

INTERIM REPORT

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Monthly Highlights

for

June 1979*

Thermal Hydraulic LMFBR Safety Experiments
Budget Activity 60-19-20-01

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*Work carried out under the auspices of the United States Nuclear Regulatory Commission.

1.1 Hydrodynamic Dispersion (T. Ginsberg, J. J. Barry, G. Zimmer; and J. Chen, Lehigh Uni.)

Work continued in assembly and debugging of the gamma traversing device.

1.2 Dispersion in Boiling Pools (T. Ginsberg and J. C. Chen, Lehigh Uni.)

The distribution of power density in electrically-heated boiling pools was investigated analytically. The distribution was found to be dependent upon the two-phase electrical resistivity of the fluid system. Preliminary resistivity measurements were made. Analysis of the results is underway.

1.3 Heat Transfer in Boiling Pools (G. A. Greene and C. E. Schwarz)

An informal report titled, "Heat Removal Characteristics of Volume-Heated Boiling Pools With Inclined Boundaries," has been issued (BNL-NUREG-26325). This report presents a critical review of the literature in heat transfer from volume-boiling pools and presents correlations to predict average heat transfer behavior, as well as void dynamics. Complete analysis of the local heat transfer and void fraction data is continuing.

1.4 Two-Phase Solidification G. A. Greene; and M. S. Kazimi, M.I.T)

Preparation of a report summarizing the results of the two-phase paraffin/N₂ freezing tests continued.

1.5 Technology Assessment Review (G. A. Greene, T. Ginsberg, and M. S. Kazimi, M.I.T.)

Work has continued on an assessment of the existing technology related to thermal-hydraulic events in the transition phase.

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