

Report on Army Ammunition Production and Load, Assemble, and Pack (LAP) Capacity

(This responds to a special interest request from the Senate Armed Services Committee (SASC) on page 307 of Senate Report 107-151 and House Armed Services Committee (HASC) on page 37 of House Report 107-436.)

1. Synopsis: The current ammunition industrial base can deliver the programmed buys. The \$544 million unfunded requirement in the Fiscal Year (FY) 2003 President's Budget could be executable if funded. There are weaknesses in the ammunition industrial base that need to be fixed. This includes outdated and under-utilized Government-Owned, Government-Operated (GOGO) and Government-Owned, Contractor-Operated (GOCO) ammunition facilities. The disciplined capability-based analysis used to recommend how to transform ammunition industrial base will be a part of the FY 2005 Base Realignment and Closure (BRAC 2005) process. After the base is consolidated, divested or leased, as appropriate, to improve utilization and efficiencies, the acquisition process will be used to modernize these efficiently sized facilities.

2. Historical Perspective of the Ammunition Industrial Base:

- a. The ammunition industrial base consists of GOGO, GOCO and Contractor-Owned, Contractor-Operated (COCO) facilities. The GOGO and GOCO installations were established during World War II and significantly retooled for the Viet Nam conflict.
- b. The Defense Planning Guidance during the Cold War was to develop detailed plans for the industrial base to mobilize to supply 28 divisions for a long war. Therefore, as production lines were inactivated after Viet Nam, they were preserved and retained to provide massive quantities of ammunition for an indefinite period. In the mid 1980's, the ammunition industrial base could only supply 40% of the volume needed to support this long war scenario. This phenomenon is why Army preserved and maintained capacity when production lines were deactivated.
- c. The end of the Cold War led to a reduced force structure and a shift to a short war strategy. The Department increased reliance on precision strike weapons. Acquisition strategies have shifted from workloading items at designated GOCOs to competition and increased reliance on prime contractors in the COCO sector. These changes have dramatically decreased the capacity needed from the GOGO and GOCO ammunition facilities. The Army went from being 60% short of our desired capacity at GOGOs and GOCOs for unguided ammunition under the long war scenario to 60% excess. The percentage of procurement dollars for the Department's munitions (tactical missiles and ammunition) that goes into the GOGOs and GOCOs has shrunk to approximately 10%.

3. Strategy for Right Sizing Ammunition Industrial Base:

a. Past: Army industrial base planners unilaterally reassigned post Cold War requirements by ranking the GOGOs/GOCOs. This reallocation involved minimal movement of capacity to other plants. The result was 12 of the 27 GOGOs/GOCOs became completely excess, 13 plants have an ammunition production mission with internal excess production lines, Scranton Army Ammunition Plant (AAP) has an ammunition mission with no excess capability, and Hawthorne AAP was retained for only its depot storage mission (see attachment 1).

b. Present: Section 1082 of the National Defense Authorization Act for Fiscal Year 1996 (P.L. 104-106) required the Secretary of Defense to review and report on the manner in which the Department of Defense procures ammunition. This review led to the Pacific Northwest National Laboratory report on "Recommended Strategy for Configuring and Managing the U.S. Munitions Industrial Base" in April 1997 and the ensuing report to Congress on March 1998. The Army issued the following procurement strategy in June 1998:

- (1) Manage ammunition using DOD's life-cycle acquisition process.
- (2) Use acquisition reform initiatives to stabilize the business environment and provide incentives for private investment in the production base.
- (3) Rely on the private sector to create and sustain ammunition production assets in response to production and replenishment contracts.
- (4) To the maximum extent feasible, transition Government-owned ammunition production assets to the private sector while preserving the ability to conduct explosives handling operations safely.

c. Future: The Department of Defense (DoD) still has too many facilities of all kinds and Congress has again endorsed our request for another round of BRAC. A Joint Cross Service Group, led by the Office of the Secretary of Defense, will analyze the DoD's industrial infrastructure. As required by Public Law 107-107, military value is the primary consideration in analyzing and making closure or realignment recommendations. The Senate report requested an assessment of the impact consolidation would have on existing items manufactured at the plants. This analysis will be capability-based and will assess unique production capability, critical skills and continuity of deliveries of ammunition. All recommendations will be based on approved, published selection criteria and a force structure plan.

4. Utilization: The analysis that follows shows the effect on utilization from the end of the Cold War to the present situation and groups the capability by ammunition manufacturing process:

a. Propellant: Army had four propellant facilities (Badger, Indiana, Radford and Sunflower AAPs). Army declared three of these propellant plants excess. In addition, 56% of Radford AAP's production lines were declared excess but it retained all the original real estate. Still, the peacetime buys are so low that Alliant Techsystems, Inc. (ATK), the contractor at Radford AAP, has not modernized. The Army financed over \$60 million to bring commercial tenants onto Radford AAP to help absorb overhead costs. The contractor continues to express concern that demand for propellant only utilizes 16% of the remaining capacity and consequently, competitive prices cannot be sustained.

b. Explosives: Army had 5 explosive facilities (Holston, Joliet, Newport, Radford and Volunteer AAPs). Army declared three of these plants excess, preserved the TNT capability at Radford AAP in idle status, and designated the workload of RDX/HMX type explosives to Holston AAP.

