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

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FEDERAL PERSONNEL AND
COMPENSATION DIVISION

APR 12 1973

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The Honorable Robert F. Froehlke
The Secretary of the Army

Dear Mr. Secretary:

The General Accounting Office (GAO) has completed its review to determine the effect of workload changes on civilian manpower authorizations at the major commodity commands of the Army Materiel Command (AMC). We undertook this review because preliminary data made available to us by AMC indicated that civilian manpower reductions were not keeping pace with workload decreases being experienced by the commodity commands. The commands employed 64,400 civilians at June 30, 1972. These employees during fiscal year 1972 received about $951 million in pay and benefits.

We found that the methods and bases used by the AMC commodity commands to determine manpower requirements could be improved. For example, the preferred method for ascertaining manpower needs is through the use of reliable performance standards and projected workload. Our review showed that this method was not used because appropriate performance standards generally were not available. Moreover, workload data was inadequate and the alternative methods used to compute manpower needs were questionable. These matters are discussed below. Also discussed below is the status of the Maroun System and its potential for analyzing and confirming the validity of manpower requirements.

Our work was performed at AMC and three of its commodity commands: Mobility Equipment Command, St. Louis, Missouri; Munitions Command, Dover, New Jersey; and Missile Command, Redstone Arsenal, Alabama.

NEED TO DEVELOP AND MAINTAIN PERFORMANCE STANDARDS

One of the principal manpower control procedures used by the Army to determine personnel requirements is the manpower utilization survey. AMC survey teams use the procedure to determine by on-site appraisal

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the minimum work force required to accomplish the mission of each command. Under the Defense Integrated Management Engineering System (DIMES) program, each AMC commodity command is responsible for establishing and maintaining performance standards which are one of the key factors the AMC survey teams are required by Army regulations to consider in determining manpower needs.

Our evaluation of the latest manpower utilization survey reports on the three commands included in our review showed that performance standards generally (a) had not been developed or (b) when available were considered unreliable. Therefore, the survey teams seldom were able to use performance standards as a basis for recommending manpower levels. For example, the percentage of total recommended spaces based on performance standards were: Mobility Equipment Command--less than 1 percent; Missile Command--2.6 percent; and Munitions Command--8.4 percent.

The principal reasons why the commodity commands did not have appropriate performance standards available were:

--An adequate number of trained personnel were not assigned to the commodity commands' work measurement programs under which performance standards are developed and maintained. For instance, Work Measurement Program Status Reports (as of June 30, 1972) showed that the number of personnel required to operate the work measurement programs of AMC's eight commodity commands was 146.5. In contrast, only 80 personnel were actually assigned and some of these had not been adequately trained.

--Equipment resources to mechanize the systems were not available under the assigned priority.

--Established work units and related historical data were not available with which to establish performance standards.

In our opinion, AMC will have to overcome these problems if it is to meet the DIMES objective of using performance standards to determine manpower requirements.

However, work measurement program status reports (as of June 30, 1972) showed that only 17.2 percent of the civilian personnel at the eight AMC commodity commands have a potential of being covered by engineered performance standards. According to the DIMES program engineered standards are the preferred type of standards and the most reliable. These standards tell how many man-hours a task or job should take not what it did take. However, since development of an engineered standard requires that a task be highly repetitive and unchanging, many types of tasks at the AMC commodity commands are not susceptible to coverage by engineered standards.

Statistical standards are the next most reliable type of performance standard in the DIMES program. This type of standard is developed from statistical analysis of 12 months or less of past performance expressed as man-hours per work unit. It establishes a standard time for accomplishing a task. However, the standard time might be inflated since it is based on past performance which shows the amount of time a task did take, not necessarily what it should have taken. Since only 12 months or less of past performance is considered when developing a statistical standard, adequate trend analysis cannot be performed to determine if the past performance has been efficient.

About 35 percent of the performance standards at the AMC commodity commands will be the statistical type. Significantly, about 50 percent of the civilian personnel will not be covered by any type of performance standard. Therefore, in our opinion, the work measurement systems being developed by the AMC commodity commands, even when completed, still will not be fully effective in determining manpower requirements.

ALTERNATIVE MANPOWER DETERMINATION METHODS QUESTIONABLE

Because of the lack of appropriate performance standards, the AMC survey teams relied heavily on (1) past manpower utilization (actual man-hours expended) and (2) past performance (hours expended per work unit processed) as a basis for determining the personnel needs of the AMC commodity commands.

Both of the above methods assume that (a) the workload in the future will remain constant and (b) the personnel actually assigned in the previous year were efficient. In addition, the past performance method has two other shortcomings:

--All the various types of work units produced by an organizational element are given equal weight. Since the various work units differ greatly in the length of time required to perform, a change in the mix of the work units in the subsequent year will effect the reasonableness of the computation.

--The total man-hours worked by an organizational element were used in computing average monthly productivity rather than only those hours charged against the work units.

WORKLOAD DATA INADEQUATE

During our evaluation of the manpower utilization survey reports, we found that:

--Work unit data presented to the survey team at the Missile Command to support past workload performance was erroneous.

--Measurable work units at the three commands we reviewed were not available for some tasks within several organizational elements.

--Work unit data at the three commands was unreliable as an accurate index of workload because of distortions caused by (a) revised methods of counting and recording work units, (b) consolidations and restructuring of the organizational elements of the commodity commands and (c) changes in the description of the performance codes related to specific work units.

--At the Munitions Command, the Procurement Division used a workload indicator system it had developed instead of the one prescribed by Army regulations. Thus, it was not comparable with other commodity commands.

--The output data provided by the three commands to the survey teams covered 1 year or less past performance. Consequently, any trend analysis performed by the survey team regarding past performance could only be based on data covering 1 year or less.

The Maroun System study currently in process has also uncovered similar conditions.

MAROUN SYSTEM

AMC is currently participating in an Army study to identify improved management indicators for manpower needs. The objective of this study is to develop a new system--the Maroun System--which will ultimately establish standards for manpower and other resources in each of the Operation and Maintenance, Army, functional areas, and by relating these standards to predicted workload, build a program budget from a zero base. The key feature of the Maroun System is that it correlates money, manpower, and workload.

AMC's efforts to develop its Maroun System are being performed on a phased basis within available manpower resources. To date, AMC has encountered many problems in correlating, validating and normalizing the data obtained from its subordinate activities. These problems have resulted from the almost total absence of any formal or informal records to isolate one-time or non-recurring costs; numerous changes in the account structure within and between fiscal years; inconsistencies in budgeting and accounting for the same function by different installations/activities; and the lack of emphasis in prior years on accurately accumulating and reporting workload data.

Even though a considerable amount of work remains to be done before the Maroun System becomes operational, we believe that the system holds

promise as a method whereby management will be able to analyze and confirm the validity of manpower requirements and budgets.

CONCLUSIONS

We believe the present methods and bases used by the AMC commodity commands to determine manpower requirements could be improved if AMC and its commodity commands took the following actions:

--Assign an adequate number of trained personnel to operate the work measurement programs.

--Develop and maintain performance standards where feasible.

--Make a concerted effort to improve and standardize accounting and data gathering methods within and between the commands in order to establish better performance standards and to provide the accurate, consistent data needed by the survey teams and for development of the Maroun System.

--Provide the survey teams with work unit and workload data for a number of years so that adequate trend analysis of workload can be performed.

--In conjunction with the Department of the Army continue to develop the Maroun System toward its ultimate goal of providing a means of budgeting from a zero base by using predicted outputs and manpower and other resource standards.

We would appreciate your comments or views on the matter discussed in this letter report.

Sincerely yours,

Forrest R. Browne
Director