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

August 25, 1962

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

SUBJECT: REPORT ON YANKEE ATOMIC ELECTRIC COMPANY

Dear Dr. Seaborg:

At its forty-third meeting on August 23-25, 1962, at Idaho Falls, Idaho, the Advisory Committee on Reactor Safeguards considered the proposal of this licensee to increase the present reactor power level of 485 Mw(t) to 540 Mw(t) and to eliminate the present requirement for temperature coefficient measurements at 2000 operating hour intervals. Discussions were presented by representatives of the Yankee Atomic Electric Company and the Westinghouse Electric Company concerning operational and plant changes to be introduced to permit the increase in power. In addition, the Committee had the benefit of information contributed by the AEC Staff. Data covering the proposed changes are recorded in the documents listed.

This power plant has operated successfully throughout the life of Core I. The experience obtained during this period has indicated the possibility of operation at a higher power level with Core II. The major operational and plant changes proposed include: (a) an additional safety injection pump, (b) automatic low pressure activation of the third charging pump, (c) changed scram requirements, (d) elimination of automatic rod withdrawal, and (e) a limitation of amount of rod withdrawal at power during any eight-hour period.

Power coefficients and moderator temperature coefficients have been determined at 2000 equivalent full power hour intervals during Core I life to determine the possible effect of plutonium build-up. These tests were carried on to substantiate previous theoretical calculations which had indicated that the effect of plutonium build-up would not be significant. Data developed during Core I life have shown that there has been no significant effect. The licensee proposes now to make these determinations during initial start-up after fuel changes, and during scheduled generator load changes and plant shut-down only.

The Advisory Committee on Reactor Safeguards believes that the change in frequency of the 2000-hour tests may be allowed and that this reactor may be operated at a power level of 540 Mw thermal without undue hazard to the health and safety of the public.

Dr. Theos J. Thompson did not participate in the discussion of this project.

Sincerely yours,

/s/ F. A. Gifford, Jr.

F. A. Gifford, Jr.
Chairman

References:

1. WCAP-1997, "New DNB (Burn-out) Correlations", dated June 1, 1962.
2. Amendment No. 41, dated June 4, 1962.
3. Proposed Change No. 26, dated July 20, 1962.
4. Letter from Yankee Atomic Electric Company, dated August 7, 1962.