

**GAO**

Report to the Chairman, Subcommittee  
on Readiness and Management Support,  
Committee on Armed Services, U.S.  
Senate

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September 1999

# DEFENSE MANAGEMENT

## Army Could Achieve Efficiencies by Consolidating Ammunition Management



**G A O**

Accountability \* Integrity \* Reliability



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

National Security and  
International Affairs Division

B-281873

September 30, 1999

The Honorable James M. Inhofe  
Chairman, Subcommittee on Readiness  
and Management Support  
Committee on Armed Services  
United States Senate

Dear Mr. Chairman:

The National Defense Authorization Act for Fiscal Year 1996 directed that the Army review and report on the management of conventional ammunition programs within the Department of Defense. In response, the Army contracted with Pacific Northwest National Laboratory in June 1996 to conduct a comprehensive study of the management and configuration of the ammunition industrial base.<sup>1</sup> The study, completed in June 1997, recommended several actions to address the fragmentation of management responsibilities and accountability and the inefficiencies that impact the ammunition industrial base. In fiscal year 1999, the budget for conventional ammunition procurement programs was about \$2 billion.

As you requested, we reviewed the Army's implementation of the study's recommendations. Specifically, we assessed the Army's (1) progress toward reorganizing the management of conventional ammunition to address the fragmentation issues and (2) efforts to improve business practices to enhance the operational efficiency of ammunition production and procurement. This is the first in a series of reports that will also address issues such as demilitarization, capacity utilization, and storage of conventional ammunition.

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## Results in Brief

The Army has made limited progress in addressing the problem of fragmented management of its conventional ammunition program. Senior Army leadership has been considering alternative organizational structures identified by a study team as a means of addressing the fragmentation

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<sup>1</sup>The industrial base includes both government-owned and private-sector ammunition production plants.

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issue. However, no decisions have been made because of lack of agreement on where management of conventional ammunition would fit into the Army's organizational structure, and no milestones have been set for resolving the issue. In lieu of an organizational change and recognition of the need to integrate ammunition management, the Commanders of the three commands that deal with conventional ammunition formed an informal coordination group. The Commanders agreed to work together on common activities to pursue the most comprehensive and cost-effective approach to conventional ammunition management. However, the coordination group's decisions are not binding and are dependent on all members agreeing to proposed actions.

Although the Army has not resolved the problem of fragmented management of conventional ammunition, it has developed initiatives to improve its business practices to enhance the operational efficiency of ammunition production and procurement. These initiatives have not yet been completed and their outcomes are yet to be determined. Further, the long-term success of these initiatives will depend upon the ability of the informal coordination group to ensure cooperation among all participants and resolve issues of common interest.

This report contains recommendations to the Secretary of Defense and the Secretary of the Army intended to address management fragmentation.

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## Background

In March 1975, the Department of Defense established the Single Manager for Conventional Ammunition within the Secretary of the Army. The Single Manager was expected to be the central procuring and logistics agency for conventional ammunition common to all military services. Additionally, the Single Manager was to be responsible for managing the Army's ammunition production facilities. The Single Manager concept evolved from a July 1970 Logistics Management Institute report and one of our reports.<sup>2</sup> These reports recommended, among other things, that the Army centrally manage all ammunition to avoid duplication among production facilities and manufacturing processes.

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<sup>2</sup>*Effective Central Control Could Improve DOD's Ammunition Logistics* (B-176139, Dec. 6, 1973).

