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

December 13, 1982

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

Dear Dr. Palladino:

SUBJECT: ACRS REPORT ON THE SYSTEMATIC EVALUATION PROGRAM REVIEW OF THE MILLSTONE NUCLEAR POWER STATION, UNIT 1

During its 272nd meeting, December 9-11, 1982, the ACRS reviewed the results of the Systematic Evaluation Program (SEP), Phase II, as it has been applied to the Millstone Nuclear Power Station, Unit 1. These matters were also discussed during Subcommittee meetings in Washington, D. C. on October 27 and November 30, 1982. During our review, we had the benefit of discussion with representatives of the Northeast Nuclear Energy Company (Licensee) and the NRC Staff. We also had the benefit of the documents listed below.

The Committee has reported to you previously on reviews of the SEP evaluations of the Palisades, Ginna, and Oyster Creek plants in letters dated May 11, August 18, and November 9, 1982. The first of these reports included comments on the objectives of the SEP and the extent to which they have been achieved. Our review of the SEP in relation to the Millstone plant has led to no changes in our previous findings regarding this program, as reported in our letter on the Palisades plant.

The remainder of this letter relates specifically to the SEP review of the Millstone plant.

Of the 137 topics to be addressed in Phase II of the SEP, 31 were not applicable to the Millstone plant and 20 were deleted because they were being reviewed generically under either the Unresolved Safety Issues (USI) program or the TMI Action Plan. Of the 86 topics addressed in the Millstone review, 48 were found to meet current NRC criteria or to be acceptable on another defined basis. We have reviewed the assessments and conclusions of the NRC Staff relating to these topics and have found them appropriate.

The 38 remaining topics involved 87 issues relating to areas in which the Millstone plant did not meet current criteria. These issues were addressed by the Integrated Plant Safety Assessment, and various resolutions have been proposed.

The Integrated Assessment has not yet been completed for 42 of the issues, for which the Licensee has agreed to provide the results of studies, analyses, and evaluations needed by the NRC Staff for its assessments and decisions. All of these issues are of such a nature that hardware backfits may be required for their resolution. Several relate to structural design, and the Licensee has proposed an integrated structural analysis program for their resolution. The resolution of these issues will be addressed by the NRC Staff in a supplemental report that will be available for review in connection with the application for a full term operating license (FTOL) for the Millstone plant.

For 23 of the issues included in the Integrated Assessment, the NRC Staff concluded that no backfit is required. We concur.

For the remaining issues for which the assessment has been completed, the NRC Staff requires hardware backfits in about half of the cases, and changes in procedures or Technical Specifications in the other half. The Licensee has agreed to make these changes with one exception. Topics XV-16 and 18 relate to the calculated radiological consequences for certain design basis accidents; thyroid doses, calculated in accordance with current criteria, are considerably in excess of the siting criteria. To correct this situation, the NRC Staff has proposed that the radioiodine concentration in the reactor coolant be limited to that permitted by the Standard Technical Specifications for BWRs. The Licensee has proposed to establish plant-specific radioiodine limits based on more realistic dose calculations. We believe that the NRC Staff's proposal is the more appropriate.

We have noted in previous letters on the SEP program that plant-specific probabilistic risk assessments (PRA) were not available for use in connection with the Integrated Assessment. In this case, a plant-specific PRA for the Millstone plant had been developed as part of the Interim Reliability Evaluation Program (IREP), and the results were used in the assessment of 21 of the issues. Contrary to our previous belief (contained in our August 18, 1982 and May 11, 1982 reports on the Ginna and Palisades SEP reviews), it does not appear that the plant-specific IREP PRA for the Millstone plant provided a basis for more definitive assessments than the more limited risk analyses developed for the other plants that we have reviewed.

Our conclusions regarding the Millstone SEP review are similar to those for the plants previously reviewed:

1. The SEP has been carried out in such a manner that the stated objectives have been achieved for the most part for the Millstone plant and should be achieved for the remaining plants in Phase II of the program.

2. The actions taken thus far by the NRC Staff in its SEP assessment of the Millstone plant are acceptable.

3. The ACRS will defer its review of the FTOL for the Millstone Nuclear Power Station, Unit 1 until the NRC Staff has completed its actions on the remaining SEP topics and the USI and TMI Action Plan items.

Sincerely,

P. Shewmon
Chairman

References:

1. U.S. Nuclear Regulatory Commission Draft Report, NUREG-0824, "Integrated Plant Safety Assessment, Systematic Evaluation Program, Millstone Nuclear Power Station, Unit 1," dated November 1982.
2. U.S. Nuclear Regulatory Commission Safety Evaluation Reports, Millstone 1 Systematic Evaluation Program Topics, Volumes 1 and 2, received November 1982.
3. NRC Staff consultants' reports on the Millstone 1 Integrated Plant Safety Assessment Report consisting of consultants' reports from S. H. Bush, J. M. Hendrie, H. S. Isbin, and Z. Zudans, dated November 22, November 29, November 24, and November 24, 1982, respectively.
4. Science Applications, Inc. report number SAI-002-82-BE, "Interim Reliability Evaluation Program: Analysis of the Millstone Point Unit 1 Nuclear Power Plant," Volume I, Main Report, Draft dated October 1, 1982.