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Air Force negotiators
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Major General J. C. Maxwell
Commander, Armament Development and Test Center
Eglin Air Force Base, Florida 32542

Dear General Maxwell:

The General Accounting Office has examined into the pricing of two negotiated contracts for the CBU-42/A Wide Area Anti-Personnel Mine (WAAPM) System awarded by the U. S. Air Force, Armament Development and Test Center (ADTC), Eglin Air Force Base, Florida, to Honeywell, Inc., Minneapolis, Minnesota. Honeywell has produced the WAAPM system since 1967.

Our examination was made as part of a continuing review of the pricing of contracts subject to the provisions of Public Law 87-653, effective December 1, 1962, as implemented by the Armed Services Procurement Regulation.

The specific contracts included in our review are fixed-price-incentive-fee contract F08635-69-C-0015 and firm-fixed-price contract F08635-70-C-0001. Both contracts contained a clause to provide for a reduction in the contract price for defective cost or pricing data.

Our review was directed towards examining into the reasonableness of the prices negotiated in relation to cost or pricing data available to Honeywell at the time of contract -0015 price negotiations. With regard to contract -0001, our review was limited solely to cost estimates for scrap and their related effect upon the contract price.

We reviewed pertinent records at the contractor's plant and the records of negotiation at ADTC. The Defense Contract Administration Services (DCAS) and the Defense Contract Audit Agency (DCAA), both of which have resident offices at Honeywell, are responsible for contract administration and auditing activities, respectively.

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BACKGROUND

Contract -0015 represents the third buy of the WAAPM system. The system was previously manufactured by Honeywell under contracts AF33(657)-16858 and F33657-68-C-0372. Since deliveries for contract -0372 had been completed at the time negotiations were being conducted on contract -0015, the contractor had furnished data on actual costs incurred for contract -0372 in support of many of the proposed costs for contract -0015. A letter contract was issued to Honeywell on December 24, 1968. Honeywell furnished its initial proposal to ADTC on January 28, 1969, and subsequently provided updated proposals on February 19, April 25, May 7, and May 15. Negotiations commenced on May 6, 1969, and were concluded on May 23, 1969. The original target cost negotiated under this FPIF contract was \$49,391,497 and the target fee was established at 9.85 percent or \$4,865,062. Under the incentive provisions of the contract, the contractor's profit will consist of a target profit plus or minus a 30 percent sharing of any underrun or overrun of target costs up to a contract ceiling price of \$58,281,966. Honeywell certified that the cost or pricing data submitted in support of the target cost were accurate, complete, and current as of May 23, 1969. The final results of the contract are shown in appendix II.

Contract -0001 represents the fourth buy of the WAAPM system. Negotiations for contract -0001 were completed approximately 2-1/2 months after the negotiations had been completed for contract -0015. Since adequate cost history had not been established on contract -0015 at the time negotiations were being conducted on contract -0001, the Government negotiators relied primarily on the cost history developed on the earlier contract -0372 in order to estimate certain cost items. For this follow-on contract, Honeywell submitted its original proposal on May 22, 1969, and provided updated proposals on July 22, August 1, and August 5. Negotiations were concluded on August 12, 1969, and Honeywell certified that the cost or pricing data submitted in support of the target cost was accurate, complete, and current as of that date. The cost originally negotiated under this firm-fixed-price contract, including two options that were subsequently exercised, was \$83,014,592 and the negotiated profit was established at 12 percent or \$9,961,750. According to data furnished us by the company in June 1972, Honeywell has incurred costs of about \$81,120,000 in the performance of this contract. The related contract price including contract modifications is about \$94,113,000 resulting in a profit to Honeywell of about \$12,993,000. None of the above amounts includes tooling which was negotiated separately as a cost-plus-fixed-fee item.

