

CC26.1



PRELIMINARY BIOSCIENCE AND MEDICAL EVALUATION

SCOPE:

- CONTAMINATION MONITORING
- FLIGHT CREW HEALTH AND SAFETY
- EXPERIMENT REQUIREMENTS DEFINITION

PURPOSE:

- A. DETERMINE THE EXTENT AND TYPES OF TERRESTRIAL MICROBIAL CONTAMINANTS SURVIVING IN RETURNED LUNAR SAMPLES.
- B. DETERMINE THE POTENTIAL HAZARD OF LUNAR SAMPLES FOR FUTURE FLIGHT CREWS.
- C. DETERMINE POTENTIAL HARMFUL AND BENEFICIAL EFFECTS OF SAMPLE COMPONENT TYPES RETURNED BY EACH MISSION.
- D. RECOMMEND SAMPLE ALLOCATION TO PI'S BASED ON RESULTS OF PRELIMINARY BIOMEDICAL EVALUATIONS AND CHEMICAL EXAMINATION.
- E. RECOMMEND DETAILED SCIENTIFIC EXAMINATIONS TO BE CONDUCTED BY PI'S BASED ON RESULTS OF PRELIMINARY BIOMEDICAL EVALUATIONS.

JUSTIFICATION

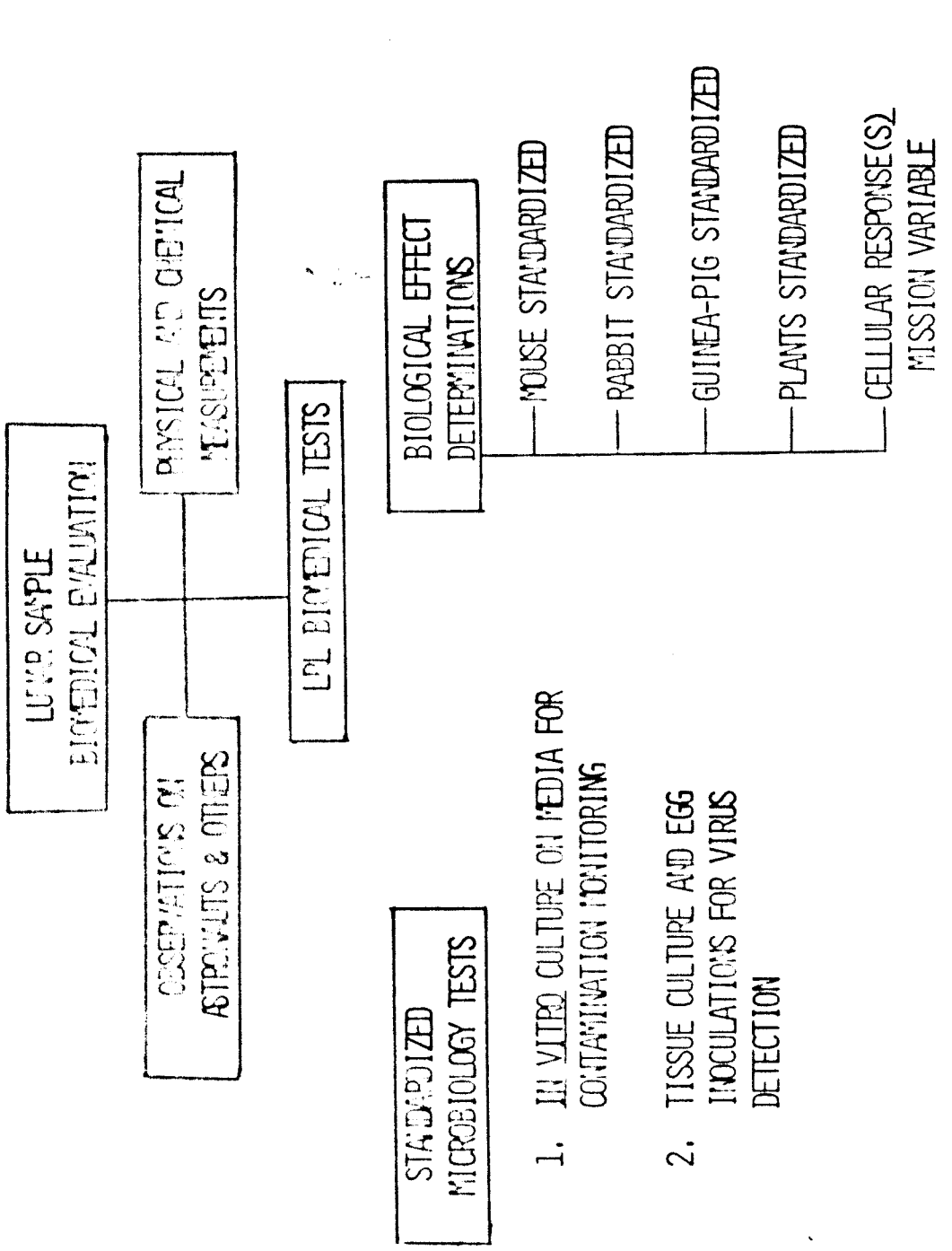
1. ONLY MSC HAS THE CONTROLLED ENVIRONMENT EQUIPMENT FOR PROTECTION OF SAMPLE INTEGRITY WHILE CONDUCTING BROAD BASED EVALUATIONS.
2. ONLY MSC PERSONNEL HAVE EXPERIENCE IN THE CONDUCT OF BROAD BASED BIOMEDICAL EVALUATIONS WITH LUNAR SAMPLES.
3. LUNAR SAMPLES WILL BE HELD AT MSC UNTIL COMPLETION OF THE PRELIMINARY PHYSICAL SCIENCE EXAMINATIONS.
4. TECHNICAL MANAGEMENT OF PI CONTRACTS HANDLED THROUGH MSC.
5. ALL OTHER ASPECTS OF CREW HEALTH AND SAFETY CONDUCTED AT MSC.
6. "THE PROGRAM OF BIOLOGICAL CHARACTERIZATION OF RETURNED LUNAR SAMPLES BE CONTINUED SINCE THE ICBC ACTION REFERRED IN THE VERY NARROW SENSE ONLY TO QUARANTINE, AND THE ABSENCE OF A DEMONSTRATED HAZARD TO THE BIOSPHERE, AND WAS NOT INTENDED TO APPLY TO THE LRL INVESTIGATIONAL PROGRAM. THE COMMITTEE FELT THAT THE SCIENTIFIC INVESTIGATIONS SHOULD NOT BE REDUCED IN SCOPE FOR A NUMBER OF REASONS."

