



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

September 15, 1976

Honorable Marcus A. Rowden
Chairman
U.S. Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: INTERIM REPORT ON MONTAGUE POWER STATION, UNITS 1 AND 2

Dear Mr. Rowden:

At its 197th meeting, September 9-11, 1976, the Advisory Committee on Reactor Safeguards completed an interim review of the application of Northeast Nuclear Energy Company, acting as agent for a group of private and municipal utilities (Applicants), for permits to construct the proposed Montague Power Station, Units 1 and 2. This application was reviewed at a Subcommittee meeting at Turners Falls, Massachusetts, on August 26-27, 1976, subsequent to a visit to the site on August 26. The Committee also had the benefit of discussions with representatives and consultants of the Northeast Nuclear Energy Company, the Nuclear Regulatory Commission (NRC) Staff, the General Electric Company, the Stone & Webster Engineering Corporation, and of the documents listed. The Subcommittee also received statements from area residents.

The Montague Station will be located in Franklin County, Massachusetts, 1.2 miles south-southeast of the village of Turners Falls (1970 population: 5,168), and 3.5 miles east-southeast of Greenfield (1970 population: 14,642). The minimum exclusion radius is 2,674 feet. The low population zone has a radius of 2.5 miles and a 1970 population of 4,476. The nearest center of population is Northampton, Massachusetts.

The Montague Units 1 and 2 each utilize a General Electric boiling water reactor (BWR-6) 3579 Mwt nuclear steam supply system (NSSS) and a Mark III type containment. The NSSS design is the same as that utilized for the GESSAR-238 Nuclear Island Standard Design. The Mark III type containment design is similar to the Stone & Webster design utilized for the River Bend Station. The latest ACRS reports relative to nuclear generating stations utilizing the BWR-6/Mark III systems are the May 12, 1975 report on the Perry Nuclear Power Plant, the January 14, 1975 report on the River Bend Station, the May 13, 1976 report on the Hartsville Nuclear Plant, and the March 14, 1975 report on the GESSAR-238 Nuclear Island.

The NRC Staff has completed a review related to the construction of the Montague Units based upon current information and current safety considerations. In view of a several year delay in the start of construction of these units, the NRC will require an update of this review, to commence approximately one year before the anticipated date for decision on issuance of construction permits. The ACRS will complete its review of this application at this time. All significant safety considerations identified in the interim will be included in the updated review.

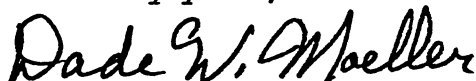
The Mark III containment design has been under continuing review by the NRC Staff and the Committee. Results from tests made to date by the General Electric Company have led to criteria which are believed to be sufficiently conservative to allow for uncertainties in the currently applied empirical design methods. The ACRS anticipates that the remaining tests of the program proposed by the General Electric Company will provide a basis for confirming the adequacy of the Mark III containment design for the Montague Station.

The Committee believes that the Applicants and the NRC Staff should further review the Montague Units for design features that could significantly reduce the possibility and consequences of sabotage, and that such features should be incorporated into the plant design where practicable.

Other generic problems relating to large water reactors are discussed in the Committee's report dated April 16, 1976. Those problems relevant to the Montague Station should be dealt with appropriately by the NRC Staff and the Applicants as solutions are found. The relevant items are: II-1, 2, 4, 5, 6, 7, 8, 9, 10, 11; II-A-1, 2, 4, 6, 8; II-B-2, 3, 4; and II-C-1, 2, 4, 6, 7.

The Advisory Committee on Reactor Safeguards believes that the above items can be resolved by the Applicants and the NRC Staff. Subject to the satisfactory resolution of these items and any new safety considerations that develop between now and the completion of the Committee's review of this application, the Committee believes that the Montague Power Station, Units 1 and 2, can be constructed with reasonable assurance that they can be operated without undue risk to the health and safety of the public.

Sincerely yours,



Dade W. Moeller
Chairman

References:

1. Preliminary Safety Analysis Report (PSAR) for the Montague Nuclear Power Station, Units 1 and 2, Volumes 1-11 and Amendments 1-14
2. Safety Evaluation Report, NUREG-0091, related to construction of Montague Nuclear Power Station, Units 1 and 2, July 1976
3. General Electric BWR/6 Standard Safety Analysis Report, Volumes 1-9 and Question and Response Guide, Volumes 1 & 2 and Amendments 1-44
4. Written statement received from Mr. George O'Brien, representing the International Brotherhood of Electrical Workers Local Union #36, dated August 27, 1976
5. Written statement received from Ms. Elizabeth Bell, dated August 26, 1976
6. Written statement received from Mr. Robert May, dated August 11, 1976
7. Written statement received from Ms. Joanne Katz, dated August 6, 1976
8. Written statement received from Ms. Juanita Nelson, dated August 26, 1976
9. Written statement received from Mr. Wallace F. Nelson, dated August 26, 1976
10. Written statement received from Mr. Robert E. Murphy, dated August 26, 1976
11. Written statement received from Mr. William Hefner, dated August 26, 1976
12. Written statement received from 100 members of the public, dated August 25, 1976
13. Written statement received from 27 members of the public, dated August 25, 1976