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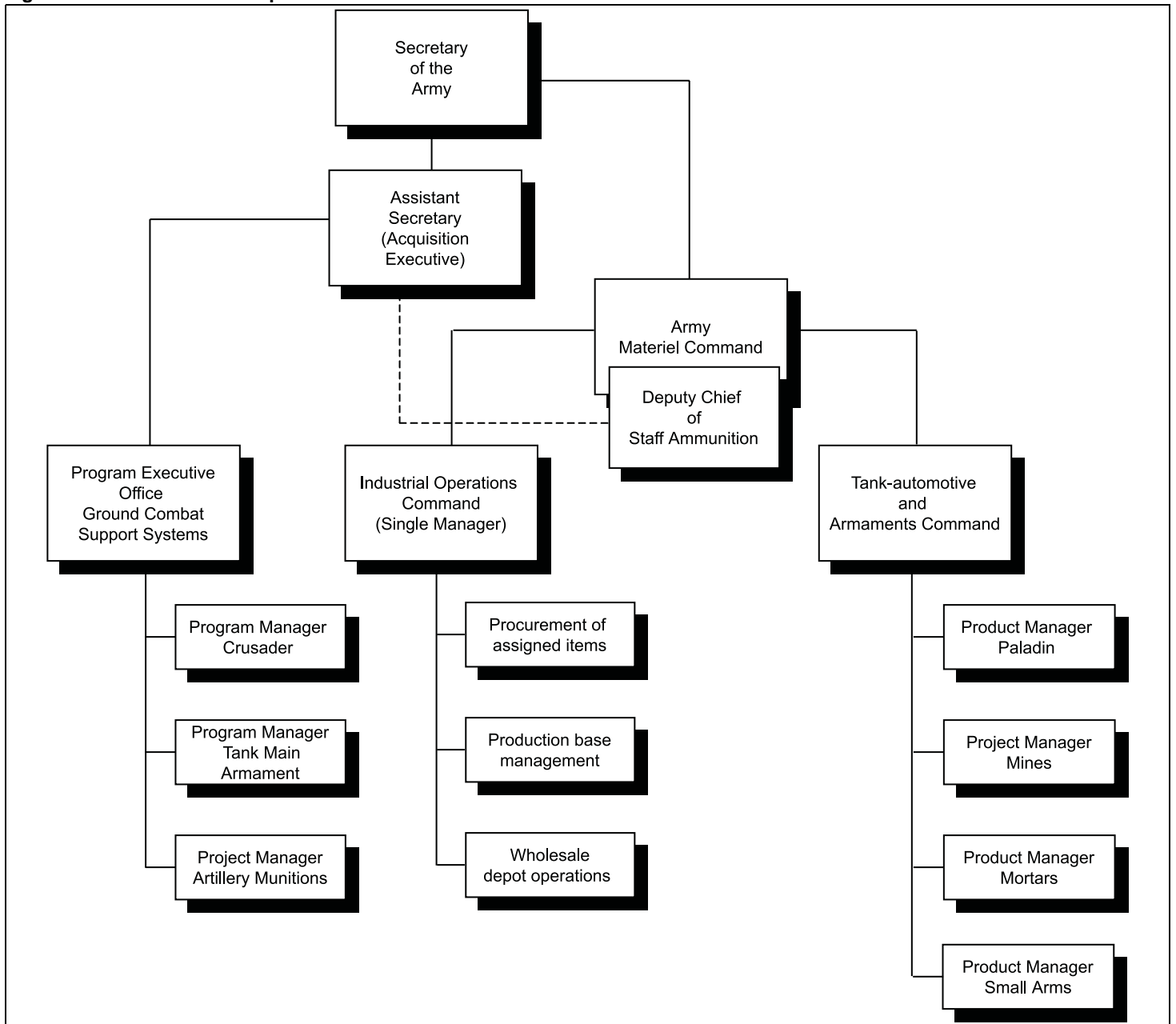
## Management of Conventional Ammunition

While the Secretary of the Army is officially recognized as the Single Manager, the Army's Industrial Operations Command, a subordinate command of the Army Materiel Command, is responsible for the day-to-day execution of the Single Manager role. However, in actual practice, ammunition management responsibility is fragmented among three major Army commands. Specifically, in addition to the Industrial Operations Command, the Tank-automotive and Armaments Command, also a subordinate command of the Army Materiel Command, and the Program Executive Office for Ground Combat Support Systems,<sup>3</sup> which reports to the Assistant Secretary of the Army for Acquisition, Logistics, and Technology (Acquisition Executive), have significant ammunition management responsibilities as well as other responsibilities. Figure 1 shows the commands that have Program, Project, or Product Managers who are responsible for procuring conventional ammunition for their programs.

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<sup>3</sup>The Program Executive Office for Ground Combat Support Systems provides program oversight and direction to the Program or Project Managers under its command.

Figure 1: Activities With Responsibilities for Conventional Ammunition



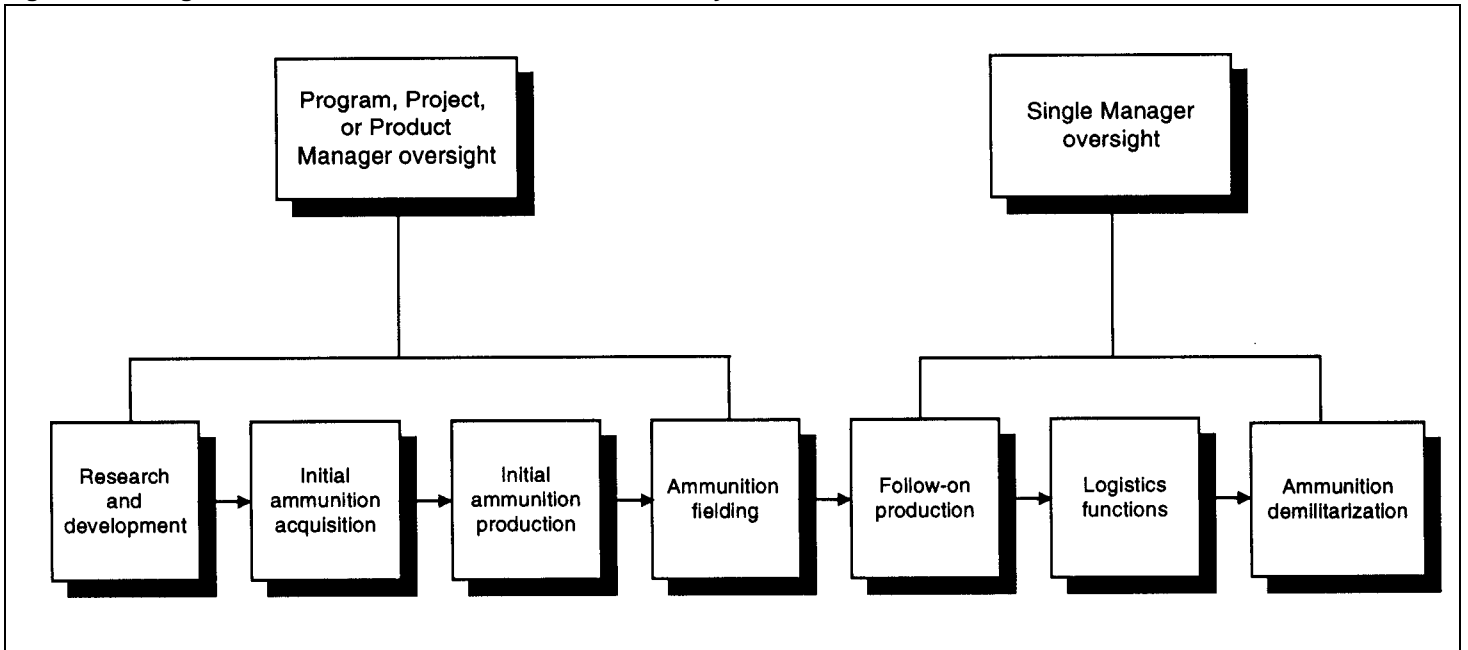
Source: Office of the Executive Director for Conventional Ammunition.



