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National Security and
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January 11, 2000

The Honorable Jerry Lewis
Chairman, Subcommittee on Defense
Committee on Appropriations
House of Representatives

Subject: Defense Budget: Army National Guard Operation and Maintenance Budget

Dear Mr. Chairman:

Since fiscal year 1998, the Army National Guard has reported high levels of unfinanced Operation and Maintenance (O&M) requirements—differences between the total amount the Guard estimates it needs in federal funding to operate and maintain its forces and the President's budget request for Guard funding. This letter responds to your request that we identify the reasons for these unfinanced requirements. Specifically, we reviewed (1) the way the Guard prepares its O&M budget, (2) the five Army models the Guard uses to generate most of its O&M requirements, and (3) improvements the Army and the Guard are making to correct problems in their use of the models. We did not validate the Guard's O&M requirements that were generated by the models as it would have significantly expanded the scope of our work.

BACKGROUND

The O&M budget provides funds for training troops and for maintaining equipment and weapon systems. O&M also funds a wide range of activities that are less directly related to training and maintaining equipment. These include many day-to-day activities such as civilian personnel management and payments, transportation, and recruiting. Since 1988, O&M has accounted for an average of 35 percent of the total Department of Defense (DOD) budget, making it DOD's largest appropriation. The Guard O&M account is about 45 percent of the total Guard budget.

Before fiscal year 1998, the Guard established O&M budget requirements using its own methods and databases. The Army allocated a share of its total obligational authority to the Guard and the Guard funded its O&M requirements with the funds

provided.¹ Beginning with the fiscal year 1998 budget, Army leadership decided to integrate the Guard and the Army Reserve into the process the Army uses to develop the budget for active forces.

The Army National Guard's reported unfinanced O&M requirements have been significant for the last 3 years. Table 1 shows the O&M requirements, the funds provided in the President's budget request, the unfinanced requirements, and the congressional appropriations for fiscal years 1998-2000. As noted in the table, Congress has appropriated more funds than requested in the President's budget for the Army National Guard for the years shown.

Table 1. Army National Guard O&M Requirements, President's Budget Request, and Unfinanced Requirements for Fiscal Years 1998 through 2000.

Dollars in millions

	1998	1999	2000
O&M requirements	\$2,658	\$2,887	\$3,424
President's budget request	2,259	2,437	2,904
Unfinanced requirements	399	450	520
Congressional appropriations	2,447	2,747	3,161

SUMMARY

Beginning with the fiscal year 1998 requirements determination process, the Guard has used five Army models to determine about 80 percent of its O&M requirements. These requirements are then reviewed by senior Army leaders, who consider Army priorities as they allocate funds within the budget levels established for the Army by the Office of the Secretary of Defense. Since the established budget levels are usually below the Guard's total O&M requirements, the Guard has reported unfinanced requirements in fiscal years 1998-2000.

Since it began using the Army's models, the Guard has experienced some problems with three of the models that estimate O&M requirements for funding civilian personnel, training, and base operations/real property maintenance. As a result, the models did not provide reliable estimates of some O&M requirements for fiscal years 1998-2000, according to Guard officials. Specifically, inaccurate results were produced by the models because the Guard did not provide accurate and timely data on civilian personnel costs and did not have a complete database on its real property inventory. In addition, one model did not consider certain costs that are unique to the Guard or used historical data that did not provide a good basis for determining future requirements.

¹ Total obligational authority is the sum of the new budget authority provided for a given fiscal year and any other amounts authorized to be credited to a specific fund or account during that year, including transfers between funds or accounts.

The Guard and the Army are working to correct problems with their use of the models so that the models will provide more reliable estimates of O&M requirements in the future. For example, the Army has assigned its Cost and Economic Analysis Center the task of providing a way to ensure that cost data for the civilian personnel model is provided in an accurate and timely manner. The Guard is also working with the Center to identify some of the unique training costs to the Guard for inclusion in the model.

