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BY THE COMPTROLLER GENERAL

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Report To The Congress

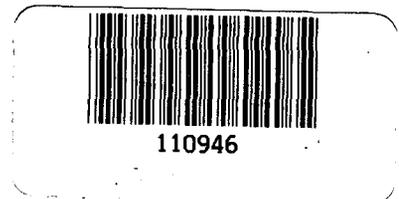
OF THE UNITED STATES

Centralized Ammunition Management--A Goal Not Yet Achieved

In 1973 GAO recommended that conventional ammunition management be centralized.

The Department of Defense agreed and in 1975 designated the Secretary of the Army as single manager.

This report discusses deficiencies in the current system, identifies managerial and organizational changes needed to fully implement GAO's previous recommendations, and makes additional recommendations.



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COMPTROLLER GENERAL OF THE UNITED STATES
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To the President of the Senate and the
Speaker of the House of Representatives

This report discusses the progress being made toward centralizing the management of conventional ammunition within the Department of Defense and demonstrates that much more needs to be done. Proposals to expand the single manager concept for conventional ammunition have encountered considerable resistance. This report contains several recommendations which we believe will strengthen the single manager organization and provide the single manager with the control necessary to achieve desired levels of efficiency and effectiveness in peacetime, and more importantly, in wartime.

We initiated this review to determine the extent of implementation of the single manager concept for conventional ammunition and the managerial and organizational changes needed to enhance further implementation. This review is an important aspect of our continuing efforts to recommend ways to improve logistics management in the Department of Defense.

We are sending copies of this report to the Director, Office of Management and Budget, and to the Secretary of Defense.

Thomas B. Stairs
Comptroller General
of the United States

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D I G E S T

Much progress has been made since the Secretary of the Army was designated single manager for conventional ammunition in the Department of Defense (DOD), but he needs more control and a stronger position. The results can be millions of dollars saved and a system capable of providing the intensive management which is essential during a war.

Currently, control over ammunition management is fragmented between the single manager and the services. For example, the services

- maintain control over some conventional ammunition items (see p. 13);
- retain procurement and production responsibility for newly designed items (see p. 14);
- determine when, where, and how to establish production capacity for newly designed items (see p. 14);
- determine when and how much ammunition will be produced (see p. 17);
- develop and execute the program to improve ammunition production facilities (see p. 19);
- maintain retail inventory control points, thus adding 6 days to requisition processing time (see p. 22);
- have complete control over the retail inventory (see p. 22);
- retain ownership of assets in both the wholesale and retail inventory (see p. 23); and
- renovate ammunition (see p. 24).

Attempts to lay the groundwork for eliminating this fragmented management have encountered stiff resistance from the services.

Central control over procurement and production functions will achieve greater efficiency and economy in peacetime operations. More important, greater central control over inventory management should provide for improved DOD-wide logistics support in the event of war.

In addition to more control, the single manager's position must be strengthened. Several problems with the existing organization preclude achieving further centralized ammunition management. The single manager organization lacks visibility, has limited communication channels, and must compete for resources with purely Army programs. It is principally staffed by Army personnel and is viewed by the services as parochial. Further, the single manager is unable to fully implement the concept within his own service--the Army. (See pp. 30 to 35.)

A need exists for increasing joint service participation, improving communication channels, elevating the organization, and limiting its responsibility to ammunition. To this end, the Office of the Secretary of Defense has prepared two draft directives concerning organizational change. One directive provides that the Secretary of the Army establish and organize a single manager operating agency for conventional ammunition as a major command of the U.S. Army. The other directive establishes a Defense Munitions Agency as a separate agency under DOD. (See p. 35.) Either alternative would substantially strengthen the single manager organization and set the stage for effective centralized management.

GAO favors the alternative of leaving the mission with the Army but elevating it to the Department of the Army level. Under this arrangement, operating activities can be at the U.S. Army Armament Materiel Readiness Command and other locations. However, it is essential that a Washington, D.C., command office be established for overall management direction.

The matter of funding single manager programs must also be resolved. Currently, the Army must fund these programs. However, certain programs benefit a service other than the Army. In times of fiscal austerity, the Army may not be inclined to fund single manager programs from which it derives limited benefits.

RECOMMENDATIONS

To provide the single manager with more control, the Secretary of Defense should:

- Assign all conventional ammunition items to the single manager. (See p. 27.)
- Make the single manager responsible for procuring and/or producing all conventional ammunition items which have passed from research and development into production, regardless of the production quantity. (See p. 27.)
- Make the single manager responsible for establishing, modifying, maintaining, modernizing, and disposing of all conventional ammunition production capacity, including initial production facilities. (See p. 27.)
- Require the services to transfer all funds appropriated for ammunition procurement to the single manager upon receipt from the Office of the Secretary of Defense. (See p. 27.)
- Authorize the single manager to review and approve the services' 5-year defense programs to achieve procurement economies and optimum use of the ammunition production base. (See p. 27.)
- Require the single manager to review and approve all funding requests for enhancing ammunition production facilities retained by the services. (See p. 28.)
- Assign responsibility to the single manager for operating a single national inventory

control point and a national maintenance point to provide DOD-wide integrated inventory and maintenance management. (See p. 28.)

- Designate the single manager as owner of the ammunition in the wholesale inventory. (See p. 28.)
- Require the single manager to apply the principles of vertical stock management for inventory management. (See p. 28.)
- Direct the Secretary of the Army to assign the project manager for production base modernization and expansion to the single manager, after the single manager's organization is strengthened. (See p. 28.)

To strengthen the single manager organization, GAO recommends that the Secretary of Defense direct the Secretary of the Army to establish a Department of the Army level activity to manage ammunition. (See p. 37.)

The Secretary of Defense should also provide the Army with sufficient funds to cover the additional costs in carrying out the single manager functions. (See p. 37.)

AGENCY COMMENTS

GAO did not receive official written comments from the Office of the Secretary of Defense in time to include them in this report. The reason for the delay is that GAO's recommendations cover several disciplines, e.g., acquisition, logistics, and finance, thus necessitating study and analysis by several organizations with requisite expertise in the Office of the Secretary of Defense and input from the single manager and the services. However, DOD officials stated that considerable agreement with GAO's recommendations has been achieved, but a uniform position has not been reached by DOD.

INTEREST BY HOUSE COMMITTEE ON APPROPRIATIONS

The House Committee on Appropriations is monitoring progress of the single manager for

conventional ammunition. The Committee discussed single manager progress and problems during its hearings on DOD appropriations for 1980. In its report on the DOD appropriations bill for 1980, the Committee expressed the desire that the single manager for conventional ammunition concept succeed. Further, the Committee expressed its intention to review DOD's response to the GAO report. GAO will provide the Congress with its analysis of the DOD response.

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ABBREVIATIONS

ARRADCOM	U.S. Army Armament Research and Development Command
ARRCOM	U.S. Army Armament Materiel Readiness Command
DARCOM	U.S. Army Materiel Development and Readiness Command
DLA	Defense Logistics Agency
DOD	Department of Defense
GAO	General Accounting Office
IPF	initial production facility
NICP	national inventory control point
OSD	Office of the Secretary of Defense

CHAPTER 1

INTRODUCTION

To streamline conventional ammunition management, the Deputy Secretary of Defense issued Department of Defense (DOD) Directive 5160.65 on November 26, 1975, assigning the Secretary of the Army as single manager for conventional ammunition. The objectives were to:

"Integrate conventional ammunition logistics functions of the Military Departments to the maximum extent practicable thereby eliminating unwarranted overlap and duplication; and

"Achieve the highest possible degree of efficiency and effectiveness in the DOD operations required to provide top quality conventional ammunition to U.S. forces during peacetime and mobilization."

The single manager concept was to be implemented in two phases--phase I during fiscal years 1977-78 and phase II during fiscal years 1979-80. Phase I was to achieve partial implementation with expansion to a "full" single manager in phase II.

We initiated this review to determine the extent of implementation and the managerial and organizational changes needed to enhance further implementation.

WHAT IS CONVENTIONAL AMMUNITION?

Conventional ammunition refers to nonnuclear ammunition covering a wide variety of items from 5.56-mm. cartridges to 2,000-pound bombs. The majority of ammunition items have four major components--a metal body, an explosive, a propellant, and a fuze.

DOD CONVENTIONAL AMMUNITION PRODUCTION BASE

The DOD conventional ammunition production base is large, complex, and costly. It consists of 28 Government-owned plants, operated by the Government or private contractors; 131 privately owned plants; and 388 Government-owned production lines which are used in both Government-owned and privately owned plants. The plants and equipment are valued at about \$16.8 billion. Most metal parts and fuzes are procured from private industry and most propellants and explosives are manufactured in Government-owned plants. The

components are assembled into complete rounds at Government-owned plants called load, assemble, and pack plants.

MAGNITUDE OF PROCUREMENT

Annual conventional ammunition procurement is big business involving billions of dollars. The procurements are primarily for peacetime training, building the war reserve stockpile, and sales to foreign countries. The projected total conventional ammunition program for fiscal years 1979-84 is shown below:

Conventional Ammunition Procurement Program
As of June 1978

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>Total</u>
	----- (billions) -----						
Army	\$1.155	\$1.478	\$1.845	\$2.199	\$2.891	\$3.059	\$12.627
Navy/Marine Corps	.332	.368	.391	.500	.649	.765	3.005
Air Force	<u>.357</u>	<u>.424</u>	<u>.455</u>	<u>.470</u>	<u>.683</u>	<u>.748</u>	<u>3.137</u>
Total	<u>\$1.844</u>	<u>\$2.270</u>	<u>\$2.691</u>	<u>\$3.169</u>	<u>\$4.223</u>	<u>\$4.572</u>	<u>\$18.769</u>

Currently, DOD inventories total about \$15 billion.