As illustrated in figure 1, the Army's Acquisition Executive is not in the Single Manager's chain of command. However, as shown by the dotted line in figure 1, there is a coordinating function within the Deputy Chief of Staff, Ammunition, (Army Materiel Command), which supports both the Industrial Operations Command and the Acquisition Executive. The Acquisition Executive is responsible for making policies that impact the government-owned industrial base, and the Industrial Operations Command is responsible for executing that policy. However, the Acquisition Executive has no direct authority over decisions made by the Single Manager and can only influence how policies are executed.

The Program Executive Office and the Tank-automotive and Armaments Command differ from the Single Manager in that they are responsible for research and development, initial production and fielding, and product improvement, but they are not responsible for logistics activities such as production base management and wholesale depot operations. Figure 2 shows the responsibilities of the Single Manager and the Program, Project, or Product Managers in the ammunition life cycle.

Figure 2: Management of the Conventional Ammunition Life Cycle



Source: Industrial Operations Command.

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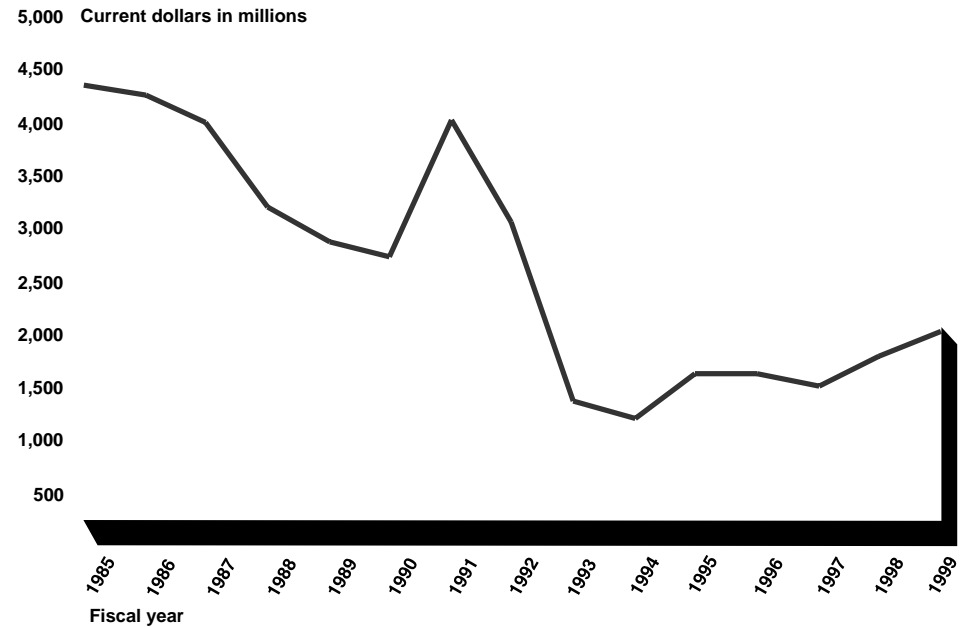
The Department of Defense directive for the Single Manager, signed by the Deputy Secretary of Defense and revised in 1995, states that once ammunition items reach stable production, they are to be assigned to the Single Manager responsible for follow-on production, logistics functions, and demilitarization. However, the Program, Project, or Product Managers operate under a separate Department of Defense directive, also signed by the Deputy Secretary of Defense and issued in 1996, which charges these managers with full life-cycle responsibility for their programs. Information from various Army officials indicates that the differences in responsibility are the genesis of the fragmentation among these commands. Appendix I illustrates problems caused by fragmented management.

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## Declining Budgets and Requirements

The end of the Cold War and subsequent changes to defense missions resulted in declining budgets and requirements for conventional ammunition. As shown in figure 3, ammunition procurement funding for all services has declined significantly, falling from a peak level of about \$4.3 billion in fiscal year 1985 to about \$2 billion in fiscal year 1999, with about one-half of the total going to the procurement of Army ammunition.

