

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

SEP 23 1970

Dr. J. R. Van Dyke
Atomic Energy Commission
Washington, D.C. 20545

RE: SAFEGUARDS REVIEW OF THE DESIGN OF THE TREAT REACTOR SYSTEM

Dear Mr. Van Dyke:

At the 15th meeting, September 17-18, 1970, the Advisory Committee on Reactor Safeguards completed its review of amendments to the application by the General Atomics Company to convert the Midland Plant Units 1 and 2. This project was the subject of a report to you dated June 18, 1970. Our review was national in consideration of additional information on the applicant's proposed changes in the design procedure of the steam generators and the addition of a system of reboilers for the production of steam to be exported to the New Chemical Company. These discussions concluded at a teleconferenced meeting held in Washington, D.C. on September 14, 1970. The Committee had the benefit of discussion with representatives and engineers of the General Atomics Company, New Chemical Company, Technical Corporation, New Chemical Company, and the AEC Regulatory Staff. The Committee also had the benefit of the information provided.

The applicant has revised downward the estimate of the free volume and internal surface area of the containment structure and has provided a margin of 60 psig the calculated peak containment pressure to avoid a likely event of a loss of coolant accident. The containment structure pressure has been raised to 67 psig to provide a suitable margin above the peak accident pressure, and a decreased number of pressure-relieving systems will be provided in the containment structure to accommodate the increased pressure. No changes in the structural design criteria are proposed. The Committee believes these changes are satisfactory.

In the earlier design the export steam was taken from the secondary side of the main steam generators and might contain traces of radioactive fission products from the primary system. The applicant now proposes to use this steam in a system of shell and tube reboilers to generate tertiary steam for export to the New Chemical Company. Secondary steam condenses in the reboilers as returned to the turbine condenser hot well while the water in the tertiary side of the reboilers is supplied by condensate from the tertiary steam which is supplemented as required by

8006170 980

SEP 23 1970

... will be used to monitor the radioactivity in the ... waste treatment system for disposal to the ... of the nuclear plant if ...

... will include ... monitoring and analytical facilities ... of radioactivity in the ... waste treatment system for disposal to the ... of the nuclear plant if ...

... analytical equipment and ... program to be carried forward during construction ...

... believes that the proposed system of boilers will provide ... additional data into that ... of primary system radioactivity into the ... can be maintained at an extremely low and ... level ...

... believes that the above items can be resolved during construction and if due consideration is given to these items ... to the ... in the July 18, 1970 report, the nuclear units proposed for the Midland Plant can be constructed with reasonable assurance that they can be operated without undue risk to the health and safety of the public.

Sincerely yours,

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

...
... to the License Applicants