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UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D C 20548

CIVIL DIVISION

APR 29 1969

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Dear Dr. Astini:

We have made a survey of policies and practices relating to the procurement of equipment and supplies at the Boulder Laboratories of the National Bureau of Standards, Department of Commerce, located at Boulder, Colorado. Our survey was made pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53) and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

Our survey was directed primarily toward examining into the procurement methods utilized, the extent of competition obtained, and whether required sources of supplies were being utilized. Our survey included an examination of pertinent legislation; General Services Administration regulations; Bureau regulations, policies and procedures; applicable records available at the Boulder Laboratories; and discussions with appropriate officials at Boulder and NBS headquarters in Gaithersburg, Maryland.

The Supply Section of the Administrative Services Division at Boulder is responsible for the procurement of supplies, equipment, and services for both Bureau and Environmental Science Services Administration (ESSA) organizational units located at the Boulder Laboratories. Our survey showed that procurement policies and practices were generally satisfactory. We did note, however, certain areas where we believe improvements could be made. These areas are discussed in the following sections of this letter.

POSSIBLE SAVINGS THROUGH INCREASED  
USE OF BLANKET PURCHASE AGREEMENTS

During our survey we noted that established dollar limitations may have restricted the use of blanket purchase agreements (BPAs) and that by lifting such restrictions possible savings could be effected.

The Code of Federal Regulations (41 CFR 1-3606) establishes a Government-wide policy for the purchase of day-to-day supplies or non-personal services requirements, such as the maintenance of rental equipment, through BPAs with vendors or dealers on a "charge account"

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basis. It provides that BPAs are authorized when (1) a wide variety of items in a broad class of goods, like hardware, are generally purchased from local suppliers but the exact items, quantities, and delivery requirements are not known in advance and may vary considerably, (2) there is a need to provide local commercial sources of supply for one or more offices or projects in a given area that do not have or need authority to purchase otherwise, and (3) in any other case where the writing of numerous purchase orders can be avoided through the use of this procedure.

Section 209.10 of the Bureau's Administrative Manual implements the above Government-wide policy and provides Bureau procurement officials authority to use BPAs. However, it also established dollar limitations for purchases made under BPAs which restricted use of the BPA procedure to procurements where the total cost of a purchase request was less than \$500 and no single line item exceeded \$100.

We observed that of \$4.8 million of supplies and equipment procurement at Boulder in fiscal year 1968, BPAs or reservations were utilized for only about \$358,500. Reservations are normally used for monthly user charge type items such as machine rentals, utilities expenses, or other charges that are of a recurring nature.

The Boulder Supply Section maintains five storerooms to stock and have available for issue various types of supplies. Each of the five storerooms generally supplies a particular type of item and each is assigned a separate project number for fiscal purposes. For example, the Electronic Storeroom stocks electronic type items and the Stationery Storeroom stocks office supplies.

Our review of 348 purchase orders issued to 13 local vendors for storeroom replenishment items during fiscal year 1968 showed that while a number of purchase orders were within the established BPA dollar limitations, BPAs were not used. Moreover, we found that elimination of the established dollar limitations for BPAs would have allowed the purchases made under these 348 purchase orders to have been made under 14 BPAs.

We did not determine the relative administrative cost to the Boulder Supply Section for purchasing items by using BPAs as compared to individual purchase orders. However, a 1964 General Services Administration (GSA) report on a study of purchasing and contracting operations at Bureau headquarters showed that the cost to purchase each line item was 25 cents under BPAs and \$2.47 on informal (open market) purchases. Based on the GSA study, it appears that savings

could be effected if greater use were made of BPAs for replenishing storeroom items.

Procurement officials at Bureau headquarters in Gaithersburg, Maryland, informed us that the dollar limitations were established to ensure that individual purchase orders would be prepared for all purchases of nonexpendable capital items in excess of the limitations. According to a Bureau official, the preparation of individual purchase orders assures that the items purchased will be capitalized and recorded on the property management records, thus providing the Bureau with a means of internal control over such purchases.

Our review showed, however, that the same internal control could be accomplished under the BPA system. Procurement officials at Bureau headquarters agreed with our view and on February 24, 1969, the Chief, Procurement Section, removed the Bureau's dollar limitations on the use of BPAs for all Bureau procurement.