GENESIS OF THE SINGLE MANAGER

The idea of a single manager for conventional ammunition is not new. After World War II and the Korean conflict, the idea was discussed, but not adopted. During the Vietnam War, the need for improved ammunition management again came to the forefront. Ammunition plants were not adequately maintained resulting in unexpected delays, inefficiency, high cost, and unreliability. Further, centralized information on ammunition production and inventories was not available. As a result, the Secretary of Defense became involved in ammunition management both personally and through an expanded Office of the Secretary of Defense (OSD) staff to intensify control over the

requirements, production, and inventory of ammunition. As U.S. Forces withdrew from Vietnam, OSD relaxed its controls.

However, in 1968 OSD directed the Logistics Management Institute, a management consulting organization, to study the management and operation of the ammunition production base. The study concluded that improvement was needed. In responding to the study, the services agreed that something should be done and recommended a joint service study of the situation. DOD agreed and the services established a panel which recommended that the services coordinate conventional ammunition programs and activities. The services established a Joint Conventional Ammunition Production Coordinating Group to coordinate ammunition production.

While the joint service study was in progress, we started a review of ammunition logistics. The review disclosed numerous problems attributable to multiservice management and in our report 1/ we recommended that the Secretary of Defense establish central management for all ammunition, either by creating a new ammunition organization or by assigning the responsibility to one service. Over the objections of the services, which unanimously endorsed coordinated management, OSD designated the Secretary of the Army as single manager for conventional ammunition. The single manager was to improve ammunition logistics planning and operations through central direction and control, especially during a war. The single manager mission was delegated to the Commanding General of the U.S. Army Armament Materiel Readiness Command (ARRCOM).

SCOPE OF REVIEW

We examined records and interviewed officials involved in ammunition management at the following locations:

Department of Defense

Office of the Under Secretary of Defense,
Research and Engineering.

Office of the Assistant Secretary of Defense,
Manpower, Reserve Affairs and Logistics.

1/"Effective Central Control Could Improve DOD's Ammunition Logistics" (B-176139), Dec. 6, 1973. (See app. I.)

Army

Headquarters, U.S. Army, Washington, D.C.

ARRCOM, Rock Island, Illinois.

U.S. Army Armament Research and Development
Command (ARRADCOM), Dover, New Jersey.

Office of the Project Manager for Munitions
Production Base Modernization and Expansion,
Dover, New Jersey.

Navy

Headquarters, U.S. Navy, Washington, D.C.

Naval Air Systems Command, Arlington, Virginia.

Naval Sea Systems Command, Arlington, Virginia.

Ships Parts Control Center, Mechanicsburg,
Pennsylvania.

Air Force

Headquarters, U.S. Air Force, Washington, D.C.

Armament Development and Test Center, Eglin
Air Force Base, Florida.

Ogden Air Logistics Center, Hill Air Force Base,
Utah.

CHAPTER 2

SINGLE MANAGER LACKS CONTROL NEEDED

FOR EFFECTIVE CENTRALIZED MANAGEMENT

Much progress has been made toward centralizing ammunition management, but much more remains to be done. Currently, the single manager lacks the control needed to meet the objectives of efficiency and effectiveness in peace and, more importantly, in war. The single manager's control is limited within his own service--the Army. OSD proposals to expand the single manager concept have encountered considerable resistance from the services. Indeed, it appears that the single manager is forced to fight a rear-guard action while attempting to implement the concept.

Why is the single manager's control limited? Because DOD decided to implement the concept in phases and because the services made it clear from the outset that they did not want a single manager and intended to retain control over certain elements of ammunition management. Given the effort involved in implementing the concept, a phased approach is appropriate. However, it should be based on a logical, time-phased implementation of actions which, when completed, will result in the satisfaction of predetermined goals. This is not the case under the present approach. Rather, decisions are being made before each phase on what the single manager's authority and responsibility should be and are based largely on what is acceptable to the services.

We continue to support the centralized ammunition management concept. However, the current system falls far short of what is needed. OSD must take firm measures to move the concept along. These measures include

- expanding the single manager's authority and responsibility in ammunition management and
- strengthening the single manager's position in the DOD structure.

PROGRESS UNDER THE SINGLE MANAGER CONCEPT

Phase I achieved partial transition from multiservice to single service ammunition management and built the framework for further implementation. This was not an easy task. It required cooperation from the services and firm leadership by the single manager. Numerous details were worked out,

e.g., computer interface, development of policies and procedures, and transfer of command control over Navy production facilities. The Joint Conventional Ammunition Program Coordinating Group played a major role in effecting transition.

Noteworthy accomplishments include

- generating savings of \$78.9 million claimed during the first year of operation;
- surfacing a serious problem with Navy-owned ammunition which, if corrected, should improve readiness; and
- highlighting the steadily increasing quantity of ammunition awaiting disposal.

However, as a result of establishing the single manager, the personnel involved in ammunition management increased.

The Army estimated it would need 587 staff to handle the single manager mission. However, 225 of these positions could have been filled by transfers from the four services. The Defense Audit Service questioned the estimate and concluded that only 199 positions were supportable. OSD approved the Army's request for positions to assure that it had sufficient personnel resources to do the job.

IMPLEMENTATION SHORTFALLS

Concept implementation under phase I falls short of what is needed. Specifically, only a portion of conventional ammunition procurement, production, production base management, and integrated materiel inventory management has been centralized. For example:

- The services retain total control over ammunition items which have not been assigned to the single manager (called nonsingle manager items). (See p. 13.)
- The services procure newly designed ammunition. These procurements are large, representing a significant portion of the total ammunition program. (See p. 14.)
- The services determine when, where, and how to establish initial production capacity for newly designed items. (See p. 14.)
- The services determine when and how much ammunition should be produced each year. (See p. 17.)

- The Army's project manager for munitions production base modernization and expansion is responsible for program development and execution of the Army's activities to improve ammunition production facilities. Yet, the project manager does not report to the single manager. (See p. 19.)
- The single manager and each of the services maintain inventory control points. Consequently, 6 days are added to requisition processing time. (See p. 22.)
- The single manager is accountable for ammunition in the wholesale inventory. The services are accountable for the ammunition in the retail inventory (about 40 percent of the total inventory). Consequently, the single manager does not have visibility over the entire ammunition inventory. (See p. 22.)
- Each service retains ownership of its ammunition both in the wholesale and retail inventory. (See p. 23.)
- The services are responsible for planning, programing, and budgeting for ammunition renovation in both the wholesale and retail inventory. (See p. 24.)

STATUS OF PHASE II

The present period is one of marking time. No one is sure when phase II will be implemented or what its provisions will include. Certainly, the fiscal year 1980 target for implementation will not be met.

In September 1977 OSD forwarded tentative phase II guidance to the services for comment--it encountered a barrage of protests. In May 1978 OSD tasked a group of ammunition experts to evaluate the responses and to determine what the single manager's responsibilities should be. The OSD group concluded that fragmented authority must be eliminated by giving the single manager greater control over the ammunition procurement and production decision process and the establishment, modification, and use of ammunition facilities. Specifically, the study group recommended the following measures be taken to achieve the OSD objectives:

- Assign the Army's project manager for production base modernization to the single manager.
- Make the single manager responsible for programing, budgeting, and executing all facility actions.
- Assign responsibility to the single manager for preparing all production plans during the development phase.
- Direct the release of all procurement funds for single manager items to the single manager.
- Assign responsibility to the single manager for procuring all single manager items.
- Assign responsibility to the single manager for executing the production engineering support program, to include control and allocation of funds.
- Assign responsibility to the single manager for planning, programing, and budgeting for wholesale asset distribution, renovation, and demilitarization.
- Provide the single manager with information concerning retail assets.

If implemented, these recommendations would go a long way toward setting the stage for a full single manager. However, we believe a key issue which the study group has not supported--a single national inventory control point (NICP) for ammunition--should also be implemented.

In December 1978 OSD forwarded an informal copy of revised phase II guidance to the services which incorporated the study group's recommendations. The services were opposed to certain provisions in this guidance. Presently, OSD is groping with revising DOD Directive 5160.65 to expand the single manager's authority and responsibility and to change the organizational structure.

CURRENT SINGLE MANAGER ORGANIZATION

Although the Secretary of the Army was designated as the single manager, the Commander of ARRCOM, with his staff in Rock Island, is actually the single manager since all the assigned joint service ammunition duties and responsibilities are assigned to him. This may have been the best and least expensive way to start the concept since it used an existing

organization with substantial experience in ammunition management. However, the organization does not reflect the characteristics recommended in our 1973 report, and it is not the most preferred alternative recommended by the Army's 1975 concept study group. 1/

The single manager's organization is at a relatively low level in the Army. Therefore, his communication channels are limited by the several layers of Army management over him. His organization has little semblance of joint service character, is commingled with ARRCOM which manages several other items, must compete with other Army programs for resources, and is viewed as parochial.

The OSD staff responsible for implementing the concept has recognized deficiencies in the existing organization and is considering two alternatives. One alternative is a separate U.S. Army command responsible only for managing ammunition. Under this alternative, the director of this command would be responsible only for directing the command's operations and would be responsible to the Secretary of the Army.

The other alternative establishes a Defense Munitions Agency as a separate agency under the direction, authority, and control of the Under Secretary of Defense for Research and Engineering. A single NICP and a revolving fund for ammunition procurement would be established under this alternative.

Strengthening the single manager's organization is discussed in chapter 4.

