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LETTER REPORT

Accession No. _____
Contractors Report No. _____

Contract Program or Project Title: Investigation of Ventilation Component

Response to Large Pressure Pulses

Subject of this Document: Monthly progress report for AUGUST 1981

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Author(s): WS Gregory, HL Horak

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Responsible NRC Individual and NRC Office or Division

Donald Solberg, Division of Risk Analysis, Office of Nuclear Regulatory Research

NRC Research and Technical
Assistance Report

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

NRC FIN NO. A 7028

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LETTER REPORT

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Engineering Analysis
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777

In reply refer to:
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September 25, 1981

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NRC Research and Technical
Assistance Report

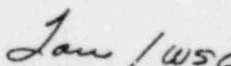
Dear Don:

SUBJECT: R295 MONTHLY PROGRESS LETTER FOR AUGUST 1981--INVESTIGATION OF
VENTILATION COMPONENT RESPONSE TO LARGE-PRESSURE PULSES

The monthly status report for August 1981 is enclosed. Please let
us know if you have any questions or comments.

Sincerely,


William S. Gregory


Henry L. Horak

WSG/cd

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CRMO (2), MS 150
WX-8 File, MS 777

NRC Research and Technical Assistance Report

PROGRAM STATUS REPORT

TITLE: Experimental Evaluation of Ventilation System Components
During Large-Pressure Pulses

PROJECT NO: R295

FIN NO: A7028

CONTRACTOR: Los Alamos National Laboratory

MONTH COVERED: August 1981

BUDGET STATUS: Annual Budget \$260 k (includes FY 1980 carryover of \$250 k)
and planned carryover to FY 1982 of \$65 k)

Monthly spending : \$ 21.3 k
Cumulative Spending: \$207.7 k
Funds Remaining : \$ 52.3 k

I. PROGRAM DESCRIPTION

The objective of this program is to experimentally evaluate the performance of ventilation system components subjected to simulated tornado environments.

The high-efficiency particulate air (HEPA) filter is considered to be the most crucial ventilation system component for maintaining the confinement of radioactive particulates. Therefore we selected this component for initial study and evaluation. We have determined the structural response of standard nuclear-grade HEPA filters for major tornado parameters (peak pressure, pressurization rate, and duration) and major filter characteristics (pack tightness, air flow direction, pack thickness, separator type, faceguards, particulate loading, manufacturer, and medium strength).

In FY 1981 we will determine the filtration efficiency of these filters for simulated tornado transients. Other components to be evaluated in FY 1981 are centrifugal and axivane fans.

II. HIGHLIGHTS/SIGNIFICANT MONTHLY ACTIVITIES

Blower Testing - A data tape was received from New Mexico State University (NMSU) containing the reverse-flow dynamic performance data for the 24-in. NYB centrifugal blower. Efforts are underway to transfer these data to LTSS disk space, and we are preparing a progress report outlining this work.

Laboratory Efficiency Tests - The pulse entrainment tests were completed this month using the laser particle-counting system. We are preparing to move the system to the large-scale test facility.

III. PROGRAMS DEVELOPMENT VARIANCE

There is no program development variance to report this month (Fig. 1).

IV. BUDGET VARIANCE

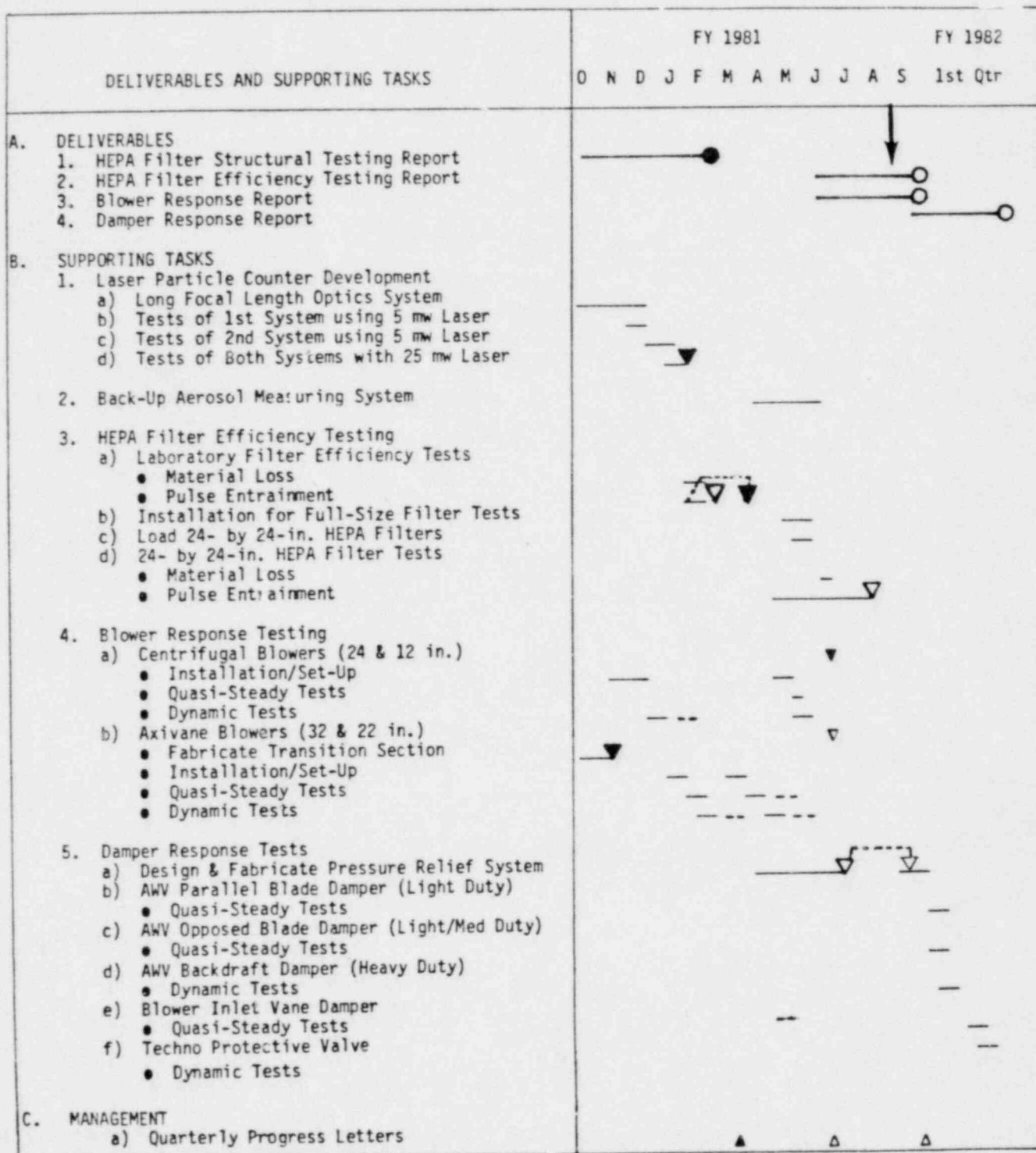
The budget variance (Fig. 2) is due to a difference in the timing of our costs at NMSU. In addition, we plan to carry over approximately \$ 80 k into FY 1982 rather than the planned \$ 65 k.

