

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

March 8, 1958

Honorable Lewis L. Strauss
Chairman, U. S. Atomic Energy Commission
Washington 25, D. C.

Subject: THE OPERATION OF THE MTR WITH PLUTONIUM²³⁹ LOADING

Dear Mr. Strauss:

On March 7, 1958, the Advisory Committee on Reactor Safeguards reviewed with MTR personnel and the Hazards Evaluation Branch the proposed special Plutonium core for the MTR. In this review the Committee had the benefit of a report by the Hazards Evaluation Branch and report PTR 224 prepared by MTR operating personnel.

The Committee agrees with the conclusion of the MTR personnel that, with the modifications proposed in the control system, the reactor kinetics for the Plutonium loading is not significantly different from that of the current Uranium ²³⁵.

It is understood that the Plutonium fuel elements will be subject to the same inspection procedure and specifications as the present Uranium ²³⁵ element. It is also understood that extensive reactor physics measurements at low power will be carried out in advance of full power operation.

The use of Plutonium in the core does not add significantly to radiological problems associated with the fission product burden at the end of the normal operating cycle.

The Committee therefore believes that there are no reasons involving matters of safety which indicate that the Plutonium loading should not proceed as proposed.

Sincerely yours,

/s/ C. Rogers McCullough

C. Rogers McCullough
Chairman
Advisory Committee on
Reactor Safeguards

cc: K. E. Fields, GM
H. L. Price, DL&R