

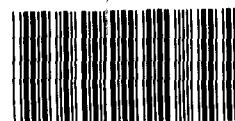
GAO

Report to the Commanding General,
Army Materiel Command

September 1991

ARMY MAINTENANCE

More Effective Implementation of Maintenance Expenditure Limits Needed



144837

National Security and
International Affairs Division

B-245280

September 18, 1991

General William G. T. Tuttle, Jr.
Commanding General
Army Materiel Command

Dear General Tuttle:

We reviewed the Army's policies and procedures for computing and using maintenance expenditure limits (MELS)—a means of helping inventory managers select the more cost-effective alternative when deciding to either repair or buy depot-level reparable spare parts. Our objectives were to determine whether (1) the Army Materiel Command's (AMC) buying commands were applying MELS effectively in their repair-or-buy decisions and (2) AMC was sufficiently overseeing the commands' use of MELS.

Results in Brief

The three buying commands we reviewed were not effectively implementing the MEL policies and procedures, and MELS were usually not a factor in their repair-or-buy decisions. In addition, AMC's management controls did not provide sufficient oversight of the commands' use of MELS. As a result, AMC's top-level managers could not ensure that the buying commands were economically meeting the Army's requirements for depot-level spare parts.

Background

The Army spends about \$2 billion each year to repair unserviceable (deteriorated and failed) items and to upgrade equipment at its depots. Before making decisions on whether to repair an item or discard it and purchase a new one, the buying commands are required to compare the repair cost with the replacement cost. Repair-or-buy decisions must be periodically reconsidered because repair and procurement costs often change.

To ensure that the Army is making cost-effective decisions, AMC has established MELS. According to AMC Regulation 750-51, "Maintenance Expenditure Limits," dated April 30, 1987, MELS are the maximum amount that can be spent to repair an item and return it to a fully serviceable condition. The cost to repair an item is compared with the MEL to determine whether an unserviceable item should be repaired or replaced through procurement. MELS are based on a percentage of the

procurement price of a new item. For example, an item with a procurement price of \$100 and a MEL of 74 percent would have a MEL value of \$74. If the repair cost exceeds \$74, it would be more cost-effective to buy a new item.

Before 1983, a 65-percent MEL was in effect for all items. Repair costs were not to exceed 65 percent of the item's procurement price unless an inventory manager could justify otherwise. Beginning in 1983, AMC changed the MEL to 100 percent of the procurement price to simplify the cost-comparison process. In other words, an inventory manager simply needed to compare the repair cost with the procurement price and select the more economical method.

The most recent policy change occurred in April 1987 in response to (1) concerns that a 100-percent MEL failed to consider certain costs associated with repair and procurement and (2) the premise that a repaired item was less reliable and durable than a new one. The current policy allows inventory managers to consider factors such as the dollar value of the item, transportation costs, salvage cost and value, and the worth of a repaired piece of equipment relative to that of a new one. Under the current policy, MEL percentages generally range from 70 to 80 percent.

Maintenance Expenditure Limit Computations Not Part of Repair or Buy Decisions

Our review at three of AMC's six buying commands—the Aviation Systems Command (AVSCOM), the Communications-Electronics Command (CECOM), and the Tank-Automotive Command (TACOM)—showed that AMC's policies and procedures for computing MELs were not being properly followed or consistently applied. We found that

- MELs were not computed at CECOM using AMC's current MEL regulation because the Command was not aware of the regulation;
- MELs were computed at AVSCOM and TACOM after repair programs had been planned—too late to be a factor in making effective repair-or-buy decisions;
- MELs were inaccurately computed at AVSCOM because of confusion over which of the different procurement prices available should have been used in making the computation; and
- exemptions were not requested for items that could not be procured, even though the costs to repair them exceeded the MEL, and waivers justifying the retention of repair programs were not prepared for items that could be less expensively procured.



United States
General Accounting Office
Washington, D.C. 20548

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MELs Not Computed

At the time of our review, CECOM had not written implementing regulations or taken any other action to implement AMC's 1987 MEL policy. CECOM officials said they had not implemented the policy because they were not aware that AMC had officially adopted the regulation. Our review of 15 items randomly selected from CECOM's fiscal year 1991 repair programs confirmed that inventory managers were not computing the MELs. We determined that repair decisions on 12 of these items might not have been cost-effective because the cost to repair them exceeded the MEL and, according to inventory managers, the items could have been replaced through procurement.