THE GUARD USES THE ARMY PROCESS FOR DEVELOPING O&M REQUIREMENTS

Beginning with the fiscal year 1998 budget, the Guard has used a number of Army models to develop its O&M requirements. We examined five models that generate about 81 percent of the Guard's O&M requirements. These models establish the requirements for civilian personnel, training, base operations support/real property maintenance,² depot maintenance, and recruiting and retention. The remaining 19 percent of the Guard's O&M requirements, which include such items as environmental needs and tuition assistance, are developed using other methods and models.

Once the Guard develops its requirements, it must work within the Army's program evaluation groups to justify the requirements and establish budget estimates for them. These six groups were created to focus on six key functional areas: organizing, manning, training, sustaining, and equipping the force and maintaining installations. The groups are chaired by senior officials from the Army secretariat and the Army staff and include members from other Army program offices. Their mission is to validate and review the requirements put forward by the Army, Guard, and Army Reserve; reconcile conflicts; and recommend how available resources should be reallocated. The Guard and Reserve participate in the groups as members.

When making resource allocation decisions, the groups have to work within the Army budget level established by the Office of the Secretary of Defense, which is based on the defense budget limits established by law. The Budget Enforcement Act of 1997 (Title X of P.L. 105-33, Aug. 5, 1997) extended discretionary spending limits or statutory caps on the level of budget authority and outlays determined through the annual appropriations process. The act modified these spending limits by establishing separate limits for defense and nondefense discretionary spending for fiscal years 1998 and 1999.

In addition, the groups consider funding priorities established by senior Army leaders. For example, in the early 1990s, Army leadership decided to fund units with an assigned wartime mission and early deployment date at a higher level than units with no wartime mission. Since many of the Guard units did not have a wartime mission, the Army provided less funds than the Guard believed were needed to train

² Base operations include the services necessary to operate an installation, such as food and housing services, snow removal, and fire protection. Real property maintenance activities include maintaining and repairing buildings, structures, roadways, utility plants, and other permanent structures.

and equip its units. The Guard is also subject to other funding decisions, such as the January 1999 decision to fund Guard depot maintenance requirements at 80 percent and Army depot maintenance requirements at 90 percent.

Resource allocation recommendations made by the program evaluation groups are then reviewed and approved by Army senior leadership and submitted to the Office of the Secretary of Defense. The submission is then reviewed by the Office of the Secretary of Defense and by the Office of Management and Budget and included in the President's Budget. Since requirements usually exceed the budget levels established for the Guard, the Guard reports those requirements that are unfinanced to interested congressional committees.

PROBLEMS RELATING TO MODELS USED TO DEVELOP GUARD O&M REQUIREMENTS AND PLANS FOR IMPROVEMENTS

During the first 3 years of using the Army's models to develop its requirements, the Guard experienced problems with three of the models—the civilian personnel, training, and base operations support/real property maintenance models. In some cases, the Guard experienced problems with the models that the active Army was already aware of. In other cases, the Guard experienced problems because the models did not include some costs that were unique to the Guard, or the Guard did not have accurate databases to use as inputs to the model. As a result, Guard officials concluded the models did not produce reliable estimates of some Guard requirements. The Guard did not experience significant problems with two other models that generate requirements for depot maintenance and recruiting and retention. However, the Army did not fully fund the Guard's requirements in these two areas due to budget limits and other factors such as the Army's decision to place higher priority on funding units with a wartime mission and earlier deployment dates than many Guard units have. The five models are discussed below.

The Civilian Manpower Obligation Resource Model

The civilian manpower obligation resources model is an automated tool the Army uses to calculate civilian staffing needs and the estimated dollar amount required to pay its civilian workforce. Historically, civilian personnel costs represent about 40 percent of the Army National Guard's O&M budget. The model generates salary rates using actual salary expenditure data from the prior fiscal year reported by each Guard unit to the Defense Finance and Accounting Service, which is responsible for standardizing financial and accounting data for the Department of Defense. The model uses force structure and expenditure data to calculate civilian personnel costs.

