

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
UNITED STATES ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

MAR 12 1968

Honorable Glenn T. Seaborg
Chairman
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subject: REPORT ON COOPER NUCLEAR STATION

Dear Dr. Seaborg:

At its ninety-fifth meeting, on March 7-9, 1968, the Advisory Committee on Reactor Safeguards completed its review of the application by the Consumers Public Power District of Nebraska for authorization to construct its Cooper Nuclear Station. The project was previously considered at ACRS Subcommittee meetings held on October 10, 1967 at the plant site, and on February 29, 1968 in Washington, D. C. During its review, the Committee had the benefit of discussions with representatives of Consumers Public Power District, General Electric Company, Burns and Roe Inc., and the AEC Regulatory Staff. The Committee also studied the documents listed.

The Cooper Nuclear Station will be located about 60 miles south of Omaha, Nebraska, on the west bank of the Missouri River. The plant is designed to produce 2381 MWt (801 MWe). The reactor in this plant is a high power density boiling water unit, with design features similar to those of the previously reviewed Browns Ferry Nuclear Power Station reactors.

The soils near the river at this location consist primarily of saturated, poorly compacted sands which may be susceptible to the phenomenon of liquefaction if shaken by a sufficiently severe earthquake. The applicant will improve the foundation support of the plant by excavation to within a few feet of bedrock, dewatering, replacing, and compacting the sand to a density sufficient to prevent liquefaction if such an earthquake should occur. The reactor containment will be placed upon a concrete mat which, in turn, will rest upon the compacted sand.

The Committee recommends that the applicant give further consideration to the design of the emergency on-site power system to avoid the need for synchronization of the diesel-driven generators.

- 2 -

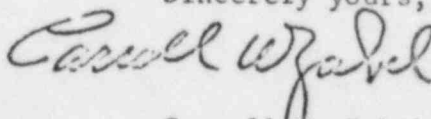
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Discussion of General Design Criterion Number 35 (10 CFR 50.34 proposed) has occurred in connection with this review. The manner in which the intent of this criterion will be met for the Cooper Nuclear Station should be resolved between the applicant and the AEC Regulatory Staff.

The Committee, in its report to you of March 14, 1967 on the Browns Ferry Nuclear Power Station, called attention to a number of matters that warrant careful consideration with regard to reactors of this type and power density. These matters apply similarly to the Cooper Nuclear Station.

The Advisory Committee on Reactor Safeguards believes that the items mentioned above can be resolved during construction. The Committee believes that, if due attention is given to the foregoing comments, the proposed facility can be constructed with reasonable assurance that it can be operated without undue risk to the health and safety of the public.

Sincerely yours,



Carroll W. Zabel
Chairman

References

1. Consumers Public Power District License Application for the Cooper Nuclear Station, dated July 26, 1967; Preliminary Safety Analysis Report, Volumes I, II, and III.
2. Amendment No. 1 to License Application, dated December 1, 1967.
3. Amendment No. 2 to License Application, dated January 25, 1968.
4. Amendment No. 3 to License Application, dated February 10, 1968.
5. Amendment No. 4 to License Application, dated February 10, 1968.
6. Amendment No. 5 to License Application, dated February 20, 1968.
7. Amendment No. 6 to License Application, dated March 2, 1968.