At AVSCOM, some inventory managers were not computing MELs even though the Command had issued guidance implementing AMC's MEL policy. AVSCOM's Aircraft Systems Division, for example, issued standard operating procedures implementing the MEL policy in March 1989 and updated the procedures in December 1990. In addition, AVSCOM issued an implementing regulation on the policy in May 1990. Our review of 21 items randomly selected from AVSCOM's fiscal year 1991 repair programs showed that while inventory managers had computed MELs for 16 of the items, they had not computed MELs for the other 5. In a November 1990 draft report, the Army Audit Agency found that AVSCOM inventory managers also had not computed MELs for the Command's fiscal year 1990 repair programs. The Agency recommended, and AVSCOM concurred, that the buying command comply with the policy for computing MELs.

MEL Computations Untimely

AMC's policy states that MEL computations are to be included in the buying command's repair and procurement record when a repair program is established. The MEL should be recomputed each time repair and procurement cost data are updated. According to the regulation, the MELs should be computed or updated when preparing the budget, when repair programs are executed, and for planning purposes for future years.

Applying the regulation to fiscal year 1991 repair programs, budget-year MELs would be first computed about June 1989, with updates in June 1990 and again just prior to the start of fiscal year 1991. An advantage of computing the MELs well in advance of the year in which repair programs are to be executed is that procurements can be planned and lead times accounted for on items that are more economical to buy than to repair. Early repair-or-buy decisions reduce the risk of depots

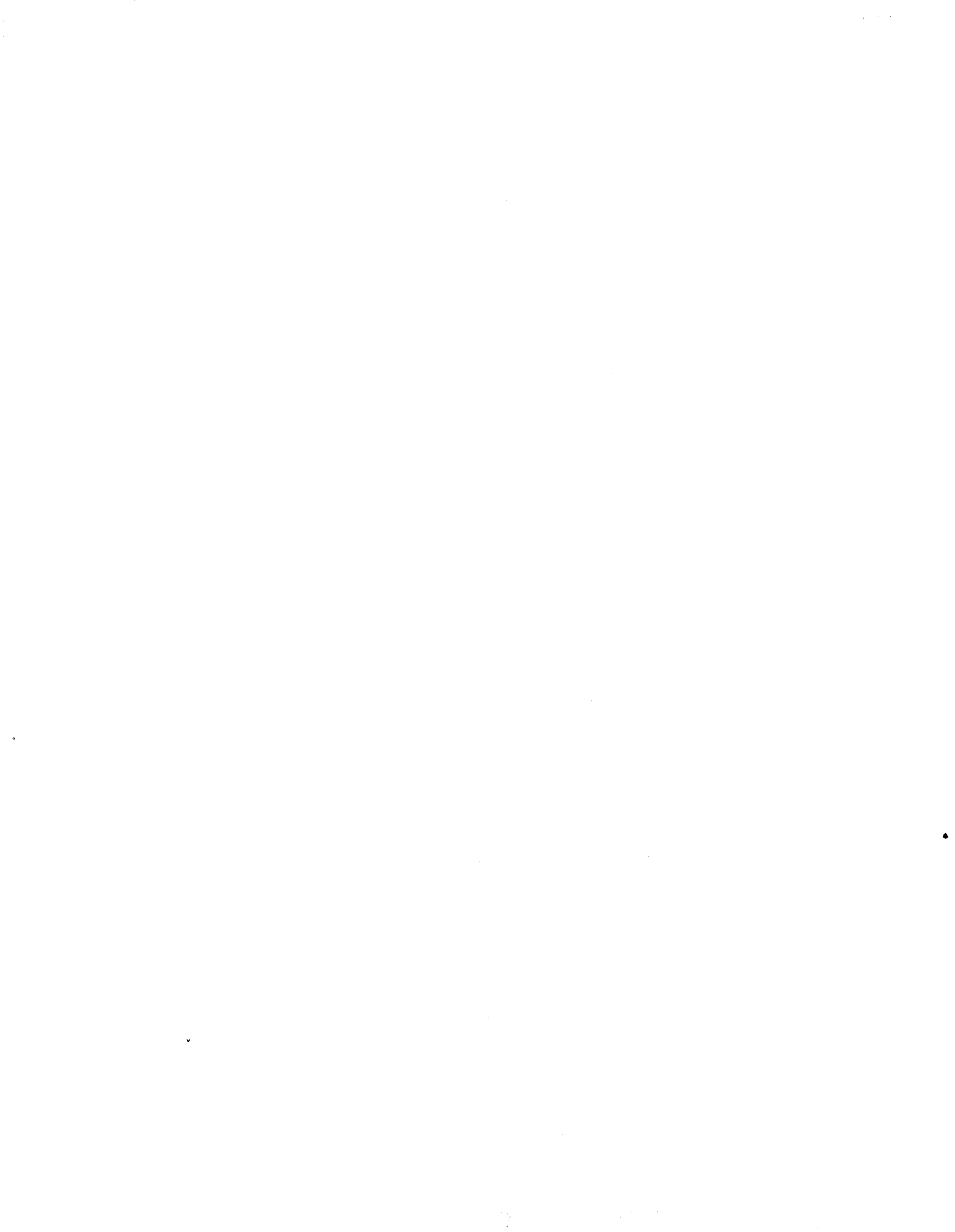
ordering and receiving parts for repair programs that could later be cancelled.

