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

September 10, 1984

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

Dear Dr. Palladino:

SUBJECT: ACRS REPORT ON THE MILLSTONE NUCLEAR POWER STATION UNIT NO. 3

During its 293rd meeting, September 6-8, 1984, the Advisory Committee on Reactor Safeguards reviewed the application of the Northeast Nuclear Energy Company (the Applicant) for a license to operate the Millstone Nuclear Power Station Unit No. 3. This application was considered by the ACRS Subcommittee on the Millstone Nuclear Power Station Unit No. 3 and the Subcommittee on Reliability and Probabilistic Assessment at a combined meeting held on August 28 and 29, 1984 at Windsor Locks, Connecticut. Members and consultants of these Subcommittees toured the facility on August 28, 1984. During our review, we had the benefit of discussions with representatives and consultants of the Applicant, Westinghouse Electric Corporation, Stone & Webster Engineering Corporation, and the NRC Staff. We also had the benefit of the documents referenced. The ACRS commented on the construction permit application for the Millstone Nuclear Power Station Unit No. 3 in a report dated April 16, 1974.

The Millstone Nuclear Power Station Unit No. 3 is located on Long Island Sound, on the east side of Niantic Bay, in Waterford, Connecticut. Millstone Unit No. 3 uses a four-loop pressurized water reactor, with a rated thermal power level of 3411 MW, supplied by the Westinghouse Electric Corporation. It is similar to that of the Comanche Peak Steam Electric Station. The containment for the plant, similar to that of the Surry Power Station Units 1 and 2, is a subatmospheric design, incorporating a steel-lined reinforced concrete structure and a supplementary leak collection and release system.

The Millstone Nuclear Power Station Units 1 and 2, presently in operation, are located on the same site. Unit 1 uses a boiling water reactor, with a rated thermal power level of 2011 MW, and Unit 2 uses a Combustion Engineering pressurized water reactor, with a rated thermal power level of 2700 MW.

Our review included an evaluation of the management organization, the operational staff, and the training program for the operating and maintenance staff. The tour of the plant included the training center located on the Millstone site. A plant-specific simulator for Millstone Unit No. 3 is expected to be installed and in operation well before startup.

During our discussions, the Applicant demonstrated an extensive knowledge of the operation, design, and construction features of the plant. We conclude that the Applicant is well qualified to operate Millstone Unit No. 3.

During our meeting, the NRC Staff identified a number of open issues that must be resolved prior to the granting of an operating license. We believe that these can be resolved in a manner satisfactory to the NRC Staff. We wish to be kept informed.

In response to a request from the NRC Staff, the Applicant submitted a Probabilistic Safety Study (PSS) in August 1983. The PSS is now being reviewed by the NRC Staff. In our meeting with the Applicant, a number of plant features were identified that have been modified as a result of the PSS. The NRC Staff is continuing its review of the PSS with special attention being given to resistance to seismic events. At this time, we are not prepared to comment on the suitability of the current NRC Staff confirmatory requirement concerning seismic capability. We expect to continue our review of the PSS and to review the NRC Staff's analyses as they become available. However, this review need not be completed before a decision is made on an operating license for this unit.

We believe that, subject to the resolution of open items identified by the NRC Staff and subject to the satisfactory completion of construction, staffing, and preoperational testing, there is reasonable assurance that the Millstone Nuclear Power Station Unit No. 3 can be operated at power levels up to 3411 MWt without undue risk to the health and safety of the public.

Sincerely,

Jesse C. Ebersole
Chairman

References:

1. Northeast Nuclear Energy Company, "Millstone Nuclear Power Station, Unit No. 3, Final Safety Analysis Report," Volumes 1-16 and Amendments 1-8
2. Northeast Nuclear Energy Company, "Millstone Nuclear Power Station, Unit No. 3, Fire Protection Evaluation Report"
3. Northeast Nuclear Energy Company, "Millstone Nuclear Power Station, Unit No. 3, Probabilistic Safety Study," Volumes 1-12 and Amendments 1-2
4. U.S. Nuclear Regulatory Commission, "Safety Evaluation Report Related to the Operation of Millstone Nuclear Power Station, Unit No. 3," USNRC Report NUREG-1031, dated July 1984
5. U. S. Nuclear Regulatory Commission, "Draft Environmental Statement Related to the Operation of Millstone Nuclear Power Station, Unit No. 3," USNRC Report NUREG-1046, dated July 1984
6. Lawrence Livermore National Laboratory, et al., draft report, "A Review of the Millstone-3 Probabilistic Safety Study," dated May 30, 1984