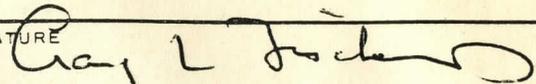


MEMORANDUM

Lyndon B. Johnson Space Center



REFER TO: SD2/81-123	DATE JUN 1 1981	INITIATOR SD2/CLFischer:jbw:6-1-81:4731	ENCL
TO: SD/Chief, Medical Sciences Division	CC ✓ CB/Dr. Thornton SD3/Dr. Johnson SD3/Dr. Bungo		
FROM: SD2/Chief, Medical Operations Branch	SIGNATURE  Craig L. Fischer, M.D.		

SUBJ: Deletion of Teflon "Treadmill" for STS-2

I have discussed the teflon "treadmill" with Dr. Thornton and Dr. Johnson and neither wish to support this particular concept for use on STS-2. However, Dr. Thornton is quite convinced an updated version of the Thornton-Whitmore treadmill should fly on the forthcoming STS missions.

He has presented to me the scientific bases for his recommendation and I concur.

In order to further evaluate the need for a treadmill concept on STS missions, I have arranged for Dr. Thornton to present a Seminar on Exercise Physiology with emphasis on the analysis of exercise modes. A notice of this meeting will arrive separately.

A copy of the Change Request deleting the "treadmill" is attached.



Routing Slip

Mail Code	Name	Action
		Approval
		Call me
		Concurrence
		File
		Information
		Investigate and Advise
		Note and Forward
		Note and Return
		Per Request
		Per Phone Conversation
		Recommendation
		See me
		Signature
		Circulate and Destroy

ACTION
P Johnson

@ Fischer

Do we want to
go to bat for Treadmill
essay for next mission?

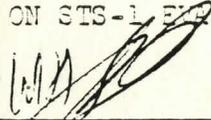
Name [Signature] Tel. No. (or Code) & Ext. _____
Code (or other designation) 26 NOV 81 Date _____

NO. G0577	PCIN 15277	CR RECEIPT DATE: 5-15-31	ECP NO. ----	CCB DATE TBD
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CREW RELATED GFE CHANGE DISTRIBUTION SHEET

TITLE/DESCRIPTION

ADJUSTMENT TO STS-2 CREW EQUIPMENT QUANTITIES BASED ON STS-1 EVALUATIONS



EVALUATION REQUIRED DATE:

6-5-31

ORIGINATOR/PRESENTER:

H. RAY

PRIMARY EVALUATOR:

C. MENDEL

The attached change proposal is forwarded for your evaluation and recommendations. Submit your evaluation to LV/CMO on JSC form 954D. THOSE MARKED FOR "MANDATORY EVALUATION REQUIRED" ARE EXPECTED TO RESPOND. ALL OTHER EVALUATIONS SUBMITTED WILL BE CONSIDERED FOR IMPACT ASSESSMENT. FOR CHANGE PROCESSING INFORMATION, CALL X3731.

DISTRIBUTION:

- | | | |
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| EW/W. W. Petynia | NB5/R. W. Glanville | |
| * EW2/C. D. Perner | ND5/C. D. Martin | BOEING-HOUSTON |
| * EW3/G. Rysavy | NS2/P. E. Westerfield | HS-02/B. Price (4) |
| FA/R. G. Rose | <u>SD/S. L. Pool</u> | |

* MANDATORY EVALUATION REQUIRED

CHANGE TITLE: Adjustment to STS-2 Crew Equipment Quantities Based on STS-1 Evaluations

CHANGE PROPOSALS/REQUESTS IDENT. NO.	DOCUMENTS AFFECTED
	Flight Manifest

DESCRIPTION OF CHANGE:

Revise the STS-2 crew equipment complement as itemized in the additions and deletion below:

Deletions

<u>Name</u>	<u>Qty. Deleted</u>	<u>Wt. (lbs) Deleted</u>	<u>Comments</u>
Binoculars	1	1.21	Deleted on STS-1; not needed.
Portable Desk	2	8.02	One carried on STS-1; not used.
Inflight Restraint Device (long)	2	.08	Delete 2 of 6; Proposed velcro additions will replace function.
EVVA Light Assy.	1	6.50	One man EVA for repair contingency.
One g IVA Footwear	2	6.00	Not required; STS-1 comments.

REASON FOR CHANGE:

Evaluation of STS-1 has determined that several items of crew equipment were not used and were not needed for successful completion of the mission. STS-1 also, proved several systems functioned well enough that some contingency equipment is considered unnecessary. Additional data is now available on other systems which allows reduction in quantities of contingency crew equipment.