Our review showed that MEL computations at AVSCOM and TACOM for fiscal year 1991 were untimely because they were computed after repair programs had already been planned. MELs at these two commands were not computed in conjunction with the budgetary process as recommended in AMC's policy. Furthermore, the May 1990 implementing regulation issued by AVSCOM does not address AMC's recommended time schedule for computing MELs. As a result of untimely MEL computations, some repair programs were implemented even though repair costs exceeded the MELs and the items could have been replaced through procurement.

AVSCOM inventory managers generally computed MELs between February and April 1991—after the start of fiscal year 1991 and also after the repair programs had begun. Our review showed that for 5 of the 21 AVSCOM programs MELs were prepared too late for making effective repair-or-buy decisions. For example, in April 1991, AVSCOM item managers computed a MEL for a central display unit (National Stock Number [NSN] 6620-01-125-0791). The total repair cost (\$385.01) exceeded the MEL (\$342.93), but no action was taken to procure the item.

TACOM officials said that they were unaware of AMC's MEL policy until early 1990. In June 1990, TACOM issued a memorandum directing inventory managers to use AMC's policy in computing MELs, and an implementing regulation was being drafted at the time of our review. Coinciding with the June 1990 memo, TACOM initiated a study to determine the impact of applying AMC's MEL policy to its fiscal year 1991 depot repair program. TACOM's MEL computations in this study were made about 1 year after the Command prepared its fiscal year 1991 depot maintenance budget submission. TACOM reviewed 1,686 repair programs, and its preliminary findings indicated that approximately 24 percent (409 programs totaling about \$120 million) exceeded the MEL.

Despite these findings, TACOM officials told us that in only a few cases the MEL study had recommended replacing rather than repairing the item. They said that because of Operation Desert Storm, a large number of repair programs was necessary and there was not enough time to buy some items. However, TACOM officials believe that under normal circumstances when adequate time is available to plan procurements, implementing the MEL policy could result in the procurement of many items that are currently being repaired.



Some MELs Computed Inaccurately

There has been confusion over which procurement price should be used for computing MELs. AMC's regulation gives two different instructions as to which price should be used as the current unit replacement price in computing the MEL. In the body of the regulation, this price is identified as the standard unit price, which is posted in the National Stock Number Master Data Record. However, in an appendix to the regulation, the current unit replacement price is identified as the contract cost divided by the number of items procured. This per-unit contract cost is also posted in the master data record.

AMC officials agreed with the second instruction, saying that the per-unit contract cost is equivalent to the current unit replacement price and should be used to compute MELs. They said that the standard unit price should not be used because it includes an Army stock fund surcharge that adds about 30 percent to the price.

Using the incorrect standard unit price could significantly affect the MEL computation and, ultimately, the repair-or-buy decision. For example, a shipping and storage container (NSN 8145-01-129-7975) managed by AVSCOM has a per-unit contract cost of \$1,770.22 and a standard unit price of \$2,293.00—a difference of approximately 30 percent. Given a MEL of 74 percent, the computation based on the per-unit contract cost totals \$1,309.96, while the computation based on the standard unit price totals \$1,696.82. Hypothetically, if it costs \$1,500, for example, to repair this item, a different decision could be reached after comparing this cost to the standard unit price instead of the per-unit contract cost.