INTERAGENCY COMMITTEE ON BACK CONTAMINATION - JANUARY 1970

7. ENCOURAGE INTEREST OF BIOLOGIST IN THE APOLLO PROGRAM.
8. REDUCE POSSIBILITY THAT OUTSIDE FINDINGS WILL EMBARRASS AGENCY.

APPROACH:

- A. UTILIZE SCIENTIFIC EXPERTISE COLLECTED FOR SUPPORT OF THE BIOSCIENCE QUARANTINE EVALUATIONS.
- B. SIGNIFICANTLY REDUCE THE MANHOUR AND SPACE REQUIREMENTS FROM THAT UTILIZED FOR QUARANTINE TESTING.
- C. MAXIMIZE THE PARTICIPATION OF OUTSIDE SCIENTISTS UTILIZING THE BAC WITH ALTERED MEMBERSHIP.
- D. COLLECT SUFFICIENT INFORMATION TO PROVIDE RATIONAL RECOMMENDATIONS FOR PI INVESTIGATIONS AND SAMPLE ALLOCATION.
- E. MSC SCIENTISTS WILL COMPETE WITH OUTSIDE PI FOR DETAILED, SPECIFIC EXPERIMENTATION USING NORMAL EXPERIMENT APPROVAL ROUTING.



STANDARDIZED = PROTOCOL BASED ON STANDARD PROCEDURES OF LIFE SCIENCES

MISSION VARIABLE = PROTOCOL DESIGNED TO ACCOMMODATE REQUIREMENTS UNIQUE TO LUNAR MISSIONS

DOES THE LUNAR SAMPLE:

- CONTAIN MICROBES?
- ALTER HOST SYSTEMIC RESPONSES?
- CAUSE IRRITATION?
- EXHIBIT ANTIGENICITY?
- BENEFIT LIVING SYSTEMS?
- ALTER ECOLOGY?