AC 104-36107

[redacted]

(U) Comments on Work Statement

RDZSBA WCLSD-2 19 Sep 56
ATTN: Maj. Stephens Lt. Weber/mka
34273/B52

1. In accordance with Action Request 8-582, WCLSW herein submits comments on the testing programs planned for Project 1794. (UNCLASSIFIED)

2. Comments are made with reference to paragraphs of the Exhibit "I", Statement of Work, Project 1794, and are restricted to the field of wind tunnel testing.(SECRET)

a. 1.1 The tests enumerated in this general program are considered necessary. The contractor should be required however, to submit a carefully detailed and planned model design and program for each of the different types of tests well in advance of the required testing date so that proper planning and a realistic completion date can be accomplished. In addition to the problem areas emphasized in the work statement, WCLSW feels that the following are also important.

b. 1.1.3 The drag breakdown and possibly methods of decreasing drag should be investigated in the subsonic range as well as in the higher speed ranges. The wind tunnel program should include tests of models equipped to study pressure distribution in order to help in the evaluation of forces and moments. If investigations in the high speed range should show the requirement for a different intake design, tests of such a design should also be made on the subsonic model. Within practical test limits, the effects of jet heating (i.e., the density-velocity effects) should be investigated. For all tests, it is most important that the jet thrust available at the exhaust nozzles be determined. Although this is a difficult parameter to measure, efforts should be made to design and test a model from which such a thrust definition can be obtained.

c. 1.1.4 Considerable testing is required in the hover and transition stages. It is necessary to establish the magnitude of nozzle thrust with a satisfactory peripherial flow distribution and flow angularity of jets. When this has been accomplished, further tests to establish model scale effects, hysteresis and lift efficiency can be made. Pressure distribution measurements on the upper and lower surfaces of the model should also be made during hovering and transition. It is conceivable that complete hovering models as large as 1/6-scale could be made and tested. The present semi-span 1/6-scale cannot be used for further tests unless extensive alterations are made to the design.

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d. 1.1.5 In view of the difficulties experience with the supersonic tests of the intake model, it appears that further check tests should be performed on the original and possible new intake modifications.

e. 1.1.6 The possibility of other dynamic tests e.g., "spin" tests to study pilot safety should be considered.

f. 1.1.13 It appears feasible to conduct such an investigation on a 2-dimensional model as a research program.

g. 2.2 It is requested that the contract specifically state that test specifications and/or model specifications should be in compliance with the specifications for models in the particular WADC wind tunnels involved and should be approved by the Wind Tunnel staff prior to construction of the test models.

3. The following comment is submitted by WCLSR. It is requested that paragraph 1.1.3 of the Statement of Work be changed to read this: the contractor shall conduct tests of subsonic wind tunnel models. The problems of trim and balance and control shall receive particular emphasis. (SECRET)

4. This document is classified SECRET because it contains information pertaining to a potential weapon system.

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