

LTG Richard Hack



U.S. ARMY
MATERIEL
COMMAND

2003 Munitions Executive Summit

"Reshaping the Munitions Base"

AMC's Role in
Transforming
The Industrial Base

12 Feb 2003

ESSENTIAL IN PEACE, INDISPENSABLE IN WAR

Purpose

To inform the munitions community about the way AMC and Army logistics is transforming.



ESSENTIAL IN PEACE, INDISPENSABLE IN WAR

AMC Efforts Underway to Transform for the 21st Century

- **Organizational Changes**
- **Industrial Base Initiatives**
- **Enterprise Development and Integration**
- **Support to Current Operations**
- **Demilitarization**



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Facts

Facts:

- **Logistics processes require modernization**
- **Logistics footprint must be reduced to improve deployment and sustainment**
- **Industrial base must be properly sized and modernized**
- **Logistical organizations must be adaptable to:**
 - **Keep pace with technology**
 - **Support system of systems**
 - **Support emerging requirements e.g., Homeland Defense**



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Assumptions

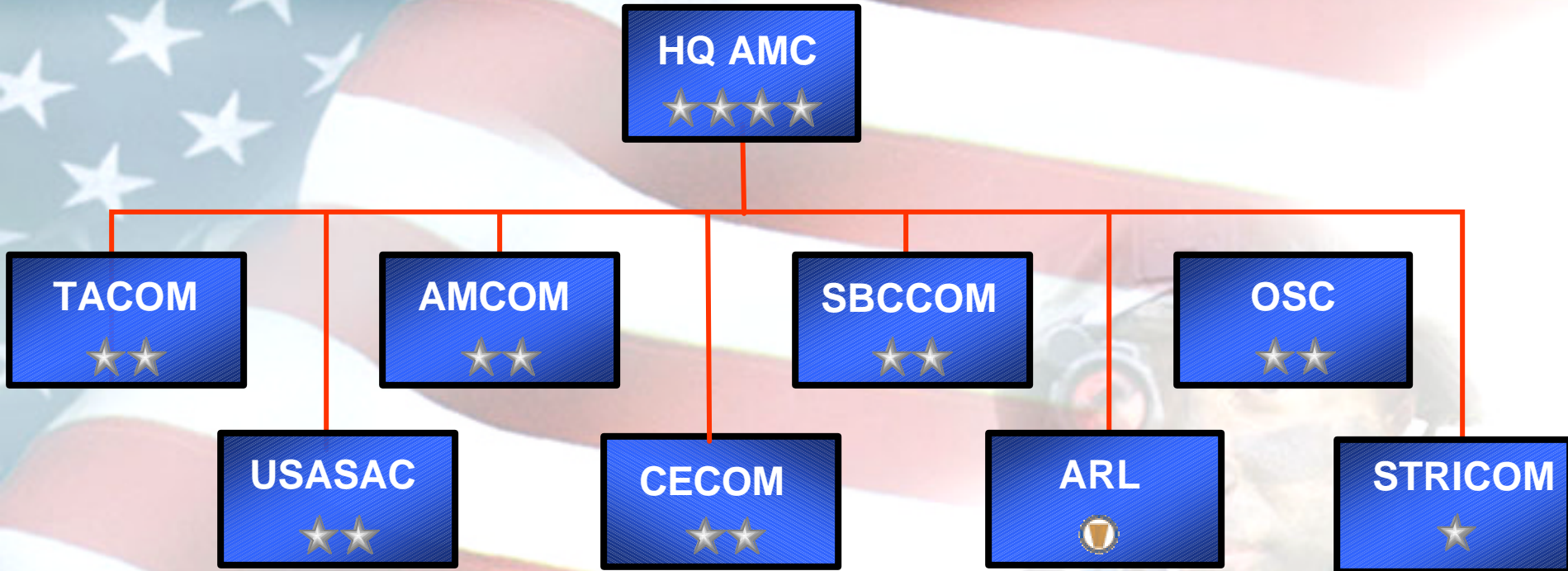
Assumptions:

- **Change will continue – successful organizations must change also**
- **Army transformation will require a logistics transformation**
- **Resources will always be constrained**
- **Industrial Base will be more Joint**



