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Methods Used for Determining Conventional Ammunition Requirements (Unclassified Digest). LCD-77-401. July 20, 1977. 5 pp.

Report to the House Committee on Appropriations; by Elmer B. Staats, Comptroller General.

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Congressional Relevance: House Committee on Appropriations.

The methods used for determining conventional U.S. ammunition requirements for the war reserve stockpile were examined, and recommendations were made for improving the methods used to meet the munitions needs in Europe.

Findings/Conclusions: Resupply from production facilities will take twice as long as estimated if ammunition supplies are exhausted in Europe. Logistics planning on a yearly basis reflects the world situation, but it has created imbalances between the services. The several services base their requirements on different criteria. Air Force requirements are primarily based on cost effectiveness; costs and quantities could be reduced by using precision guided munitions. Army requirements are primarily based on combat simulations. Navy and some Marine Corps munitions were not based on a cost-effective criterion despite the recommendation of the Secretary of Defense to so do. Marine Corps requirements are not adequately defined.

Recommendations: The House Committee on Appropriations should ask the Department of Defense to evaluate U.S. military posture in Europe relative to allied capability; discuss the implications of substituting precision-guided munitions for some less sophisticated munitions to support an Asian scenario; and discuss with the Navy the validity of adding shipfill requirements to the war reserve stockpile. The Secretary of the Army should examine the Army's special operational project requirements and plan to meet these needs, where appropriate, from the war reserve stockpile. The Secretary of Defense should direct the Marine Corps to follow his guidance in developing requirements and require the services to fully recognize in-theatre losses to minimize the impact on U.S. readiness posture for munitions. The Marine Corps should eliminate its practice of rounding firing rates to conform to unit packs.

(Author/DJM)

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COMPTROLLER GENERAL'S
REPORT TO THE
COMMITTEE ON APPROPRIATIONS
HOUSE OF REPRESENTATIVES

METHODS USED FOR DETERMINING
CONVENTIONAL AMMUNITION
REQUIREMENTS
Department of Defense

D I G E S T

This report deals with the methods used for determining conventional U.S. ammunition requirements for the war reserve stockpile, rather than for quantities bought for training and testing. The report makes recommendations for improving these methods and contains information on the Department of Defense's methods for meeting the munition needs in Europe which the Committee may want to pursue with Department officials.

This is GAO's second report responding to the Committee Chairman's request that GAO review the (1) Department of Defense's justification for procuring conventional ammunition and modernizing and expanding ammunition plants and (2) concepts and methods used by the military services to develop conventional munition requirements and the rationale for recent changes in the Secretary of Defense's logistics planning guidance. (See p. 12.) GAO's first report was issued July 30, 1976 (LCD-76-449). It discussed programs for procuring conventional ammunition and modernizing and expanding ammunition plants.

MEETING MUNITION NEEDS IN EUROPE

For planning purposes, Defense guidance permits the military services to stockpile ammunition to sustain combat operations for a predetermined period in Europe. Theoretically, after this time, Defense's production base should produce sufficient quantities to meet the combat consumption rate if quantities will be required beyond the planning period. Actually, most munition production facilities will require twice this time before they can produce the quantities required. (See p. 9.)

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LCD-77-401

CHANGES IN PLANNING GUIDANCE
AND THE ABSENCE OF PLANNING
FOR MAJOR ISSUES

Each year, the Secretary of Defense issues guidance to the military services for developing their procurement programs. In 1976 the Secretary issued guidance which provided for a longer period of logistics planning in Europe and a shorter period in Asia. This change from previous years' guidance-- attributed to changes in the world situation-- resulted in increased U.S. requirements for ammunition. (See p. 17.)

Other issues not mentioned in the guidance cause military services to develop their own assumptions, which creates imbalances in their planning. For example, the guidance did not address differences in logistic planning periods between the United States and our allies. (See p. 18.)