SPACE SHUTTLE PROGRAM
CREW RELATED GFE CHANGE

30577

OFFICE:
LB

CHANGE IMPACT:

- SAFETY
- PERFORMANCE
- RELIABILITY
- MAINTAINABILITY
- PRODUCIBILITY
- BALANCE & STABILITY
- GSE
- SPARES

- CREW RELATED GFE
- FACILITIES
- FLIGHT OPERATIONS
- GROUND OPERATIONS
- SIMULATORS AND TRAINERS
- SOFTWARE
- PAYLOADS
- OTHER (SPECIFY)
- STOWAGE

WEIGHT IMPACT:

-125.4 lbs.

SCHEDULE IMPACT:

NONE

COST PER FLIGHT IMPACT:

NONE

DDT & E COST
IMPACT:

FY

FY

FY

FY

REMAINDER

TOTAL

IMPACT DESCRIPTION:

Stowage configuration must be updated to reflect additions and deletions. Crew procedures must be revised to reflect deletions.

IMPACT OF NONINCORPORATION:

A number of unnecessary crew equipment items will be flown and the benefit of weight reduction will not be realized.

RECOMMENDATION:

CHANGE PROPOSALS EVALUATED

APPROVED BY:

Hilary A. Ray

SIGNATURE

5/4/81
DATE

PGIN 15277

SPACE SHUTTLE PROGRAM
DOCUMENT CONTINUATION SHEET

PAGE 3 OF 4

OFFICE:

1B

DOCUMENT:

DATE

<u>Name</u>	<u>Qty. Deleted</u>	<u>Wt. (lbs) Deleted</u>	<u>Comments</u>
IVA Foot Restraints	1 pr.	4.74	Not required on STS-1; Retain 1 of 2 pair for potential RMS OPS.
Crewmember Helmet liner assy.	2	3.54	Not used on STS-1.
Portable Restraint Sys.	1	1.67	Deleted 1 of 2. Not used on STS-1.
Aft Flight Station Restraint Sys.	1	8.50	Delete 1 of 2. Not needed on STS-1; may need one for RMS.
Data Acquisition Camera	1	1.69	Delete 1 of 2. Third camera onboard for NOSL could provide redundancy.
Polaroid CRT Camera Equip.	1	8.50	Not used on STS-1. Teleprinter proven reliable.
Lightweight Headset	2	0.66	Mini headset adequate.
Air Sample Bottle Assembly	4	3.50	Retain Sorbent Filters only.
Treadmill Assy.	1	5.00	Not used on STS-1.
Pantry Food	1/2	10.00E	STS-1 Crew Comments.
Leak Detector	1	3.50	No cabin leakage problems on STS-1.
FOMO Fix Foam Dux Seal Aluminum Tape Duct Tape	1	6.27	No cabin leakage problem on STS-1.
3 pt. Latch Tools	4	32.00	Delete 4 of 8.
Tube Cutter Assy.	1	1.70	Delete backup tool.
Centerline Latch Tools	2	23.00	Delete 2 of 4
 Total Wt.		 126.77 lbs.	

PCIN 15277

SPACE SHUTTLE PROGRAM
DOCUMENT CONTINUATION SHEET

PAGE 4 OF 4

30577

OFFICE:
LB

DOCUMENT:

DATE

Additions

<u>Name</u>	<u>Qty. Added</u>	<u>Wt. (lbs) Added</u>	<u>Comments</u>
Trash Container	1	1.27	Needed for Teleprinter.
Mini Headset	1	.11	Spare to replace lightweight Deletion
Total Wt.		<u>1.38 lbs.</u>	

PCIN 15277

SPACE SHUTTLE PROGRAM
CREW RELATED GFE CHANGE EVALUATION

PAGE / OF /

G0577

OFFICE:

CHANGE IMPACT:

- SAFETY
- PERFORMANCE
- RELIABILITY
- MAINTAINABILITY
- PRODUCIBILITY
- BALANCE & STABILITY
- GSE
- SPARES

- CREW RELATED GFE
- FACILITIES
- FLIGHT OPERATIONS
- GROUND OPERATIONS
- SIMULATORS AND TRAINERS
- SOFTWARE
- PAYLOADS
- OTHER (SPECIFY)
- STOWAGE

WEIGHT IMPACT:

SCHEDULE IMPACT:

COST PER FLIGHT IMPACT:

DDT & E COST
IMPACT:

FY

FY

FY

FY

REMAINDER

TOTAL

IMPACT DESCRIPTION:

IMPACT OF NONINCORPORATION:

RECOMMENDATION:

CHANGE PROPOSALS EVALUATED

APPROVED BY:

SIGNATURE

DATE