FINDINGS

The costs negotiated by the Air Force and Honeywell for 3,872 and 7,350 WAAPM systems under contracts -0015 and -0001, respectively, including those options subsequently exercised, were overstated by about \$2.7 million on the basis of the cost and pricing data available to Honeywell prior to the effective date of its certifications that the pricing data was accurate, complete, and current. As a result, the amounts received by Honeywell under the contracts may increase by about \$1,698,100 as shown below:

	<u>Contract</u>		<u>Total</u>
	<u>-0015</u>	<u>-0001</u>	
Scrap	\$454,100	\$971,100	\$1,425,200
Materials	208,200	N/A	208,200
Destructive testing	<u>64,700</u>	<u>N/A</u>	<u>64,700</u>
Increase in amounts received by Honeywell	<u>\$727,000</u>	<u>\$971,100</u>	<u>\$1,698,100^a</u>

^aSee appendix I for additional details.

Although we determined the amount of overstated estimates that occurred in contract -0001 as the result of inaccurate scrap rate data, we made no further review of the other cost elements included in contract -0001.

SCRAP

The amounts paid to Honeywell for material scrap costs and the related indirect costs and profits under contracts -0015 and -0001 were excessive by about \$454,100 and \$971,100, respectively, because they were based on management scrap reports that contained inaccurate and incomplete data. These reports that intended to show the actual scrap rate experienced for the preceding contract -0372 were furnished by Honeywell to the Government representatives so that the Government would be able to evaluate the scrap rates proposed by Honeywell.

In order to determine the accuracy and completeness of the management scrap reports, we examined the supporting documentation including scrap tickets, computer print-outs, and contractor work-sheets. Internal controls over the recording, classifying, and reporting of the material scrap incurred in the plant were inadequate. We found numerous instances where the scrap tickets had been improperly prepared or recorded. For example:

1. \$87,360 - Use of incorrect unit cost on four scrap tickets.
2. \$143,894 - Posting errors to the management scrap report.

3. \$188,947 - The erroneous inclusion of material costs on 31 scrap tickets that were applicable to production labor only.
4. \$241,983 - Failure to properly exclude destructive testing that had been provided for as a direct item under the contract.
5. \$14,675 - Addition and multiplication errors.

Upon reviewing our findings, Honeywell located approximately 80 scrap tickets that it claimed had been erroneously omitted from the scrap reporting system. After our review of these scrap tickets, we gave consideration in our computations to the contractor's offsetting credits totaling about \$259,000 for these unrecorded items. We computed the scrap rate as adjusted for the mine on the preceding contract -0372 to be 6.5 percent after making all necessary corrections to the scrap statistics.

Contract F08635-69-C-0015

Prior to the fact-finding meetings and final negotiations, Honeywell had furnished the management scrap reports to the DCAS and DCAA representatives in order that they might review and evaluate the proposed scrap rates. During the fact-finding meeting on May 8, 1969, Honeywell furnished the management scrap reports to the Government negotiators showing the scrap rate for the mine on contract -0372 to be 9.2 percent through March 1969. On May 9th, Honeywell furnished its estimates of the transactions for the month of April, resulting in an increase of the inception-to-date scrap rate from 9.2 percent at the end of March to 10.3 percent at the end of April 1969.

During the fact-finding meetings of May 8th and 9th, scrap rates were discussed by the negotiators in considerable detail. The record of negotiations maintained by Government officials indicate that Honeywell stated that the 10.3 percent supported the 14 percent scrap rate proposed for contract -0015 after consideration of the more stringent reliability requirements incorporated into the specifications for contract -0015. During the negotiations on May 15th, Honeywell furnished an updated management scrap report showing a 9.8 percent scrap rate incurred to date through April 1969. Based on the inaccurate data furnished by Honeywell and Honeywell's statements made during the fact-finding meetings, the Government and Honeywell negotiated a 10 percent scrap rate for the mine. If the Government negotiators had been aware of the actual scrap rate experienced on contract -0372, they would have had a basis for negotiating a substantially lower scrap rate for the mine on contract -0015. The actual scrap rate incurred for the mine on contract -0015 was 6.4 percent as compared to the negotiated rate of 10 percent.

