



UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, D. C. 20555

April 19, 1983

Honorable Nunzio J. Palladino
Chairman
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Dr. Palladino:

SUBJECT: ACRS REPORT ON LOW POWER OPERATION OF THE SEABROOK STATION,
UNITS 1 AND 2

During its 276th meeting, April 14-16, 1983, the Advisory Committee on Reactor Safeguards reviewed the application of the Public Service Company of New Hampshire, acting as agent for and on behalf of the Seabrook Owners Group (the Applicant), for an operating license for the Seabrook Station, Units 1 and 2. The station is to be operated by the Public Service Company of New Hampshire. This application was considered at an ACRS Subcommittee meeting in Hampton Beach, New Hampshire, on April 1-2, 1983. Members of the Subcommittee toured the facility on April 1, 1983. In our review, we had the benefit of discussions with representatives of the Applicant, the Yankee Atomic Electric Company, Westinghouse Electric Corporation, United Engineers and Constructors, Inc., the NRC Staff, and with members of the public. We also had the benefit of the documents listed below. The Committee commented on the construction permit application for Seabrook Station, Units 1 and 2 in a report dated December 10, 1974.

The Seabrook Station is located on the western side of Hampton Harbor, in the Township of Seabrook, Rockingham County, New Hampshire, approximately 11 miles south of Portsmouth, New Hampshire and 40 miles north of Boston, Massachusetts.

Each Seabrook unit uses a Westinghouse nuclear steam supply system with a rated core power of 3411 MWt. The containment for each unit consists of a steel lined, reinforced concrete structure which is surrounded by a reinforced concrete containment enclosure. The design pressure of the containment is 52 psig. The annular space between containment and enclosure is maintained at a slight negative pressure.

Seabrook will use Westinghouse Model F steam generators, which incorporate design changes intended to eliminate the problems experienced with earlier models. We wish to be kept informed concerning the performance of these steam generators.

We were favorably impressed by the amount of attention given and resources expended in the area of personnel training. The result appears to be an

excellent educational system for operations personnel, including operators and technicians. The resources at the disposal of the Applicant, including those of the Yankee Atomic Electric Company, appear to be appropriate for the operation of this nuclear power station.

The ACRS has on several occasions recommended that evaluations be made of the capability of light water nuclear power plants to be shut down safely in the event of an earthquake of greater severity and lower likelihood than the safe shutdown earthquake. The implications of recent seismic activity, such as the January 1982 earthquakes in central New Brunswick and New Hampshire, are being evaluated. We recommend for the Seabrook Station that specific attention be given to the seismic capability of those components that are important to the accomplishment of safe shutdown including the emergency AC power supplies, the DC power supplies, and small components such as actuators and instrument lines.

The Applicant has undertaken a full-scope probabilistic risk assessment (PRA) which is scheduled for completion about October 1983. The ACRS wishes to be kept informed concerning the results of the NRC Staff's review and evaluation of this PRA.

The Seabrook Station, Units 1 and 2 will be the first commercial nuclear power plant in the state of New Hampshire; the Station is also situated very close to the New Hampshire-Massachusetts border. As a result, the NRC Staff and Applicant must give particular attention to assuring proper coordination with appropriate state and regional agencies in the development of effective emergency plans. There is a large summertime increase in population within a few miles of the site due to the beach areas of Seabrook and Hampton, New Hampshire. The nature of the road network serving the beach requires that special attention be given to the problems associated with evacuation. Because the emergency plan is not yet fully developed, we were unable to review it.

A number of other items have been identified by the NRC Staff as Outstanding Issues. There is also a set of Confirmatory Issues that awaits additional documentation. We found no reason to believe that any of these issues will be especially difficult to resolve. We recommend that they be resolved in a manner satisfactory to the NRC Staff.

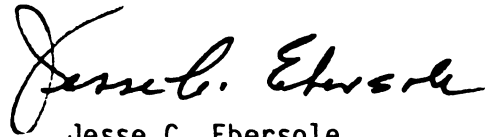
Fuel loading for Unit 1 is scheduled for September 1984 and fuel loading for Unit 2 is planned to take place about 2.5 years after fuel loading for Unit 1. Should there be a significant delay in this schedule, we would expect to examine the need for additional review of Unit 2.

We believe that, if due regard is given to the items mentioned above, and subject to satisfactory completion of construction, staffing, and preoperational testing, there is reasonable assurance that the Seabrook

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Station, Units 1 and 2, can be operated at core power levels up to 5 percent of full power without undue risk to the health and safety of the public.

Sincerely,



Jesse C. Ebersole
Acting Chairman

References:

1. Public Service Company of New Hampshire, Seabrook Station "Final Safety Analysis Report," Volumes 1-15, with Amendments 45-48
2. U.S. Nuclear Regulatory Commission, "Safety Evaluation Report Related to the Operation of Seabrook Station, Units 1 and 2," NUREG-0896, dated March 1983.
3. Written Public Comments from J. Doughty, Seacoast Anti-Pollution League (SAPL), Subject: SAPL Comments to the Advisory Committee on Reactor Safeguards Subcommittee Conducting the Independent Technical Review for the Seabrook Nuclear Power Plant, April 1983, received April 1, 1983.
4. Written Public Comments from Rep. Roberta C. Pevear, New Hampshire House of Representatives, Subject: Statement Before Advisory Committee on Reactor Safeguards Meeting on Seabrook Operating License, April 2, 1983, received April 2, 1983.
5. Written Public Comments from Elizabeth Dolly Weinhold, Subject: Seismic Issues, received April 2, 1983.
6. Written Public Comments from Rep. Roberta C. Pevear, New Hampshire House of Representatives, Subject: Response to Kulash Report on evacuation planning, dated April 4, 1983.
7. Written Public Comments from Diana P. Sidebotham, President, New England Coalition on Nuclear Pollution, Inc., Subject: Remarks Prepared for delivery at April 1, 1983 Subcommittee meeting on Seabrook Station, dated April 11, 1983.