CONCLUSIONS

Much progress has been made toward centralizing ammunition management, but much more remains to be done. The concept has not been implemented to the extent we envisioned in our 1973 report. In that report, we recommended that the single manager be responsible for consolidating requirements and continuing through the inventory accounting, procurement, production, storage, and distribution functions. This was only partially done under phase I and the services (including the Army) are resisting measures to more fully implement the concept in phase II. Without further implementation, DOD

1/"Concept Study for Establishment of a Single Service Manager for Conventional Ammunition," May 28, 1975.

will not have an efficient and effective system for managing ammunition during peacetime and, more importantly, during any future war. For example, how can the single manager provide intensive inventory management without information about retail assets? In the event of another war, OSD would probably find it necessary to provide intensive management over ammunition as it did during the Vietnam War. However, that is precisely the situation the single manager organization is supposed to avoid.

Partial implementation is not enough. The single manager's responsibilities and authority must be determined and milestones must be established for their implementation. The authority and responsibility should follow the lines proposed in our 1973 report, in phase II guidance, and in the OSD single manager study group report. In addition, the single manager organization must be strengthened to enhance discharging both existing and added responsibilities. (See pp. 27 and 37 for specific recommendations.)

CHAPTER 3

SINGLE MANAGER'S AUTHORITY AND RESPONSIBILITY MUST BE EXPANDED

Under phase I, the services retained authority and responsibility for many acquisition and logistics functions which the single manager should have controlled. The services reject proposals to transfer control over some of these functions to the single manager during phase II. If the single manager is to function as envisioned in our 1973 report, the Army's 1975 concept study, and the OSD study group report, then the single manager's authority and responsibility in procurement, production, and inventory management must be expanded.

PHASE II GUIDANCE

OSD planned to expand the concept to a full single manager during phase II, thus gaining even greater efficiencies with less personnel and funds. OSD issued implementing guidance to the services on September 2, 1977. The major provisions in the guidance included the following:

- The single manager's procurement responsibility would begin once an item was type classified for production, even if the type classification was for limited production.
- Each service's budget submission would identify the ammunition procurement funds to be furnished, upon receipt, to the single manager.
- The single manager would establish a single NICP and national maintenance point.
- The services would assist in determining single manager phase II personnel requirements.

This guidance encountered considerable resistance and none of the provisions were implemented at the time of our review.

Single manager's and services' responses

The single manager considers the following principles essential in developing phase II:

- The concept works in war as well as peace.
- The single manager does not require command control over additional facilities.
- The single manager and services need worldwide visibility over ammunition.
- All services must be involved in developing the implementation plan.

The single manager supported all major provisions. However, the Air Force and Navy disagreed with major provisions which, in our opinion, were necessary for accomplishing the directive objectives. These include release of ammunition procurement funds to the single manager upon receipt and establishment of a single NICP and national maintenance point. Further, the Air Force and Navy concluded that the single manager did not need additional resources for phase II, therefore, they would not need to assist in developing resource requirements. Subsequently, the single manager determined that an additional 323 personnel would be needed to implement phase II.

OSD single manager study group

The OSD study group established in May 1978 evaluated the responses to the guidance and examined several aspects of centralized ammunition management. It recommended the single manager be assigned responsibility for

- budgeting and executing of all facility actions;
- preparing production plans during the development phase;
- procuring all assigned items;
- controlling the production engineering support program; and
- planning, programing, and budgeting for wholesale inventory distribution, renovation, and demilitarization.

In addition, the study group recommended assigning the project manager for production base modernization to the single manager and transferring all procurement funds for conventional ammunition items to the single manager within 30 days of receipt. The OSD study group concluded that a single NICP was not necessary. However, it recommended that the

services provide the single manager retail asset visibility and inventory stratification reports to achieve the directive objectives.

Revised guidance

Using the original guidance, the single manager's and the services' responses to the original guidance, and the study group's recommendations, OSD prepared a revised version of phase II guidance on November 3, 1978. Since the revision was informally presented to the services, formal responses were not prepared. However, the services took issue with certain provisions in their informal responses. During this review, we discussed aspects of both sets of guidance with OSD, the single manager, and service officials.

SINGLE MANAGER SHOULD BE RESPONSIBLE FOR ALL CONVENTIONAL AMMUNITION ITEMS

The draft copy of DOD Directive 5160.65 stated that the single manager would be responsible for all conventional ammunition. However, because of the services' objections the following conventional ammunition items were excluded from the single manager's responsibilities:

- Guided missiles.
- Naval mines and torpedoes.
- Cartridge and propellant actuated devices.
- Chaff and chaff dispensers.
- Guidance kits for bombs or other ammunition.
(See apps. II and III.)

Consequently, the services are responsible for a substantial number of ammunition items. The Navy and Air Force retained responsibility for several thousand items and the Army and Marine Corps for several hundred. The services are totally responsible for the procurement, production, and inventory management of these items.

Initially, OSD attempted to assign all ammunition items to the single manager. Early draft directives excluded only nuclear and toxic munitions. However, the final directive excluded other munitions to accommodate the services' wishes. In its September 2, 1977, phase II guidance, OSD proposed that additional items be assigned to the single manager, as

did a subsequent draft and revisions to the directive. The services strongly resisted any attempt to assign more items to the single manager. For example, the Navy opposed any transfer stating its ability to arm the fleet with state-of-the-art weaponry would be threatened. The Army even refuses to assign two rocket items to the single manager.

Officials in the single manager organization conclude that certain items should be added to its responsibility. They recognize that while some aspects of management can be delegated to the services, aspects such as inventory management for all items can be centralized since most ammunition items are stored at Army facilities whether or not they are assigned to the single manager.

The full benefits of centralized management are more nearly achieved by placing as many similar items as possible under the single manager. We believe the items which are not assigned to the single manager are sufficiently similar to other conventional ammunition items to warrant their assignment to the single manager. While it may be beneficial for the services to participate in managing certain items because of their inherent sophistication, technical complexity, and low volume, i.e., torpedoes, the single manager should be responsible for all conventional ammunition items and related production facilities. The single manager cannot meet the directive objectives if he has to plead with the services to assign certain items as is the case with the two Army rocket items. Any transfer of management authority and responsibility from the single manager to the services should be based on mutual agreement.

The Defense Logistics Agency (DLA) sees advantages in centralizing management of as many similar items as possible. It proposes to assume management of 1.4 million consumable items currently managed by the military services. DLA projects significant savings and improved supply support from such action.

SINGLE MANAGER SHOULD BE
RESPONSIBLE FOR PRODUCTION OF
NEWLY DESIGNED AMMUNITION ITEMS

Service development agencies and project managers are responsible for ammunition research and development. DOD Directive 5160.65 states that the services should assign ammunition approved for service use and released for full-scale production to the single manager for procurement. Approval for service use and release for production occurs after research, development, and testing. Initially, small

quantities are produced to minimize any adverse effect of design and/or production problems.

Under the present system, the services (including the Army) do not assign (transition) new ammunition items to the single manager when they are approved for service use. Rather, the services retain responsibility for acquiring production facilities and producing initial quantities supposedly to work out any problems and to validate the technical data package. They transition the items to the single manager when they feel all problems have been resolved. On the surface, this approach seems reasonable; however, the production facility and procurement programs are substantial. For example, ARRADCOM projects the following amounts for initial production facilities (IPFs) and procurement:

<u>Fiscal year</u>	<u>Initial production facilities</u>	<u>Procurement</u>
	------(millions)-----	
1977	\$22.4	\$190.2
1978	65.1	308.1
1979	26.4	402.9
1980	21.6	310.8
1981	28.6	617.1

Moreover, procurement for some items is planned for several years, as shown below:

<u>Item</u>	<u>Fiscal year</u>				
	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
	------(millions)-----				
105-mm. cartridge	\$68.4	\$62.6	\$32.1	\$32.2	\$ 33.2
155-mm. propelling charge	7.8	11.1	25.5	85.3	150.6
Demolition kit cratering	1.6	2.8	1.8	1.8	0.0

The services are required to coordinate with the single manager in developing IPFs. However, the services decide when, where, and how to establish capacity and when to transfer procurement responsibility to the single manager.

The single manager, OSD, and the OSD study group all agree that the single manager must play a greater role in establishing IPFs and initial production of new ammunition

items. The single manager and OSD state that the existing \$16.8 billion production base has substantial capability and that it should be used for producing new items instead of building new facilities whenever possible. Some savings are being achieved by using existing single manager facilities. For example, the Air Force will save about \$2 million on its Combined Effects Munitions program and estimates savings in the millions on its improved 20-mm. program. Further, it is estimated the Navy can save \$4 million on its Fuel Air Explosive II program.

However, the services may not be realizing all possible savings. For example, the single manager contends better use of his facilities by the Army would lower the General Support Rocket System and Viper program costs. Yet, the Army's Missile Research and Development Command has limited the single manager's participation in these programs despite the single manager's repeated attempts to get more involved.

Both the single manager and OSD are concerned over the possible duplication of single manager procurement staff by ARRADCOM. The ARRADCOM procurement directorate has 231 employees to support its mission. During fiscal year 1979, the ARRCOM procurement directorate was authorized 476 employees, of which 247 support the single manager mission. The single manager and OSD conclude that prompt transition of new ammunition items to the single manager will reduce the number of procurement personnel ARRADCOM needs without a corresponding staff increase in the single manager organization.

In its phase II guidance, OSD proposed to give the single manager planning, programing, and budgeting responsibility for IPFs. Further, the guidance specified that the single manager should be responsible for procuring new ammunition items when procurement funds are first used in the program.

The services, including the Army, oppose these measures. They feel that the single manager is sufficiently involved in their facility planning and additional involvement could hinder their development programs. For example, the Air Force contracts out most of its research and development. Air Force officials state that their contractors bid for research and development with the objective of getting follow-on contracts for initial production. They state that if the contractors are denied follow-on production through greater single manager involvement, they may be reluctant to do research and development. Further, they argue that a substantial portion of the single manager's facilities are old and technologically obsolete. They do not want to constrain ammunition design

to old equipment and technology. ARRADCOM officials contend that any restriction by the single manager on funds to establish IPFs will cause severe delays in the research and development cycle. In addition, they conclude it will be difficult to perform additional research and development work and will increase the risk of producing defective items if the single manager is responsible for initial production. Further, they state that the single manager executes a significant portion of ARRADCOM's program through procurement of items, such as explosive fill and load, assemble, and pack of end items. They contend their procurement personnel are as capable as the single manager's.