**Figure 3: Conventional Ammunition Procurement Program Budgets, Fiscal Year 1985 Through Fiscal Year 1999**



Source: Office of the Secretary of Defense, Office of Munitions.

Requirements for conventional ammunition also changed as the services decreased their dependence on traditional ammunition items and increased their reliance on highly technical, precision munitions.<sup>4</sup> In 1997, the Department of Defense issued a new policy on requirements determination in an attempt to generate consistent conventional ammunition requirements Department-wide and address changes in mission requirements. The new policy states that military departments should establish ammunition requirements and associated acquisition programs to properly perform their military mission. The Army is conducting a study to determine whether the increased investment in more modern precision munitions would have a significant impact on reducing the total life-cycle

<sup>4</sup>Precision Munitions cover both guided and smart munitions. Guided munitions are one-on-one munitions—one munition for one target—that are guided to their target through a target acquisition sensor or laser designation system. Smart Munitions are “fire and forget” and have an autonomous capability to search, detect, classify, select, and engage targets with a lethal mechanism.

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cost of ammunition. According to the study director, the study should be completed in November 1999.

Decreasing requirements for conventional ammunition have resulted in a reduction in both government-owned and private-sector production plants. The number of government-owned ammunition plants decreased from 32 in 1978 to 22 in 1999. Of these 22 plants, 8 are currently producing ammunition, 6 are contractor operated, and 2 are government operated. Of the 14 remaining plants, 4 are inactive<sup>5</sup> and 10 are no longer required for current or future production and are in the process of being disposed of. Additionally, the number of contractor-owned plants declined from 286 in 1978 to 72 in 1999. A list of the 22 plants is included in appendix II.

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## Congressional Concerns Over Program Management

To comply with Section 1082 of the National Defense Authorization Act for Fiscal Year 1996, the Army contracted with Pacific Northwest National Laboratory to conduct a comprehensive review of the ammunition industrial base. The key objectives of the study were to assess the capability and capacity of the industrial base for conventional ammunition and recommend a strategy for configuring and managing the base to effectively meet Department of Defense planning guidance.

In June 1997, the contractor issued its report: Recommended Strategy for Configuring and Managing the U.S. Munitions Industrial Base. The study found that, among other things, the ammunition management system was fragmented and the business environment needed to be stabilized. The report stated that different organizations, specifically the Industrial Operations Command, the Tank-automotive and Armaments Command, and the Program Executive Office for Ground Combat Support Systems, were responsible for different stages of the ammunition life cycle. Consequently, much time was being spent trying to coordinate activities. Additionally, the study found that the government-owned industrial base was becoming less efficient as the volume of work continued to shrink. On the basis of its assessment, Pacific Northwest National Laboratory recommended the following strategy to improve the management of conventional ammunition:

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<sup>5</sup>Inactive plants no longer have work directed to them, but their capacity is retained for replenishment or technological reasons.

- manage ammunition as a major program using Department of Defense life-cycle acquisition processes;
- consolidate management responsibilities and financial resources for ammunition into a Program Executive Office for Ammunition;<sup>6</sup>
- convert government-owned production assets to private-sector ownership and acquire ammunition from the private sector; and
- apply acquisition reform initiatives already underway in the Department of Defense to the ammunition acquisition process to stabilize the business environment and encourage industry to invest in the industrial base.

To accomplish this strategy, the study listed the following critical actions:

- establish ammunition program managers with full life-cycle responsibility for developing and producing items they manage;
- establish full and open competition among qualified suppliers as the standard acquisition approach;
- establish an integrated requirements process that includes representatives from all services and the industrial base; and
- establish and implement an equitable process for transitioning government-owned assets to private ownership.

The report further stated that with an acquisitions-based management approach, the government could move away from direct ownership and management of production assets and could instead focus its activities on the acquisition function, buying end items and replenishment capacity rather than production facilities and equipment.

The Army agreed with most of these recommendations, and they were included in a June 1998 Industry Base Policy Letter, 98-1-Ammunition, which established the Army's strategy for achieving efficiency in the ammunition industrial base. There was no agreement on the recommendation to create a Program Executive Office for Ammunition. Instead, Army officials chartered a study team, known as the Organizational Integrated Process Team, to develop other organizational alternatives to address fragmentation issues. It also established a Business Case Integrated Process Team to determine how to implement the Pacific

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<sup>6</sup>The Program Executive Office for Ammunition would be responsible for integrating budgets, acquisition strategies, research and development, and life-cycle management across all ammunition categories that the Army refers to as families.

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Northwest National Laboratory's recommendations for improving operational efficiencies. Subsequently, the Army formed ammunition teams to develop competition and ammunition life-cycle strategies for all categories of ammunition, including Artillery, Fuzes, Mines/Countermines, Mortars, Small Arms, and Tank/Medium Caliber.