V. PROBLEMS AND ISSUES

We have no problems or issues to discuss at this time.

Fig. 1

FY 1981 PROGRAM DEVELOPMENT SCHEDULE



LEGEND

- Topical Report, ● Topical Report Completed
 △ Progress Report, ▲ Progress Report Completed
 ↓ Time Now
 ▽ Intermediate Milestone
 * Identification of Task Causing Variation
 — Activity Line
 --- Scheduled Variation

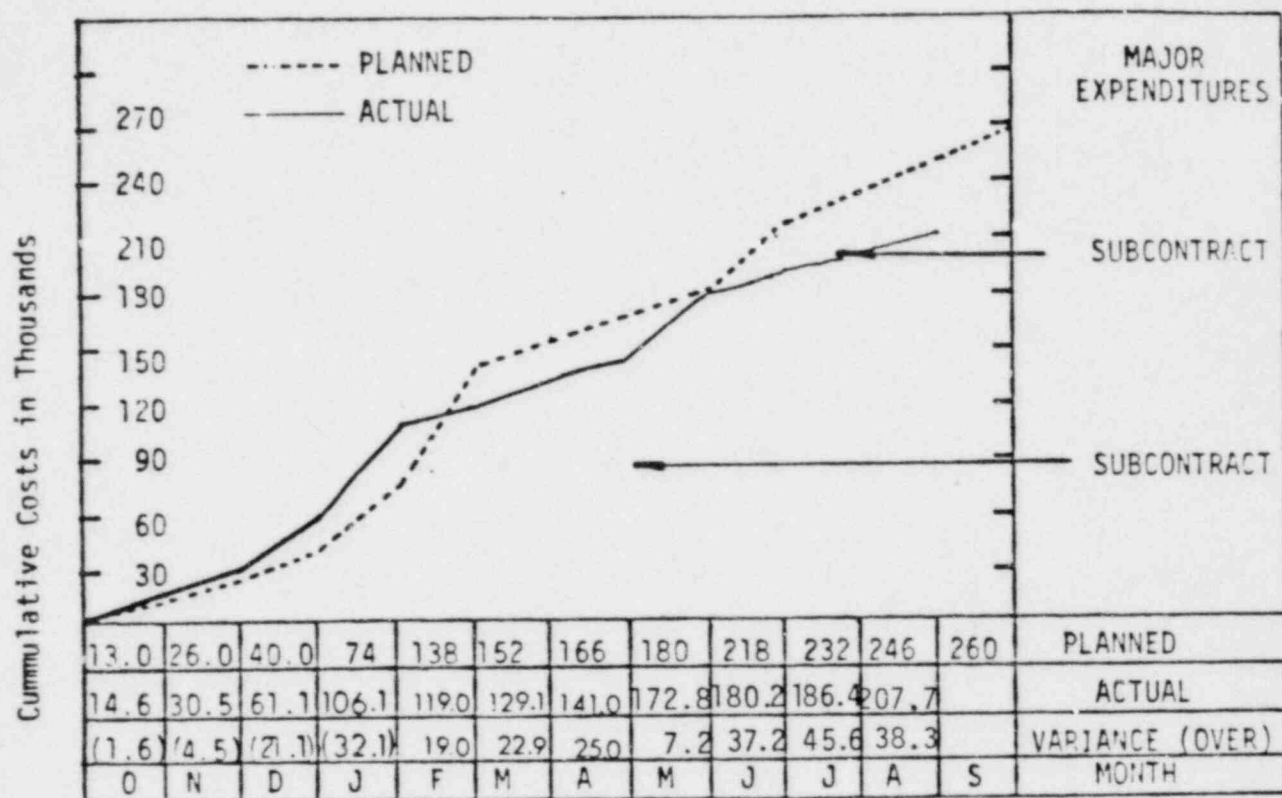


Fig. 2.
OPERATING COSTS IN THOUSANDS