For fiscal year 2000, the unfinanced requirement for civilian personnel costs for the Guard is \$132 million; the total requirement is about \$1.3 billion. According to Guard officials, this unfinanced requirement exists because (1) the Army did not fully fund the Guard's requirements for civilian personnel (2) the model does not factor in all salary costs for civilian personnel and (3) the Guard has experienced problems in reporting accurate data and making corrections to the data in a timely manner.

Problems With the Model

One problem is that the model does not account for all personnel costs, such as periodic salary increases that civilian employees are eligible to receive. As a result, Army funding for Guard civilian personnel has not included any funding for these periodic increases. The Guard has had to reprogram funds from other O&M areas to pay for these increases.

Another problem is the accuracy of the data on prior year payroll costs, which are used to generate the salary rates in the model. The Guard has 54 states and territories that must input monthly civilian pay expenditure data into the Defense Finance and Accounting Service system. Entries are not always accurate and sometimes late. As a result, Guard officials said they have had to make significant quarterly and end-of-year corrections to avoid the appearance that they did not use all available funds. Army Budget Office officials said they do not verify whether the data provided by the Defense Finance and Accounting Service is complete when they determine the salary rates for the model. These officials said that it is the Guard's responsibility to certify the numbers being reported are correct and that the Guard is supposed to do this at the end of the second and fourth quarters. Guard officials acknowledged that they have the opportunity, at least at the end of the year, to correct all data entry problems. However, if they miss the deadline for submitting the corrections, the data is incorrect.

Army and Guard Are Working to Correct Problems With the Model

The Army has taken several actions to correct problems associated with estimating civilian personnel costs. It has recently tasked its Cost and Economic Analysis Center with calculating the salary rate figures. The Center plans to institute the use of a 3-year salary expenditure average instead of the current prior fiscal year total, which should mitigate unusual expenditures in any particular year from affecting the general expenditure trend and include the periodic salary increases that are currently missing.

The Center also plans to use an interactive software system that will allow local finance offices at the state level to immediately interact with the Defense Finance and Accounting Service to correct errors in the reported civilian workforce expenditures before the data is processed. Local financial officers will be required to work directly with Accounting Service officials to determine and correct the errors or the systemic problem that caused the error before the data is finalized. By correcting problems immediately, the Center hopes to eliminate many of the recurring reporting problems and thus the need for quarterly and end-of-year adjustments. This would improve the actual expenditure reporting totals and produce a more accurate requirements estimate. The Center expects it will take 2 to 3 years for this system to be implemented.

The Training Resource Model

The training resource model is used to compute the total organizational requirement for direct training (the total operating cost of items such as the annual miles driven for tanks and wheeled vehicles and hours flown for aircraft) and indirect training (the recurring operating costs for items such as field gear, medical supplies, contracts, and travel). Historically, training represents about 25 percent of the Army National Guard's O&M budget: about 16 percent for ground forces and about 9 percent for the aircraft flying hour program. This model uses three types of information to compute the training requirements: (1) cost factors for tank miles, wheeled vehicle miles, flying hours, and weapon systems usage for direct training and a per capita usage factor, which includes all indirect training items; (2) force structure data from an Army-wide database; and, (3) planned Guard training events contained in individual unit training plans as determined by a Guard training model.

For fiscal year 2000, the Guard's unfinanced requirement for training is \$139 million for ground forces and \$30.8 million for flying hours; the total requirement is about \$874 million.

Problems With the Model

Army National Guard officials are concerned about the validity of some of the cost factors used in the training resource model and the way these factors affect the requirements generated by the model. These cost factors are developed by the Army's Cost and Economic Analysis Center and are based on a 3-year average of historical use and demand for parts, plus inflation. For new weapon systems, the model uses engineering factors in place of historical usage. The cost factors are specific to the Guard, the Army Reserve, and each Army major command. For example, the fiscal year 2001 cost factor for the M1A1 tank is \$76.24 per mile if the tank belongs to the Guard and \$173.48 if the tank belongs to the Army's Forces Command.