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## Fragmentation Issues Remain Unresolved

The Army has made limited progress towards addressing the fragmentation of ammunition management because of lack of agreement on where management of conventional ammunition would fit into the Army's organization. Although the Army is considering recommendations from both an external and an internal group for improving the management structure of conventional ammunition, to date the Army has taken no action. In the interim, the principal Army commands responsible for management of conventional ammunition have formed an informal coordinating group known as the Armament Triad to deal with common issues that impact conventional ammunition. Because the Triad is an informal group, its prospects for long-term success are uncertain.

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## Team Recommendations Are Being Considered

The Organizational Integrated Process Team focused on the lack of integration in ammunition management. Specifically, the team addressed three problems: (1) fragmented ammunition management, (2) problems with the industrial base, and (3) outdated physical and organizational structures and processes, all of which have resulted in inefficiencies in the production and procurement of conventional ammunition. The team developed four proposals:

- Creation of an Ammunition Command. This proposal would centralize decision-making authority under a Major General with responsibility and accountability for integrated life-cycle management of ammunition while maintaining the mission of the Single Manager.
- Creation of a Program Manager/Program Executive Office and Merged Major Subordinate Command. This proposal would establish a joint Program Manager at the Brigadier General level for ammunition within the Ground Combat Support Systems Command. This concept would totally integrate ammunition under a single command and provide one voice for the Army's conventional ammunition. The logistics mission of the Single Manager would be retained.
- Creation of a management structure that would integrate industrial base management with weapon systems management under the same

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command. The concept is predicated on fully utilizing the private sector for all aspects of the ammunition life cycle.

- Creation of a Single Service. This proposal is based on the premise that the Department of Defense would merge into one service and that the requirement for the Single Manager would be eliminated.

The team recommended that the Army adopt the second proposal, which would provide a structure similar to that recommended by the Pacific Northwest National Laboratory study. The team found that the Program Manager/Program Executive Office concept scored the highest in attributes such as a clearly defined mission that focuses on total life-cycle management of ammunition.

The team briefed Army leadership in July 1998, and its recommendations were taken into consideration by a three-member team representing the Army Materiel Command, the Army's Office of the Deputy Chief of Staff for Logistics, and the Secretary of the Army for Acquisition, Logistics, and Technology. The Army has not made any decision to reorganize the management of conventional ammunition and has not set milestones to do so. As a result, the three commands that report to the Secretary of the Army through different chains of command can still make independent decisions that impact the industrial base.

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## Uncertainty Regarding the Triad's Effectiveness

Recognizing the need to integrate ammunition management, in October 1998 the Commanding Generals of the three commands (Industrial Operations Command, Tank-automotive and Armaments Command, and Program Executive Office for Ground Combat Support Systems) that deal with conventional ammunition formed an informal coordination group referred to as the Armament Triad. The Commanders signed a memorandum of understanding to work together to coordinate common activities by pursuing a comprehensive and cost-effective approach to the life-cycle management of ammunition.

The Triad deals with concerns forwarded by the ammunition teams through an Executive Council. The Triad meets quarterly to discuss and attempt to resolve issues that impact the production and procurement of conventional ammunition. The teams are responsible for developing life-cycle management plans for their individual categories of conventional ammunition. This is to be accomplished through three plans: a business plan, an acquisition plan, and an industrial base plan, which are discussed in detail later in this report. Additionally, the Triad has assumed

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responsibility for ensuring total integration of plans being formulated by the various teams.

Although the Triad provides overall coordination to the ammunition teams, Triad members have expressed concern about the group's long-term ability to affect change. For example, members are concerned they will not be able to resolve Army-wide ammunition issues if decisions to do so adversely impact any one individual command. This situation is exacerbated by the fact that the individual Triad members do not report to the Secretary of the Army through the same chain of command. According to senior Army officials, in order for the Triad to be successful, huge cultural, if not organizational, changes would have to take place. They added that Program Managers are more concerned with cost, schedule, and performance than with how their decisions impact government-owned ammunition production facilities. Various officials also suggested that unless the Triad is given permanent status, its future would become less certain as command changes affecting the Triad members occur.

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## Initial Efforts Underway to Improve Management Efficiencies

While the Army has not addressed the fragmentation issues as they relate to ammunition management, it has made efforts to improve the efficiency of the industrial base as well as the life-cycle management of ammunition. The Army initially focused on two initiatives: (1) development of a competition strategy for ammunition acquisition, and (2) development of life-cycle management plans for individual ammunition categories. The first initiative was developed to facilitate the transfer of government-owned ammunition plants to private-sector ownership. Although two competitions have been carried out, the Army recently decided to base future competitions on the life-cycle management plans that are being developed by ammunition teams.

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## Competition Strategy

The Business Case Integrated Process Team developed competition strategies for each government-owned plant by assessing the plant's capabilities, determining the best method of transitioning it to private-sector ownership, and establishing a timeline for completion. A competition for explosive materials was completed in June 1998, and another for small caliber ammunition was completed in July 1999. However, Army officials have recently voiced concerns about the competitions being carried out prior to completion of the life-cycle management plans, which they think should help determine future facility requirements. The Commander, Industrial Operations Command, and the



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Deputy Chief of Staff for the Single Manager, both stated they have recognized the value of the family team plans in helping to determine which competitions would be needed. As a result, future competition plans will take into account information contained in life-cycle management plans.

