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JAN 14 1970

PDR

Mr. Edward J. Bauser
Executive Director
Joint Committee on Atomic Energy
Congress of the United States

Dear Mr. Bauser:

A report of the Advisory Committee on Reactor Safeguards, dated January 10, 1970, concerning the Monticello Nuclear Generating Plant, is enclosed for the information of the Joint Committee.

Sincerely,

(Signed) H. L. Price

Harold L. Price
Director of Regulation

Enclosure:
As stated

bcc: Cong. Rel. - 2
Chairman's office
HLPrice, DR
PAMorris, DRL
RSBoyd, DRL
GErtter, DR
DR reading
DRL reading

AC

OFFICE ▶	DRL	DR	Cong Rel			
SURNAME ▶	PAMorris/bh	HLPrice				
DATE ▶	1/12/70	1/13/70	1/14/70			

Form AEC-318 (Rev. 9-53) AECM 0240 GOVERNMENT PRINTING OFFICE 1968 O—298-617

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

January 10, 1970

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

Subject: REPORT ON MONTICELLO NUCLEAR GENERATING PLANT

Dear Dr. Seaborg:

At its 117th meeting, January 8-10, 1970, the Advisory Committee on Reactor Safeguards completed its review of the application by the Northern States Power Company for a license to operate Unit 1 of its Monticello Nuclear Generating Plant, a boiling-water reactor unit, at power levels up to 1670 MW(t). A Subcommittee meeting with the applicant was held at the site on November 20, 1969. In the course of the review, the Committee had the benefit of discussions with the applicant, the General Electric Company, and their contractors and consultants; of discussions with the Regulatory Staff; and of the documents listed.

The Committee reported to you on the Monticello site in its report of May 11, 1966, and on the construction permit application in its report of April 13, 1967. The Committee's review for construction was based on initial operation at 1409 MW(t); this report is based on the presently proposed power of 1670 MW(t) which the applicant justifies on the basis of more recent heat transfer correlations and development of the core design. In its April 13, 1967 report, the Committee recommended that the stress analysis report for the field-erected reactor vessel be reviewed by independent experts and that a duplicate diesel generator be installed. Both recommendations have been followed. The Committee is also satisfied that proper attention has been given to other matters referred to in its report. Several recommendations made by the Regulatory Staff and the Committee on recent applications have also been adopted in this plant.

The main steam lines are provided with redundant valves that are required to close automatically in the unlikely event of a serious accident. Because experience with these large and special valves is limited, the Committee recommends that their performance be followed closely, and that

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the applicant make additional provisions to assure the requisite leak-tightness if experience should be unfavorable. The Committee wishes to be kept informed of the resolution of this matter.

The General Electric Company has an extensive integrated program for measuring vibration in several reactors. A major program of vibration testing is planned for the Browns Ferry 2 reactor and is expected to precede operation of the Monticello unit. The Committee believes that a limited program of vibration monitoring is appropriate for the Monticello reactor during preoperational tests and initial operation. In the event that the Browns Ferry 2 data are not clearly favorable, or are not forthcoming before the Monticello unit is ready to operate, the Committee believes that the matter should be reviewed by the Regulatory Staff before routine full power operation of the Monticello unit.

The containment is penetrated by a large number of small diameter instrument lines. The Committee recommends that special attention be given to assuring the continued integrity and isolability of these lines and a program for the periodic testing and examination of the valves in these lines. The adequacy of measures taken with regard to such instrument lines should be confirmed by the Regulatory Staff.

Continuing research and engineering studies are expected to lead to enhancement of the safety of water-cooled reactors in other areas than those mentioned, for example, by the determination of the extent of the generation of hydrogen by radiolysis and by other sources in the unlikely event of a loss-of-coolant accident, development of instrumentation for in-service monitoring of the pressure vessel and other parts of the primary system for vibration and detection of loose parts in the system, by the development of further means of preventing common failure modes from negating scram action and of design features to make tolerable the consequences of failure to scram during anticipated transients, and evaluation of the consequences of water contamination by structural materials and coatings in a loss-of-coolant accident. As solutions to the problems develop and are evaluated by the Regulatory Staff, appropriate action should be taken by the applicant on a reasonable time scale.

The Advisory Committee on Reactor Safeguards believes that, if due regard is given to the items mentioned above, and subject to satisfactory completion of construction and preoperational testing, there is reasonable assurance that Monticello Nuclear Generating Plant Unit 1 can be operated

at power levels up to 1670 MW(t) without undue risk to the health and safety of the public.

Mr. Hill did not participate in the review of this project.

Sincerely yours,

Original Signed by
Joseph M. Hendrie
Joseph M. Hendrie
Chairman

References:

1. Final Safety Analysis Report for the Monticello Nuclear Generating Plant Unit 1

2. Amendments No. 10-24 to license application