

CONTRACT NUMBER		MANNED SPACECRAFT CENTER SKYLAB PROGRAM		DATE									
CONTRACTOR		CONFIGURATION CONTROL BOARD DIRECTIVE		PAGE <u>1</u> OF <u>1</u>									
<input type="checkbox"/> COM <input type="checkbox"/> GSE <input type="checkbox"/> EXP. <input type="checkbox"/> GFE <input type="checkbox"/> MISSIONS <input type="checkbox"/> CLUSTER <input checked="" type="checkbox"/> OTHER (SPECIFY) MRD													
RECT NUMBER	DATE	CHANGE TITLE/DESCRIPTION Addition of Blood Pressure Measurements, Leg Measurements and Facial Photographs to M092 for SL-4											
REP NUMBER	DATE												
MSN NUMBER	DATE												
SEARLES AFFECT	WEIGHT Δ	EFFECTIVITIES SL-4											
None	None												
DESIGN DIF.	SCHEDULE Δ	ESTIMATED COST <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 25%;">FY</th> <th style="width: 25%;">FY</th> <th style="width: 25%;">FY</th> <th style="width: 25%;">TOTAL</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>				FY	FY	FY	TOTAL				
FY	FY					FY	TOTAL						
None	None	REMARKS PSCN <u>236</u> to I-MRD-001F, Volume III, is approved.											
SPECIFICATION OR BASE-LINE DOCUMENTATION AFFECT													
I-MRD-001F		ACTION: KM - Update MRD in accordance with PSCN <u>236</u> . KM/CMO - Notify MSFC of approval of PSCN <u>236</u> .											
Volume III													
INTERFACES AFFECTED		This change has been coordinated with MSFC/C. Sprinkle.											
CONCURRENCE		MSFC Representative _____ Date _____											
RESPONSIBLE ENGINEER		THIS CHANGE IS <input type="checkbox"/> APPROVED AS WRITTEN <input type="checkbox"/> APPROVED WITH CHANGES NOTED IN REMARKS <input type="checkbox"/> DISAPPROVED											
		ACTION REQUIRED		K. S. Kleinknecht SIGNATURE OF CHAIRMAN, CONFIGURATION CONTROL BOARD/PANEL									
		<input type="checkbox"/> ISSUE CCA <input type="checkbox"/> ISSUE RECP <input type="checkbox"/> ISSUE T.D. <input type="checkbox"/> DISAPPROVAL LETTER											

RECP NUMBER	REQUEST FOR ENGINEERING CHANGE PROPOSAL		DATE 1 October 1973
ORIGINATING ORGANIZATION JSC Biomedical Research Division(DB)		REQUESTED ACTION <input type="checkbox"/> CCA <input type="checkbox"/> ECP	
CONTRACT NUMBER	CONTRACTOR	CCA NEED DATE	
END ITEM NOMENCLATURE SL-4 MRD, I-MRD-001F, Volume III			
CHANGE TITLE Addition of Blood Pressure Measurements, Leg Measurements and Facial Photographs to M092 for SL-4			
DESCRIPTION OF CHANGE Same as the above Change Title			
SPECIFICATION CHANGE			
SPECIFICATION NUMBER	PAGE NUMBER	PARAGRAPH	
CHANGE FROM/TO		PSCN 236	
See revised DTO (Attachment A) for Experiment M092, In-Flight Lower Body Negative Pressure			
JUSTIFICATION These three additions were approved by Level I/II CCB on 18 September 1973 as new Detailed Test Objectives. It was later concluded by JSC/DB that the desired additions could be incorporated in the existing DTO for Experiment M092.			
EFFECTIVITY SL-4			

