



UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

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PROCUREMENT, LOGISTICS,
AND READINESS DIVISION

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B-205319

NOVEMBER 4, 1981

RELEASED



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The Honorable William L. Armstrong
United States Senate

Dear Senator Armstrong:

Subject: Review of an Allegation That TRW Colorado Electronics, Inc., Incurred Unnecessary Test Costs on Cost-Type Contracts (PLRD-82-16)

In your March 17, 1981, letter, you asked us to inquire into a constituent's allegation that TRW Colorado Electronics, Inc., has a complete disregard for costs that are unnecessarily incurred and passed on to the Government on cost-type contracts. Specifically, the allegations were that TRW

- incurred costs of more than \$20,000 for unnecessary and duplicative tests on the same purchase orders;
- paid vendors on different purchase orders for tests on identical parts from the same production lots; and
- did not take action on suspected duplicate costs, when cost-type contracts were involved, because the Government was absorbing the costs.

In summary, we found that:

- As alleged, TRW did incur test costs of about \$20,000, and we believe these tests were unnecessary. However, these tests were required by the procurement activity--the Maryland Procurement Office at Fort Meade, Maryland--and were performed by a TRW subcontractor. Hence, neither TRW nor the subcontractor received undue profits from these tests.
- Contrary to the allegation, TRW did not pay subcontractors on different purchase orders for identical tests on parts from the same production lots.
- Contrary to the allegation, TRW has tried, in several instances, to reduce test cost on cost-type contracts.

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SCOPE, OBJECTIVE,
AND METHODOLOGY

In responding to the request, we interviewed TRW Colorado Electronics officials and Ft. Meade contracting officials at Ft. Meade. In addition, we examined contract documents, Department of Defense (DOD) military standards, TRW operating and purchasing procedures, and 8,300 purchase orders issued by TRW under contracts with DOD and the National Aeronautics and Space Administration.

Our objective was to determine if unnecessary costs were being incurred, the extent they were occurring, and the reasons for the occurrences. Initially, we examined all 5,610 purchase orders issued by TRW in 1980. We found unnecessary expenditures only on one contract with Ft. Meade for one type of parts (magnetic parts). We then reviewed 1,423 purchase orders for magnetic parts issued in 1979 and 1,267 in 1981. All purchase orders that listed lot qualification testing and lot conformance testing were examined in detail and discussed with TRW officials.

FT. MEADE CONTRACT REQUIRED UNNECESSARY
TESTS AND TEST PARTS

Contractual quality and reliability requirements for deliverable end items are established and imposed on TRW by the contracting Federal agencies. The degree of quality and reliability desired is related to the intended use of the deliverable end items. For example, devices intended for use in long-life non-reparable spacecraft systems should have a greater degree of quality and reliability than devices intended for use in repairable ground equipment. To obtain the necessary degree of quality and reliability, TRW is required to purchase those parts which are manufactured and tested in accordance with individual part specification quality assurance provisions, military standards, and the contractual qualification test plan. TRW officials informed us that to ensure high reliability for parts sent into space, it is normal to require that initial parts production lots meet qualification test requirements. Subsequent production lots for those parts will then be required to meet quality conformance tests.

As required by specifications under a contract between TRW and Ft. Meade, TRW purchased from a subcontractor (1) conformance tests and test parts amounting to \$20,181 and (2) production lot qualification tests and test parts for the same groups of parts from the same production lots. Qualification tests included, in addition to other tests, all tests required under conformance testing; hence, conformance tests were duplicated. Based on our review of the 8,300 purchases orders, unnecessary conformance tests were limited to this

one contract, one type of part, and one subcontractor. The specifications did not state when or under what circumstances both sets of tests would be required. Both the TRW program manager and the parts engineer agreed that quality conformance tests are not necessary on initial single production lots where qualification tests are also required and purchased. They stated that the lack of clarity in the parts specifications was the primary cause for the unnecessary purchase of tests and test parts.

OTHER ISSUES

We did not find any instances where TRW paid suppliers on different purchase orders for identical tests on parts, subsequently purchased from the same production lot. In contrast, we found that subsequent purchase orders identified prior purchase orders of identical parts and specified that the additional parts be provided from production overruns that had been previously tested. This approach to subsequent purchases demonstrated TRW's awareness of a potential problem and avoided the unnecessary purchase of identical tests.

We did not find any differences in TRW's efforts to purchase required parts and tests on cost-type versus fixed-price contracts. In contrast, we found, for example, that on one large cost-type contract, TRW reduced the Government's testing requirements for purchased parts, with the Government's approval. These reductions, including the application of small lot sampling techniques and the qualification of certain parts by similarity to other parts, resulted in substantial savings to the Government.

FT. MEADE AND TRW COMMENTS

Ft. Meade officials told us they plan to review the specifications for clarification and will coordinate their results with TRW's Defense Space Systems Group.

TRW officials stated they plan to strengthen management controls to ensure that qualification tests and quality conformance tests are not both purchased on parts for the same production lot. An official from TRW's Defense Space Systems Group said he plans to have his group review the problem specifications and revise them as necessary.

CONCLUSIONS

The lack of clarity in DOD's parts specifications caused TRW to purchase \$20,181 of unnecessary quality conformance tests. TRW did not receive undue profits from the unnecessary purchases. On numerous occasions, TRW took actions that resulted in significant savings to the Government. In addition, we do not believe that unnecessary purchase of tests is being required in other contracts with TRW.

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In view of actions promised, we are not making any recommendations.

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As arranged with your Office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from its date. At that time, we will send copies to the Secretary of Defense and other interested parties and make copies available to others upon request.

Sincerely yours,



Donald J. Horan
Director