



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

October 12, 1977

Honorable Joseph M. Hendrie
Chairman
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

SUBJECT: REPORT ON GREENE COUNTY NUCLEAR POWER PLANT

Dear Dr. Hendrie:

During its 210th Meeting, October 6-8, 1977, the Advisory Committee on Reactor Safeguards completed its review of the application of the Power Authority of the State of New York (Applicant) for a permit to construct the Greene County Nuclear Power Plant. A Subcommittee meeting was held in Catskill, New York on September 21, 1977 and the plant site was visited by members of the Subcommittee the same day. The Committee had the benefit of discussions with representatives and consultants of the Applicant, Babcock and Wilcox Company, Stone and Webster Engineering Corporation, and the Nuclear Regulatory Commission (NRC) Staff. The Committee also had the benefit of the documents listed.

The Greene County Plant will utilize a 3600 MW(t) Babcock & Wilcox pressurized water reactor, enclosed in a steel-lined reinforced concrete containment. The basic design of the Nuclear Steam System (NSS) is similar to designs for the Washington Public Power Supply System Nuclear Projects, WNP 1 and 4, the Bellefonte Nuclear Power Plant, Units 1 and 2 and the Pebble Springs Nuclear Plant, Units 1 and 2 reported on in Committee letters of June 11, 1975, July 16, 1974 and February 11, 1976, respectively. The NSS design is also similar to the 3800 MW(t) Babcock-205 Standard NSS design on which the Committee reported in its letter of August 18, 1977. The balance-of-plant design is similar to the Stone and Webster standard balance-of-plant design for Westinghouse reactors on which the Committee previously reported in its letter of August 18, 1976.

The proposed Greene County Plant will be located on a 190 acre site on the west bank of the Hudson River approximately 35 miles south of Albany, New York and 13 miles north-northeast of Kingston, New York (the nearest population center, 1970 population 25,500). The minimum exclusion distance is 1500 feet from the center of containment and the radius of the low population zone is 2 1/2 miles.

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The Applicant and the Staff have agreed on a horizontal ground acceleration of 0.2g for the safe shutdown earthquake and 0.1g for the operating basis earthquake. The Committee considers these values acceptable for this plant.

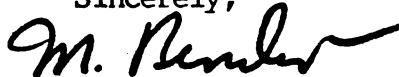
The Staff has identified a number of safety items which will require resolution before issuance of a construction permit. These matters should be resolved in a manner satisfactory to the Staff. The Committee believes these items can be resolved prior to the issuance of a construction permit.

The Committee has concerns about the substantial quantities of explosives used near the site, and believes this should be given special consideration in the development of security measures.

With regard to generic problems cited in the Committee's report "Status of Generic Items Relating to Light Water Reactors: Report No. 5," dated February 24, 1977, items considered relevant to the Greene County Plant are: II-2, 3, 4, 5 (loose parts monitor resolved), 6, 7, 10; IIA-3, 4, 5, 6, 7; IIB-1, 2; IIC-1, 2, 3, 4, 5, 6; IID-2. These problems should be dealt with by the Staff and the Applicant as solutions are found.

The Advisory Committee on Reactor Safeguards believes that if due consideration is given to the foregoing, the Greene County Nuclear Power Plant can be constructed with reasonable assurance that it can be operated without undue risk to the health and safety of the public.

Sincerely,



M. Bender
Chairman

References

1. Greene County Nuclear Power Plant Preliminary Safety Analysis Report, Volumes 1 through 12 and Supplements 1 through 19.
2. Safety Evaluation Report related to construction of Greene County Nuclear Power Plant, NUREG-0283, September 1977.