

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

May 13, 1964

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

Subject: REPORT ON N.S. SAVANNAH CHANGES

Dear Dr. Seaborg:

At its fifty-fifth meeting on May 7-9, 1964, at Argonne, Illinois, the Advisory Committee on Reactor Safeguards reviewed proposals from the AEC-Maritime Joint Group to: (1) remove accident dosimeters from the N.S. SAVANNAH, (2) operate the auxiliary propulsion system without maintaining a vacuum on the main condenser, and (3) use existing cooling coils for removing heat from the containment vessel under accident conditions as described in Change No. 30. The Committee had the benefit of discussions with representatives of the AEC-Maritime Joint Group, the Savannah Technical Staff, the American Export and Isbrandtsen Lines, and the AEC Staff, and of the reports referenced.

The Committee agrees that safety would not be adversely affected by removal of the accident dosimeters from the ship. However, it is suggested that other monitoring and instrument systems be studied and if necessary modified to assure that, in the unlikely event of an accident, they will supply the Master of the ship with sufficient information on the performance of engineered safeguards to enable him to assess the situation and take appropriate action.

Maintaining a vacuum on the main condenser in order to reduce windage in the turbine when the auxiliary propulsion motor is operating does not appear essential.

The Committee has not yet evaluated the cooling requirements in the containment under accident conditions, a problem which is being studied by the Joint Group and the AEC Staff. However, the Committee believes that the use of presently installed cooling coils for heat removal during emergency conditions as proposed in Change No. 30 provides a useful backup for other containment heat removal systems.

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The Committee believes that continuing to operate the N.S. SAVANNAH while the above questions are being resolved does not present an undue hazard to the health and safety of the public.

Sincerely yours,

/s/

Herbert Kouts  
Chairman

References:

1. Memorandum from D. L. Crook to M. L. Price dated March 24, 1964, 970/9494, with attached "Proposed Significant Change No. 30 - Use of Cooling Coils in Containment Vessel to Reduce Pressure in Accident Conditions".
2. STS-S&L-1, "N.S. SAVANNAH Containment Vessel Cooling to Reduce Pressure in Accident Conditions", dated April 3, 1964.
3. "Proposed Significant Change No. 30 - Use of Cooling Coils in Containment Vessel to Reduce Pressure in Accident Conditions. Revision 1 (April 13, 1964)".
4. STS-S&L-2, "Nuclear Accident Dosimeter Requirements for N.S. SAVANNAH", dated April 1964.
5. STS-S&L-3, "Main Condenser Vacuum Requirement for N.S. SAVANNAH", undated, received April 22, 1964.