

INTERIM REPORT

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Contract Program or Project Title: Aerosol Measurements and Modeling  
NRC-04-76-293-07 for Fast Reactor Safety

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Responsible NRC Individual and NRC Office or Division: Mr. Mel Silberberg, Chief  
Experimental Fast Reactor Safety Research Branch  
Division of Reactor Safety Research

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Prepared for  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

INTERIM REPORT

NRC Research and Technical  
Assistance Report

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June 12, 1979

Mr. Mel Silberberg, Chief  
Experimental Fast Reactor Safety  
Research Branch  
Division of Reactor Safety Research  
Office of Nuclear Regulatory Research  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Mel:

Program Title/Activity Identification

Aerosol Measurements and Modeling for Fast Reactor Safety.

Current Progress and Technical Highlights

During April, the nondimensional form of the CRAB code was thoroughly checked out, the CRAB code users manual was nearly completed, resuspension of deposited aerosols was evaluated through use of a modified HAARM-3 code, efforts continued on preparation of a HAARM-3 code validation plan, and efforts related to measurements of  $UO_2$  properties were primarily concerned with selecting the best operating conditions for the Stöber centrifuge. In addition, contributions to the CSNI nuclear aerosol group were made through HAARM-3 calculations and attendance at the meeting on April 3-5. Visits were made on April 9-11 to laboratories in the U.K. at which nuclear aerosol work is being done. The CSNI meeting and U.K. laboratory visits were summarized in a trip report submitted on April 20.

Anticipated Accomplishments for May

During May, the multiple zone adaptation of the CRAB code will be started, measurements of  $UO_2$  aerosol properties will be continued, and the HAARM-3 code validation plan should be nearly completed for NRC review.

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June 14, 1979

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

Sincerely,

  
James A. Gieseke, Research Leader  
Physico-Chemical Systems, Atmospheric  
Science & Aerosol Technology Section

JAG:ld

In quadruplicate

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