(1) The explosive competition in 1998 resulted in an award to BAE. The BAE production plan calls for using Holston AAP to satisfy all peacetime and replenishment scenarios for explosives. All of these explosive requirements are significantly lower than Holston AAP was capable of delivering in support of the obsolete long-war scenario. The current requirements only require three active and three inactive explosive lines at Holston AAP. However, the infrastructure and the real estate remains the same as when Holston AAP had a mission for ten explosive lines. The Department has decided to evolve to "insensitive" explosive fills to avoid accidental detonation. The effect of this evolution on RDX/HMX explosive requirements must be analyzed as part of the BRAC 2005 process.

(2) A multi-year contract is currently being competed within the National and Technology Industrial Base for TNT. This procurement will ensure a reliable source of supply for TNT.

c. Load/Assemble/Pack-out (LAP): Army had 15 AAPs with LAP capability. Eight plants have had 100% of their LAP capability declared excess (i.e., Cornhusker, Indiana, Joliet, Louisiana, Longhorn, Hawthorne, Mississippi and Ravenna AAP). Seven LAP plants continue to have assigned ammunition production missions (i.e., Crane Army Ammunition Activity; Pine Bluff Arsenal; and Iowa, Kansas, Lone Star, McAlester and Milan AAPs). During the Cold War these seven LAP plants had 78 production lines.

(1) Currently only 42 production lines have a mission assignment. These 42 production lines are capable of delivering the programmed buys for items manufactured in the Government-owned base. The \$544 million unfunded requirement in the Fiscal Year (FY) 2003 President's Budget could also be executable if funded.

(2) The overall condition and efficiency at these seven LAP plants is a concern. This concern is what led to the 2001 Request For Information (RFI) to gain industry input on how the acquisition process could be used to competitively right-size the LAP facilities. The Army has not disposed of any infrastructure at these seven plants. Therefore, there is a potential to increase ammunition capability from individual LAP plants by adding production equipment to those 36 production lines that no longer have a mission assignment. On 10 May 2002, the Army informed Congress (Senator Hutchinson) that the LAP competition was being cancelled because a number of ongoing and future actions. While nothing about the BRAC 2005 process has been definitized, it is expected to improve the efficiency of LAP facilities.

d. Small Caliber: Army had two small-caliber AAPs and multiple COCOs. Lake City AAP is the only remaining source. The small caliber ammunition competition in FY 1999 was awarded to ATK. Most small caliber ammunition requirements, from 5.56 mm to .50 caliber, were grouped together for ten years in order to provide incentives for contractors to self-invest in production capacity. The ATK production plan centers on use of Lake City AAP, and the contractor is required to modernize portions of Lake City AAP's infrastructure and equipment at no additional cost (modernization funding is included in ammunition price). The prices were set by competition, and this saved 20% when compared to historical costs.

e. Metal Parts: Army had seven AAPs and numerous COCOs for metal parts. Three of the COCOs were declared excess (i.e., Hays, St. Louis and Twin Cities AAPs). Four COCOs continue to have a metal parts mission (i.e., Louisiana, Riverbank, Mississippi and Scranton AAPs). Louisiana and Mississippi AAPs are in an inactive, layaway status.

(1) The metal parts mission at Louisiana AAP is one production line and occupies less than twenty acres. There are 10 LAP production lines and approximately 15,000 acres that no longer have an ammunition mission and is mostly under license to the Louisiana National Guard.

(2) Riverbank AAP only has a mission for three of its eight production lines.

(3) Mississippi only has a mission for one metal parts building out of its original four production lines.

(4) Scranton AAP is an active producer of artillery and mortar metal parts.

5. Ability of Ammunition Industrial Base to Increase Deliveries:

a. Fiscal Year 2003 Army Unfunded Requirement: It is standard Army practice to limit unfounded requirement submissions to those requirements that can be executed within the funded delivery period. The Program Executive Officer for

Ammunition verified that the industrial base is capable of successfully delivering the fiscal year 2003 \$544M unfunded ammunition requirement.

b. Sub-tier Capacity Constraint: The Single Manager for Conventional Ammunition has identified sub-tier companies as the root cause limiting the industrial base from surging production. This is part of the Diminishing Manufacturing Sources and Material Shortages (DMSMS) Program. The Program Executive Officer for Ammunition is developing a plan of action to relieve the bottlenecks in surge capacity caused by these single point sub-tier suppliers.

6. Conclusion:

a. On 10 May 2002, the Army informed Congress (Senator Hutchinson) that the LAP competition was being cancelled because a number of ongoing and future actions.

b. The current configuration of the Government-owned ammunition production installations has evolved over the last 60 years. Every installation, except Scranton AAP, has an infrastructure that can absorb production mission from other installations. This circumstance leads to a dilution of business base and inefficiencies. The Army needs a joint, comprehensive and capability-based analysis to be used in the BRAC 2005 process to achieve an efficiently sized infrastructure.

b. The commercial sub-tier base causes more of a constraint in capacity than the Government-owned ammunition production installations. The Program Executive Officer for Ammunition is developing a plan of action to relieve the bottlenecks.