The confusion over which price to use in computing MELs was especially evident at AVSCOM. The AVSCOM regulation instructs inventory managers to use the standard unit price when computing MELs. Our review showed that inventory managers were using both the standard unit price and the per-unit contract cost to compute MELs. AVSCOM inventory managers incorrectly used the standard unit price in 6 of the 16 cases in which they computed MELs.

Waivers and Exemptions Not Prepared for Repair Programs Exceeding the MEL

When the depot repair cost exceeds the MEL, AMC's policy requires inventory managers to evaluate the repair program to determine whether it should go forward. The policy states that a one-time waiver may be granted to avoid stock shortages. In cases where an item can no longer be purchased because a supply source is not available, AMC policy allows the commands to seek permanent MEL exemptions.

Our review showed that all three buying commands had not followed the required procedures regarding the use of waivers and exemptions. AVSCOM inventory managers had neither prepared waivers nor applied for exemptions for the nine repair programs that they had determined exceeded the MEL. CECOM inventory managers did not prepare waivers or apply for exemptions because they were unaware of the MEL policy and did not compute MELS. TACOM inventory managers had prepared waivers for programs that exceeded the MEL; however, they said that they had not yet determined which items should be exempted instead of waived.

AMC Monitoring of the Commands' Use of MELS Inadequate

AMC was not monitoring the buying commands' implementation of the current regulation to ensure that they were making cost-effective repair-or-buy decisions. Although AMC issued memoranda to the six buying commands that discussed the use of its MEL regulation, none of the three buying commands included in our review developed implementing procedures before March 1989. In December 1990, AMC issued additional guidance to the buying commands emphasizing the need for them to implement the regulation.

AMC is required to perform a compliance review at each of its buying commands at least once every 2 years. AMC officials told us, however, that because of possible reductions-in-force at AMC and the importance of Operation Desert Storm, its most recent compliance review was performed in early 1990 at CECOM and did not include a review of the implementation of AMC's MEL regulation. Furthermore, no reviews had been made of AMC's revised MEL policy since it was issued in 1987. AMC officials said they did not know why the implementation of the MEL policy was not included in the CECOM compliance review.

Recommendations

We recommend that you take the following actions:

- Reemphasize the requirement that the buying commands are to (1) compute MELS and compare them with the cost to repair an item, (2) procure items which, according to the MEL, are not economical to repair, and (3) request waivers or exemptions in cases where the repair program is necessary, even though the cost to repair exceeds the MEL.
- Direct the commands to compute and recompute MELS in accordance with the time frames in AMC's MEL regulation and to include in their implementing regulations the correct time frames for making these computations.

- Clarify that the procurement price the buying commands are to use in the MEL computations is the per-unit contract cost.
- Include the extent of implementation of MEL policies and procedures at the buying commands in future compliance reviews.

Scope and Methodology

We reviewed AMC Regulation 750-51 as well as local regulations at each of the three buying commands for making repair-or-buy decisions. We discussed the regulations with officials of AMC and the buying commands.

To assess the effectiveness of the buying commands' implementation of MELS, we randomly selected repair programs for review at CECOM and AVSCOM. At CECOM we randomly selected 28 items from a total of 1,990 fiscal year 1991 depot repair programs. Because CECOM had not computed MELS as required, we computed MELS as specified by the regulation and reviewed documentation for the 15 items which exceeded the MEL.

At AVSCOM, we randomly selected 100 fiscal year 1991 depot repair programs. Because AVSCOM's policy is to compute MELS for only those items that exceeded 65 percent of the procurement price, we reviewed 21 items that exceeded the 65-percent criteria. For all 36 items we selected at CECOM and AVSCOM, we interviewed inventory managers and obtained information on MEL computations as well as on the status of repair programs and procurements.

We also analyzed TACOM's review of 1,686 fiscal year 1991 depot programs to assess the impact of the MEL policy on that program.

We conducted our review from August 1990 to June 1991 in accordance with generally accepted government auditing standards. We discussed this report with Department of Defense and Army officials, who generally agreed with the report's findings and recommendations.


We would appreciate your advising us what action you plan to take regarding our recommendations.

