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

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DEFENSE DIVISION

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Dear Mr. Secretary:

We have recently completed a review of the procurement of ammunition components to determine whether significant amounts of defective items were being accepted from suppliers.

The Army Ammunition Procurement and Supply Agency, Joliet, Illinois, is the Defense Department's major ammunition procurement activity. This agency purchases ammunition components and parts and furnishes them to Government-owned, contractor-operated (GOCO) plants for assembly into ammunition items. The parts and components furnished are generally inspected and accepted at the manufacturers' plants prior to shipment. In accordance with provisions of the Armed Services Procurement Regulation, such inspection and acceptance is conclusive except for latent defects, fraud, or such gross mistakes as amount to fraud.

Our review was performed at five of the 24 currently active Government-owned, contractor-operated Army ammunition plants, the Army Ammunition Procurement and Supply Agency, Defense Contract Administration Services offices, and selected plants furnishing parts and components.

We found that the five plants received $1.8 billion worth of Government-furnished material during a 1-year period. The ammunition plants, however, could not readily furnish statistics showing the amount of this material that was found to be defective.

We reviewed 15 items having a value of $96.3 million and found that $8.8 million, or 9.2 percent, was reported as defective. These materials were acquired from contractors or other GOCO plants, hereinafter referred to as vendors. We selected seven of the items for more detailed examination and found that the Government had incurred $3 million in additional costs due to defective material. The costs involved were as follows:

	Amount
Reinspection and rework	$1,633,819
Value of items scrapped	888,949
Replacement of defective items	568,700
Transportation costs	40,000
Total	$3,131,468

Several examples of defects found and costs incurred for correction are discussed below.

M72A1 ROCKET

The M72A1 rocket consists of a launcher and a rocket-propelled warhead. It is assembled by one of the GOCO plants, using material, such as the launcher, motor, closure, and fuze, acquired by the Government from other vendors.

In 1969, 204 shipments containing 1.1 million launchers were received, of which 33 shipments contained launchers either with critical defects (those likely to injure the person handling the item) or with major defects (those likely to reduce materially the usability of the item). Since Government quality representatives at the vendor's plant had previously accepted the launchers, the only course of action available to Government personnel at the ammunition plant was to report the defective launchers to the procuring agency and reinspect the shipments.

In 1968 and 1969 reinspections of rocket components cost the Government $974,184 and resulted in scrapping defective components valued at $694,649. Moreover, inspections after final assembly had revealed quality defects traceable to deficiencies by the vendor. For example:

In 1969 the contractor operating the Government plant screened about 19,000 assembled rockets for excessive trigger pressure. According to an Army representative, this problem could have been at least partially

attributed to the vendor's failure to place the required rust preventative on the trigger mechanism. These screening costs amounted to $217,800. In addition, 7,757 launchers, valued at $96,300, were scrapped.

In another instance, over one third (135,600) of the rockets assembled from May through December 1969 were rejected due to fuze failures traceable to one vendor. Reinspections at the GOCO plant revealed fuzes partially or completely armed, or electrical circuits out of position. As a result, 46,700 rockets required new fuzes at an estimated replacement cost of $503,800.

LIFTING PLUGS

During 1969 over 1.4 million lifting plugs for 155 mm projectiles were received at one ammunition plant. During incoming inspections at the plant about one half of the plugs were found to have defective threads. This occurred even though the vendor submitted certifications that the plugs were produced in accordance with specifications. The Government quality assurance representatives at the vendor's plant had identified deviations from required cleaning and pretreatment procedures that were the primary causes for rejection at the ammunition plant. The inspector, however, accepted the plugs and did not require the production deviations to be corrected.

The Army has authorized the GOCO plant operator to screen and rework nearly all the plugs received from this vendor during 1969. We estimate that additional costs of about $149,000 will be incurred.

ADDITIONAL EXAMPLES

In August 1969 an Army ammunition plant received 267,000 defective M2 bandoleers that had to be hand packed at an additional cost of $87,000.

Another plant intensified its incoming inspection procedures principally because firing pins in T336E7 head assemblies contained a defect that was attributed to deficiencies in the quality assurance program at the vendor's plant. This resulted in additional costs of $340,600 due to (1) increased inspection effort by the operating contractor, $202,700, (2) removal and replacement of fuzes having defective head assemblies, $64,900, and (3) scrapping of defective head assemblies, $73,000.

Incoming inspections performed by the operating contractor on projectile bodies for 4.2-inch mortars in the first 7 months of 1969 disclosed 52 shipments of 149,175 defective units. The Government incurred additional costs of $28,135 to reimburse the operating contractor for screening suspect projectile bodies. Also the vendor agreed to rework defective parts at its plant provided that the Army paid the transportation costs of approximately $40,000.

ACCEPTANCE OF CONTRACTOR-ACQUIRED MATERIAL

The operating contractors, in addition to receiving parts purchased by the Government, purchase parts and components directly from suppliers. In those cases, contractors operating the Government plants accept the materials at destination. On this basis, they can generally return defective materials to the vendors who must absorb the transportation, rework, or replacement costs involved.

We found that this policy of accepting material at destination was widely followed by industry. For example, one vendor's purchase order deferred final acceptance up to 30 days after receipt of material, even though the order required inspection by both Government and vendor representatives at the supplier's plant. Another vendor utilized more stringent provisions in its standard purchase order that afforded it the right to reject any goods, within 6 months of receipt, which did not conform to requirements of the purchase order, notwithstanding prior inspection, payment for, or use of the goods.

AGENCY COMMENTS

Because of the relatively high-percentage rejection rate of previously accepted material, we suggested that the Department of Defense consider deferring acceptance until items reached their destination and were deemed adequate for use by the ammunition plants. This, we believe, would encourage vendors to exercise better quality control over their products, reduce costs, and possibly reduce the requirement for Government inspectors at vendors' plants.

In responding to our draft report, the Assistant Secretary of Defense, Installations and Logistics, generally concurred with our findings and conclusions and agreed that the problem of rejecting previously accepted material was of sufficient magnitude to warrant exploration of alternatives which would reduce Government costs and improve the quality of vendors' products or services.

The Assistant Secretary stated that the Army was undertaking a study to determine whether, and under what circumstances, inspection at destination may be cost effective. He stated also that, as an alternative to inspection and acceptance at destination, the Army had included a warranty clause in selected ammunition component contracts on a trial basis.

The Assistant Secretary indicated that contracts containing a warranty clause would have several advantages over the "inspection and acceptance at destination" concept. He stated that the use of warranties might be advantageous because (1) it would provide a period after acceptance in which the Government would have legal recourse against a contractor, (2) the Government may elect to screen the lot of defective material at the GOCO plant, at the contractor's expense, and return the defective material for replacement to avoid a shutdown of GOCO production lines, and (3) it permitted existing procurement policies to remain in effect while it provided the Government with recourse against a contractor when defective material was found subsequent to acceptance.

We plan to follow up our review to determine the effectiveness of the action taken by the Department of Defense.

Copies of this report are being sent to the House and Senate Committees on Armed Services and to the House and Senate Committees on Appropriations. Because of his expressed interest in this area, we are sending a copy of this report to Senator William Proxmire. Copies are also being sent to the Director, Office of Management and Budget; the Secretary of the Army; the Director, Defense Supply Agency; the Director, Defense Contract Audit Agency; and the Commission on Government Procurement.

Sincerely yours,

E. M. Bailey

Director, Defense Division

The Honorable
The Secretary of Defense