



UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20548

JAN 12 1972

CIVIL DIVISION

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Dear Mr. Shaffer:

[FAA] We have reviewed the Federal Aviation Administration's (FAA) procurement of test-monitor-and-control equipment (TMC) for use in its short-range air navigational aids system. The procurement was made under an incentive-type production contract awarded in June 1964 which, as amended, called for delivery of 195 TMC's and certain related equipment and services under a fixed delivery schedule at a ceiling price of about \$6.3 million. Under the schedule, the first TMC was to have been delivered in June 1966 and the last in September 1967. The contractor delivered the first TMC in August 1969 and the last in June 1971.

The contractor's failure to meet the delivery schedule resulted in a delay of nearly 4 years in the completion of a system which was justified as needed to provide air safety. It also resulted in the loss of the value of warranties, estimated at \$140,000, on other components of the system which had been delivered earlier because these components could not be put into operation until after the warranties expired. The contractor was selected by FAA because it offered the lowest price, although among the five bidders, it had received the lowest technical point score in FAA's evaluation of bids. The contractor had not developed and produced similar equipment in the past, and was not in a position to produce the equipment at the time of contract award.

The monitor equipment was a major component with which the contractor experienced difficulty. Another contractor had developed a prototype monitor for FAA for \$622,000. FAA evaluators expressed satisfaction with the prototype and FAA made it available for the TMC contractor's use. The contractor was not required to pattern its production model after the prototype, although the contract called for 60 percent vacuum tube - 40 percent solid state construction, the same as the prototype. FAA officials advised us that they were not able to obtain electronics equipment that met their performance requirements when requiring a production contractor to copy prototype equipment built by another contractor.

In February 1965, the contractor proposed the development of a fully solid state monitor. In May 1965, FAA approved the proposal and the contract was amended at an additional cost of over \$500,000. FAA could not provide us with data justifying its decision to authorize a research and development effort under the production contract, but this decision was material to the contractor's failure to deliver in accordance with the contract terms.

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We believe that the delay in obtaining acceptable TMC equipment could have been minimized if FAA had stabilized its design plans for TMC equipment and made effective use of the prototype monitor that had been developed. We recognize the need to strive for equipment improvements but in our opinion production contracts geared toward timely completion of systems needed for air safety are not appropriate vehicles for undertaking prolonged research and development efforts.

We wish to acknowledge the courtesy and cooperation given to our representatives during the review. We would appreciate being advised of any action you may take to clarify contracting procedures to assure that extensive research and development work is completed before production contracts are awarded.

Sincerely yours,



Richard W. Kelley
Assistant Director

The Honorable John H. Shaffer
Administrator, Federal Aviation
Administration
Department of Transportation

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