The issue is complex and could be argued indefinitely. Valid points can be made for either view. However, if the single manager is to function as intended he must control the decisions. He cannot meet his responsibilities if he has to argue and bargain with the services' development activities and project managers about when an item should be transitioned and whether existing facilities should be used or new ones developed. This control can be exercised best by transferring all procurement funds to the single manager for execution. The single manager would have the option of retaining the funds or assigning them to the services for procurement action. This should eliminate the conflict over when an item is ready for transition and should enable the single manager to bring the procurement program under his full control as envisioned in DOD Directive 5160.65. The directive should also require single manager control over acquisition of facilities for producing new items. Decisions whether to use existing single manager facilities must be made on a case-by-case basis. Depending on the circumstances, the single manager may ask the services to carry out the facilities development program.

SINGLE MANAGER NEEDS
MORE CONTROL OVER SERVICES'
PROCUREMENT PROGRAMS

The single manager has limited control over when ammunition is procured and produced. The services plan, program, and budget for ammunition and furnish funds to the single manager throughout the year for procuring items they want. For example, during fiscal year 1978, the single manager received procurement requests from the Navy, Marine Corps, and Air Force ranging from \$7 million to \$86 million per month. The single manager contends that savings in procurement and production could be achieved if the services' programs were released early in the fiscal year. This would permit timely contract awards, earlier delivery of ammunition,

lower pipeline investment, and elimination of the intensive and costly efforts required under the present system to prevent increased procurement costs resulting from piecemeal release of ammunition programs. These actions include identifying planned procurement programs and coordinating with the services to determine when and for which items procurement requests will be received.

In its informal phase II guidance, OSD proposed that funds for ammunition procurement be transferred to the single manager within 30 days after they are received. The guidance specified that the transfers include production engineering support funds which are used to correct problems encountered during production. Thus, the single manager could assure that proper emphasis is placed on resolving manufacturing problems and on cost-reduction studies.

While the services support early release of their procurement programs to the single manager, they do not want to be constrained to a particular time. They conclude they need flexibility to transfer funds between programs as conditions warrant and early total release would deny them this flexibility.

We support early release of the annual ammunition programs, including production engineering support funds to the single manager. As a minimum, this should provide economies of scale through consolidated procurement and reduce breaks in production stemming from delayed contract awards.

In addition to early release of procurement funds, single manager officials see a need for greater involvement in determining when ammunition items should be procured during the services' 5-year defense programs. They feel this will permit the single manager to

- keep critical portions of the production base active,
- level year-to-year procurements,
- consolidate procurement to achieve economies of scale, and
- delay production to take advantage of new processes and/or facilities being developed.

In our opinion, this not only seems reasonable but necessary for effective management. The single manager has a defensewide perspective of ammunition procurement and its

impact on the ammunition production base. He has an overview of new items and processes being developed and their impact on the production base. Accordingly, he is in a position to determine the optimum time for procuring specific ammunition items during the 5-year defense plan, taking into consideration factors, such as cost, and maintaining an active production base to minimize investment in inventory.

SINGLE MANAGER SHOULD EXERCISE
SOME CONTROL OVER AMMUNITION PRODUCTION
FACILITIES RETAINED BY THE SERVICES

With the establishment of the single manager most, but not all, of the ammunition production base was consolidated under one activity. On October 1, 1977, the Navy transferred to the single manager its ammunition production and storage facilities at Crane, Indiana; Hawthorne, Nevada; and McAlester, Oklahoma. It also transferred all but one of its plant equipment packages. Navy officials stated that this package would be transferred to the single manager upon completion of a classified contract. The Air Force did not have any facilities or equipment to transfer.

The Navy, however, retained production facilities at Indianhead, Maryland, and Yorktown, Virginia. The Indianhead facility is used for research and development and for propellant production. The Yorktown facility is used for renovating ammunition and has load, assemble, and pack capability. The single manager does not need or want these facilities.

We did not attempt to determine the merits of assigning these facilities to the single manager. However, one reason for establishing a single manager was to bring all production facilities under one activity, thereby eliminating duplication. Accordingly, procedures should be established requiring single manager approval for any modernization, expansion, or disposal programs at these facilities. This should assure that funds are not spent for facilities which already exist in the single manager's production base.

PROJECT MANAGER FOR MUNITIONS PRODUCTION
BASE MODERNIZATION AND EXPANSION SHOULD
REPORT TO THE SINGLE MANAGER

In the early 1970s, the Army embarked on a multibillion dollar program to modernize and expand its ammunition facilities. The program was so big and complex that the Secretary of the Army established a project manager for munitions production base modernization and expansion to develop and carry out the program. The project manager has developed a highly

effective program and, because of his Secretary of the Army charter and reporting channel to the U.S. Army Materiel Development and Readiness Command (DARCOM), has high visibility in the Army and, indeed, throughout DOD. He has a staff of 192, of which 17 are military.

The program includes over 200 manufacturing methods and technology engineering projects and the design and execution of over 300 construction and equipment projects with a total cost of over \$3 billion through fiscal year 1985 (in fiscal year 1978 dollars). The project manager is presently managing \$1.5 billion in facilities modernization and expansion projects and is planning for an additional \$1 billion by fiscal year 1985. The remaining \$0.5 billion includes current and projected manufacturing technology and support programs.

In a July 7, 1978, letter, DARCOM directed that the project manager's office be terminated by the end of fiscal year 1979 and redesignated an activity reporting to the single manager for conventional ammunition. The project manager views this as inconsistent with the need to provide overall balance and functional expertise to the conventional ammunition program. He feels there is a continuing requirement for intensive management of the facilities modernization and expansion program due to its size and technological complexity, as well as the many interfaces required within and outside DOD.

Other project manager officials believe the need for the office is probably more valid now than when it was established, particularly with the fragmentation of roles and missions between ARRCOM, ARRADCOM, and the single manager. The officials view their office as the one organization capable of planning, coordinating, and executing the task of production facility acquisition between divergent commands, if maximum economy and standardization is to be realized. They feel reporting to a lower level of authority will affect the program in two ways. First, the ability to act quickly, authoritatively, and conclusively is the key to project success and assignment to a lower level will require more time, require an additional level of approval, and be subject to additional review, change, or cancellation. Second, the program is highly dependent on visibility and access for support and funding.

Officials view the project manager's ability to deal directly with DOD, the Office of Management and Budget, the Department of the Army, DARCOM, the Corps of Engineers, other Army commands, and other services as dependent on his responsibility for his program and the agencies' understanding of his authority. They conclude reporting to a lower level will

severely restrict the project manager's relationship with other organizations and may reduce access to all upper command levels, besides losing the present bridge he provides between ARRCOM and ARRADCOM. Certainly, the project manager performs a significant part of the single manager's responsibility. Accordingly, the single manager proposes that the project manager report to him rather than DARCOM. The OSD study group also shares this view. We also share this view with one qualification--the single manager's position in DOD must first be strengthened. The program is still large and requires close management. As indicated earlier, problems exist in the single manager organization. Placing the project manager under the existing single manager could weaken the project manager's ability to effectively carry out the program.

NEED FOR A SINGLE NICP

The single manager plays a limited role in inventory management. In fact, rather than streamlining inventory management, the single manager merely added a management layer to the existing system. This results in inefficiency and duplication rather than the improvements envisioned in the directive and may very well hamper, rather than help, troop support during a war.

In its 1975 concept study, the Army concluded that all elements of integrated materiel inventory management had to be done through a single NICP if there was to be viable centralized management. These elements include catalog direction, requirements aggregation for all services, procurement direction, distribution management, maintenance direction, and materiel utilization. A basic assumption in the study was that the single manager would operate a single NICP, assume ownership of all wholesale assets, and be responsible for ammunition renovation. However, because of service resistance this was not done, causing an inventory management split between the single manager and the services. The Navy and Air Force fought establishing a single NICP, claiming that disestablishing their inventory control points in deference to a single NICP would seriously affect their ability to meet the operational needs of fleet and theater commanders. The OSD study group concluded that a single NICP was not needed and directive objectives could be met by giving the single manager retail asset visibility, asset stratification reports, and responsibility for wholesale asset distribution, renovation, and demilitarization. While this would improve the existing situation, it would not achieve the degree of control necessary for effective centralized management.

The single manager is convinced that a single NICP will result in a more efficient system with fewer personnel DOD-wide, and that a single NICP is essential to meet the demands of a wartime environment. He forwarded a proposal to OSD detailing how a single NICP would work. Under this proposal, the services would lose NICP functions but they would still be responsible for certain logistics management functions.

We support the establishment of a single NICP. In fact, until this is done, the single manager can, at best, be considered only a single manager for procurement and production.

Duplicate requisition processing

Prior to establishment of the single manager, each service maintained an inventory control point for conventional ammunition. Within each service, requisitions flowed from users to its inventory control point. The item manager at the inventory control point filled the requisitions from wholesale or retail stocks.

Under the single manager concept, each service still maintains its own inventory control point. The only difference between the single manager concept and what was done previously is that the item managers can only fill requisitions from available retail stocks. If such stocks are unavailable, then the item managers refer the requisition to the single manager who fills it from wholesale stocks. This double handling of paperwork adds 6 days to the time it takes to fill a requisition. In addition, the single manager must provide the service inventory control point with information concerning the quantity and location of assets used to fill the requisitions. (See apps. IV and V.)