AIR FORCE REQUIREMENTS
BASED ON COST EFFECTIVENESS

The Air Force develops munitions requirements based on a least-cost-per-kill criteria. For munitions which have a special role, the Air Force sometimes uses other criteria, such as selecting munitions based on the Theater Commander's assessment of his needs. (See p. 23.)

Substituting precision guided munitions for some less sophisticated munitions would reduce the number of aircraft sorties and munitions quantities required for stockpiling to support an Asian scenario. Total munitions stockpile costs for Asia could decrease with the substitution of precision munitions. (See p. 28.)

ARMY REQUIREMENTS BASED ON
SIMULATED COMBAT

The Army uses simulated combat to develop combat firing rates for ammunition and anti-tank missiles. The firing rates are used to

compute the munitions war reserve stockpile requirements for Army forces. For other than antitank missiles, the Army computes requirements on a mission-oriented basis, taking into consideration the specific numbers and types of targets and the number of missiles necessary to destroy a target. (See p. 29.)

The Army also computes requirements for special operational projects which are added to the Army's war reserve stockpile requirements. These projects have added \$144 million to the total Army requirements. Similar requirements for these projects in the other services are filled from the overall war reserve stockpile. (See p. 33.)

The Army's frequent recomputation of requirements is disruptive to the planning and budgeting cycle, and has an unfavorable impact on the Marine Corps. (See p. 35.)

The Army's new firing rates considerably increased the Army's overall worldwide munitions stockpile requirement. The Army was asked by Defense officials and GAO to explain the reasons for some of these increases. The Army was unable to do so. (See p. 36.)

NAVY MUNITIONS AND SOME MARINE CORPS MUNITIONS NOT COST EFFECTIVE

The Secretary of Defense's guidance directs the services to develop requirements on a basis that the most cost-effective method of destroying a target should be selected. The Navy used a most-effective-kill selection criterion for only part of the planning period. This is contrary to the Secretary's guidance and created a requirement for more costly munitions for this period. (See p. 37.)

The Navy develops a "shipfill" requirement for ship-gun ammunition. The shipfill requirement is added to the planned combat consumption quantity to arrive at the war reserve inventory objective. Combining

shipfill requirements with planned combat consumption overstates the Navy's munition requirements. (See p. 38.)

WHAT ARE MARINE CORPS REQUIREMENTS?

Since officials are not sure how the Marine Corps will be used with its amphibious assault capability, the Secretary of Defense's guidance to the Marine Corps is different from that to the other services. (See p. 43.)

The Marine Corps deviates from the Secretary's guidance in developing munition requirements. These deviations tend to understate requirements; however, they may be overstating requirements based on deployment schedules used as the basis for their requirements. (See p. 44.)

The Marine Corps' use of a single firing rate for both Asia and Europe and the practice of rounding firing rates distorts Marine Corps requirements. (See p. 46.)

GAO RECOMMENDATIONS

The Committee should:

- Query the Department of Defense for an evaluation of the U.S. military posture in Europe relative to allied capability. (See p. 21.)
- Discuss the implications of substituting precision-guided munitions for some less sophisticated munitions to support an Asian scenario. (See p. 28.)
- Discuss with the Navy officials whether or not the practice of adding shipfill requirements to the war reserve stockpile is valid. (See p. 42.)

The Secretary of the Army should examine the Army's special operational project requirements and plan to meet these needs where appropriate from the war reserve stockpile. (See p. 36.)

The Secretary of Defense should:

- Direct the Marine Corps to adhere to his guidance in developing requirements. (See p. 50.)
- Issue guidance to the military services requiring them to give full recognition to in-theater losses to minimize the impact on the U.S. readiness posture of munitions. (See p. 21.)

The Commandant of the Marine Corps should eliminate the Marine Corps' practice of rounding firing rates to conform to unit packs. (See p. 50.)

AGENCY VIEWS

As directed by the committee, GAO did not follow its usual procedure of obtaining written comments from agency officials; however, GAO did discuss the report and our findings with Department of Defense officials.