

May 30, 1997

Mr. Ted C. Feigenbaum
Executive Vice President and
Chief Nuclear Officer
North Atlantic Energy Service Corporation
c/o Mr. Terry L. Harpster
P.O. Box 300
Seabrook, NH 03874

SUBJECT: PUBLIC NOTICE OF APPLICATION FOR AMENDMENT TO OPERATING LICENSE FOR
SEABROOK STATION, UNIT NO. 1 (TAC NO. M98842)

Dear Mr. Feigenbaum:

The enclosed announcement has been forwarded to the Portsmouth Herald and Foster's Daily Democrat for publication. This announcement relates to your application dated May 29, 1997, for an amendment to Facility Operating License No. NPF-86. The proposed amendment would revise Technical Specification (TS) 5.3.1 by replacing the current term zircaloy with terminology that explicitly identifies the NRC-approved Westinghouse fuel assembly design in use at the Seabrook Station consisting of assemblies with either ZIRLO or Zircaloy-4 fuel cladding material.

A separate notice will be published in the Federal Register concerning the revision to Section 5.3.1, Design Features-Fuel Assemblies, of the Seabrook Station, Unit No. 1 Technical Specifications.

Sincerely,

(Original Signed By)

Albert W. De Agazio, Sr. Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-443
Serial No. SEA-97-014

Enclosure:
Announcement

cc w/encl: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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Sincerely,

A handwritten signature in cursive script, reading "Albert W. De Agazio", is positioned above the typed name.

Albert W. De Agazio, Sr. Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

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Seabrook Station, Unit No. 1

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PUBLIC NOTICE

NRC STAFF PROPOSES TO AMEND OPERATING LICENSE AT THE SEABROOK STATION, UNIT NO. 1

The Nuclear Regulatory Commission staff has received an application dated May 29, 1997, from the North Atlantic Energy Service Corporation (North Atlantic), for an emergency amendment to the operating license for the Seabrook Station, Unit 1 (Seabrook), located in Rockingham County, New Hampshire.

The proposed amendment would revise Technical Specification (TS) 5.3.1 by replacing the currently identified fuel rod cladding material, zircaloy, with terminology that explicitly identifies the NRC-approved Westinghouse fuel assembly design in use at the Seabrook Station consisting of assemblies with either ZIRLO or Zircaloy-4 fuel cladding material.

In its May 29, 1997, application, North Atlantic requested that the proposed changes to TS 5.3.1 be reviewed on an exigent basis pursuant to the provisions of 10 CFR 50.91(a)(6) and that a license amendment be issued to support startup from the current refueling outage (i.e., MODE 2). Seabrook is now in Refueling Outage 5.

North Atlantic submitted License Amendment Request (LAR) 93-18, "Wide Band Operation and Core Design Enhancements," on November 23, 1993, to support Cycle 5 operation. Several changes to the Seabrook Station Technical Specifications were proposed in LAR 93-18. Specifically, Item 13) of LAR 93-18 stated:

The fuel assembly description is changed to allow the possibility of future implementation of Zirlo cladding. The thermal performance characteristics of Zirlo were considered in the revised LOCA analysis which accompanies YAEC-1871. Affects: Technical Specification Design Feature 5.3.1, Fuel Assemblies (Page 5-9).

The proposed change to Technical Specification 5.3.1 was the replacement of the term "Zircaloy-4" with the term "zirconium alloy." The term "zirconium alloy" was intended by North Atlantic to accurately describe and encompass the materials ZIRLO or Zircaloy-4. License Amendment Request 93-18 was approved by the NRC in Amendment No. 33, dated November 23, 1994. In its safety evaluation for Amendment No. 33, the NRC stated specifically that the term "zirconium alloy" was to provide flexibility for future implementation of ZIRLO cladding.

North Atlantic submitted License Amendment Request 97-01 on February 18, 1997, and received NRC approval in License Amendment 51 on May 13, 1997. Amendment 51 approved a revision to Technical Specification 5.3.1, which had the primary purpose of providing flexibility in the repair of fuel assemblies containing damaged or leaking fuel rods. Amendment 51 authorized "limited substitutions of zirconium alloy or stainless steel filler rods for fuel rods, in accordance with NRC-approved applications of fuel rod configurations...." License Amendment Request 97-01 was submitted in accordance with NRC Generic Letter 90-02, Supplement 1, "Alternative Requirements for Fuel Assemblies in the Design Features Section of Technical Specifications." License Amendment Request 97-01 employed the model Technical Specification 5.3.1 language, but slightly modified, as contained in the Generic Letter 90-02, Supplement 1. Additionally, License Amendment 51 also revised, as requested, the description of fuel assemblies in accordance with Generic Letter 90-02, Supplement 1, language to state that they consist of "...zircaloy clad fuel rods...."