What is the effect of the additional 6 days to process a requisition? It adds 6 days to the supply pipeline. However, according to service and single manager officials, the increased requisition time does not increase the size of the inventory because the services are not authorized to buy ammunition for the pipeline. OSD and single manager officials conclude that the increased requisition processing time, although undesirable, can be tolerated during peacetime, but not during a war. Single manager officials estimate that the 6 days could necessitate \$200 million of added inventory in a European war.

Wholesale and retail inventory designations

Ammunition at storage and production facilities in the United States is designated wholesale and the remainder

retail. About 60 percent of the 6-million-ton inventory is in the wholesale inventory.

The services retain total responsibility for the retail inventory. They are not required to furnish information concerning their retail inventories to the single manager. However, the Army does furnish retail inventory information to the single manager. The single manager has achieved modest savings through his knowledge of the Army's retail inventory. During fiscal year 1979, he claimed \$9,200 savings in transportation costs because he was able to fill requisitions from other services with Army retail assets. Single manager officials claim they could achieve more savings if they had retail asset visibility for all services through transportation savings and matching long supply against projected procurements.

The wholesale and retail designation, coupled with the services' responsibilities, preclude the single manager from managing a substantial segment of the inventory. Worse, the single manager's limited knowledge of assets in the retail inventory leaves unresolved one of the problems which surfaced during the Vietnam War--lack of a complete overview of inventory and its location.

Originally, OSD wanted to consider ammunition in overseas depots as wholesale. However, due to service objections wholesale stocks were confined to the United States. Currently, OSD is considering requiring all services to provide retail asset information to the single manager.

Services retain ownership of all assets

Currently, each service retains ownership of its ammunition inventory at both the wholesale and retail levels. Because they own the assets, they exercise a significant degree of control over them. We believe the single manager needs to own the wholesale assets before he can effectively control them. Why? Because management and control cannot logically be separated from ownership.

From the outset, the Army has viewed single manager ownership of wholesale assets as essential to a viable single manager organization. In its 1975 concept study, the Army assumed that the single manager would gain ownership of the wholesale stocks. The Army concluded that without this ownership, each service would have to maintain its own inventory control point, have its own account in the separate depots, and have responsibility for renovation and distribution.

Further, the Army stated that without stock ownership the single manager was merely a manager for procurement. However, the services retained ownership of wholesale assets.

The single manager says he must own the wholesale inventory to manage it. This would eliminate the bookkeeping associated with maintaining two sets of books and permit the single manager to issue stocks from the optimum location without regard to service ownership. Currently, if assets from one service are used to fill a requisition from another service, then the donating service must be "paid back" by the receiving service. The bookkeeping becomes involved and reconciliation becomes difficult. The services argue that since they pay for the ammunition they own it. Further, Navy officials contend that the Navy must retain asset visibility, asset control, and asset ownership to meet its responsibility. The Air Force shares this view.

We believe that many of the basic principles of vertical stock management could be used to centralize management and control of conventional ammunition. Our reports 1/ discuss the advantages of vertical stock management, including more efficient use of inventory investment dollars and better service to customers.

Under the vertical organization, the inventory managers control and manage all stock fund material. They have worldwide visibility over all material under their control (they know how much is onhand and where it is located) and they "own" the material under their control and have the authority to direct stock transfers from one storage location to another.

The Navy and Air Force are already successfully operating vertically managed and vertically funded supply systems. At the time of our 1977 report, DLA was converting its management of bulk fuels and substance to vertical controls. Currently, DOD is considering establishing a stock fund for ammunition procurement.

Maintenance and renovation functions split

The single manager is responsible for maintenance of ammunition in the wholesale inventory and the services are

1/"Department of Defense Stock Funds--Accomplishment Problems and Ways to Improve" (B-159797, Apr. 2, 1974). "The Department of Defense Should Increase Efforts to Implement Vertical Controls Over Military Stock Funds" (LCD-77-437, Sept. 7 1977).

responsible for its renovation. Maintenance involves minor reconditioning, such as painting, while renovation is a more complex operation, often involving disassembly and replacement of parts.

Single manager officials state that it is difficult to optimize maintenance and renovation operations because of this split responsibility and that this has a material bearing on whether the single manager can achieve the highest possible degree of efficiency and effectiveness. They cite the possibility of each service workloading depots for renovating the same type of ammunition during different years. This could result in increased costs because of factors such as multiple setting up of the renovation line for the particular operation. Further, the officials cite the possibility of a service with ample funds renovating ammunition which is in better condition than other services' ammunition in the stockpile. The single manager prefers that renovation funds be applied where they are most needed from a DOD, rather than service, perspective.

In its 1975 concept study, the Army concluded that the single manager should program, budget, and fund renovation, preservation, packaging, and demilitarization of all conventional ammunition in the wholesale inventory. The Army also concluded that workloading depots for renovation through a single system would be more economical and efficient. The OSD study group supported this position and recommended the single manager plan, program, and budget for renovation and demilitarization of wholesale stocks and have visibility over these functions in the retail inventory. It concluded that this would enable the single manager to consolidate planning and workloading and tie these functions in with the overall requirements, shortages, and excess stocks. The OSD phase II guidance concerning renovation and demilitarization follows the line of the OSD study group's conclusion.

CONCLUSIONS

The single manager lacks necessary control over ammunition management. Consequently, his ability to fully achieve the objectives of efficiency and effectiveness in peace and, more importantly, in war is limited.

What has emerged from phase I is not what we had in mind in our 1973 report. In that report, we concluded that central control was needed to enhance ammunition acquisition and logistics in peace and in war. However, the services--including

the Army--retain significant control over procurement and production and major control over inventory management. Further, the services are reluctant to give the single manager additional control over these functions.

Unfortunately, the current system is not efficient and it is doubtful that it could meet the demands of a wartime situation. For example, many items are not assigned to the single manager, he does not control all facility acquisition decisions, and his role in procurement is more nearly that of a buyer than a manager. Inventory management has not been streamlined, e.g., the supply pipeline is longer, there is record duplication, information on total inventory is scattered between the services, responsibility for inventory management functions is split, and the wholesale/retail designation excludes single manager involvement in a significant portion of the inventory.

The services are especially reluctant to give the single manager the degree of control he needs to provide efficient and economic inventory management in peacetime and the intensive inventory management needed during war. This additional control includes

- establishing a single NICP,
- expanding the wholesale inventory to include overseas facilities, and
- giving the single manager ownership of the wholesale inventory.

The services fear that doing this would adversely affect responsiveness.

We believe that centralized management will enhance rather than hinder responsiveness to the services' needs. For example, DLA claims it outperforms the military services by 10 to 15 percent in supply effectiveness. DLA contends it immediately fills 97.4 percent of demand for items in support of 79 major weapon systems. The total inventory visibility available through a single NICP would allow the single manager to effectively cross-level stocks in the retail inventory, thus enhancing DOD-wide responsiveness. Expanding the wholesale inventory to include overseas locations should enhance management since the expertise logically lies with stateside support organizations rather than with fleet or theater commander overseas staff. Single manager ownership of the wholesale inventory should save money in areas such as renovation and distribution and minimize record duplication.

However, single manager ownership of the wholesale inventory may necessitate a different method of funding. The single manager may have to plan, program, and budget for procuring the wholesale inventory. At this time we cannot develop a specific recommendation. However, DOD is considering a stock fund which could be used to fund the services' annual needs with an annual appropriation for the stockpile.

If the single manager is to do his job he must be given the necessary control over procurement, production, and inventory management. This control should not be based on accommodation and compromise. Rather, it should be based on what control the single manager needs to meet the directive objectives.

RECOMMENDATIONS

To provide the single manager more control over ammunition management, we recommend that the Secretary of Defense:

- Assign all conventional ammunition items to the single manager.
- Make the single manager responsible for procuring and/or producing all conventional ammunition items which have passed from research and development into production, regardless of the production quantity. The single manager may assign procurement and/or production functions to the services as circumstances warrant.
- Make the single manager responsible for establishing, modifying, maintaining, modernizing, and disposing of all conventional ammunition production capacity, including IPFs. The single manager may delegate certain facility actions to the services when it is prudent to do so.
- Require the services to transfer all funds appropriated for ammunition procurement to the single manager upon receipt from OSD. These transfers will include all funds appropriated for production engineering support.
- Authorize the single manager to review and approve the services' 5-year defense programs to achieve procurement economies and optimum use of the ammunition production base.

- Require the single manager to review and approve all funding requests for enhancing ammunition production facilities retained by the services.
- Assign responsibility to the single manager for operating a single NICP and national maintenance point to provide DOD-wide intergrated inventory and maintenance management.
- Designate the single manager as owner of the ammunition in the wholesale inventory.
- Require the single manager to apply the principles of vertical stock management for inventory management. This will necessitate redesignating as wholesale a substantial portion of the retail inventory.
- Direct the Secretary of the Army to assign the project manager for production base modernization and expansion to the single manager, after the single manager organization is strengthened.

AGENCY COMMENTS

We did not receive official written comments from OSD in time to include them in this report. We forwarded a draft of this report to OSD on August 17, 1979. However, as of November 19, 1979, we still had not received official comments. From discussions during the week of October 1, 1979, with officials from the Office of the Undersecretary of Defense for Research and Engineering; the Office of the Assistant Secretary, Manpower, Reserve Affairs and Logistics; and the Office of the Assistant Secretary, Comptroller; it is clear that no firm decisions have been reached on our recommendations and more time is needed. According to these officials, the reason for the delay is that our recommendations cover several disciplines, e.g., acquisition, logistics, and finance, thus necessitating study and analysis by several organizations with requisite expertise in OSD and input from the single manager and the services. In addition, from discussions with the single manager and an OSD sponsored study group evaluating our report, it is evident the responses will take time because of the differing views about centralized management within DOD. However, DOD officials stated that considerable agreement with our recommendations has been achieved, but a uniform position has not been reached by DOD.

