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4 March 1979

**MEMORANDUM FOR : Deputy Director (Plans)**

**SUBJECT : Meeting on Cost Overrun incurred by General Electric, Project CORONA**

1. The undersigned attended a meeting in Philadelphia on 2 - 3 March 1979, between Lockheed Missile Systems Division and its subcontractor, General Electric, for the purpose of discussing and analyzing a reported cost overrun of [redacted] on Project CORONA.

2. The subcontractor's actual and projected costs were examined in detail and considerable discussion was held regarding certain aspects of the Program. The resulting conclusions of the undersigned represent why the overrun occurred, the action being implemented by the subcontractor and the prime to prevent further increases and the approximate share of this overrun which must be funded by the Project.

(a) Causes of the Overrun - It appeared that G.E. had more than its share of trial and error approaches to problems which needed to be solved. Difficulties in developing rockets and rocket propellants were encountered in several areas because of the stringent limitations of weight and size imposed upon their design. Each development was an advance in the "state of the art" and there were a good many "tests". The Ablation Shield of the Nose Cone has created costly problems. In this particular instance the shield must be a structural part of the cone and this has never been done before. A rejection rate of 2 to 1 is being encountered. Considerable changes have been made in the Bio-Medical portion of the Program which has resulted in increased costs. And last, but perhaps most important, it is believed that the subcontractor was overly optimistic in its original cost quotations and did not appreciate the difficult problems involved.

(b) Action being taken to prevent further occurrences - The subcontractor has established a Project Control System by:

- (1) Establishing ceilings on materials and manpower by operation.
- (2) Establishing heads of individual operation (i.e., Vehicle, Recovery, Bio-Medical, O&M and Systems, etc.) who are directly responsible to the Project Director and the General Manager.

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- (3) Conducting weekly meetings of the various Heads of Operations, Project Director and General Manager to review status of program and take action where required to stay within imposed ceilings or reduce costs.
- (4) Advise Prime Contractor (LMB) immediately of any problems which arise which may affect the costs or deliveries under the Program.
- (5) The approximate share of the overrun to be absorbed by the Project. The following is a recap of the total Program Costs to date:

(In 1,000's of dollars)

	<u>Original</u> <u>Costs</u>	<u>Actual</u> <u>thru 1/25/52</u>	<u>Estimated</u> <u>To Complete</u>	<u>Total Re-</u> <u>vised Cost</u>	<u>Increase</u>
Material	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Labor	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Overhead	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
GA	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total Cost	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Fixed Fee	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total Program	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

The original quotations were prepared on the basis that Air Force (White Program) would absorb all prime equipment costs peculiar to the Bio-Med Program, all Bio-Med costs, Mark I Rocket costs and Basic Ground Support Equipment. The Agency (Black Program) would assume all prime equipment costs peculiar to its program, all common development costs, all other rocket costs and Ground Support Equipment peculiar to the Black Program. On this basis, approximately [REDACTED] of the [REDACTED] overrun is allocable to the Black Program and must be funded through LMB.

Exhibits A and B attached are subcontractors' estimates and breakdown by Program. However, LSMD has not given an indication as to whether or not they will expect a cost build up of their C and A expense before they present it to us for funding. If this is requested and approved the total overrun could be increased by approximately 3%. The LSMD representative was queried on this matter but said he wished to discuss it with his management prior to committing himself. It is anticipated that an answer will be received on 6 March when he visits Project Headquarters.

3. On the basis of the foregoing and detailed information furnished to the undersigned which may be reviewed by you if so desired, it is the opinion of the undersigned that both Contractors are taking serious action to prevent a further overrun. The subcontractor stated unequivocally that, in his opinion, the present overrun would be the maximum and there was a possibility of some reduction in their estimate.

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J. H. McDonald  
Contract Negotiator

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Project Comptroller

DPD-DD/P:JMcDonald: 

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