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GAO

United States General Accounting Office
Washington, DC 20548

Logistics and
Communications
Division

B-197585

FEBRUARY 5, 1980

Reg. Rep. Carl D. Perkins GH500001

The Honorable Harold Brown AGC00005
The Secretary of Defense



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Dear Mr. Secretary:

Subject: Alternatives For Care of Material Stored
Outside (LCD-80-35)

At the request of the Kentucky congressional delegation, we have reviewed Army practices for storing material outside at depots. The delegation was concerned that, rather than using available warehouse capacity, such as at the Lexington-Bluegrass Army Depot, Kentucky, the Army is planning to construct additional warehouse storage capacity for material now inappropriately stored outside where it is subject to excessive deterioration.

Assessing the impact of deterioration of material stored outside and alternatives available for caring for such material is a lengthy process. Numerous tradeoffs, variables, and uncertainties need to be considered. Due to time constraints, we limited the scope of our review to examining the range of possibilities for caring for the material stored outside. We did not identify a specific storage action which would be the most economical while assuring required material readiness. We recognize that a combination of alternatives may be the most appropriate action.

Generally, our review consisted of discussions with key Army logistics officials, examination of studies and reports, and observations of depot storage activities at the Red River, Letterkenny, Tobyhanna, and Lexington-Bluegrass Army Depots.



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Letterkenny: DLG03861
Red River: AGC00327
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INTRODUCTION

The U.S. Army has accumulated a vast inventory of equipment and spare parts to ensure it can sustain a war-time effort should the need arise. This material primarily includes various types of weapons, munitions, spare parts, and vehicles. Much of this material is not in the hands of combat or support units. Instead, it is stored and drawn upon as needed. As of June 1979, the Army had about 2.6 million tons of material occupying about 46 million square feet of storage space at 20 depots and other locations. Of this amount, 489,000 tons, or 19 percent, were stored outside. In addition, the Army stored about 3.5 million tons for other agencies. Generally the material stored outside is composed of larger items, such as trucks and tanks and enclosed mobile shelters which contain electronics or medical equipment.

OUTSIDE STORAGE

Outside storage can be attributed, in part, to three factors:

- As the Southeast Asia conflict drew to a close, the material issue rate declined and the material was stored for longer periods. Although storage volume needs increased, available warehouse space decreased.
- Over the past few years, the Army has implemented its area-oriented depot concept. Under this concept, the storage of material has been consolidated at fewer depots. Assets, such as tanks and trucks, are stored at the depots having the maintenance mission. This consolidation transferred major storage missions from depots that did not have a maintenance mission, such as the Lexington-Bluegrass Army Depot, Kentucky, and the Pueblo Army Depot, Colorado, to other depots that did.
- Inside storage would not be beneficial or practical due to the nature or condition of some items (e.g., large inoperable items awaiting disposal or overhaul or vehicles being issued within a short period).

X The Army concedes that about 350,000 tons of material--
X generally vehicles and electronics and medical shelters--
are stored outside, even though under regulations it
should be inside. The bulk of this material, some of which
belongs to other agencies, is stored at the Letterkenny Army

Depot, Pennsylvania; Red River Army Depot, Texas; and Tooele Army Depot, Utah. According to Army sources, outside storage generally results from a lack of inside storage capacity where it is needed. Material stored outside deteriorates about four times faster than material stored inside. Consider vehicles: rubber brake seals, tires, and vinyl seat covers rot and metal surfaces rust when exposed to the elements. Generally, vehicles stored outside for over 6 months will require additional maintenance. Thus, there is a trade-off between the recurring cost of providing extra care for the outside material and costs pertaining to (1) restoration and replacement of deteriorated material, (2) degraded material readiness, and (3) additional inside storage capacity.

NEW STORAGE FACILITIES HAVE A LOW PRIORITY

Army logistics plans include storage facility construction proposals for 1982 through 1985 totaling about \$100 million. However, Army logistics officials stated that the Army has not given final approval to these proposals. Furthermore, they said that because storage facilities have a low priority, ultimate approval for such construction is uncertain.

CARE ALTERNATIVES FOR OUTSIDE MATERIAL

Various alternatives, or combinations of alternatives, are available for caring for the 350,000 tons stored outside, contrary to Army regulations, besides constructing additional warehouse space. For example:

- The Army could store the material outside without providing recurring care, thereby possibly paying later for restoration of the material at the time of issue.
- The depots could regularly care for the material to minimize future potential restoration and replacement costs.
- Depot supply activities could more frequently consolidate inside stock to make more warehouse space available (commonly called rewarehousing).
- The Army could transfer stock levels, which are beyond peacetime requirements, to available storage capacity at other Defense installations, thereby making more inside space available at depots where material is stored outside.

--The Army could construct temporary shelters to provide limited protection from the weather.