Because the cost factors are based on historical usage, Guard officials believe that prior funding levels do not provide a good basis for determining future requirements. For example, in fiscal year 1998, the Guard's training requirement for its divisions was funded at about 13 percent of the stated requirement. According to Guard officials, this funding level was based mostly on an Army decision to fund units with an assigned wartime mission and early deployment dates at a higher level than units with no wartime mission. The Guard has many of its units in this second category and therefore received less funding than was required to keep those units trained and equipped. The lower funding level caused the Guard to significantly reduce vehicle usage for the year. Since fiscal year 1998, the Army has funded training at a higher level, but in the opinion of Guard officials, the 1998 usage rate distorted the data used to calculate the cost factors and resulted in lower cost factors.

Guard officials also believe that the Cost and Economic Analysis Center does not consider some costs that are unique to the Guard. For example, a Guard unit stores its tanks at training sites, which are usually not located at the unit's home station. This requires the unit to travel to and from the training site. This mileage is not

included in the cost factors used by the model. As a result, the Guard adjusted the model's output to reflect these requirements. Also, if a tank requires repair while a Guard unit is training at the site, the repair is usually done by the Army repair facility at the site. This repair is charged to the Army, not to the Guard, and therefore is neither included in the Guard's record of demand for parts nor considered in calculating the Guard's cost factor.

Army and Guard Officials Are Reevaluating Cost Factors

Officials from the Guard and the Cost and Economic Analysis Center are reviewing how the cost factors should be calculated. The Guard has had one person stationed at the Center to help Center officials better understand how the Guard operates and its problems with the cost factors. The Center official responsible for calculating the factors stated that he is willing to work with the Guard to incorporate any changes agreed to in the review.

The Army Installation Management--Headquarters Information Model

The Army installation management--headquarters information model is used to generate requirements for real property maintenance and base operations. The model is used to develop resource requirements for all of the Army's O&M installation costs except for base communications and audiovisual needs. The model uses data from several different Army systems and other sources that provide information related to facilities, such as force structure by unit, population by installation, real property inventory, and requirements for facilities. The real property inventory provides information on each type of facility, such as the square footage and other characteristics. The Guard has its own real property inventory database. The Army's Cost and Economic Analysis Center provides cost factors for the model.

Real property maintenance and base operations costs have historically been about 10 percent of the Guard's O&M budget. For fiscal year 2000, the total requirement is \$468 million for base operations and \$190 million for real property maintenance. The Guard's fiscal year 2000 unfinanced requirement for real property maintenance is \$72 million.

Problems With the Model

During the development of the fiscal year 1998 budget, the first year the Guard used the model, the Guard found that its real property inventory database was not comparable with that of the Army and the Army Reserve. The Guard's database was not complete because it included only the square footage of buildings. In contrast, the Army's database included other items, such as land, roads, and training ranges. Therefore, the model did not determine the Guard's total real property maintenance requirement. Also, the Guard database did not clearly indicate what percentage of federal funding was required to maintain Guard facilities that are state-owned, but receive some federal funding, such as armories. As a result, Guard officials adjusted the database to make it as accurate as possible.

In addition, until recently, the model calculated requirements for real property maintenance using historical actual expenditure data. Because past budgets had not funded real property maintenance at required levels, the historical costs drove down the requirements estimates for future years. The Guard also found that real property maintenance costs varied by locality. The model did not consider these regional variations.

Finally, the Army estimated most of its base operations costs on a per capita basis, which assumed that all types of personnel used the same services in the same amounts. However, the cost of some services is not directly related to the number of personnel on an installation. For example, the cost of utilities is determined by the square footage of a building, not by the number of people in the building.

Improvements to the Model

The Guard has improved its real property inventory database. In particular, the Guard added items that are already included in the inventory for the Army and Army Reserve. This addition will make the databases of all three entities comparable. The Guard also added information to identify the percent of federal funding needed to maintain Guard facilities owned by the states. This will allow the model to more accurately determine real property maintenance requirements.