We are sending copies of the report to the Secretaries of Defense and the Army; the Director of the Office of Management and Budget; and the Chairmen of the House Committee on Government Operations, the

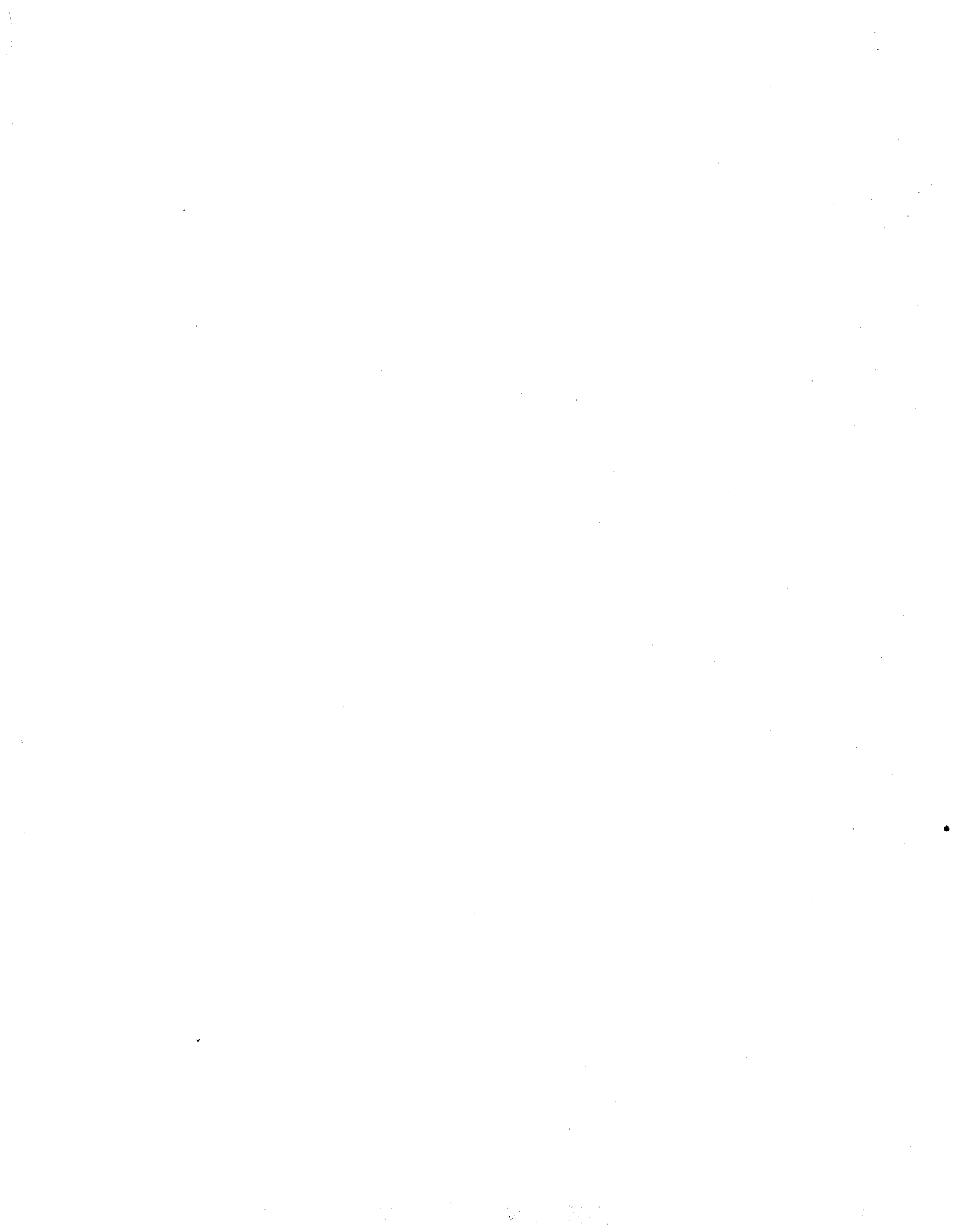
Senate Committee on Governmental Affairs, and the House and Senate Committees on Appropriations and on Armed Services.

Please contact me on (202) 275-4141 if you have any questions concerning this report. Major contributors to this report are listed in appendix I.

Sincerely yours,

A handwritten signature in cursive script that reads "Richard Davis".

Richard Davis
Director, Army Issues



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