We recognize there may be other alternatives as well.

Minimal recurring care

The practice of storing material outside without recurring care has merit in some cases. If material stored outside is in long supply and would never be issued, the cost to care for it would be wasted. Furthermore, there would be little benefit from caring for material briefly stored outside pending major overhaul. The overhaul would correct any deterioration occurring during the period of outside storage.

Actually, minimal recurring maintenance is the practice the Army has been following for outside material. Historically, funds made available for care of material in storage have been limited to an average of about \$15 million a year. The present level of funding is not sufficient to provide for inspections and reprocessing of all material in storage. Most of the funds have been used for the care of ammunition and repair parts. Vehicles and other items in outside storage have been given low priority. Consequently, this material is not being inspected and cared for on a cyclical basis as the Army believes it should. As a result, deficiencies caused by deterioration from outside storage must be repaired at the time of issue.

According to Army sources, the 350,000 tons include material awaiting shipment or induction into a maintenance program. To the extent that such actions are forthcoming for the material, recurring care may be unnecessary.

Regular care

The Army has a "care-of-supplies-in-storage" program which involves regularly inspecting stored material and, where necessary, correcting deficiencies. As we mentioned earlier, the Army spends relatively little on the care of the material stored outside. If the Army would allot funds for care of such material being held for future issue or maintenance, it could improve material readiness and possibly

reduce future material restoration and replacement costs. If, however, the Army could find a way to store this material inside, it could achieve the same objectives at a lower cost.

Inside capacity available
through rerehousing

During tours of supply warehouses, we noted intermittent vacant space and areas where material was not stacked as high as it could have been. We were told that only about 85 percent of the available space could be used without frequently moving and restacking material--called rerehousing. Empty space is created when items are issued, but this space may be insufficient for effectively storing material currently outside.

Rerehousing can make more space available, but it requires more labor hours. Therefore, there would be a tradeoff between the increased cost of labor for rerehousing and the potential reduction in funds required to care for or store the material outside. Again, improved material readiness could be a benefit.

Inside capacity available
from stock transfers

The Army's basic problem is that it lacks sufficient inside storage capacity where needed. As stated previously, this situation can be attributed to reduced supply activity after the Southeast Asia conflict and the recent implementation of the area-oriented depot concept. Under this concept, stocks have been consolidated at fewer depots. Depots that did not have a maintenance mission lost some of their supply storage missions. Thus, some depots, such as the Lexington-Bluegrass Depot, now have excess storage capacity.

The Army could make more inside space available by transferring inactive material which does not have a peacetime requirement to depots with excess storage capacity. We noted that some material items have not been moved from the warehouses in 9 or 10 years, and extensive inventories of unserviceable equipment have been stored inside.

Army officials stated that moving inactive material between depots would be too expensive. For example, to move about 45,000 tons from the Red River Depot to the Lexington-Bluegrass Depot would cost an estimated \$5.2 million. And,

to move the material from the Letterkenny Depot to the Lexington-Bluegrass Depot would cost about \$3 million. Army officials contend that the consolidation into area storage depots resulted in economies of scale which could be lost if the storage became less centralized.

Whether this option is viable would depend on the cost tradeoffs. The cost of caring for active material stored outside or losses due to deterioration would have to be compared with (1) the cost of transportation to move inactive material between depots and (2) any extra costs incurred at the receiving depots to accommodate the material.

Use of temporary shelters

The Army could construct temporary shelters similar to the three-sided structures currently in use at some depots. Such shelters could reduce the cost of caring for outside material. The initial outlay for shelters is much less than the cost to construct warehouses.

CONCLUSIONS

Because there is not enough inside storage capacity where needed, material is stored outside. This material requires more care than material stored inside. However, the Army provides it with little, if any, recurring care. Deterioration of material is a problem if it is ultimately issued. We recognize that deterioration may not be a problem for material stored outside for short periods while it is awaiting depot overhaul, disposal, or shipment to the user.

Army logistics plans include new storage facility construction for 1982 through 1985. These facilities have a low priority, however, and may not be approved for construction.

We believe various options, including those discussed in this report, should be evaluated as more cost-effective alternatives to new facilities and as means for reducing deterioration.

RECOMMENDATIONS

The Secretary of Defense should direct the Secretary of the Army to evaluate the Army's practice of storing material outside without adequately caring for it. This evaluation should recognize

--the cost of restoring needed material and loss of material readiness and

--the cost tradeoffs of alternatives, including those in this report, for improving the material care without constructing new facilities.

As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the Senate Committee on Governmental Affairs and the House Committee on Government Operations not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

Copies of this report are being sent to the Kentucky congressional delegation; the Chairmen, House and Senate Committees on Appropriations and on Armed Services; the Director, Office of Management and Budget; and the Secretary of the Army.

Sincerely yours,



R.W. Gutmann
Director