



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS 77058

REPLY TO
ATTN OF: CB

April 19, 1972

MEMORANDUM

TO: See list below
FROM: CB/R. Crippen
SUBJECT: SMEAT Crew Training

Enclosure 1 outlines the SMEAT crew training to be conducted in the twenty-foot chamber and indicates the persons responsible for that training. The 4-week training period is scheduled to commence on May 8, 1972.

Please review those parts of the document applicable to you and be prepared to support the appropriate training sessions.

Comments should be directed as indicated in the enclosure.

R. L. Crippen
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1 Enclosure

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SMEAT CREW
INCHAMBER TRAINING
REQUIREMENTS

1

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Due to schedule requirements the BMEAT in chamber crew training sessions have been compressed to nineteen consecutive days (excluding weekends) as indicated in Figure 1.

The intent of this paper is to outline the requirements for each of the training sessions and to note the person(s) responsible for each session.

All training will be conducted in and about the 20 foot chamber from 8:00 a.m. to 5:00 p.m., and the interior of the chamber shall be devoted exclusively to training during this period.

Any questions or comments regarding this paper should be directed to Mike Brzezinski/CE12 Ext. 5595 or Bob Crippen/CB Ext. 2421.

Numbers indicate days of training

SMEAT
ACTIVITY PLANNING GUIDE

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1 CCFF & Bench Check	2 CCFF & Bench Check	3 MO92/171/093 RC/WT KB/WT	4 MO92/171/093 WT/KB Waste Mgt M133	5 Recreation Electronics and Comm. TV System Russian Course	
	6 MO92/171/093 RC/WT WT/RC	7 MO92/171/093 KB/WT Fire Detection & Suppression	8 Transfer Airlock Tool Kit EPS & Lighting Structures	9 Water System T003	10 Food System SMMD CAL	
	11 MO92/171/093 RC/WT KB/WT	12 MO92/171/093 WT/KB Environment Noise	13 Skylab Urine System ECS, CO ₂ Dew PT Monitor	14 Emergency Training	15 Emergency Training	
	16 MO92/171/092 KB/WT WT/KB	17 MO92/171/092 RC/WT Microbiol Crew & Chamber	18 IMSS OBS Oral Hygiene	19 M487 System Check Vacuum Cleaners 16mm DAC M110 series		

CCFF & Bench Check (Days 1 & 2 - 16 hr.)

Joerns/CD, Mandell/DE, Trombley/EC

The CCFF & Bench Check training session shall consist of the following:

- a. Removal, review, and replacement of all stowage items.
- b. Exercise all mechanical interfaces for fit and function.
- c. General chamber review for crew interface.

M092/171/093 (Days 3, 4, 6, 7, 11, 12, 16, & 17 - 4 hr./session)

Shumate/DB, Smith/CG

The M092/171/093 training sessions shall also be baseline data sessions. Each session shall consist of a complete run through of all three experiments. The sessions on days 11 & 16 shall be a complete run with building 36 and the appropriate personnel.

Each run will provide M151 coverage.

Waste Management (Day 4 - 3 hr.)

Mays/EC

The Waste Management training session shall cover the following:

- a. Fecal bag installation, collector operation, and bag removal.
- b. Fecal matter weighing and stowage.
- c. Use of contingency fecal bag
- d. Fecal collector maintenance to include cleaning and odor removal filter replacement.
- e. WMS odor removal system operation and maintenance to include filter replacement.
- f. Urine and fecal can transfer in and out of the chamber.

M133 (Day 4-1 hr.)

Griffin/CG, Mandell/DE

The M133 training session shall include the following:

a. Normal M133 operation including donning, checkout, and doffing with a fit check including the chamber bunks.

b. Any M133 maintenance to include tape recorder checks and tape change.

Recreation Electronics and Communications (Day 5 - 4 hr.)

Burgett/EC

The Recreation Electronics and Communication training session shall include the following:

a. A briefing and walk-through of the CAPCOM Station and chamber communication boxes including headsets and lightweight headsets. This shall include switching comm boxes on various channels and use of the telephone tie.

b. A briefing and walk-through of the entertainment system to include full use of the TV sets and radios.

c. Any defined maintenance tasks associated with these systems.

TV Cameras (Day 5 - 3 hr.)

Burgett/EC

The TV camera training session shall include the following:

a. A briefing and walk-through of normal TV operations including portable camera operation with the tripod.

b. A walk-through of a safety monitor session with the TV cameras and feedback on the monitor channels.

c. Any defined maintenance tasks to include replacing cameras using TD coordinated procedures.

Russian Course (Day 5 - 1 hr.)

Joerns/CD, Burgett/EC

The Russian Course training session will be an exercise to work out any problems associated with conducting courses via the TV sets.

Fire Suppression and Detection (Day 7 - 4 hr.)

Leech/EC, Dunaway/EC

The training session for the fire detection and suppression system shall include the following:

a. A briefing and walk-through of the system using crew operating procedures. This shall include water hose operation, sensor location and identification, and sensor panel operation and checkout.

b. All defined maintenance procedures to include changing one of each type of sensor using TD coordinated procedures.

Transfer Airlock (Day 8 - 1 hr.)

Leech/EC

The airlock training session shall consist of a briefing and walk-through of lock operation.

Tool Kit (Day 8 - 1 hr.)

Trombley/EC

The tool kit training session shall consist of a briefing and inspection of the tool kits to familiarize the crew with the tools and to cover their uses and restrictions.

