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APR 16 1971

Rear Admiral Nathan Sonenshein  
Commander  
U. S. Naval Ship Systems Command  
Main Navy Building  
18th and Constitution Avenue, N. W.  
Washington, D. C. 20360



Dear Admiral Sonenshein:

We have examined into selected aspects of the negotiation of major field modifications under contract N00024-68-C-1092 awarded to RCA Corporation, Electromagnetic and Aviation Systems Division, Van Nuys, California. The contract, awarded by the Naval Ship Systems Command (NSSC) on November 15, 1967, provided that RCA furnish stock repair parts, supply support backup and overhaul and repair capability to maintain electronic equipment previously procured by the Navy from RCA under other prime contracts. Under the terms of the contract, the negotiation of prices for repair parts and assemblies/subassemblies to be repaired is the responsibility of the Defense Contract Administration Services (DCAS). At the completion of our review, field modifications totaling over \$4.6 million had been negotiated under the contract.

Our examination was directed primarily toward evaluating (1) the feasibility of direct procurement by the Government of traveling wave tubes (TWT's), (2) the adequacy of RCA's cost analysis of major subcontract cost proposals included in the pricing of contract modifications, and (3) the reasonableness of negotiated profit rates for major field modifications involving the procurement of stock repair parts.

The results of our review are presented as follows.

FEASIBILITY OF DIRECT PROCUREMENT  
OF TWT'S

Our review showed that 53 TWT's were purchased by RCA as spare parts under contract -1092. The TWT's were obtained from the Electron Dynamics Division of Hughes Aircraft Company at prices ranging from \$10,250 to \$11,500 for each model 338H tubes and \$25,100 each for model 702H. The subcontract prices included in RCA's cost proposals were adjusted upward by

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substantial add-on factors (material overhead, requisition engineering, general and administrative expense, and profit). For example, a TWT costing RCA \$10,250 was negotiated in the contract modification price at \$15,750, a 54 percent increase.

In reviewing the RCA processing of the TWT from receipt to issue, we found that RCA expended about 16 hours of direct labor for each TWT. This effort primarily consisted of (1) installation of a tube mounting bracket, and (2) electronic testing. The labor effort was significantly reduced in March 1970 when RCA stopped performing electronic testing of TWT spares.

In view of the minimal in-house labor effort involved and the substantial markups to the Government, we discussed with RCA, Hughes, and Navy officials the possibility of direct Government purchase of the TWT's. We found that:

- Both RCA and Hughes officials agreed that it would be technically feasible for the Government to buy the tubes direct from the manufacturer.
- The RCA rejection rate of new TWT's received from Hughes was only 3 percent on recent contracts.
- Officials at the Naval Ship Engineering Center stated that the technical problems of producing TWT's at Hughes had been resolved and they agreed that a direct buy should be considered.

We believe that NSSC may wish to consider performing a screening process in accordance with the Department of Defense High Dollar Spare Parts Breakout Program to determine if a direct buy of TWT's is feasible.

#### REVIEW OF PROPOSED SUBCONTRACT COSTS

We reviewed the negotiations of modifications 10, 12, and 17 to contract -1092 which involve the procurement of TWT's by RCA from the Hughes Aircraft Company, a sole-source supplier. The contracting officer waived the requirement for preaward audit of RCA's cost proposals in accordance with ASPR 3-809(b)(1). We found that major elements of cost proposed by Hughes (labor hours and yield factors) were not verified by RCA during its cost analyses of the subcontract proposals. Also, DCAS

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did not identify the weakness in the RCA cost analysis during its evaluation of RCA's cost proposals.

In our opinion a verification of proposed subcontract labor hours and yield factors should have been made by RCA or obtained by DCAS where appropriate.

PROFIT RATES NEGOTIATED ON PROCUREMENTS  
OF STOCK REPAIR PARTS

We reviewed the negotiation records for five recent modifications under contract -1092, each in excess of \$100,000 and totaling about \$1.5 million. Stock repair parts represented about \$1.1 million of the total. Over 90 percent of the prices of stock repair parts comprised subcontractor material costs and RCA add-on pricing factors. Also, 97 percent of the stock repair parts had been procured by RCA prior to the negotiations of the contract modification prices. Although RCA's cost risk appears to have been substantially minimized due to the high material content and the procurement of such items prior to contract negotiation, profit rates of 10 percent were negotiated on four modifications and 9 percent on the other.

The contracting officer assigned a 5 percent profit factor for cost risk on four of the contract modifications, which is in the percentage range normally assigned to a high risk firm fixed-price contract. While recognizing that the negotiation of profit under the weighted guidelines concept involves consideration of a number of factors other than cost risk, it appears that the degree of risk assumed by RCA may not have been commensurate with the profit rates negotiated. Further consideration of the degree of cost risk inherent in each contract modification may be warranted when establishing acceptable profit objectives for negotiations.

We would appreciate being advised of actions taken or planned with regard to the matters discussed in this letter. Copies of this letter are being sent to the Commander, Defense Contract Administration Services Region, Los Angeles, for comment on these matters within his area of responsibility. An information copy is also being furnished to the Regional Manager, Defense Contract Audit Agency.

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Sincerely yours,

H. L. KRIEGER

H. L. KRIEGER  
Regional Manager

cc: Commander, DCASR, Los Angeles  
Regional Manager, DCAA, Los Angeles