

**ADVISORY COMMITTEE ON REACTOR SAFEGUARDS**  
**UNITED STATES ATOMIC ENERGY COMMISSION**  
**WASHINGTON 25, D. C.**

September 11, 1961

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

Subject: REPORT ON PM-3A

Dear Dr. Seaborg:

At the thirty-sixth meeting of the Advisory Committee on Reactor Safeguards on September 7-9, 1961, the PM-3A Nuclear Power Plant was reviewed. Representatives of the contractor and AEC Staff participated. Documents as listed were available.

The PM-3A is a low power, 9.36 MW(th), pressurized water reactor designed for operation in isolated areas such as the Antarctic. The plant, including its containment, is designed for air transportation and is readily assembled at site. The interconnected containment vessels do not meet the ASME code but stress analyses reported by the manufacturer have shown the vessels to be satisfactory for the intended use.

Meteorology at the Antarctic site differs markedly from that in the temperate zones. The contractor should re-evaluate a fission product release using meteorological techniques and parameters suitable to the area and more realistic fission product release rates to establish the conditions that might exist at the time of an accident and its effect on evacuation.

The Martin Company will start up the reactor and remain in responsible charge until Naval personnel take over the operation. The initial owner's acceptance of the installation is a responsibility of the New York Operations Office. The ACRS advises that an independent safety inspection should be arranged in a manner comparable to a licensed reactor installation as suggested for the PM-1.

Honorable Glenn T. Seaborg

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Subject to the above considerations, the ACRS believes this reactor may be operated as proposed without undue hazard to the health and safety of the site personnel.

Sincerely yours,

/s/ T. J. Thompson

T. J. Thompson  
Chairman

References:

1. MND-M3A-2496, Vol. 1 - "PM-3A Nuclear Power Plant Hazards Summary Report Plant Design," dated March 1961.
2. MND-M3A-2496-II, Vol. II - "PM-3A Nuclear Power Plant Hazards Summary Report, Site Description and Safety Evaluation, "dated June 1961.
3. Errata Sheet, PM-3A Hazards Summary Report, Plant Design, Vol. I, undated, received August 2, 1961.
4. Letter from Martin Company to AEC, dated September 5, 1961, Additional Information to Complete PM-3A ACRS Review.
5. Letter from Martin Company to AEC, dated September 1, 1961, Additional Information to Complete PM-3A ACRS Review.