EPS/Lighting (Day 8 - 3 hr.)

Dunaway/EC

The EPS and lighting system training session shall include the following:

a. A briefing and walk-through of the system to cover normal operation and restrictions. All lights including the portable and reading lamps.

b. All defined maintenance procedures including bulb change with TD coordinated procedures.

STRUCTURES (Day 8 - 3 hr.)

Trombley/EC

The Structures training session shall include the following:

- a. Pull down ladder operation
- b. Retractable curtain operation
- c. Floor plate and grid removal
- d. WMS electrical area access
- e. Bunk sleep restraint rod removal
- f. Altitude limiting valve operation
- g. Normal chamber ingress
- h. Use of manlock to remove an item from the test

Water Systems (Day 9 - 7 hr.)

Trombley/EC

The water system training shall include the following:

a. A briefing and walk-through of the portable water system. This is to include normal operation (three drinking dispensers as well as hot and cold water dispensers) and a defined maintenance procedure such as changing water dispensers.

b. A briefing and walk-through of the WMS water dispenser and collection tank. This is to include checking and emptying the tank as well as any defined maintenance procedures.

c. A briefing and walk-through of the SMEAT shower to include an actual shower. This shall be a complete walk-through including transferring the water collection tank in and out of the chamber.

T003 (Day 9-1 hr.)

Nute/CG

The T003 training session shall be a complete walk-through of a T003 data taking session.

Food System (Day 10 - 7 hr.)

Rapp/DC, Skipper/EC

The food system training session shall include the following:

- a. Transfer in and stowage of a 6-day supply of food, including frozen.
- b. A complete meal preparation consumption, weighing, stowing, clean up and report.
- c. Transfer out of food waste.

The M151 procedures for camera pointing will be used for meal preparation and determining mass.

SMMD Calibration (Day 10 - 1 hr.)

Griffin/CG

The SMMD Calibration training session shall cover normal calibration procedures for the SMMD and any defined maintenance tasks on the unit.

Environmental Noise (Day 12 - 4 hr.)

Homick/DB

The Environmental Noise training session shall also be a baseline data gathering session and shall include the following:

- a. Ambient noise measurements (all areas including experiment operations).
- b. Conduct audiometric exams on all three crewmen.
- c. Conduct speech intelligibility tests with all three crewmen.
- d. Complete a noise questionnaire and make a report.

Skylab Urine System (Day 13 - 4 hr.)

Sauer /DC

The Skylab Urine System training session shall include the following:

- a. Normal system operation including sampling and special collections with use of supporting containers.

- b. Normal operation of contingency urine collection and sampling.
- c. All defined maintenance tasks on the urine system.
- d. Transfer out of the chamber all possible urine and fecal configurations.

ECS, CO₂ & Dew Point Monitor (Day 13 - 4 hr.)

Snyder/EC

This training session shall include the following:

- a. A briefing and walk-through on the two gas control system, vacuum holding, CO₂ injection and removal system, and CO₂ Dew Point Monitor. Such items as crew instrumentation and alarms shall be exercised.
- b. A walk-through of transferring LiOH cartridges in and out of the chamber, cartridge removal and replacement, and any defined maintenance tasks on this system.

Emergency Training (Days 14 & 15 - 16 hr.)

LeBlanc/EC

The emergency training shall consist of briefings and walk-throughs of all emergency procedures with rescue personnel. This training shall include use of the O₂ masks and the emergency oxygen system.

Microbiology, Crew & Chamber (Day 17 - 4 hr.)

Graves/DC

This shall include a complete walk-through of crew and chamber sampling using test equipment and will include passing items out of the chamber. This should also include the midstream urine sample. (The Anderson air sampler will be used with the IMSS training.)

IMSS (Day 18 - 6 hr.)

Ferguson/DC, Jernigan/DD

The IMSS training session shall include the following:

- a. A complete review of all IMSS equipment and drugs.
- b. A complete in-chamber physical examination.

c. A complete walk-through of inchamber microbiology sampling to include hardware, crew, and air. This should include pass out procedures. The Anderson air sampler shall be exercised in conjunction with the IMSS air sample.

d. There shall be a complete walk-through of an illness event. This shall include sampling, growing, isolating, identifying and slide samples. This should also include those procedures associated with the laboratory equipment in the IMSS.

OBS (Day 18 - 1 hr.)

Shumate/DB

The OBS training session shall include a walk-through of connecting and donning the device and using it with the ergometer. This should also include doffing and stowing.

Oral Microbiology (Day 18 - 1 hr.)

Frome/DD

The Oral Microbiology shall include a complete walk-through of the procedures using test equipment and shall include passout through the airlock.

System Check (Day 19 - 1 hr.)

Trombley/EC

This session should be a complete walk-through of all the chamber checks the crewmen should make on a periodic basis.

Vacuum Cleaner (Day 19 - 1 hr.)

Trombley/EC

This training session should be a walk-through of the normal and maintenance procedures for both the Skylab and Apollo vacuum cleaners.

16mm DAC (Day 19 - 1 hr.)

Laski/CG

This training session will be a walk-through using the camera and associated equipment, including logs.

M487 (Day 19 - 2 hr.)

Ramon/CG

The M487 training session shall include a walk-through using all of the associated equipment and reporting procedures.

M110 series (Day 19 - 2 hr.)

Kimzey/DC

The M110 training session should be a walk-through of all chamber blood withdrawal requirements and will include the centrifuge and chamber passout. A subject should be provided for blood withdrawal.