The cost overstatement of about \$1,139,400 for scrap on contract -0015 was computed by comparing the total cost achieved by employing a 6.5 percent scrap rate for the mine in lieu of the 10 percent scrap rate actually negotiated. Under the incentive provisions of the contract, the Government may incur increased costs of about \$454,100 for cost-sharing and profit unless target costs and profits are adjusted.

Contract F08635-70-C-0001

In support of the proposed scrap rates, Honeywell furnished the management scrap reports for both contracts -0372 and -0015 to DCAS and DCAA representatives for their review and evaluation. Since the data accumulated on contract -0015 was too limited, it was not used for projecting the appropriate scrap rates for contract -0001. Therefore, the Government relied on the erroneous data shown on the management scrap reports for contract -0372 as discussed previously. Since deliveries for contract -0372 were completed in April 1969 and deliveries under contract -0001 were to be made during calendar year 1970, Government representatives anticipated an improvement in the contractor's scrap experience during the performance of contract -0001 through increased manufacturing efficiencies.

On July 23, 1969, Honeywell furnished a management scrap report to the Government negotiators showing a 9.8 percent scrap rate for the mine through June 1969. On its proposal of August 5, 1969, Honeywell proposed an 8 percent scrap rate for the mine. Based on the inaccurate data in the management scrap reports, the Government accepted the 8 percent scrap rate proposed by the contractor and included it in the final negotiated price. The Government negotiators believed they were providing for a 20 percent scrap improvement factor over the preceding contract -0015 where a 10 percent scrap rate had been negotiated. If the data on the management scrap report had been accurate, complete, and current, the Government negotiators would have had a basis for negotiating a lower scrap rate for contract -0001. The actual scrap rate incurred for the mine on contract -0001 was 6.6 percent as compared to the negotiated rate of 8 percent.

The total amount of the overstatement for scrap on contract -0001 was computed by comparing the contract price that would have been achieved by using a 6.5 percent scrap rate as opposed to the contract price actually negotiated using an 8 percent scrap rate. The amount of the overstatement included in the negotiated contract price after consideration of all applicable cost and profit factors totals about \$971,100.

Submission of conflicting
scrap rate history

Honeywell states that in addition to the management scrap reports, they also furnished, as part of their proposal for contract -0015, a historical variance factors schedule showing an 8 percent material scrap rate for the mine through March 1969. During negotiations on May 15, 1969, Honeywell furnished an updated variance schedule to the Government negotiators that included April 1969 transactions. On this updated schedule, the inception-to-date scrap rate for the mine was 8 percent as opposed to the 9.8 percent shown on the management scrap report. Consequently, Honeywell believes it has adequately disclosed the existence of an 8 percent scrap rate for contract -0372 and, therefore, they claim that defective pricing does not exist for any scrap rates negotiated in excess of 8 percent.

Our review disclosed that the variance schedule showing the 8 percent scrap rate contained primarily labor factors and related supporting data. The title of the variance schedule refers to the labor factors that are applicable to the production labor hours. In contrast, the management scrap reports showing the 9.8 percent scrap rate are identified as being "Material Scrap Rate" and the only data entered thereon relates to the computation of the monthly and inception-to-date scrap rates.

Government files indicate that during the DCAS review of the April 25, 1969 proposal, a contractor official minimized the significance of the 8 percent scrap rate shown on the variance schedule for scrap incurred through March 1969. The official indicated that inventory transfers and additional scrap not yet booked would increase the scrap rate to 10.5 percent by the time the contract was closed out. Furthermore, he stated that additional scrap statistics would be furnished to the Government representatives during the fact-finding meetings. During the fact-finding meeting held on May 9, Honeywell furnished an exhibit estimating a 10.3 percent inception-to-date scrap rate through the end of April 1969. This 10.3 percent estimate, however, was based on the erroneous data shown on the management scrap report. Nevertheless, according to the record of negotiations maintained by Government officials, a contractor official stated during the fact-finding meetings that the 10.3 percent rate supported the scrap rate proposed by the contractor.