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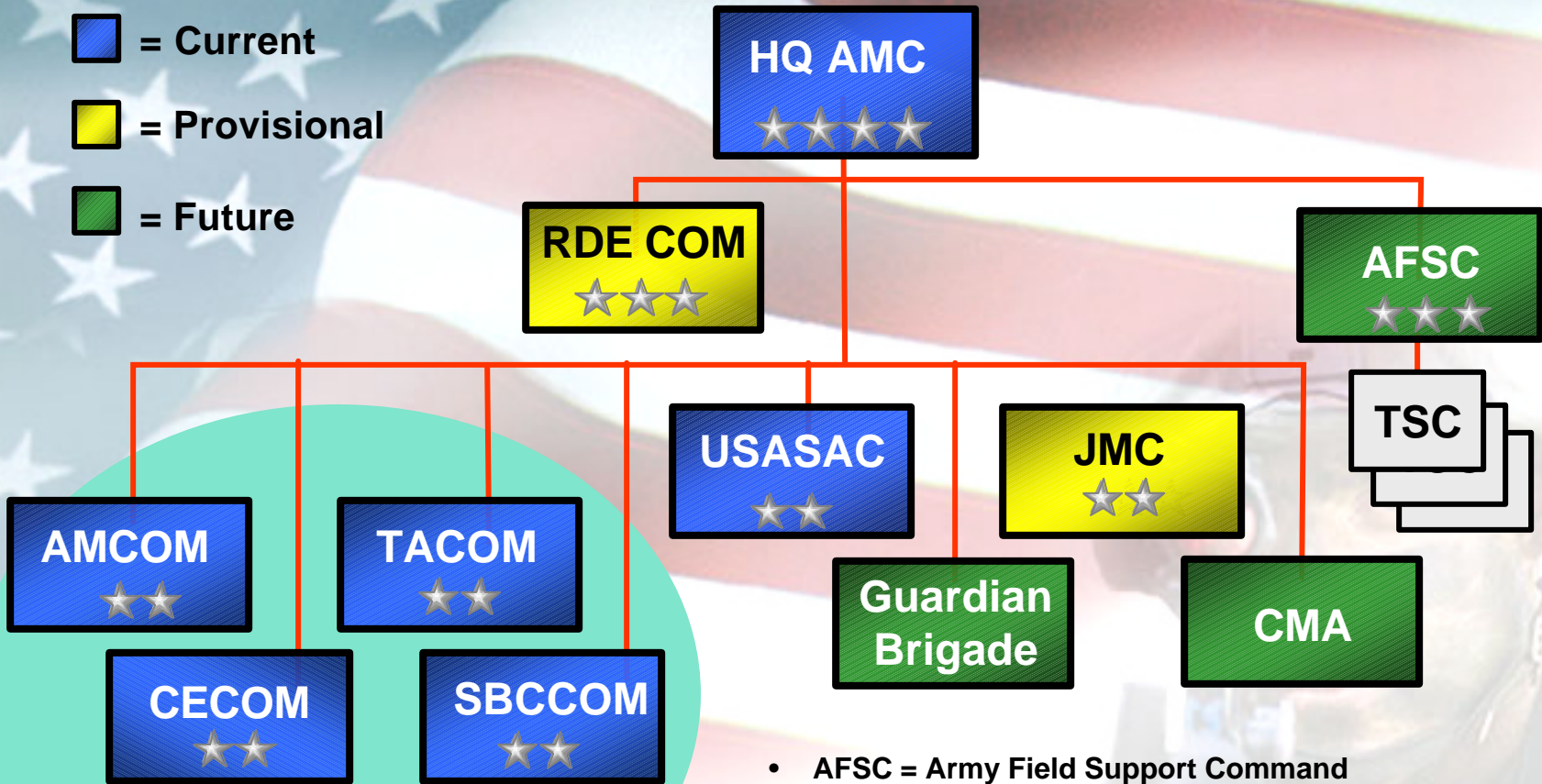
AMC Past



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AMC Transforming

-  = Current
-  = Provisional
-  = Future



TBD

- AFSC = Army Field Support Command
- AMCOM = Aviation and Missile Command
- CECOM = Communications-Electronics Command
- CMA = Chemical Materials Agency
- JMC = Joint Munitions Command
- RDE COM = Research, Development & Engineering Command
- SBCCOM = Soldier and Biological Chemical Command
- TACOM = Tank-Automotive and Armaments Command
- USASAC = Security Assistance Command



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AMC's Industrial Base Vision

**A Responsive, Innovative, Lean Cost/
Process with an Efficient Manufacturing Base
Capable of...**

- Meeting National Security Missions
- Integrating Lean/Agile Manufacturing Concepts
- Satisfying Defense Future Systems Requirements
- Migrating to Public-Private Partnerships



*Commercialize
When Economically
Feasible at Minimum
Cost & Risk*



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The 21st Century Defense Industrial Base

- Capabilities & Capacity Based -

A New Millennium...New Definitions...New Culture...New Sustainment Philosophy...
Requires New Technologies...New Products...Innovative Business Arrangements!

