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DEPT. 65-80 BLDS. PLANT/ 1 DATE 11/23/65

OFFICIAL USE UNL

FROM

DEPT / 62-56 BLDG.

PLANT, FAC.

v 1 ≥ar. 28362

SUSJECT:

FLIGHT READINESS REVIEW, FTV 39205-1614.

1. CONFIGURATION DESCRIPTION AND DIFFERENCES

- 1.1 FTV 1614 is of the configuration -511 shown on Launch Vehicle Assembly Drawing 1363224G.
- 1.2 Vehicle 1614 is functionally similar to vehicle 1612. Some of the notoworthy features are:

(a) Deactivate/reactivate capability.

- (b) Dual KIK/Zeke command capability with re-use lockout of the selected command at L/B Timer start.
- (c) Dual KIK/Zorro command capability with re-use lockout of the selected command by Orbital Timer Brush 5.
- (d) System F Capability.

(e) System A Capability.

(f) Beacon transponder enable/disable by Ul.

(g) Pyro current monitoring capability.

- (h) Bettery diagnostic instrumentation and electrical isolation from vehicle structure.
- (1) Command 13 emable/disable circuit.

Declassified and Released by the NRC

(j) S-Band beacon strain gage installation.

L/B Timer sequence timing change.

In Accordance with E. O. 12958

1.3 Some of the features different from 1612 are: on NOV 26 1007

(a) Command Analog 14 is used for inverter transfer.

(b) Mod IIC Morison Sensor installed.

(c) Redundant Type 12A Inverter Installation.

(d) No paint markings on tank section.

(e) Analog command backup by Zeke Command system.

(f) Wew selective address J-Box #2, enable/disable command.

(g) Revised AP Pyro Interface.

(h) Amp. Hour Sensor modification.

(i) (j) VHF Command Receiver Monitor.

2. ENGINEERING DOCUMENTATION STATUS

- 2.1 Engineering Release (62-56. As of 23 April, all engineering has been released except EJA 343-40229, VAFB Generated LEOs.
- 2.2 TEO Reviews. VAFB Generated LEOs have been reviewed and are satisfactory. EJA 343-40229 is in process of release to the Design Change Control Board to validate those LEOs not previously covered by WJA. This EJA includes the following LEOs:

1360471 MC-4 - T/M Wiring Diagram

1366930 NC-3 - Rework Aft Section

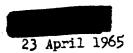
1416231A-2R1 - System Test Specification

1361916A-1, A-2 - Vehicle Test Plan Revision

1363742 NC-2 - Sequence of Events







Telemetry Schedule. The Telemetry Instrumentation schedule, 1359027
revision A, with EOs A-1 thru A-2 released, have been reviewed. As
revised, this schedule satisfies the current instrumentation defined by
Vehicle Schematics 1361052, revised to SEO NC-8 and by the Program Requirements, A386369, revised.

3. QUALIFICATION AND DESIGN REVIEW STATUS

- 3.1 Program Hardware. Al' Program Hardware peculiar components noted in the P.A. Component Serial Number List for this vehicle are qualified.
- 3.2 Design Reviews. Design Reviews have been completed on vehicle 1614 in accordance with requirements of Table 4 of Program Design Review Plan, A393991, revision A.

Certification of satisfactory compatibility of major review efforts is given herein under separate headings as well as in Attachment I. All references in Attachment I to this paragraph indicate satisfactory completion of the applicable review assignment except where specific exception is made. All documentation required from Engineering to support the CSE Master Certification Check List has been submitted to the CSE (Attn:

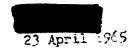
4. UAS/FEDR REVIEWS. Urgent Action Surveys and Failed Equipment and Discrepancy Reports to and including 23 April 1965 of all critical components have been reviewed and dispositions are satisfactory to Program Engineering.

5. PLANS/SPECIFICATIONS/PROCEDURES/MANUALS

- 5.1 Vehicle Test Plan LMSC 1361916, revision A, LEO A-1 and a-2 pending, have been reviewed and approved.
 - 5.1.1 Requirements of all vehicle critical alignments have been verified to be specified within this Test Plan.
- 5.2 Systems Test Specification 14SC 1416231 NC, with USCNs 1, 2, and 2R1 have been reviewed and approved.
- 5.3 Countdown Manual LMSC 226785-14-6 is in process of review.
 - 5.3.1 VADE GO/NO-GO Launch Criteria. Document IMSC 227184-14 has been reviewed and approved with recommendations for revision as required.
- 5.4 SV Test Procedures All test procedures specified in VST MPL S40,000-1614 revision A, have been reviewed and approved with recommendations for revision as required.
- 5.5 VAFB Test Procedures To date, all test procedures specified in VAFB MPL 50,000-1614 NC have been reviewed and approved with recommendations for revision as required.
- 5.6 VAFB Special Test Procedures. To date, VAFB STPs 1614-1 thru 1614-6 have been reviewed and are satisfactory to Engineering.







