LOCKHEED MISSILES & SPACE COMPANY

INTERDEPARTMENTAL COMMUNICATION

CRAFT UNIT

[redacted]

14 000224260

TO [redacted] DEPT./ORGN. 65-80 BLDG. [redacted] PLANT/FAC. 1 DATE 4/23/65

OFFICIAL USE ONLY

FROM [redacted] DEPT./ORGN. 62-56 BLDG. [redacted] PLANT/FAC. 1 EXT. 28362

SUBJECT: 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 noteworthy 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 U4.
(g) Pyro current monitoring capability.
(h) Battery diagnostic instrumentation and electrical isolation from vehicle structure.
(i) Command 13 enable/disable circuit.
(j) S-Band beacon strain gage installation.
(k) L/B Timer sequence timing change.

1.3 Some of the features different from 1612 are:

(a) Command Analog 14 is used for inverter transfer.
(b) Mod IIC Horizon Sensor installed.
(c) Redundant Type 12A Inverter Installation.
(d) No paint markings on tank section.
(e) Analog command backup by Zeke Command system.
(f) New 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 LEO 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 EJA. This EJA includes the following LEOs:

1360471 NC-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

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CRAFT UNIT

2.3 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. All 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: [redacted].

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 - LMSC 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 LMSC 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.

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[redacted] 23 April 1965

5.

5.7 SV and VAFB Supplementary Technical Instructions. The following STIs have been reviewed and are satisfactory to Engineering: S-01 thru S-05, V-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.

for [redacted] Manager
Program Engineering

[redacted]

cc:
[redacted]

[redacted]

23 April 1965

FTV 1614

ATTACHMENT I

(D/62-56 Master Certification Check List)

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, EO NC-1. LEO NC-2
2.6	Propellant Loading and Margins	Para. 6 this IDC
2.7	Velocity Meter Settings (& BTL Ant)	LEO NC-2 to 1363742 (2.5 above)
2.8	Verification of Required Alignments	Para. 5.1.1 this IDC.
3.1	Control Gas Mixture Loading and Margins	Para. 3.1.3 Spec. 1417393 as revised & Dwg. 1303937-3 Ref. J
3.2	Power Summary, includes curves of:	IDC B111068- 4/26/65
	a) Amp-Hour Expenditure	Title - 1614
	b) Predicted Battery Bus Voltage	Title - 1614
3.2	Power Requirements	IDC A746278 4-26-65
3.3	Vehicle Battery Complement Assignment	EJA 343-40248
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 IDC.
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 Document	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. 3.2 this IDC
7.1	Review & Approvals of Originals/ Revisions. a) System Test Specification b) Vehicle Test Plan c) MPL's (System Level)	Para. 5 this IDC
7.2	Review & Approval of Post DD-250 System Level TP's & Revisions	Para. 5 this IDC
[illegible]	Review & Approval of Post DD-250 ST's and Revisions	Para. 5 this IDC
[illegible]	Review & Approval of Post DD-250 Tests Initiated by STI But not covered by STP or other requirements	Para. 5 this IDC
[illegible]	Review of Veh AGE Functional Compatibility	Para. 3.2 this IDC
[illegible]	Review of Veh. Countdown Manual	Para. 5 this IDC
[illegible]	Review of Umbilical & Veh. Test Plugs and Pin List	Para. 3.2 this IDC
[illegible]	Status of Vehicle Schematics	Para. 3.2 this IDC
[illegible]	Review of [illegible] and System Level TPs and revisions	Para. 5 this IDC
—	Oper Vehicle Engineering AT Vehicle [illegible]	Para. 2.1 this IDC
[illegible]	Review of Veh. Wiring Diagram Against Veh. Schematics	Para. 3.2 this IDC
[illegible]	Status of System Level Design Review applicable to Vehicle including closure of Review-derived action items	Para. 3.2 this IDC
	[illegible] of vehicle schematics for compatibility [illegible] a) [illegible] b) AP & RP interfaces AGE Schematics for Control & Monitor	Para. 3.2 this IDC