It was identified to North Atlantic by the NRC Project Manager while conducting a plant tour on May 23, 1997, and confirmed on May 27, 1997, that

the Technical Specifications must be revised to identify the specific fuel cladding materials in use at the Seabrook Station.

North Atlantic has acted in a timely manner to submit the May 29, 1997, license amendment request; however, there is insufficient time to process the proposed amendment in the routine manner described in 10 CFR 50.91 without delaying restart of the Seabrook Station from the current refueling outage. The current best estimate for achieving criticality (MODE 2) is June 16, 1997, but North Atlantic believes that there are multiple opportunities to improve on this schedule, which could result in MODE 2 being achieved earlier.

The licensee and the NRC staff have evaluated this proposed change with regard to the determination of whether or not a significant hazards consideration is involved.

Operation of Seabrook, in accordance with the proposed changes would not involve a significant increase in the probability or consequences of an accident previously evaluated. ZIRLO is similar in chemical composition, physical and mechanical properties to Zircaloy-4, but features improved corrosion performance and dimensional stability. These characteristics ensure that fuel rod cladding integrity and fuel assembly structural integrity are maintained. Fuel assemblies manufactured with ZIRLO clad fuel rods meet the same design bases requirements as fuel assemblies manufactured with Zircaloy-4 cladding and the regulatory requirements of 10 CFR 50.46 are applicable to either material. No concerns have been identified pertaining to reactor operation with a core comprised of fuel assemblies manufactured with Zircaloy-4 clad rods and fuel assemblies manufactured with ZIRLO clad rods. ZIRLO clad fuel rods do not require change to the Seabrook reload design and

safety analysis limits. The changes will not result in a change to any of the process variables that might initiate an accident or affect the radiological release for an accident. The operating limits will not be changed and the analysis methods to demonstrate operation within the limits will remain in accordance with NRC-approved methodology. The proposed amendment does not involve any changes to facility structures, systems, or components other than the changes to the fuel assemblies. Radiological consequences of previously evaluated accidents are not increased because the safety analysis dose predictions are not sensitive to the type of cladding material used. Therefore, the use of ZIRLO fuel rod material does not adversely affect fuel performance or impact nuclear design methodology, and the probability or consequences of accidents previously evaluated in the Seabrook Updated Final Safety Analysis Report (UFSAR) are not increased by this change.

The proposed amendment will not create the possibility of a new or different kind of accident from any previously analyzed. Fuel assemblies manufactured with ZIRLO clad fuel rods will satisfy the same design bases as those currently used for Zircaloy-4 clad fuel assemblies. All design and performance criteria will continue to be met by fuel assemblies manufactured with ZIRLO clad fuel rods. The use of fuel assemblies manufactured with ZIRLO cladding does not involve any other alterations to facility structures, systems, or components that would introduce any new operational modes or accident initiators. Therefore, the possibility of a new or different kind of accident from any accident previously evaluated is not created by this change.

The proposed amendment will not involve a significant reduction in a margin of safety. The use of fuel assemblies manufactured with ZIRLO clad

fuel rods does not change the reactor core reload design and safety accident limits. The use of these fuel assemblies will take into consideration the normal core operating conditions allowed in the Technical Specifications. Each cycle reload core design will continue to be evaluated using NRC-approved reload design methods.

Following an initial review of this application, the requested amendment has been evaluated against the standards in 10 CFR 50.92 and the NRC staff has made a proposed (preliminary) determination that the requested amendment involves no significant hazards considerations. The changes do not significantly increase the probability or consequences of any accident previously considered, nor create the possibility of an accident of a different kind, nor significantly decrease any margin of safety.

If the proposed determination that the requested license amendment involves no significant hazards consideration becomes final, the staff will issue the amendment without first offering an opportunity for a public hearing. An opportunity for a hearing will be published in the Federal Register at a later date and any hearing request will not delay the effective date of the amendment.

If the staff decides in its final determination that the amendment does involve a significant hazards consideration, a notice of opportunity for a prior hearing will be published in the Federal Register and, if a hearing is granted, it will be held before the amendment is issued.

Comments on the proposed determination of no significant hazards consideration may be telephoned to Patrick D. Milano, Acting Director, Project Directorate I-3, by collect call to 301-415-1457. All comments received by

close of business on June 10, 1997, will be considered in reaching a final determination. A copy of the application may be examined at the NRC's Local Public Document Room located at Exeter Public Library, Founders Park, Exeter, New Hampshire and at the Commission's Public Document Room, the Gelman Building, 2120 L Street, Washington, DC.