In like manner, Honeywell's proposal for the follow-on contract -0001 included a variance schedule showing an 8 percent scrap rate

for the mine through April 1969 under contract -0372. In addition, Honeywell also furnished management scrap reports to the Government representatives for their review and evaluation that showed a 9.8 percent scrap rate for the same period. Since deliveries for contract -0372 had been completed by April 1969, changes of the scrap statistics after April 1969 were negligible. Government files show that on June 17, 1969, during the Government's review of the proposal for contract -0001, a Honeywell official explicitly stated that the material scrap rate of 9.8 percent shown on the management scrap report was accurate and that the 8 percent rate shown on the variance schedule was inaccurate.

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After we brought our findings to the contractor's attention, the company initiated a review of the scrap recording and accounting procedures. Honeywell then issued revised scrap control procedures on February 8, 1972, to assure:

1. Training of employees on scrap ticket preparation.
2. Improved control over scrap ticket issuance and processing.
3. Improved coding accuracy on the scrap tickets.
4. Timely processing of scrap tickets.
5. Audits are performed to test for procedural compliance.

DESTRUCTIVE TESTING

In its proposal for contract -0015, Honeywell included an estimate of the materials, labor and burden costs it would incur in destructively testing parts or assemblies during the lot acceptance testing. Over 90 percent of the proposed costs were to be incurred for the destructive testing of the safing and arming mechanisms. Honeywell had overestimated the number of safing and arming mechanisms required for destructive testing, resulting in potential increased costs to the Government of about \$64,700 after providing for all applicable cost factors, the cost sharing ratio, and the profit factor.

In the proposal of January 28, 1969, Honeywell had estimated the destruction of 21,440 safing and arming mechanisms during destructive testing. This quantity was reviewed and approved by the DCAS Quality Assurance Division. In the proposal of April 25, 1969, Honeywell increased the number of safing and arming mechanisms to be destroyed from 21,440 to 34,491 units. Included in the 34,491 units was a provision for double sampling all production lots for the anti-disturbance test. Under the double sampling plan, if the

number of defects found in the first sample exceeded the first acceptance number but was less than the first rejection number, a second sample of equal size would be drawn from the lot in order to determine if the lot would be ultimately accepted or rejected.

Based on the actual experience for contract -0372 and contract -0015 through the certificate date, May 23, 1969, Honeywell was not justified in including a provision for a double sample on all lots.

The number of safing and arming mechanisms required to perform the anti-disturbance destructive testing is statistically predictable by using the test results up to May 23, 1969, and applying them to the new and more stringent requirements of contract -0015. After allowing the contractor an allowance to provide for any necessary double sampling, we determined that Honeywell had overestimated by approximately 8,262 units the number of mechanisms required to perform the testing. Accordingly, unless target costs and profits are adjusted, the amount received by Honeywell under the contract may be higher by about \$64,700 than was justified based on data available to Honeywell.

MATERIALS

Our review also revealed that the costs the Government incurred under contract -0015 may increase by about \$208,200 (increases of \$272,400 less decreases of \$64,200) because the material estimates were not based on the most current cost and pricing data. Examples illustrating some of these overstated estimates follow.

Integrated circuit (Part 8677) overstatement may result in increased costs of \$127,800 to Government

On the material proposal record that supports material prices entered on the proposal, Honeywell indicates that there will be no purchases of this part and that the entire contract requirement of 242,174 pieces would be obtained from inventory at the unit cost of \$2.25 each. Honeywell had, in fact, purchased 100,000 pieces at \$1.60 each and 75,000 pieces at \$1.015 each 1-1/2 to 3 months prior to the certificate date. Furthermore, Honeywell's last purchase of this part under the predecessor contract was for 75,000 pieces at \$.75 each. Using actual purchase prices, the appropriate unit cost for this part is \$1.18 each instead of the \$2.25 each shown on the proposal. Consequently, target costs were overstated by about \$320,700 and, accordingly, unless adjusted, the amounts received by Honeywell under the contract may increase by about \$127,800 after application of the cost-sharing ratio and the profit factor.

