

RAMO-WOOLDRIDGE CORP

LOS ANGELES 45, CALIFORNIA

INTEROFFICE CORRESPONDENCE

MAIL ROOM

CM 01-030

TO: Col. C. H. Terhune
CC: Col. R. Curtin
Col. H. L. Evans
W. B. Heberstrett
R. F. Mettler
S. Rame

SUBJECT: STL Responsibilities
in the I17L Program

DATE: May 12, 1959

FROM: Louis G. Dunn

This memorandum is written to outline my understanding of the STL responsibilities in the I17L program. This understanding is based upon the meetings which you and I had on this subject several months ago, following the extensive separate conversations which Dr. Mettler and Mr. Heberstrett had with Colonel Oder and Colonel Evans.

In general, it is my understanding that the decision was made to require Lockheed to carry out in full its role as the system engineering contractor for the I17L flight vehicle, along with its role as the development and production contractor for the second stage of the I17L vehicle. As I recall, special meetings were to be held with Lockheed management to require them to draw from the total manpower resources of the Lockheed Corporation to properly perform their several tasks in the I17L program. It is, therefore, my impression that Lockheed's responsibilities include, but are not limited to, the following:

- a. System engineering for the two-stage flight vehicle, including complete dynamic analysis of the two-stage vehicle, trajectory analysis, stability and control analysis, detailed system test planning, analysis of flight data, diagnosis of flight failures, etc.
- b. Development and testing of the second stage.
- c. Identification and specification to AFBMD of any modifications required in the standard Thor or Atlas boosters allocated by AFBMD to the I17L program, and identification and specification to AFBMD of any modifications required in GSE and facilities for launching I17L vehicles from AFMTC and/or Cocks Air Force Base.
- d. Assistance to AFBMD as required to verify that the modified booster when delivered does in fact meet the Lockheed-specified requirements, and assistance to AFBMD in contractually accepting the modified booster hardware.

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- e. Engineering liaison activity with Convair and Douglas is required to identify and specify to AFMMD changes needed in the boosters to satisfy the Lockheed system engineering requirements, to work out any interface problems on the missiles allocated to the I17L program, and to identify and specify to AFMMD all GSE and facility requirements for launching of I17L vehicles.
- f. Technical test direction for the flight testing of all I17L vehicles, both at AFMTC and Cocks Air Force Base, using Convair and Douglas as test contractors for the booster stages.
- g. Checkout and operation of the second stage for flight testing.

It is my understanding that STL has the following responsibilities in the I17L program:

- A. Staff assistance to AFMMD, upon specific request, to assist in the allocation and scheduling of standard unmodified boosters for the I17L program.
- B. Staff assistance to AFMMD, upon specific request, to assist in evaluating certain special technical problems in the I17L program.
- C. System engineering for the standard booster as delivered to the Air Force for the Thor and Atlas weapon systems programs, not including I17L modifications.
- D. Preparation of guidance equations for the Atlas ground guidance stations used for I17L launchings. (This part of the Atlas system is treated as a special case and differently from the Atlas missiles because, as fixed ground equipment, it must remain interchangeable for both standard Atlas and I17L launchings.)

It is my understanding that STL does not have any of the following responsibilities (except insofar as specific requests for staff assistance to AFMMD under Items A and B above overlap the items listed below):

1. Any system engineering responsibility for the two-stage flight vehicles.

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2. Any responsibility for the identification and/or specification of the modifications to the booster required for 117L purposes.
3. Any responsibility for assisting AFBMD in contractually accepting the boosters allocated to the 117L program, after the Lockheed-specified modifications have been made to the boosters.
4. Any responsibility for the technical test direction of 117L launchings, either at AFMTC or at Cooke Air Force Base.
5. Any responsibility for the specification and/or development of proper launching facilities for 117L vehicles at either AFMTC or Cooke Air Force Base.
6. Any responsibility for diagnosis of flight failures of 117L vehicles or analysis of 117L flight test data.

I would like to discuss the role of STL in the 117L program with you if the responsibilities outlined above for STL do not represent a mutual AFBMD/STL understanding.

LCD:RFM:im

~~Louis G. Damm~~