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## Integration of Life-Cycle Management Plans

Ammunition teams were formed between November 1998 and January 1999 to integrate the entire ammunition life cycle by including representatives from each of the three commands, as well as from other services and units such as requirements planning and budgeting. These teams are responsible for developing life-cycle management plans for their ammunition items. They expect to do so by developing the following plans:

- A business plan is to be developed to include all life-cycle requirements such as environmental technology, maintenance, and demilitarization. This plan must ensure that the necessary industrial capacities, including peacetime production, replenishment capacity, and storage are obtained and maintained in a cost-effective manner.
- An acquisition plan is to be developed to document all acquisitions for the ammunition category and determine the cost at each phase of the life cycle. Examples of acquisitions are peacetime production, storage, maintenance, and transportation.
- Based on an assessment of the current ammunition production base, an industrial base plan is to be developed to determine what capacity is needed to meet requirements.

The plans were due to be completed and submitted to an Integration Planning Team in June 1999. However, according to an Army official, the plans are taking longer to complete than was anticipated because of difficulties in achieving agreement among the team members. The business plans were completed in July 1999, and the remaining plans are to be completed by October 1999.

An Integration Planning Team was formed at the same time as the ammunition teams. It is responsible for reviewing teams' plans to assess their overall impact on the ammunition industrial base. The plans are expected to be reviewed concurrently to eliminate conflicts or negative impacts on the industrial base. According to the Integration Planning Team leader, the team's goal is to optimize the Army's procurement and production of conventional ammunition. One way to achieve this, according to the Team leader, is to consolidate ammunition procurement efforts across ammunition categories whenever possible. For example, the

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Team and ultimately the Triad may decide that mortar bodies and artillery shells could be included in a single contract to save money and stabilize the industrial base, and the Team could work with the individual teams to achieve that goal. This strategy differs from the current one, in which each of the three commands can make decisions considering only its own individual programs.

Additionally, according to various Army officials, the plans would be included in the competition strategies for government-owned plants as well as in future budgetary and requirements plans. This initial effort is scheduled to be presented to the Triad in October 1999. Thereafter, according to the Integration Planning Team leader, these plans are expected to be reviewed annually and modified as conditions change.

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## Conclusions

Management of the Army's conventional ammunition program continues to be fragmented despite internal recognition of the problem and efforts to identify alternative solutions. The Army is continuing to review the recommendations of the group that studied the issue; however, no timeframe has been established for taking any formal action. In the interim, the three commands that deal with various aspects of conventional ammunition have established an informal structure and a set of procedures for addressing issues of common interest. While this is a constructive step, it is only an informal process that depends on all parties voluntarily cooperating to improve business practices for the purpose of enhancing operational efficiencies for ammunition production and procurement. The ability to resolve differences caused by competing program goals is exacerbated by the lack of a single chain of command with the ability to force reconciliation among competing interests. Likewise, unless the Triad is given permanent status, its future will become less certain as command changes affecting the Triad members occur. Until actions are taken to address the fragmentation of ammunition management, the area remains vulnerable to inefficiency.

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## Recommendations

Since management fragmentation can only be resolved through changes in the current organizational structure and reporting relationships, and because of the Defense-wide nature of the issue, we recommend that the Secretary of Defense direct the Secretary of the Army to establish a timeframe for implementing an Army-wide reorganization to integrate the management of conventional ammunition. In considering organizational

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alternatives, we recommend that the Secretary of the Army consider a permanent Triad structure as well as other recommended organizational structures. To facilitate efficient operations, until organizational changes occur, we further recommend that the Secretary of Defense direct the Secretary of the Army to put in place a mechanism to address issues the informal Triad is unable to resolve.

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## Agency Comments and Our Evaluation

The Director of Strategic and Tactical Systems in the Office of the Under Secretary of Defense for Acquisition and Technology provided written comments on a draft of this report. They are included in appendix III. While concurring with the report's assessment of issues and recommendations, the Director stated that the recommendation should be directed to the Secretary of the Army rather than the Secretary of Defense. Ultimately, the Secretary of Defense is responsible for ensuring the economy and efficiency of Defense organizations and operations, and the Secretary of the Army reports to the Secretary of Defense. In this instance, although significant time has passed, the Army has not resolved the long-standing issues identified in this report. Consequently, we continue to believe that action is needed by the Secretary of Defense to achieve a timely resolution of these issues.

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## Scope and Methodology

To identify the Army's plans for reorganizing the management of conventional ammunition and to determine how this should be accomplished, we reviewed the Pacific Northwest National Laboratory recommendations, Industrial Base Policy Letter, 98-1-Ammunition, and proposals made by the Organizational Integrated Process Team. We reviewed how the Industrial Operations Command, the Tank-automotive and Armaments Command, and the Program Executive Office for Ground Combat Support Systems were established and Department of Defense directives that set out their roles and responsibilities. We interviewed senior officials at the Office of the Secretary of Defense, Washington, D.C; the Office of the Secretary of the Army for Acquisition, Logistics and Technology, Washington, D.C; the Army Materiel Command, Alexandria, Virginia; the Industrial Operations Command, Rock Island, Illinois; the Program Executive Office for Ground Combat Support Systems, Picatinny Arsenal, New Jersey; and the Tank-automotive and Armaments Command, Warren, Michigan. We also discussed ammunition management with representatives of the Munitions Industrial Base Task Force, Arlington, Virginia; the Program Manager for Ammunition, U.S. Marine Corps Systems