CHAPTER 4

SINGLE MANAGER'S ORGANIZATIONAL

POSITION MUST BE STRENGTHENED

There is general consensus that the single manager's position in DOD must be strengthened if he is to effectively carry out his mission. The concern is that the single manager's organization at ARRCOM lacks necessary visibility, does not report to a high enough level, is Army dominated, must compete for resources with purely Army programs, and is viewed by the services as parochial. Further, the single manager cannot implement the concept within his own service--the Army. We share this concern and conclude that organizational changes, along with expanded authority and responsibility, are needed for effective centralized ammunition management.

SINGLE MANAGER MISSION DELEGATED TO ARRCOM

DOD Directive 5160.65 assigned the Secretary of the Army as single manager for conventional ammunition. However, after a study of several conceptual alternatives for managing conventional ammunition was made, responsibility for carrying out the mission was delegated to the Commander of ARRCOM and his staff located at Rock Island, Illinois. The study considered alternatives, such as establishing the single manager organization

- at the Department of the Army level,
- as a project manager at the Department of the Army or DARCOM level,
- as a separate major command within DARCOM,
- at ARRCOM, and
- as a Deputy Commander for conventional ammunition at DARCOM.

The Army study group concluded that each alternative could do the job and that there would not be significant loss in personnel if the operating element was located at Rock Island, Illinois. The group recommended a Department of the Army level Military Munitions Command with a command office in Washington, D.C., and an operating element at Rock Island. However, the Secretary of the Army approved assimilating single manager functions into ARRCOM because it caused the

least personnel turbulence and could be carried out at the least cost in staffing.

PROBLEMS ASSOCIATED WITH
DELEGATION OF SINGLE
MANAGER MISSION TO ARRCOM

Delegating the single manager mission to ARRCOM was probably the best way to start the concept since it used an existing organization with substantial ammunition management expertise. However, several problems are inherent in such an assignment which preclude achieving effective centralized ammunition management.

What is ARRCOM?

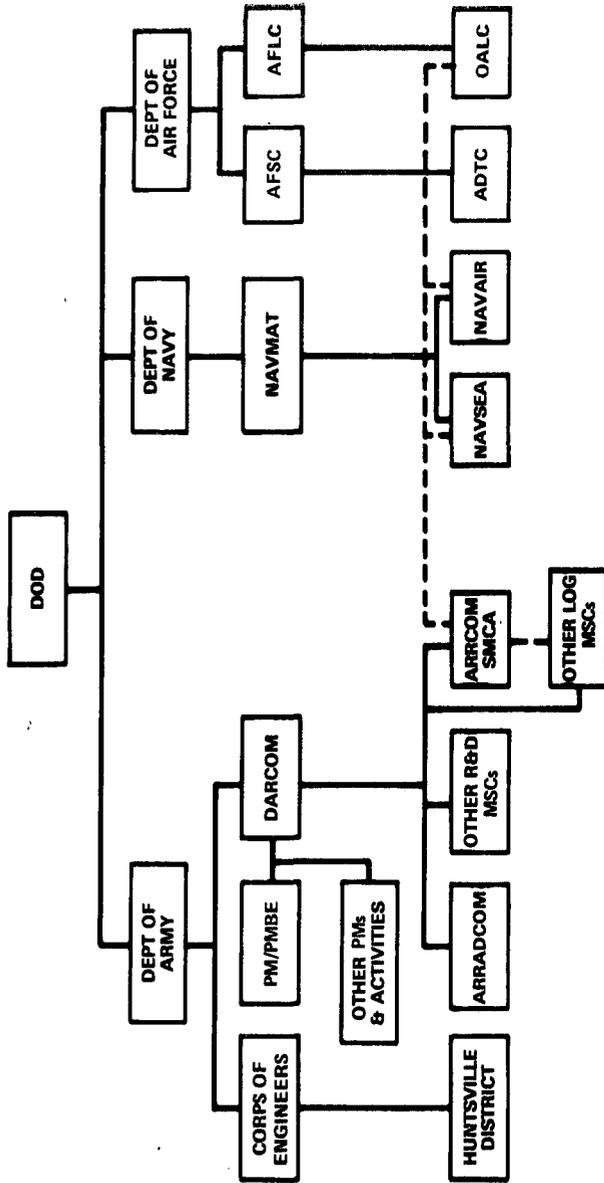
Organizationally, ARRCOM is a major subcommand of DARCOM (see p. 31). ARRCOM is responsible for managing several commodities for the Army in addition to its DOD-wide responsibility for ammunition. Consequently, the ARRCOM commander manages several items in addition to his single manager mission for ammunition. On the basis of the latest fiscal year 1979 authorization data, 4,228 civilian and 380 military personnel were authorized for ARRCOM headquarters of which 1,692 civilian and 110 military supported the single manager ammunition management mission. Of the \$376.8 million fiscal year 1979 operations and maintenance program, \$213.4 million was in support of the single manager mission.

ARRCOM lacks necessary visibility

In analyzing the various alternatives, the Army study group considered a high degree of visibility and stature important to the single manager's success. Service, single manager, and OSD officials conclude that because of its position in DOD, ARRCOM had neither the visibility nor stature needed to carry out the single manager mission. They conclude that elevating the organization is necessary.

The organizational chart on the following page clearly shows that ARRCOM is at a relatively low level in the DOD structure and is under several layers of Army management. In all likelihood, this limits the single manager's visibility outside the Army and certainly limits his stature both in the Army and throughout DOD.

LOCATION OF ARRCOM IN THE DOD STRUCTURE



SMCA - Single Manager for Conventional Ammunition

NAVMAT - Naval Material Command
 NAVSEA - Naval Sea Systems Command
 OALC - Ogden Air Logistics Center
 PMS - Project Managers
 PM/PMBE - Project Manager/Production Base Modernization and Expansion

ADTC - Armament Development and Test Center
 AFCLC - Air Force Logistics Command
 AFSC - Air Force Systems Command
 DARCOM - US Army Material Development and Readiness Command
 MSCs - Major Subordinate Commands
 NAVAIR - Naval Air Systems Command

ARRCOM commander's reporting channels are restricted

DOD Directive 5160.65 specifically delegates authority to the Secretary of the Army to have access and direct communications with the Secretaries of the Navy and Air Force and the Director, Defense Supply Agency, for all matters in the single manager assignment. Certainly, the single manager needs direct communication at all levels within DOD to effectively carry out his mission. However, the Secretary of the Army has not delegated this authority to the ARRCOM commander. Consequently, the ARRCOM commander's reporting channel is through DARCOM. This limits his ability to communicate effectively with OSD and the services. For example, we were told that the single manager was cautioned not to make direct contact with certain OSD personnel.

The Secretary of the Army could have provided the single manager appropriate communication channels by issuing a charter similar to the one issued to the Army's project manager for production base modernization and expansion. The project manager's charter provided a direct communication channel to the DARCOM Commanding General, the Army Chief of Staff, and the Secretary of the Army. Indeed, in developing the single manager implementation plan, the services prepared a charter which provided a direct communication channel to the Secretary of the Army. However, the charter was not signed because the Army takes the position that a DARCOM mission order provides adequate communication authority. We reviewed the mission order but could not find provisions for such authority.

ARRCOM lacks representation from services other than the Army

ARRCOM is almost totally Army in character which does little to exemplify joint service management of a DOD-wide program.

From the outset, emphasis was placed on the need to get personnel from all services into the single manager organization. The benefits were obvious, i.e., personnel with unique service experience could better address unique service needs in the single manager organization and military personnel could "sell" their respective services on the single manager concept, if they were at a high enough position in the organization. It follows that an activity with a DOD-wide mission should have a DOD-wide character.

Despite recruiting efforts by the single manager, only three Navy, three Marine Corps, and two Air Force military personnel are in his organization. In addition, only 12 civilian personnel were recruited or transferred to the single manager organization from other service activities involved in ammunition management. At present, 110 military and 1,692 civilian positions are in the single manager's organization.

The single manager estimates that military representation in the single manager's organization based on the proportions of the services' acquisition and inventories should include 116 positions: 71 Army, 23 Navy, 14 Air Force, and 8 Marine Corps. The Army views assignment of additional military and civilian personnel from the other services as essential to the effective execution of the single manager's DOD mission. OSD concludes that lack of joint service staffing perpetuate's parochial perceptions. The Army's 1975 concept study group concluded that it might be difficult to attract military personnel into the single manager organization because the positions would require supervision of single manager functions (ammunition) and Army functions (weapons). Apparently, they were right.

ARRCOM competes Army resources needs with single manager needs

As stated earlier, ARRCOM has mission responsibility for several Army programs in addition to its single manager mission for conventional ammunition. During the budget process, the single manager's programs must compete for resources with the Army's programs at ARRCOM and higher levels in the Army. Certain single manager programs benefit a service other than the Army. For example, the single manager needs \$113.2 million to correct a Navy inventory problem. Yet, he is unable to get funds from the Army or OSD to correct the problem. If the single manager assumes additional planning, programing, and budgeting responsibilities, more of the Army's resources will be needed to fund DOD-wide ammunition management needs. In times of fiscal austerity, the Army may not be inclined to fund programs from which it derives limited benefits. For example, during fiscal year 1979 the single manager needed \$55.3 million to support Navy, Marine Corps, and Air Force needs. The Army financed only \$37.4 million, or about 68 percent of the requirement. However, the Army financed 78 percent of the total ARRCOM fiscal year 1979 requirements.

During preimplementation planning, the Army was concerned that it would encounter funding problems. The Secretary of the Army sought assurance that DOD would support future funding requirements by either increasing the Army's funding or

establishing separate appropriations to support the single manager in fulfilling his responsibilities. Apparently, OSD assured the Army of its support. However, according to Army officials, it was not forthcoming. The Army's position is that single manager requirements to support the Navy, Marine Corps, and Air Force should compete with those service programs at the OSD level rather than within the Army.