Integrated circuit (Part 9253)
overstatement may result in increased
costs of \$27,300 to Government

In computing the average unit price for this part, Honeywell failed to consider that a portion of the requirement would be satisfied by the use of another integrated circuit. Although purchase orders issued prior to the certificate date justified a price of \$1.377 per part, Honeywell proposed prices of \$1.37 for part of the requirement and \$1.60 for the balance of the requirement, resulting in an overstatement of target costs of about \$68,500. Accordingly, the amount received by Honeywell under the contract may be increased by about \$27,300 after application of the cost sharing ratio and the profit factor.

Resistor (Part 11392) overstatement
may result in increased costs of
\$19,100 to Government

Honeywell made a clerical error on the material proposal record in computing the average unit price. Consequently, the target costs were overstated by about \$47,900, and the resulting increased costs to the Government after application of the cost sharing ratio and the profit factor may total about \$19,100.

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In addition, there were 12 other parts on contract -0015 (see appendix I) that were overstated based on cost and pricing data available to Honeywell resulting in increased costs to the Government totaling about \$98,200. On the other hand, Honeywell furnished us with a listing of parts which it believed constituted offsets. We reviewed these items and other supporting evidence and allowed about \$64,200 as offsetting items in arriving at the net additional costs of about \$208,200 that may be incurred by the Government for materials under contract -0015.

CONTRACTOR COMMENTS

In May and August 1971, we presented our findings of overstated costs for materials, destructive testing, and scrap on contract -0015 to Honeywell officials and also furnished them with copies of pertinent workpapers. Subsequently, Honeywell furnished us with its rebuttal to our findings and also furnished us with details of items it claimed as offsets for contract -0015. In general, Honeywell disagreed with our conclusions regarding the existence of an overstatement of costs. We reviewed and evaluated Honeywell's response

and adjusted our claim of overstated costs as was deemed necessary. In June 1972, we presented to Honeywell our revised claim of overstated costs for contract -0015 along with the details of those items that were claimed by Honeywell but which we did not accept. In addition, we also furnished Honeywell with our findings of overstated costs on contract -0001 resulting from the scrap rate on the mine. We mutually agreed with Honeywell officials that instead of continuing the process of issuing claims and rebuttals, it would be more expedient to furnish the pertinent facts to the procurement agency for action and ultimate disposition.

CONCLUSIONS AND RECOMMENDATION

Our examination disclosed that the estimated costs for contracts -0015 and -0001 were overstated by about \$2.7 million on the basis of cost and pricing data available to Honeywell prior to the effective dates of its certifications. As a result, the Government may incur additional costs of \$1,698,100 under the contracts. We believe that these findings are subject to consideration for price adjustments under the defective pricing clause included in the contracts.

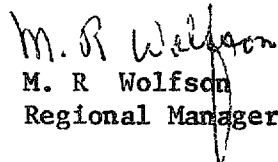
We recommend that you consider our findings, as well as any additional information available to you, to determine the extent to which the Government may be entitled to a price adjustment with respect to these procurements.

We would appreciate a written reply within 30 days expressing your views and comments on the matters discussed in this letter.

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Copies of this letter are being sent to the Comptroller of the Air Force; the Commanding General, Air Force Systems Command; the Director, Defense Contract Audit Agency; the Regional Manager, Defense Contract Audit Agency, San Francisco; the Director, Defense Supply Agency, the Commander, Defense Contract Administration Services Region, St. Louis; and the President, Honeywell, Inc.