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Command, Arlington, Virginia; the Office of Munitions Requirements and Allocations, U.S. Air Force, Washington, D.C; and the Program Executive Office for Theater Surface Support, Naval Sea Systems Command, Arlington, Virginia. To develop the examples of fragmented management and decision-making, we interviewed the Program Manager, Crusader Munitions, at the Program Executive Office, Ground Combat Support Systems, and the Commanding General and Deputy Product Manager, Mortars, at the Tank-automotive and Armaments Command. We also interviewed senior officials at the Industrial Operations Command.

To determine how the Army is addressing its business practices to improve operational efficiencies related to ammunition production and procurement, we reviewed the proposals of the Business Case Integrated Process Team and discussed its recommendations with the above officials.

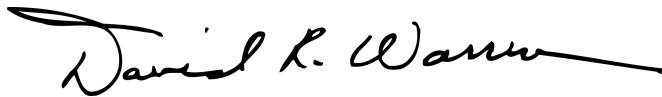
We conducted our review from December 1998 through June 1999 in accordance with generally accepted government auditing standards.

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We are sending copies of this report to the Honorable William Cohen, Secretary of Defense; the Honorable Louis Caldera, Secretary of the Army; the Honorable Jacob Lew, Director, Office of Management and Budget; and Senator Charles Robb, Ranking Minority Member, Subcommittee on Readiness and Management Support, Senate Committee on Armed Services, Representative Floyd D. Spence, Chairman, and Representative Ike Skelton, Ranking Minority Member, House Committee on Armed Services. Copies will also be made available to others upon request.

GAO points of contact and other key contributors are listed in appendix IV.

Sincerely yours,



David R. Warren, Director  
Defense Management Issues

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# Examples of Fragmented Management and Decision-Making

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Fragmentation in ammunition program management has led to less than optimum communications, coordination, and decision-making, affecting requirements determination and production. Two programs where some of these problems have been encountered involve Crusader munitions and mortar production.

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## Crusader Munitions

This example illustrates how lack of communication between two commands led to an industrial base decision based on incomplete information. In 1993, the Army began a program, known as the Crusader, to upgrade its self-propelled howitzer. The munitions for this system use a propellant charge that requires nitroguanidine. According to the Deputy Program Manager for Crusader Munitions, the program will need 14 million more pounds of nitroguanidine than is currently available in the stockpile. However, the Army's ability to acquire the needed nitroguanidine could be adversely affected by an industrial base decision made by the Industrial Operations Command.

In 1997, the Industrial Operations Command requested that the Office of the Secretary of the Army inform Congress that it intended to divest the Sunflower Army Ammunition Plant, the only plant in North America with the production equipment and skills to make nitroguanidine. The Industrial Operations Command based its decision on what it believed were no known future requirements for nitroguanidine and is in the process of transferring the plant to Kansas. Industrial Operations Command officials concede they did not do a very good job of communicating their decision throughout the Army ammunition community; if they had, they would have seen a significant increase in nitroguanidine requirements. As a result, the Army must either locate an alternative supply source for nitroguanidine outside North America or build another plant.

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## Mortar Production

This example demonstrates how a split in program responsibilities between two commands resulted in years of production delays. Management of the mortar program is divided between the Product Manager, Mortars, at the Tank-automotive and Armaments Command and the Industrial Operations Command. The Product Manager, Mortars, has responsibility for items in the research and development, initial production and fielding, and product improvement phases, and the Industrial Operations Command is responsible for items in later phases of the life cycle such as follow-on production, maintenance, and demilitarization.

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**Appendix I**  
**Examples of Fragmented Management and**  
**Decision-Making**

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In the early 1990s, the Industrial Operations Command, concerned about lack of production in the government-owned industrial base, developed a strategy to preserve critical government-owned capability. Using this strategy, mortar production was assigned to Milan Army Ammunition Plant. However, according to Industrial Operations Command personnel and the Deputy Product Manager, Mortars, Milan had a variety of process problems and was not able to produce to the Product Manager's required high quality levels. Because of these problems, the Deputy Product Manager, Mortars, tried for several years to convince the Industrial Operation Command not to direct their work to Milan but rather allow the Product Manager to identify, through a competitive process, other production sources.

Unable to resolve production issues, the Industrial Operations Command agreed in June 1997 to allow the Product Manager to seek out other production sources. This issue took years to resolve because of the split in program responsibilities and lack of communication between the two commands.