We believe that removal of the Bureau's established dollar limitations should enable savings in procurement costs through the increased use of BPAs at Bureau headquarters, as well as at Boulder. However, in discussing the possible increased usage of BPAs, we were advised by a Boulder procurement official that all purchases must be identified with an individual project number for fiscal purposes and that use of a single BPA for numerous projects was unsatisfactory for this purpose. We recognize the need to associate all purchases with the individual project number for fiscal purposes, however, this need does not preclude the use of BPAs for storeroom replenishment since, as previously stated, each storeroom has a separate project number and a separate BPA could be established for each vendor supplying a particular storeroom. In addition, we believe that further increased use of BPAs may be possible through establishing only one BPA for each vendor supplying storerooms. We believe, therefore, that further savings could be effected at the Boulder Laboratories through the increased use of BPAs for storeroom replenishment.

#### Recommendation

Accordingly, we recommend that the Boulder Laboratories make greater use of BPAs where practical and feasible in the procurement of supplies, including storeroom replenishment items.

#### POTENTIAL SAVINGS THROUGH INCREASED USE OF FORMAL ADVERTISING

We noted during our survey of procurement activities that additional savings might be effected through the increased use of formal advertising.

The Code of Federal Regulations (41 CFR 1-3.101) provides that no procurement in excess of \$2,500 shall be made by negotiation if the use of formal advertising is feasible and practicable under the existing conditions and circumstances, even though such conditions and circumstances would otherwise satisfy the requirements of procurement by negotiation.

The Boulder Supply Section makes numerous purchases from local suppliers for replenishment of storeroom stock, such as electronic supplies. We were informed by a Stores Unit official that requisitions for replenishment were normally initiated when the reorder points indicated on the stock cards were reached--usually when a 2-month supply of each item is on hand. As a normal practice, the Procurement Unit, upon receipt of requisition documents for \$2,500 or less, issued purchase orders on a daily basis to local suppliers under the small purchase procedure.

During our survey, we identified 17 weeks during fiscal year 1968 in which purchases of electronic supplies for storeroom replenishment from four local suppliers would have exceeded \$2,500 had all requisitions for electronic supplies been accumulated for 1-week periods in lieu of issuing purchase orders on a daily basis. The use of formal advertising procedures for such purchases could increase the number of vendors solicited, which could result in a lower total cost to the Government for the items purchased through increased competition.

Boulder procurement officials advised us that they believe that the accumulation of requisitions for formal advertising might increase procurement costs and adversely affect supply services. They advanced the following principal reasons:

1. Higher priced personnel would be required to perform contract work.
2. The procurement cycle would be increased by 1 month because of the necessity to obtain and evaluate bids.
3. Formal advertising would not necessarily result in lower prices since two of the vendors currently supplying items to NPS are national firms offering national prices. In addition, price quotations are solicited from local vendors who are known by experience to give the lowest prices for certain items.

It is generally recognized that increased competition through formal advertising provides one of the best assurances that needs will be filled at a fair price. We believe, therefore, that increased use of formal advertising procedures through the accumulation of requisitions for storeroom replenishment on a weekly basis could result in a savings in procurement costs at the Boulder Laboratories.

#### Recommendation

Accordingly, we recommend that a comparative study be made at the Boulder Laboratories to determine whether the accumulation of requisitions, on a weekly basis, for storeroom replenishment would result in a net savings in procurement costs.

#### NEED TO REVIEW COST FACTORS USED IN ECONOMIC ORDER QUANTITY FORMULA

General Services Administration (GSA) Federal Property Management Regulations (FPMR 101-27.102) require the use of the economic order quantity (EOQ) principle of stock replenishment by civilian agencies and recognize the need for periodic review of the cost factors used to formulate EOQ tables. This method of replenishment utilizes a mathematical formula to determine the order size which will minimize total procurement and inventory-carrying costs. The EOQ tables show the economic order quantities for ranges of annual or monthly demand. The reliability of the formula is dependent on the accuracy of the procurement and inventory cost factors used in the calculations.

The Boulder Supply Section uses an EOQ table in the replenishment of storeroom stock. However, the table in use was developed over three years ago and the procurement and inventory cost factors used in the formula have not been subsequently reviewed or updated.

Since the reliability and effectiveness of the EOQ principle of stock replenishment is dependent on the accuracy of the procurement and inventory cost factors used in developing the EOQ table, we believe that the Boulder Supply Section should review these cost factors to determine whether they are still appropriate.

#### Recommendation

Accordingly, we recommend that the Boulder Supply Section review, and revise if necessary, the procurement and inventory-carrying cost factors used in the EOQ formula. We recommend also that action be taken to provide for the periodic review of these cost factors.

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We wish to express our appreciation for the courtesies and cooperation extended to our representatives during the survey. We plan no further reporting at this time. We would appreciate being advised of corrective actions taken as a result of this report.

Sincerely yours,

Henry Eschwege

Henry Eschwege  
Associate Director

Dr. A. V. Astin, Director  
National Bureau of Standards  
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