

INTERIM REPORT

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Responsible NRC Individual and NRC Office or Division: _____

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August 20, 1979

Mr. Donald E. Solberg
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US Nuclear Regulatory Commission
Washington, DC 20555

Dear Don:

SUBJECT: R295 MONTHLY PROGRESS LETTER FOR JUNE 1979

NMSU Work - One HEPA filter has been preloaded with polystyrene aerosol to approximately 6-in. of water gauge pressure drop across the filter. This loading was accomplished using only two of the four aerosol trays in the loading apparatus. When we have preloaded several filters, we will determine the effect of preloading (simulated operating conditions) on structural strength. We will also determine filter effectiveness and material loss under transient conditions. A medium impact testing device has been designed and is being built at NMSU. We are trying to obtain a second series of membrane samples while simultaneously measuring aerosol concentration with the laser particle counter. Earlier tests showed that we did not have enough aerosol on the membrane samples. Improper settings for the aerosol generator were the cause of the problem.

Rocky Flats Medium Tests - We performed tensile tests and DOP penetration tests on HEPA medium taken from previously tested filters. Flanders filters medium did not meet specifications. The medium from the other three manufacturers did meet specifications. We plan to use these results in our statistical analyses to determine correlation with break pressure.

Film Analysis - The high-speed film from all the filter tests is being analyzed to obtain enlarged 16-mm frames at the time of filter break and at the 3-psi pressure differential point. From these photographs, we will tabulate break location, break area, and fold elongation.

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