

September 1, 1972

SMEAT DAILY REPORTNumber 29

This report covers the period from 0800 August 31, 1972, through 0800 September 1, 1972 (test day 37).

I. Significant Accomplishments - The chamber activities for the last 24 hours included the M110 blood samples, M071 and M073 sampling, and other misc. DTO's. All activities are proceeding smoothly and on schedule.

II. Problems

A. Hardware

The crew encountered some additional problems with the OWS urine system. The VDR meter stuck and the cause for this failure is being investigated by the MSFC representative. In addition, the crew encountered a problem with the urine volume measuring system hose which has been attributed to the use of an older design which is incompatible with the urine system. Twenty-four new urine hoses are being shipped to MSC for use in the balance of the SMEAT test.

B. Facility

The crew reported that they had encountered a backup in the wash basin water drain. Facility personnel are investigating this problem and the required fixes.

C. Procedural

No major problems.

III. Medical Report

The mission surgeon reported that the crew continues in good health.

IV. Special Evaluations Planned

M171 - The PI indicated that he would like to complete the three regularly scheduled M171 protocols and in addition, conduct the following special runs:

1. Evaluation of alternate drier cartridge. Three tests will be scheduled on or about September 6 to evaluate the use of a silica gel drying cartridge in the metabolic analyzer. Secondly, the crew will be requested to use the ear plethysmograph to compare heart rate data with the VCG output.

2. The science pilot will be requested to perform a sustaining 180 watt exercise protocol for 45 minutes to evaluate the effect of varying chamber gas composition on metabolic data. The PI has requested that the chamber nitrogen composition be varied 1/2% every 10 minutes for the duration of this special test.

3. The PI also would like to schedule additional Douglas bag tests for two crewmen. These tests would tentatively be scheduled about September 14.

The evaluation of the mosite inserts would tentatively be scheduled around September 14 in conjunction with the manned airlock operation required for the special Douglas bag test.

4. A proposed plan to evaluate the microbiology and cabin atmosphere after the crew leaves the chamber was reviewed during the meeting. This plan is attached for information and will be discussed in detail at the 8 am meeting on Tuesday morning.

A. T. Seoff

for Richard S. Johnston
Manager, Test Operations
Management Committee

PROPOSED PLAN FOR TEST CLOSEOUT AFTER CREW EXIT

1. SMEAT atmospheric conditions maintained.
2. Have micro samples taken in chamber (location to be determined by micro people).
3. Collect air sample.
4. Bring chamber from 5.0 psia to 0.5 psia. (See profile)
5. Hold chamber at 0.5 psi for 48 hours.
6. Return chamber to SMEAT 56-day test conditions, i.e., 5.0 psia, 69°F, 70/30.
7. Repeat micro and air sampling.
8. Return chamber to sea level and secure prior to any equipment removal.
9. All TPS's for subsequent medical equipment, experiments hardware, etc., removal should be processed through TCMC.
10. TPS should include:
 - a. Priority statement.
 - b. Processing of equipment, i.e., cleaning if required, bagging, etc. to be delivered to or placed in bond locker for pickup by (date) and organization.
 - c. Purpose of tests to be performed and whether tests are destructive.
 - d. Final disposition of equipment like return to SMEAT, ship to contractor for rework, etc.