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# Army Ammunition Plants

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## Government-owned, government-operated plants

- *Active Plants*  
Crane, Crane, Indiana  
McAlester, McAlester, Oklahoma

## Government-owned, contractor-operated plants

- *Active Plants*  
Holston, Kingsport, Tennessee  
Iowa, Middletown, Iowa  
Lake City, Independence, Missouri  
Lone Star, Texarkana, Texas  
Milan, Milan, Tennessee  
Radford, Radford, Virginia
- *Inactive*<sup>1</sup>  
Louisiana, Doyline, Louisiana  
Mississippi, Stennis Space Center, Mississippi  
Riverbank, Riverbank, California  
Scranton, Scranton, Pennsylvania
- *Excess*<sup>2</sup>  
Badger, Baraboo, Wisconsin  
Cornhusker, Grand Island, Nebraska  
Indiana, Charlestown, Indiana  
Joliet, Wilmington, Illinois  
Kansas, Parsons, Kansas  
Longhorn, Marshall, Texas  
Ravenna, Ravenna, Ohio  
Sunflower, DeSoto, Kansas

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<sup>1</sup>Inactive plants are no longer assigned production but are retained to meet replenishment requirements. The Army is using the Armament, Retooling, and Support Initiative, which allows tenants to lease space at these plants, to reduce operation and maintenance cost. For a full discussion of the Armament, Retooling, and Support Initiative see *Military Bases: Cost to Maintain Inactive Ammunition Plants and Closed Bases Could be Reduced* (GAO/NSIAD-97-56, Feb. 1997).

<sup>2</sup>Excess plants are no longer required for assigned mission and are in the process of being disposed of. The Army is negotiating the transfer of Sunflower to Kansas. The General Services Administration is disposing of Badger, Cornhusker, Joliet, and Longhorn. The Army Corps of Engineers is disposing of Indiana under an agreement with the General Services Administration. Ravenna and Twin Cities are being turned over to the National Guard. The Kansas plant will not begin the disposal process until the operating contractor's commercial production contracts expire in 2006.



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**Appendix II**  
**Army Ammunition Plants**

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Twin Cities, Arden Hills, Minnesota  
Volunteer, Chattanooga, Tennessee

# Comments From the Department of Defense



ACQUISITION AND  
TECHNOLOGY

## OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3000

23 SEP 1999

Mr. David R. Warren,  
Director, Defense Management Issues  
National Security and International  
Affairs Division  
U.S. General Accounting Office  
Washington, D.C. 20548

Dear Mr. Warren:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report "DEFENSE MANAGEMENT: Army Could Achieve Efficiencies by Consolidating Ammunition Management," dated August 25, 1999 (GAO Code 709389/OSD Case 1884).

The Department has reviewed the report and concurs with the GAO assessment of the issues. Although the Army is working to resolve the noted inefficiencies and to effect the necessary organizational changes, the conventional ammunition program continues to be fragmented. The Department agrees that the three commands dealing with various aspects of conventional ammunition need to implement an army-wide organizational restructuring to integrate the management of conventional ammunition.

While the Department substantively agrees with the stated recommendations, as noted in the attachment, we believe the recommendations should be directed to the Secretary of the Army, who is the proper implementing authority for this matter. However, the Office of the Secretary of Defense will remain involved in order to monitor the Army's progress and to serve as a catalyst for expediting the necessary changes.

Thank you for the opportunity to comment on the draft report.

Sincerely,

George R. Schneider  
Director  
Strategic and Tactical Systems

Attachment



GAO DRAFT REPORT DATED AUGUST 25, 1999  
(GAO CODE 709389) OSD CASE 1884

“DEFENSE MANAGEMENT: ARMY COULD ACHIEVE EFFICIENCIES  
BY CONSOLIDATING AMMUNITION MANAGEMENT”

DEPARTMENT OF DEFENSE COMMENTS TO  
THE GAO RECOMMENDATIONS

Now on p. 16.

RECOMMENDATION 1: The GAO recommended that the Secretary of Defense direct the Secretary of the Army to: (1) establish a timeframe for implementing an Army-wide organizational restructuring to integrate the management of conventional ammunition, and (2) put in place a mechanism to address issues the informal Triad<sup>1</sup> is unable to resolve until organizational changes occur. (p. 14/GAO Draft Report)

DoD RESPONSE: While the Department substantively agrees with the stated recommendations and recognizes the defense-wide nature of this issue, the Secretary of the Army, nonetheless, is the proper implementing authority for the recommended actions. The Office of the Secretary of Defense will remain involved in order to monitor the Army's progress and to serve as a catalyst for expediting the necessary changes

Now on p. 17.

RECOMMENDATION 2: The GAO recommended that the Secretary of the Army consider a permanent Triad structure as well as other recommended organizational structures in determining organizational alternatives. (p. 14/GAO Draft Report).

DoD RESPONSE: The Department concurs with the recommendation.

<sup>1</sup> In October 1998, the principal Army commands (Industrial Operations Command, Tank-Automotive and Armaments Command and Program Executive Office for Ground Combat Support Systems) formed a coordinating group known as the Armament Triad. The Triad is an informal group that was developed as an interim solution to deal with conventional ammunition production, procurement and life-cycle management issues. The Triad, which meets quarterly, provides overall coordination to category-based ammunition teams and assumes responsibility for ensuring total integration of plans being formulated by the teams.

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# GAO Contacts and Staff Acknowledgments

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## GAO Contacts

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In addition to those names above, Patricia J. Nichol, Kimberly C. Seay, and Frederick T. Lyles, Jr. made key contributions to this report.

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