Services fear ARRCOM
could be parochial

Service officials express fear the single manager is in a position to be parochial to the Army. They feel that higher ranking officers in the Army can influence his decisions since they prepare his performance rating. Further, they feel that the single manager's restricted reporting channel precludes his surfacing problems to higher levels in the Army and DOD. Finally, they fear the single manager will be parochial simply because he is part of the Army. Although we did not find, and the services did not provide us with, examples of parochialism, it certainly could take place.

ARRCOM unable to implement
concept within the Army

OSD and the other services have criticized the Army for not implementing the single manager concept. Specifically, the Army is criticized for

- not turning over its ammunition depots to the single manager,
- permitting the procurement split between ARRCOM and ARRADCOM,
- permitting its project managers and others to control production of newly designed items,
- permitting ammunition items such as rockets to be classified as missiles to preclude their being assigned to the single manager, and
- not assigning sufficient technical staff to the single manager.

As the single manager, the Secretary of the Army could have fully implemented the concept within the Army; however, the ARRCOM commander could not. It is ironic that the single manager sees a need for his greater involvement in facility acquisition for, and production of, newly designed

items yet his major problems are with activities within his own service. If he cannot break down resistance to the concept within his own service how can he hope to break down resistance in the other services? Simply stated, he needs more authority.

OSD CONSIDERING CHANGES IN SINGLE MANAGER ORGANIZATION

OSD recognizes deficiencies in the existing organization. OSD officials are especially concerned with the lack of full support for the concept within the Army, citing conflicts between ARRCOM and ARRADCOM, as examples. They see a need for increasing joint service participation by establishing direct communication channels to OSD, elevating the organization, and limiting its responsibility to ammunition.

To this end, OSD has prepared two draft directives, one of which will be implemented if enough support can be obtained in OSD. (Apparently, certain OSD officials are not supportive of the single manager concept.) One directive provides that the Secretary of the Army shall

"Establish and organize, as a major command of the United States Army, the single manager operating agency for conventional ammunition which shall have no other functions other than those assigned to it in this directive.

"Designate a general officer as executive director for the agency subject to the approval of the Secretary of Defense. The executive director shall have no other duties but to direct the operations of the agency and shall be responsible to the Secretary of the Army."

The other directive establishes a Defense Munitions Agency as a separate DOD agency under the direction, authority, and control of the Under Secretary of Defense for Research and Engineering. A single NICP and revolving fund for ammunition procurement would be established under this alternative. Each directive intends that the agency will manage only ammunition.

CONCLUSIONS

The widely held opinion that the single manager cannot effectively carry out his mission under the existing organizational arrangement is justified. The single manager's communication channels are limited, he has several layers

of Army management over him, he manages several other items along with ammunition, his organization lacks visibility because of its relatively low level in the Army, and it has little semblance of joint service character. Also, the single manager is forced to compete his resource requirements with Army requirements throughout the Army, is subject to being parochial, and cannot implement the concept within the Army.

The two alternatives OSD is considering are sound and certainly timely. Each improves visibility, communication, stature, and raises budgeting to a higher level. A Defense Munitions Agency would perhaps be the best alternative for centralizing ammunition management, but would involve creating yet another organization at the DOD level at considerable cost and personnel turbulence.

We favor the alternative of leaving the mission with the Secretary of the Army. This is a logical choice since about 80 percent of the ammunition program is for the Army and most ammunition management expertise is within the Army. A Department of the Army level single manager should greatly enhance implementing the concept within the Army. If there is going to be a single NICP, a greatly expanded wholesale inventory, assignment of all conventional ammunition items to the single manager, improved funding methods, and greater control by the single manager over procurement and facility acquisition, the Army should take the lead in implementing such actions. If the Army cannot--or will not--then a Defense Munitions Agency may be the only answer.

In establishing a Department of the Army level single manager organization, the operating activities can remain at Rock Island and other locations. However, it is essential that a Washington, D.C., command office be established to provide overall management direction.

This command office must be

--highly visible throughout DOD,

--staffed with top notch military and civilian personnel from all services,

--authorized to make ammunition management decisions for all services,

--given a clear charter by the Secretary of Defense with the single manager reporting directly to the service Secretary, and

--capable of providing intensive DOD-wide ammunition management in peace and especially in war without OSD intervention.

The manner of funding single manager programs must also be resolved. The program will suffer if the Army is forced to absorb the total cost without additional funding from DOD. As a minimum, DOD must provide additional funds for the incremental increase in the Army's ammunition program resulting from the Army carrying out the single manager responsibilities for conventional ammunition mission.

RECOMMENDATIONS

To strengthen the single manager organization, we recommend that the Secretary of Defense

- direct the Secretary of the Army to establish a Department of the Army level organization to carry out the single manager for conventional ammunition mission and
- provide funds to the Army for the additional costs the Army incurs in carrying out the single manager concept for conventional ammunition mission.

AGENCY COMMENTS

As discussed on page 28, OSD did not provide official written comments in time to include them in this report.

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COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

EFFECTIVE CENTRAL CONTROL COULD
IMPROVE DOD'S AMMUNITION LOGISTICS
B-176139

D I G E S TWHY THE REVIEW WAS MADE

The logistics of the four military services for dealing with ammunition--ranging from rifle bullets to sophisticated bombs--is complex and unusual. Comparable products for the most part are not manufactured for civilian use; needs vary greatly in times of peace or war; and each service has its own system of procuring, maintaining, and distributing ammunition. Over \$21 billion was appropriated from 1968 to 1973 for ammunition.

These factors led GAO to study ammunition logistics in the Department of Defense (DOD).

FINDINGS AND CONCLUSIONS

In ammunition logistics the Army and Navy have the predominant DOD management roles. They control Government-owned ammunition production plants and storage facilities. GAO's review of key logistics functions of

- requirements determinations,
 - procurement,
 - production scheduling, and
 - storage and distribution
- showed that current management was

not satisfactory in terms of economy and efficiency.

GAO noted that:

- Improved exchange of information by the services on available ammunition could reduce funds appropriated for procuring ammunition.
- More accurate budget requests could reduce funds appropriated for procuring ammunition. (See pp. 9 and 10.)
- Improved procurement operations could avoid interservice competition for the limited private industrial capacities. (See p. 12.)
- Defense-wide perspective in scheduling production, modernization, and mobilization could eliminate competition for appropriated funds. (See p. 14.)
- Improved storage and distribution management could reduce transportation and handling costs. (See p. 20.)

Those objectives can be reached by Defense-wide planning that matches Defense-wide requirements with Defense-wide capabilities.

Stronger central management could help attain this Defense-wide perspective.

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difficult as it is to bring about.

RECOMMENDATIONS

The Secretary of Defense should establish central management for all ammunition either by creating a new ammunition organization or by assigning this responsibility to one service. The central manager would be responsible for consolidating requirements for ammunition items determined by each service and for continuing through the inventory accounting, procurement, production, storage, and distribution functions. (See p. 26.)

The central manager should also work closely with the services' research and development organizations in planning future ammunition production.

AGENCY ACTIONS AND UNRESOLVED ISSUES

DOD agreed with GAO's conclusions that Defense-wide perspective in ammunition management needs improving.

DOD believes that this can be attained by establishing a Joint Conventional Ammunition Production organization consisting of a coordinating group and working committees operating under the Joint Logistics Commanders.

DOD recognizes the inherent disadvantages of such an organization, but it wants to give the organization an opportunity to demonstrate fully its management capability before considering alternatives.

GAO appreciates that several alternative organization concepts could be used to improve ammunition management. GAO feels that the Joint Conventional Ammunition Production

organization could work if it is given the responsibility and staffing needed to obtain effective central control of ammunition.

Such an organization should, at least, be

- staffed with officials who appreciate Defense-wide needs and who are not restricted to service desires;
- authorized to make decisions for all service components involved in ammunition requirements determinations, procurement, production, storage, distribution, and modernization; and
- responsive and responsible to the Secretary of Defense rather than to the military departments.

The Secretary should set a reasonable test period for improving ammunition management with the present organization.

If, at the end of that period, ammunition management has not improved substantially, he should consider assigning responsibility for managing ammunition to one service or to a new organization with the authority and manpower to do an effective job.

MATTERS FOR CONSIDERATION BY THE CONGRESS

In peacetime, manufacture, storage, and safekeeping of ammunition can be an expensive drain on the economy. Its efficient and economical management is obviously always important.

Certain congressional committees may want to be kept advised of:

- How the Secretary of Defense will determine if ammunition management

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is being improved by the Joint
Conventional Ammunition Production
organization.

--What he is doing to insure that
service competition no longer

interferes with ammunition manage-
ment.

--How much the military budget is
being reduced by improved ammuni-
tion management.

