technical Programs (e.g. Environmental Qualification, Fire Protection) and Topical Areas (e.g. Station Blackout, High Energy Line Break); and

¹ NRC letter dated October 9, 1996, "Request for Information Pursuant to 10 CFR 50.54(f) Regarding Adequacy and Availability of Design Bases Information," James M. Taylor to Bruce D. Kenyon

² "Response to the NRC's Letter of October 9, 1996 on the Adequacy and Availability of Design Bases Information."

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- A review of the links within and among current configuration control programs, processes and procedures.

All of the reviews conducted in support of this response have been consolidated into a North Atlantic Engineering Self-Assessment Report (ESAR). The responses to the six specific NRC requests that are contained in the attached report are based on the information contained in the ESAR.

The self-assessment provides objective evidence to support our conclusions. The Vertical Slice Reviews indicate how effectively the design bases have been maintained over the life of Seabrook Station. The accuracy and validity of the accident analyses assumptions that govern much of the design bases were examined in the UFSAR Chapter 15 review. In the Technical Specifications reviews, source documents for numerical operating limits and the appropriateness of Limiting Conditions for Operation were reviewed. Our effectiveness in incorporating the design and licensing bases into engineering program requirements was assessed in the Engineering Technical Programs and Topical Areas review. Finally, a measure was taken of the ability of our current program to ensure that the plant continues to be maintained within the design bases in the Current Programs, Processes and Procedures Review. We believe that these assessments, when considered in the context of our historical performance, provide a sufficient basis upon which to respond to the NRC's requests.

The self-assessment was the product of an intense effort that demanded a considerable commitment of personnel and resources. The reviews were conducted by knowledgeable and experienced engineers supplemented by highly qualified contractor personnel. For example, the 30-member vertical slice review team averaged over 20 years of nuclear industry experience. In total, over 15,000 person-hours were expended over a period of about two and one-half months on the project. As expected with any examination of this scope and intensity, areas warranting additional attention and improvement have been identified. Deviations and discrepancies identified by the self-assessment are being evaluated individually and collectively to ensure that we are addressing any areas of weakness that they may represent.

The self-assessment supplements our ongoing efforts to improve the configuration management and corrective action programs. As described in the report, a number of efforts have been underway in these areas. In 1995, we initiated changes to the corrective action program which include the transition to a single adverse condition reporting document, a lowering of the reporting threshold and the establishment of a management review team. Recently, we have contracted with Performance Improvement International (PII) to provide training in root cause analysis and human error reduction. PII will also certify North Atlantic staff as instructors so that this training can become an ongoing component of our corrective action program.

As a result of a detailed common cause analysis of identified UFSAR discrepancies in 1996, improvements are in the process of being implemented in UFSAR maintenance.

They include improved 10 CFR 50.59 evaluation guidance and documentation, additional training, increased oversight and the use of LAN-based software to efficiently conduct UFSAR searches.

Other initiatives that are addressing configuration management issues include the Design Basis Document (DBD) program, the procedure upgrade program and the conversion to Improved Standard Technical Specifications. North Atlantic's DBD program was established in 1988. To date, 33 DBDs have been completed. Maintenance Rule criteria will be used to establish future priorities in this important program. The procedure upgrade program, begun in 1994, will review, consolidate, simplify and clarify about 3,000 plant procedures. The conversion to Standard Technical Specifications is expected to be completed in 1998.

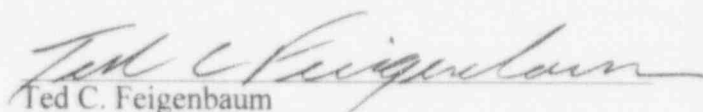
In addition to evaluating and dispositioning each finding and recommendation, North Atlantic is initiating a number of actions to improve performance and configuration management as a follow-up to the self-assessment. Self-assessment findings related to the UFSAR and to calculation consistency will be subjected to a common cause analysis to identify common conditions and generic causes. This will ensure that program enhancements in these areas are properly targeted and effective. A comprehensive review of the UFSAR will also be conducted. Details on the scope of this review will be submitted separately. As a result of the self-assessment, additional structure, visibility and organizational focus will be given to engineering topical areas such as High Energy Line Break and Station Blackout. Finally, North Atlantic has requested that PII conduct an independent collective analysis of the self-assessment findings. Such an analysis will provide additional assurance that we have identified opportunities for program improvement and that appropriate corrective actions are being implemented.

As Chief Nuclear Officer for North Atlantic, I am responsible for the safe operation of Seabrook Station. Based on my knowledge of the process and personnel involved in the self-assessment, the extensive oversight and review that was conducted, and my own review of the self-assessment findings, I conclude that Seabrook Station's programs, processes and procedures provide reasonable assurance that the plant is being operated and maintained within its design bases and that deviations are reconciled in a timely manner.

If you should have any questions on this submittal, please contact Mr. Terry L. Harpster, Director of Licensing (603) 773-7765.

Very truly yours,

NORTH ATLANTIC ENERGY SERVICE CORP.



Ted C. Feigenbaum
Executive Vice President and
Chief Nuclear Officer

cc: Mr. Hubert J. Miller, Region I Administrator
Mr. Albert W. De Agazio, Sr. Project Manager
Mr. John B. Macdonald, NRC Senior Resident Inspector

Mr. L. J. Callan
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AFFIDAVIT

STATE OF NEW HAMPSHIRE

COUNTY OF ROCKINGHAM

TED C. FEIGENBAUM, being duly sworn according to law, deposes and says as follows:

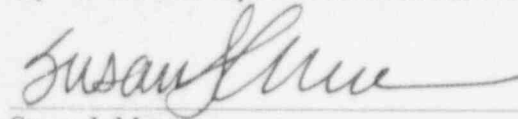
1. I am the Executive Vice President and Chief Nuclear Officer of North Atlantic Energy Service Corporation (North Atlantic). North Atlantic is authorized by an operating license issued by the U.S. Nuclear Regulatory Commission to possess, use and operate the Seabrook Nuclear Power Station.
2. I am authorized to sign and submit on behalf of North Atlantic the attached response to the U.S. Nuclear Regulatory Commission's letter dated October 9, 1996 requesting additional information pursuant to 10 CFR 50.54(f) regarding the adequacy and availability of design basis information. The attached response is comprised of the preceding letter dated February 7, 1997 and the attachments thereto (the "Response").
3. The Response was prepared by a team of experienced engineers and other professionals from North Atlantic and from other organizations under the direction of North Atlantic management. The Response is based on the results of a series of reviews and assessments that are documented in an Engineering Self-Assessment Report (ESAR). The reviews and assessments that comprise the ESAR are described in the Response. The factual content of the Response was reviewed by a Validation Team. Management oversight was provided by a Senior Review Team consisting of senior North Atlantic managers and directors. The Nuclear Safety Audit Review Committee and the Station Operating Review Committee reviewed the Response.
4. I have read the attached Response and in reliance on that review, my inquiries of the individuals involved in the preparation of the Response, and the processes and reviews discussed in the preceding paragraph, and independent oversight, do hereby state that the contents of the accompanying Response are true and correct to the best of my knowledge, information and belief.


TED C. FEIGENBAUM

Executive Vice President and Chief Nuclear Officer
North Atlantic Energy Service Corporation

Subscribed and Sworn
before me on this 7th day
of February, 1997.

My commission expires December 22, 1998



Susan J. Messer
Notary Public