RECP NUMBER	REQUEST FOR ENGINEERING CHANGE PROPOSAL				DATE 1 Oct. 1973
EFFECT OF CHANGE ON					
SAFETY	N/A		TRAINERS AND TRAINING	N/A	
RELIABILITY	N/A		GSE	N/A	
PERFORMANCE	N/A		SPARES	N/A	
MAINTENANCE	N/A		INTERFACE CONTROL DOCUMENTS	N/A	
OPERATIONS	Yes		DELIVERY SCHEDULE	N/A	
WEIGHT, BALANCE, AND STABILITY	N/A		CTN/CTR	N/A	
GFE GFP	N/A		OTHER RECP'S/ECP'S	N/A	
REQUIRES INSTALLATION AT KSC <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
IMPACT ON PROGRAM IF THIS CHANGE IS DISAPPROVED The SL-4 MRD will not baseline the details of the blood pressure measurements, leg measurements and facial photographs as approved by the Level I/II CCB.					
REMARKS The facial-photographs portion of the additions consists of taking photographs every 14 (+3) days (rather than early, middle, and late in the mission as in PSCN 173 "Still Photography for M092 on SL-4" and as published in Change 1 to the SL-4 MRD as SCN 144).					
ESTIMATED COST	FY71	FY72	FY73	FY74	TOTAL
APPROVALS					
SIGNATURE OF ORIGINATOR Dr. R. L. Johnson/DB		DATE		SIGNATURE OF DIRECTOR OR MANAGER	
SIGNATURE OF DIVISION CHIEF E. L. Michel/DB		DATE		<input type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED	

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A total of ~~26~~ photographs will be obtained by use of the 35-mm camera and operational film every 14 (+3) days as follows:

- a) One frontal and one side view during a M092 rest period for each crewman on one of their runs in the first 14 (+3) days of the mission (two photographs per crewman for a total of six photographs)
- b) One frontal and one side view during the subsequent M092 maximum ΔP level for each crewman (two photographs per crewman for a total of six photographs)
- c) One frontal and one side view during a M092 rest period for each crewman on one of their runs in the second 14 (+3) day period of the mission (two photographs per crewman for a total of six photographs)
- d) One frontal and one side view during the subsequent M092 maximum ΔP level for each crewman (two photographs per crewman for a total of six photographs)
- e) One frontal and one side view during a M092 rest period for each crewman on one of their runs in the third 14 (+3) day period of the mission (two photographs per crewman for a total of six photographs)
- f) One frontal and one side view during the subsequent M092 maximum ΔP level for each crewman (two photographs per crewman for a total of six photographs)
- g) One frontal and one side view during a M092 rest period for each crewman on one of their runs in the fourth 14 (+3) day period of the mission, preferably on the last M092 rest period (two photographs per crewman for a total of six photographs)
- h) One frontal and one side view during the subsequent M092 maximum ΔP level for each crewman (two photographs per crewman for a total of six photographs)

In order to properly assess the time and extent of the anticipated decrease in leg circumference, tape measurements will be made on each leg of each crewman at the largest part of the calf. These measurements will be made as soon after entry of the OWS as feasible and on each succeeding day up to (but not including) the day of each crewman's first M092 test. These measurements will be part of FO 1 and are to be taken at the same time of day that M092 tests are to be run on subsequent days.

In order to avoid loss of important cardiovascular data on days prior to running the first M092 tests and to provide selected blood pressure control point during the mission, manual blood pressure measurements of each crewman will be taken as follows:

- On the left arm and left leg as soon after entry of the OWS as feasible and on each succeeding day up to (but not including) the day of each crewman's first M092 test (NOTE: These measurements will be part of FO 1 and are

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to be taken at the same time of day that M092 tests are to be run on subsequent days.)

- On the left leg just prior to putting on the electrodes for alternate M092 tests beginning with FO 1 (NOTE: These measurements will be part of FO 1, 3, 5, 7, 9 etc.)

In-Flight Data

- a) Telemetry - Required telemetry measurements for each LBNP session will be transmitted on a real-time basis when ground coverage permits; otherwise the data will be recorded for subsequent playback and transmission. Dumps of recorded data will be initiated at least once each day that the experiment is performed.
- b) Crew Voice Comments - Comments by subject and observer will be recorded during conduct of the experiment. Voice observations will be required on the presence or absence of symptoms and/or physical signs resulting from the experiment.
- c) Log Books - Any crew voice comments and related data which cannot be recorded on the voice recorder will be entered in the appropriate experiment log.
- d) Photographs - Forty-eight photographs (18 per crewman) using the 35-mm camera
- e) Return Payload - Log books, if any, and photographs (Note: The photographs are to be included as part of the operational film.)

For additional details, refer to Appendix A.

Evaluation

Refer to MSC-03022, Scientific Data Analysis and Reporting Plan.