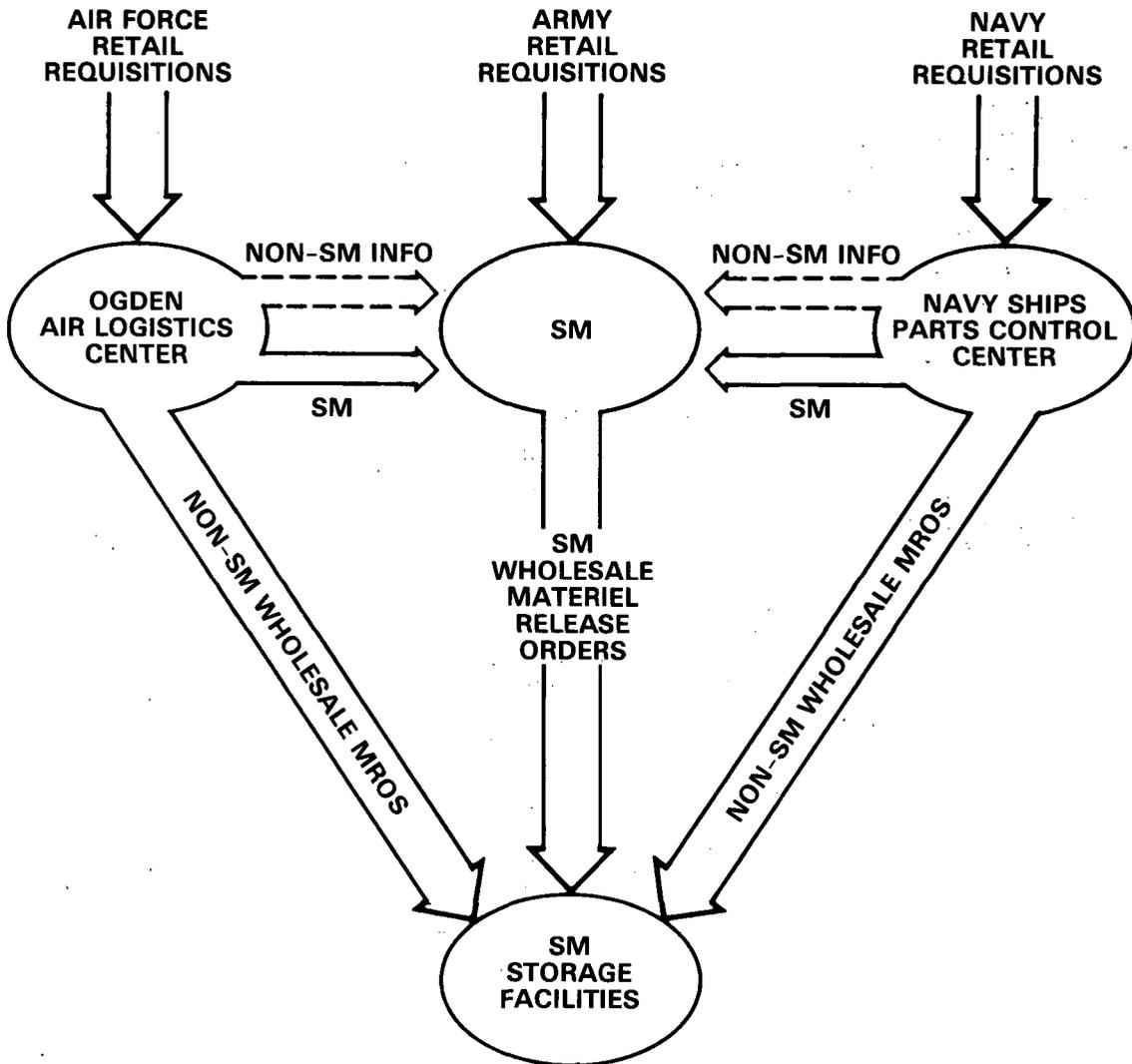
CONVENTIONAL AMMUNITION ITEMS INCLUDED
IN THE SINGLE MANAGER PHASE I CHARTER

<u>Federal supply classes</u>	<u>Item</u>	<u>Army</u>	<u>Navy</u>	<u>Air Force</u>	<u>Marine Corps</u>	<u>Common to two or more</u>	<u>Total</u>
1305	Ammunition to 30-mm.	379	442	288	152	174	1,435
1310	Ammunition over 30-mm. to 75-mm.	139	85	25	64	25	338
1315	Ammunition over 75-mm. to 125-mm.	590	324	35	375	51	1,375
1320	Ammunition over 125-mm.	244	656	-	87	7	994
1325	Bombs	204	335	475	0	103	1,117
1330	Grenades	105	99	39	98	69	410
1340	Rockets, rocket ammunition, and rocket components	96	210	63	61	30	460
1345	Land mines	129	28	33	58	24	272
1365	Military chemical agents	43	36	15	20	9	123
1370	Pyrotechnics	74	224	159	102	73	632
1375	Demolition materials	247	136	72	97	72	624
1376	Bulk explosives	234	16	1	5	1	257
1390	Fuzes and primers	232	220	3	122	15	592
1395	Miscellaneous ammunition (includes shapes, such as blanks, discs, slugs, and cups)	50	93	1	15	-	159
8140	Ammunition and nuclear ordnance boxes, packages, and special containers	863	20	13	85	8	989
	Total	<u>3,629</u>	<u>2,924</u>	<u>1,222</u>	<u>1,341</u>	<u>661</u>	<u>9,777</u>

AMMUNITION ITEMS NOT SUBJECT
TO SINGLE MANAGER ASSIGNMENT

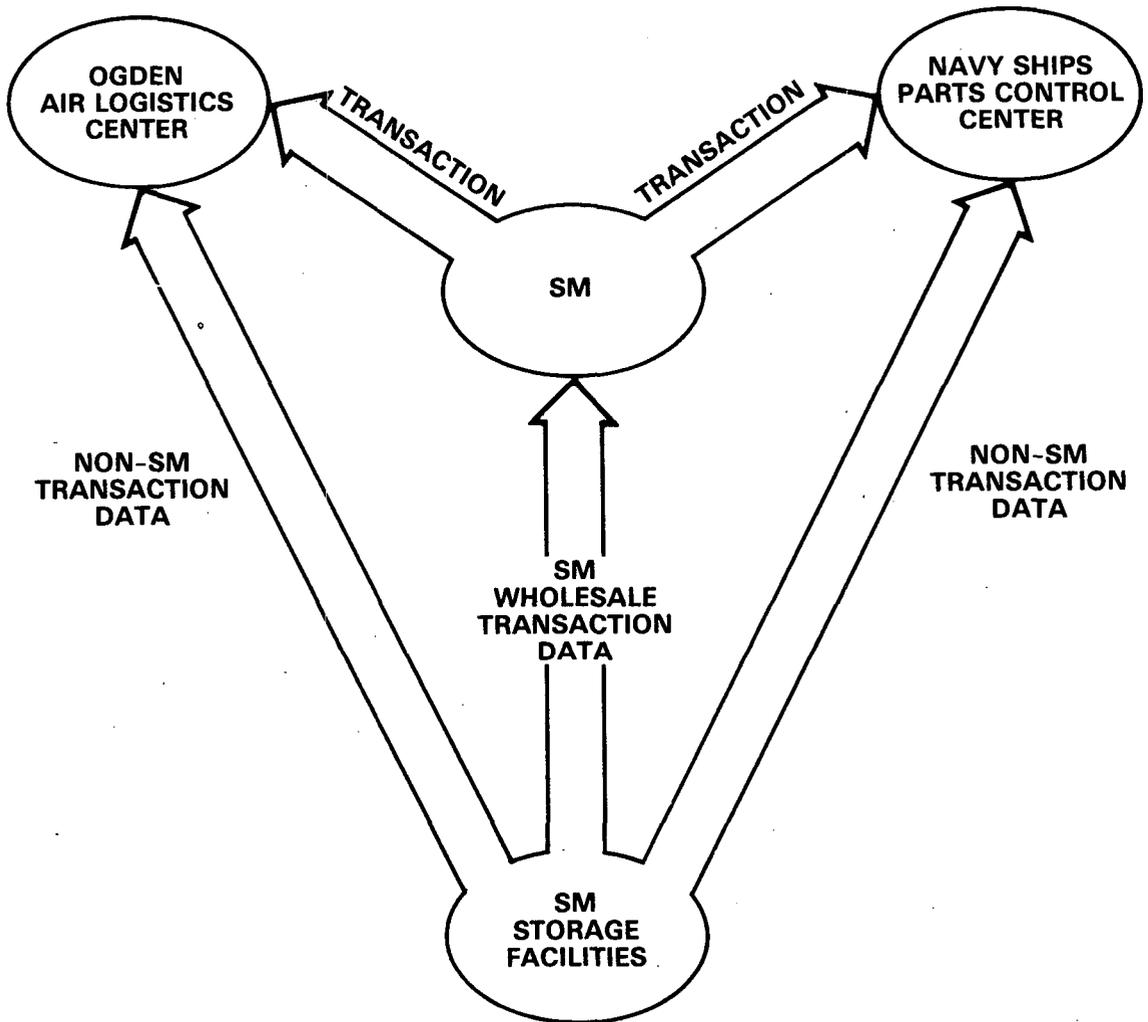
<u>Federal supply classes</u>	<u>Item</u>	<u>Army</u>		<u>Navy</u>		<u>Air Force</u>		<u>Marine Corps</u>	
		<u>Single user</u>	<u>Multi- user</u>	<u>Single user</u>	<u>Multi- user</u>	<u>Single user</u>	<u>Multi- user</u>	<u>Single user</u>	<u>Multi- user</u>
1336	Guided missiles	121	21	245	43	219	42	10	20
1337	Guided missiles	49	3	86	34	146	34	-	3
1338	Guided missiles	55	8	23	30	522	30	2	8
1350	Underwater mines	1	1	2,056	4	1	2	-	1
1351	Underwater mines	-	-	395	3	-	3	-	-
1355	Torpedo inert	-	-	4,919	-	-	-	-	-
1356	Torpedo explosive	-	-	161	-	-	-	-	-
1360	Depth charge	-	1	259	1	-	-	-	-
1361	Depth charge	-	-	45	-	-	-	-	-
1377	Cartridge actuated device/propellant actuated device	105	105	791	186	1,453	224	11	11
1385	Explosive ordnance disposal tools	10	100	79	148	2	95	39	144
1386	Explosive ordnance disposal tools	-	5	239	30	-	9	1	23
	Total	<u>341</u>	<u>244</u>	<u>9,298</u>	<u>479</u>	<u>2,343</u>	<u>439</u>	<u>63</u>	<u>210</u>

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