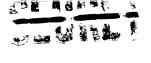
- 5.7 SV and VAFB Supplementary Technical Instructions. The following STIs have been reviewed and are satisfactory to Engineering: Sell thru Sels, 7-01 thru V-10, and V-101 thru V-103.
- 6. LAUNCH/HOLD LIMITATIONS. The applicable Launch/Hold Limitations are those specified in LMSC Specification 1417393 and as revised by USCN-1 and USCN-2.
- 7. PAD TEST DATA REVIEW.

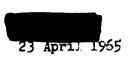
FTV 1614 has completed final Pad Systems Run and is continuing with normal R-day activities. Data analysis has been completed sufficiently to establish flight readiness.











FTV 1614

ATTACHMENT I

(D/62-56 Master Certification Check List)

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TABLE 4 ITEM NO.	TASK	ACTION	
1.8	Vehicle Launch/Hold Criteria Para. 6 this IDC.		
2.5	Ascent Sequence of Events (Includes Recovery)	LMSC Spec 1363742 NC, FO NC-1- LEO NC-2	
2.6	Propellant Loading and Margins	Para. 6 this IDC	
2 .7	Velocity Meter Settings (& BTL Ant)	IEC NC-2 to 1363742 (2.5 above)	
2.8	Verification of Required Alignments Para. 5.1.1 this IBC.		
3.1	Control Cas Mixture Loading and Para. 3.1.3 Spec. 1417 Margins revised & Dag. 1303937		
3.2	Power Summary, includes curves of:	IDC B11 1068- 4/26/65	
	a) Amp-Hour Expenditure b) Predicted Battery Bus Voltage	Title - lólk .	
		Title - 1614	
3.2	Power Requirements	IDC 4745278 4-26-65	
3.3	Vehicle Battery Complement Assignment	EJA 343=47248	
3.8	Recovery Sequence of Events	Item 2.5, Att. I	
3.9	L/B Sequence of Events	LMSC Spec. 1416519 NC, USCNs 1, 2, 3, 4, 5	
3.10	Command Functions and Interlocks Review	Para. 3.2 this IC.	
3.15	Review of Functional Compatibility of Program Peculiar C&C Equipment	Para. 3.2 this IDC.	
5.3	Guidance Summary, Analysis of Control Moments, Hydraulic Gain Settings, Predicted Control Gas Usage, Stability, etc.	Calculations dated 1/25/65 and 4/2/65	



:•	ITEM NO.	TASK	ACTION
, ·	.6.1	Status of Veh/Payloads Interface Definition Comment	Para. 3.2 this IDC
	6.2	Review of Veh/AP Interface	Para: 3:2 this IDC
	6 .5	Review of Veh/RP Interface	Para, 3,7 this IDC
	7-2	Review & Approvale of Originals/ Revisions. a) System Test Srepification b) Vehicle Test Place c) MPL's (System Level)	Para, 5 this IDC
	Toš	Review & Approval of Post DD=250 System Level TP+s & Revisions	
	en e	Resurv & Approval of Post DD=250 SI-s and Revisuose	Para, 5 this IDD
		Rest with improved of Post DD-250 Tests initiated by STO But not accessed by STO or other require- ment	Para- 5 this IDC
		Removal of CenthOR Functional Competibility	Para 3.2 this IDC
	· · · · ·	Review of Vet., Councidown Mamual	Fers, 5 this IDO
	6.4	Review of Umbilical & Veh. Test Fings and Fit List	Pare: 3,2 this IDC
	2 - 2	Status of Vehacle Schematics	Fare: 3:2 this IDC
	\$ *	Revire this sund Symmetry Level Top and revisings	Pares 5 this 100
	~~*	Oper Vehicle Engineering AT VEhicle Centification came	Para: 2-1 this IDC
	û ķ	Revise of Veha Wiring Disgram	Fare: 3:2 this IDC
	. *	Status of Symbols Lett Lovigo Replay amplifiable to Vehicle inclining closure of Casley- cerized acts in items	ianak 3/2 da d IDC
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