

July 21, 2003

Mr. Mark E. Warner, Site Vice President
c/o James M. Peschel
Seabrook Station
PO Box 300
Seabrook, NH 03874

SUBJECT: SEABROOK STATION, UNIT NO. 1 - ENVIRONMENTAL ASSESSMENT
RE: EXEMPTION REQUEST (TAC NO. MB6699)

Dear Mr. Warner:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application and exemption request dated October 11, 2002. The proposed exemption is from the requirements of Title 10 of the *Code of Federal Regulations* Part 50, Section 50.60(a) and Appendix G, and would allow the use of American Society of Mechanical Engineers *Boiler and Pressure Vessel Code* Code Case N-641 as the basis for revised reactor vessel pressure and temperature limit curves.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

/RA/

Victor Nerses, Senior Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-443

Enclosure: Environmental Assessment

cc w/encl: See next page

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UNITED STATES NUCLEAR REGULATORY COMMISSIONFPL ENERGY SEABROOK, LLC, ET AL.DOCKET NO. 50-443SEABROOK STATIONENVIRONMENTAL ASSESSMENT AND FINDING OFNO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC or the Commission) is considering issuance of an exemption from Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Section 50.60, "Acceptance criteria for fracture prevention measures for light-water nuclear power reactors for normal operation," and 10 CFR Part 50, Appendix G, "Fracture Toughness Requirements," for Facility Operating License No. NPF-86, issued to FPL Energy Seabrook, LLC, et al. (the licensee), for operation of the Seabrook Power Station, located in Seabrook, New Hampshire. Therefore, as required by 10 CFR 51.21, the NRC is issuing this environmental assessment and finding of no significant impact.

ENVIRONMENTAL ASSESSMENTIdentification of the Proposed Action:

The proposed action would exempt the licensee from the requirements of 10 CFR Part 50, Section 50.60(a) and Appendix G, and allow the use of American Society of Mechanical Engineers *Boiler and Pressure Vessel Code* (ASME Code) Code Case N-641 in the development of the Seabrook Reactor Pressure Vessel (RPV) Pressure and Temperature (P-T) limits. These limits would be used through 20 effective full-power years of operation.

10 CFR 50.60(a) requires, in part, that except where an exemption is granted by the Commission, all light-water nuclear power reactors must meet the fracture toughness requirements for the reactor coolant pressure boundary set forth in Appendices G and H to 10 CFR Part 50. Appendix G to 10 CFR Part 50 requires that P-T limits be established for RPVs during normal operating and hydrostatic or leak-rate testing conditions. Specifically, 10 CFR Part 50, Appendix G states, "The appropriate requirements on both the pressure-temperature limits and the minimum permissible temperature must be met for all conditions." Additionally, the Appendix specifies that the requirements for these limits are given in the ASME Code, Section XI, Appendix G limits.

ASME Code Case N-641 permits the use of alternate reference fracture toughness curves (i.e., use of the " K_{IC} fracture toughness curve" instead of the " K_{IA} fracture toughness curve," as defined in ASME Code, Section XI, Appendices A and G, respectively) for reactor vessel materials in determining the P-T limits for heatup, cooldown, and inservice testing.

The proposed action is in accordance with the licensee's application dated October 11, 2002.

The Need for the Proposed Action:

The provisions of ASME Code Case N-641 were incorporated in Appendix G of Section XI of the ASME Code in the 1998 through the 2000 Addenda, which is the edition and addenda of record in the 2003 Edition of 10 CFR Part 50. However, the proposed action is needed to apply Code Case N-641, because the Seabrook licensing basis has only been updated to include the 1995 Edition through the 1996 Addenda of the ASME Code.

Environmental Impacts of the Proposed Action:

The NRC has completed its evaluation of the proposed action and concludes that, as set forth below, there are no significant environmental impacts associated with the use of

ASME Code Case N-641 in developing RPV P-T limits for heatup, cooldown, and inservice testing. The proposed action does not adversely affect the integrity of the reactor vessel or the function of the reactor vessel to act as a radiological barrier during an accident.

The proposed action will not significantly increase the probability or consequences of accidents, no changes are being made in the types of effluents that may be released offsite, and there is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential non-radiological impacts, the proposed action does not have a potential to affect any historic sites. The proposed action does not affect non-radiological plant effluents and has no other environmental impact. Therefore, there are no significant non-radiological environmental impacts associated with the proposed action.

Accordingly, the NRC concludes that there are no significant environmental impacts associated with the proposed action.

Environmental Impacts of the Alternatives to the Proposed Action:

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the "no-action" alternative). Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

The action does not involve the use of any different resources than those previously considered in the Final Environmental Statement for the Seabrook Station, Unit No. 1, dated December 1982.

Agencies and Persons Consulted:

On June 4, 2003, the staff consulted with the New Hampshire State Official, Mike Nawoj of the New Hampshire Office of Emergency Management, and with the Massachusetts State

Official, Diane Brown-Couture, of the Massachusetts Emergency Management Agency, regarding the environmental impact of the proposed action. The State Officials had no comments.

FINDING OF NO SIGNIFICANT IMPACT

On the basis of the Environmental Assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letter dated October 11, 2002. Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the Agencywide Documents Access and Management System (ADAMS) Public Electronic Reading Room on the Internet at the NRC Web site, <http://www.nrc.gov/reading-rm/adams.html>. Persons who do not have access to ADAMS, or who encounter problems in accessing the documents located in ADAMS, should contact the NRC PDR Reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by e-mail to pdr@nrc.gov.

Dated at Rockville, Maryland, this 21st day of July, 2003.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

James W. Clifford, Chief, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation