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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 2054

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2 addressees 72-0399

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Dear Mrs. Grasso:

In your letter of June 23, 1971, you requested our Office to review the Department of the Army's purchase of some of the Hamilton Watch Company's equipment and the Army's related noncompetitive contract award for M565 mechanical time fuzes. Some of the equipment is used to manufacture pinions--the fuzes' precision parts. The Army stated that pinions had been purchased extensively overseas and that the mobilization requirements for them could not be met by domestic pinion producers. In subsequent discussions with your office, we agreed to evaluate the Army's actions by reviewing the reported principal producers' capacities to manufacture pinions.

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In July 14, 1971, hearings before the Subcommittee on Defense of the House Committee on Appropriations, Army officials stated that, to maintain the present domestic base and to retain skilled employees, the Army was negotiating with Hamilton to buy certain of its equipment, to lease its plant, and to place sufficient production with it to keep the plant active through January 1972.

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PURCHASE OF CERTAIN HAMILTON ASSETS

The Army stated that the domestic watch and clock industry, which then was the exclusive source of M565 mechanical time fuzes, had been declining since 1948. Mobilization requirements for the time fuzes exceed domestic capability, and extensive imports of precision parts, particularly pinions, have been used to meet recent military requirements. After Hamilton notified the Army in December 1970 that it would liquidate its ordnance operation and dispose of its equipment, the Army decided to purchase the equipment and lease one of the buildings.

The Hamilton facility is particularly valuable to the fuze production base because it has integrated capability. According to the Army the facility can produce all of its required precision components, including pinions, without relying on imports.

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In July 1971 the Army purchased Hamilton's fuze line tooling, accessories, and equipment for \$2 million and agreed to lease one of its buildings consisting of about 300,000 square feet for the period August 1, 1971, to December 31, 1976, at an annual rental of \$40,000. The Government has a lease-renewal option for two 4-year periods as well as an option to purchase the property for \$500,000 during any period. The Army stated that it had acted pursuant to section 2304(a)(16) of title 10 of the United States Code, to preserve a mobilization base in the interest of national defense.

The Army designated Hamilton Technology, Inc., a subsidiary of the Hamilton Watch Company, as lessee of the property from August 1, 1971, to December 31, 1972. This designation is renewed automatically unless the Government gives 6 months' written notice.

A facilities contract was executed on November 12, 1971, whereby Hamilton Technology was to be paid \$180,000 for the 6-month period ending January 31, 1972, for facility and maintenance costs for that part of Hamilton's real property not presently utilized in producing precision timing devices. The \$180,000 payment is predicated upon estimated sales of Hamilton Technology of \$5 million for the 6-month period. Contract terms provide that the amount payable for facility and maintenance costs be adjusted for fluctuations in yearly sales. According to a schedule in the contract, this amount can range from \$700,000 yearly, based on no annual sales, to zero, based on annual sales of \$30 million or more.

CONTRACT AWARDS

In June 1971 the Army awarded a noncompetitive letter contract to Hamilton Technology for the production of 144,000 M565 fuzes at a unit price of \$15.932, in accordance with its plan to retain Hamilton in the mobilization base. Delivery is to be completed on or before January 31, 1972. On December 6, 1971, the letter contract was finalized at a ceiling price of \$2,289,211 or \$15.8973 a unit.

The administrative contracting officer told us that, as of October 31, 1971, the contractor's actual costs under the

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contract were approaching \$2.2 million and that a significant projected loss at completion of the contract was contemplated. Thus the ceiling price is expected to be paid.

On August 2, 1971, the Army exercised a contract option with Ingraham Industries for the production of 120,000 M565 fuzes at a unit price of \$11.62 for a total of \$1,394,000. On August 3, 1971, the Army exercised a contract option also with the Westclox Division, General Time Corporation, for the production of 51,000 M565 fuzes at a unit price of \$12.48 for a total of \$636,480. Deliveries on both optional procurements are to be completed on or before January 31, 1972. There will be additional costs of about \$500,000 to \$600,000 to the Government for the Hamilton contract when compared with the unit prices of Westclox and Ingraham, respectively.

On November 18, 1971, the Army awarded fixed-price contracts covering the period March 1972 through February 1973 to Ingraham for 429,448 M565 fuzes at \$14.73 each for a total of \$6,325,769 and to Hamilton for 420,012 M565 fuzes at \$17.12 each for a total of \$7,190,605. As a result of these awards, the Government will pay Hamilton about \$1 million more than it would have paid Ingraham solely on the basis of the above unit prices.

PINIONS

Army officials stated that their decisions relating to the purchase of certain Hamilton assets and contract awards had been based on information in an April 22, 1971, briefing publication prepared by the Army Munitions Command. These officials stated also that the actions were taken to buy time in which to study the precision components and fuze program more thoroughly.

The April 1971 briefing publication showed estimated maximum pinion requirements for mobilization to be 68.4 million a month. The publication included a listing which showed pinion production capacities of the Government and private companies to be 44.9 million a month, less essential civilian requirements of 10 million, or a net total of 34.9 million.

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Hamilton's capacity included in the 44.9 million was estimated at 1.1 million a month. The Army's capacity estimates were based on the use of two 10-hour shifts a day, 6 days a week.

We reviewed the Army's list and selected for detailed verification the pinion-producing capacities of certain firms. We also obtained production estimates from other companies not on the list that appeared to have pinion production capability.

We found that at least 18 additional companies not on the Army list could produce pinions in significant quantities for the Army's mobilization reserve requirements. We computed additional pinion-making capacities on the basis of three 8-hour shifts both for 6 days and for 7 days by using machine production estimates furnished by machine manufacturers' representatives.

Army officials agreed that additional companies could produce pinions but questioned the quality of pinions produced by two such companies which use a cold-drawn or extruded method. The importance of the cold-drawn method is that relatively scarce Swiss hobbing or pinion-cutting machines would not be required. Automatic screw machines, which are in plentiful supply in the United States, generally are used to process cold-drawn stock.

The Army also took exception to our use in our computation of three 8-hour shifts and stated that two 10-hour shifts, 6 days a week, was the more efficient shift arrangement. On the other hand a "Pinion Report," issued by the Department of Defense Value Engineering Services Office on December 1, 1970, indicated that three 8-hour shifts for 6 or 7 days a week were feasible and more productive. The Army also questioned production estimates that representatives of machine manufacturers furnished to us.

Recognizing that a prior 1970 study, on which the April 1971 briefing publication was based, was not as comprehensive as it could have been, the Army is making a more thorough study to be completed in January 1972 by using personnel from

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the Munitions Command, Picatinny and Frankford Arsenals, and Harry Diamond Laboratories. Agency officials have agreed to make a critical reevaluation of the entire fuze program, including Hamilton's place in the program, after the current study is completed.

Army officials have stated that Hamilton will not be retained in the production program if it is not a low-cost producer and if the study reveals a domestic capability for making precision parts greater than mobilization requirements.

RETENTION OF SKILLED EMPLOYEES

Army officials emphasized that an important reason for the purchase of Hamilton's assets and the award of contracts was to retain its skilled employees necessary to produce precision parts, to prevent a deterioration of the domestic mobilization base. We received data from several other watch companies indicating that many technical employees, such as foremen, setup men, engineers, and toolmakers, had been released from these firms as a result of a decline in ordnance business. Presumably some of these skilled employees would have been retained had these companies obtained more Army fuze work.

Officials of two firms informed us that they had not recently produced fuzes and that they did not then have any mobilization commitment. They stated, however, that, as prime contractors having skilled clock-making employees, their firms could produce the M565 fuze. Army officials stated that there was a considerable difference between available skills and active skills actually employed in fuze making and that some companies which, in the past, had said that they could manufacture the fuzes had fallen considerably behind schedule after contracts were awarded to them.

CONCLUSIONS

A 1970 Army study used to support the purchase of Hamilton's fuze line assets and related contract awards was insufficiently comprehensive because additional available machine

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capacity had not been considered. The Army's current study is intended to remedy this. We believe that a thorough study will enable the Army to determine whether Hamilton should be retained in the production program.

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We visited four principal producers of mechanical time fuzes and obtained and evaluated detailed information concerning their pinion-making capabilities. We also considered the pinion-producing capacities of 20 additional commercial firms, including two companies which used the cold-drawn method, and held discussions with responsible officials.

We used data submitted to us by the Defense Industrial Plant Equipment Center, Memphis, Tennessee, to compute the Government-owned machines' capabilities. This information assisted us in computing the capacities of commercial firms which were using this equipment in their daily operations or which were storing it for possible future use to meet mobilization requirements.

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A similar report is being furnished to Senator Weicker in response to his request. If we can be of further assistance in this matter, please let us know.

Sincerely yours,



Comptroller General
of the United States

cl The Honorable Ella T. Grasso
fr House of Representatives