About 5 years ago, the Army reviewed the model and identified problems and needed improvements. The Army has been working to implement these improvements. The model was improved to develop cost estimates for real property maintenance using private sector industrial standards, rather than historical budget execution data, to better reflect the true cost of maintenance and repairs. In addition, cost factors used by the model have been refined to account for differences in cost by locality and different inflation rates. These changes were implemented in 1999 for determining requirements for the fiscal year 2001 President's budget.

The Army is also refining its methodology for determining base operations requirements. The Army has agreed on and defined 95 services that make up base operations, such as food service, electricity, and custodial services. Quantity and quality performance measures are now being developed for each of these services. The Army will then be able to use these measures as a basis for estimating costs. Eleven of the cost metrics for base operations services were tested during 1999 in developing requirements for the fiscal year 2001 budget. An Army official responsible for developing and implementing the metrics believes that all of the cost metrics for each of the 95 services could be in place by 2001.

The Depot Maintenance Resource Requirements Model

The Army uses the depot maintenance resource requirements model to develop its depot maintenance requirements. Historically, depot maintenance accounts for about 4 percent of the Guard's O&M budget. The fiscal year 2000 requirement for depot maintenance is \$228 million, and the unfinanced requirement is \$41 million.

The Guard develops an independent cost estimate for depot maintenance and uses the estimate as an input to the model as the basis for developing the requirements. The model uses a 3-year average of historical costs and over 30 data sources to build the baseline estimate of requirements. In building this estimate, the model considers the Guard's ability to actually spend the budgeted funds during the year as well as the backlog of depot maintenance items.

The Guard and the Army have been working very closely on depot maintenance issues for several years. Guard officials are satisfied with the way the depot maintenance requirement generation process works. The Guard has an unfinanced requirement for depot maintenance because the Army has determined it cannot fully fund the Guard's requirements within its budget limit.

The Recruiting and Retention Model

The Army uses the recruiting and retention model to calculate its requirements for recruiting and retention activities, civilian pay for recruiters, and recruiting advertising. Historically, recruiting and retention accounts for about 2 percent of the Guard's O&M budget. For fiscal year 2000, the total requirement for recruiting and retention is about \$95 million, with an unfinanced requirement of \$53 million. Guard officials are satisfied with the process and the model used to generate recruiting and retention requirements. As with depot maintenance, Guard officials believe the primary issue is the lack of budget dollars to fully fund the program.

AGENCY COMMENTS

DOD officials, including officials from the Office of the Assistant Secretary of Defense (Reserve Affairs), provided oral comments on a draft of this report. They did not raise any issues concerning the report. The Army National Guard provided technical comments, which we included in the report where appropriate.

SCOPE AND METHODOLOGY

To determine reasons that may have contributed to the Guard's unfinanced requirements, we focused our work on how O&M requirements are determined. We reviewed budget guidance and other budget planning documents. We interviewed officials from the Army National Guard's and the Army's Offices of Budget and Program Analysis and Evaluation. To understand the models and how they operate, we interviewed officials from the Office of the Secretary of Defense (Reserve Affairs), the Army's Cost and Economic Analysis Center, and Army and Army National Guard program offices and reviewed documentation on the models. We did not review or validate the models, inputs to the models, or requirements generated by the models.

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We performed our work from July through December 1999 in accordance with generally accepted government auditing standards.

We are sending copies of this letter to the Honorable Louis Caldera, Secretary of the Army; Major General Roger Schultz, Director, Army National Guard; the Honorable Charles Cragin, Assistant Secretary of Defense (Reserve Affairs), and the Honorable Jacob Lew, Director, Office of Management and Budget; and interested congressional committees. Copies of this report will also be made available to others on request.

If you have any questions about this report, please contact me at (202) 512-5140. Major contributors to this letter were Brenda S. Farrell, Ann Borseth, Alan M. Byroade, and Richard H. Yeh.

Sincerely yours,



Norman J. Rabkin
Director, National Security
Preparedness Issues

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