

INTERIM REPORT

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Washington, D.C. 20555

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June 11, 1979

Mr. Richard Sherry
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Office of Nuclear Regulatory Research
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Washington, D.C. 20555

Dear Rick:

Program Title/Activity Identification

Fission Product Transport Analysis.

Current Progress and Technical Highlights

During March, major efforts were concerned with improving the TRAP-MELT mechanism describing particle deposition from turbulent flow, running a base case with the code for the TC accident sequence, submitting a work plan for vapor deposition experiments, performing source term characterization and modeling for use in both the code uncertainty analyses and vapor deposition experiment design, and constructing a second set of tubes for the particle deposition experiments. In addition, presentations on project status were presented at the NRC Mid-year Project Review Meeting on March 6.

It is to be noted that the second set of tubes for the particle deposition experiments are for the purpose of evaluating further the effects on deposition of dimensionless parameters noted for importance in the initial set of experiments. The particle deposition regimes that are to be covered in experiments are to extend from the conditions where Brownian diffusion controls to conditions where particle inertia predominates.

Computer calculations with the TRAP-MELT code were successfully completed, as noted, for the TC accident sequence base case. Problems were encountered with similar runs for the TLMB' and AB sequence conditions. Efforts are underway to identify the cause of these problems.

Anticipated Accomplishments for April

During April, it is anticipated that major efforts will be concerned with identifying and solving the problems noted with TRAP-MELT and then calculating the remaining baseline accident sequences. Construction of components

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571 013

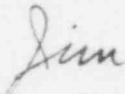
for the vapor deposition apparatus will be continued and preparations of deposition coupons and iodine source materials will be carried out. The particle deposition experiments will be continued.

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The estimated and actual cumulative costs are shown in Figure 1.

Sincerely,



James A. Gieseke, Research Leader
Physico-Chemical Systems, Atmospheric
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JAG:ld

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