Sincerely yours,


M. R. Wolfson
Regional Manager

APPENDIX I

SUMMARY OF POTENTIAL INCREASED
COSTS TO GOVERNMENT RESULTING
FROM OVERSTATED COST ESTIMATES

	<u>Overstatement of estimated costs</u>	<u>Increased costs to Government after provision for cost-sharing and profit</u>
<u>Contract -0015</u>		
<u>Materials</u>		
7734 Diode	\$ 18,300	\$ 7,300
7765 Contact ring	19,600	7,800
8663 Diaphragm disc	16,200	6,400
8677 Integrated circuit	320,700	127,800
9253 Integrated circuit	68,500	27,300
11301 Piston actuator	24,200	9,700
11302 Micro detonator	23,400	9,300
11346 Cup	8,000	3,200
11352 Circuit board	55,900	22,300
11392 Resistor	47,900	19,100
11424 Circuit board	11,500	4,600
11425 Circuit board	16,900	6,700
11567 Spring	35,600	14,200
28004008 Casting	9,600	3,800
28004009 Casting	7,300	2,900
	<u>\$ 683,600</u>	<u>\$ 272,400</u>
- Offsets	(161,000)	(64,200)
Total Materials	<u>\$ 522,600</u>	<u>\$ 208,200</u>
<u>Destructive Testing</u>		
Reduction in the quantity of safing and arming mechanisms	162,300	64,700
<u>Scrap</u>		
Reduction of scrap percentage on mine from 10% to 6.5%	<u>1,139,400</u>	<u>454,100</u>
Total Contract -0015	\$1,824,300	\$ 727,000
<u>Contract -0001</u>		
<u>Scrap</u>		
Reduction of scrap percentage on mine from 8% to 6.5%	<u>867,000</u>	<u>971,100^a</u>
Totals	<u>\$2,691,300</u>	<u>\$1,698,100</u>

^aContract -0001 is FFP and has no cost-sharing.

All amounts are rounded.

APPENDIX II

COMPUTATION OF PROFIT AND PAYMENTS TO HONEYWELL

CONTRACT F08635-69-C-0015

	Final results per Honeywell (unaudited)	Final results as adjusted by GAO for cost overstatements	Difference
Computation of underrun (overrun):			
Target cost as adjusted by modifications	\$50,344,900	\$50,344,900	\$ -
Overstatement of costs	-	(1,824,300)	1,824,300
FPI final cost	<u>50,344,900</u>	<u>\$48,520,600</u>	<u>\$1,824,300</u>
Underrun (overrun)	<u>\$ 1,335,700</u>	<u>(\$ 488,600)</u>	<u>\$1,824,300</u>
Honeywell's share at 30% of underrun (overrun)	<u>\$ 400,700</u>	<u>(\$ 146,600)</u>	<u>\$ 547,300</u>
Computation of profit:			
Target profit	\$ 4,959,700	\$ 4,780,000	\$ 179,700
Add (deduct) Honeywell's share of underrun (overrun)	400,700	(146,600)	547,300
Profit	<u>\$ 5,360,400</u>	<u>\$ 4,633,400</u>	<u>\$ 727,000</u>
Expected payments to Honeywell under contract:			
FPI final cost	\$49,009,200	\$49,009,200	\$ -
Profit	<u>5,360,400</u>	<u>4,633,400</u>	<u>727,000</u>
Total	<u>\$54,369,600</u>	<u>\$53,642,600</u>	<u>\$ 727,000</u>

All amounts are rounded.



UNITED STATES GENERAL ACCOUNTING OFFICE
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ROOM 403 U S CUSTOMHOUSE 610 SOUTH CANAL STREET
CHICAGO, ILLINOIS 60607

Mr. Stephen F. Keating, President
Honeywell, Inc.
2701 Fourth Avenue South
Minneapolis, Minnesota 55408

AUG 31 1972

Dear Mr. Keating:

Enclosed is a copy of our report to the Commander, Armament Development and Test Center, Eglin Air Force Base, Florida, on the pricing of selected contracts for the CBU-42/A Wide Area Anti-Personnel Mine System awarded to Honeywell, Inc.

The information contained in this report may ultimately be included in a report to the Congress. Therefore, we would appreciate receiving a written reply within 30 days expressing your views and comments on the matters discussed in the enclosed report.

Very truly yours,

M R Wolfson
M. R. Wolfson
Regional Manager

Enclosure