Maintenance &
Renovation

Virtual
parts
supplier

Flexible
Packaging

Integrated
Nano &
Biomechanical
Technologies

Chip Foundry

**INTEGRATED-
MATRIXED
CAPABILITIES**

Virtual Prototyping

Production of
Flat Panel
Displays

Electronic Product
Data Management

Demilitarization

Flexible for small
quantity
production

Source of supply
for Obsolete items
or Single point
items

EMP Hardening
Technologies

Storage & Out-
loading

Goal ...Joint Pull Production...Reconfigurable & Responsive Manufacturing . . . Rapid Acquisition

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Integrating Army Logistics Automation

The Plan

SSF & National Maintenance

2001 - 2003

- SSF implementation
 - Installation 2000-2001
 - Tactical 2002-2003
- National Maintenance Integrated maintenance decisions at the National and Installation level beginning 2001
- Development of Single Repair Standards to increase reliability of legacy systems

National Level Modernization

2003 - 2004

- Modernize National Level Logistics Automation via:
 - SAP - LMP
 - COTS Software & Contractor Sustainment
 - Legacy Retirement - CCSS, SDS, HAS

Installation / Tactical Modernization

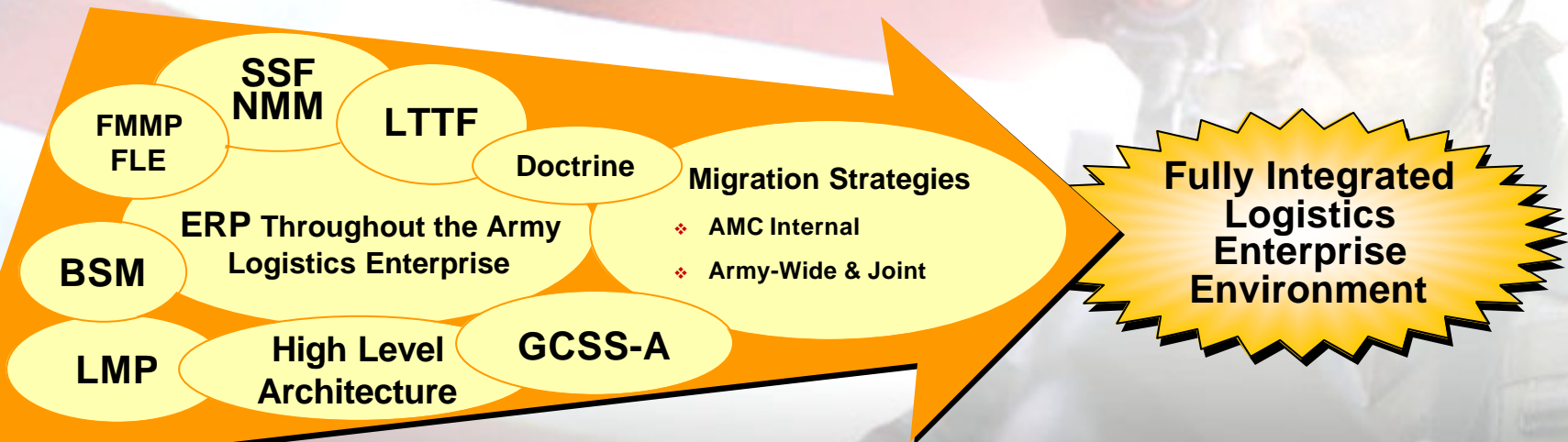
2003

- Modernize Installation & Tactical Level Logistics Automation with ERP Tools
- COTS Software
- Legacy Retirement - SARSS, ULLS, SAMS, ILAP...
- SAAS-MOD

Continuous Upgrades

2002

- Identify "Legacy Capabilities" & Develop Migration Strategies
 - Resource the Efforts
 - Synchronize Program Schedules
- Eliminate "Stovepipes" Legacy Retirement

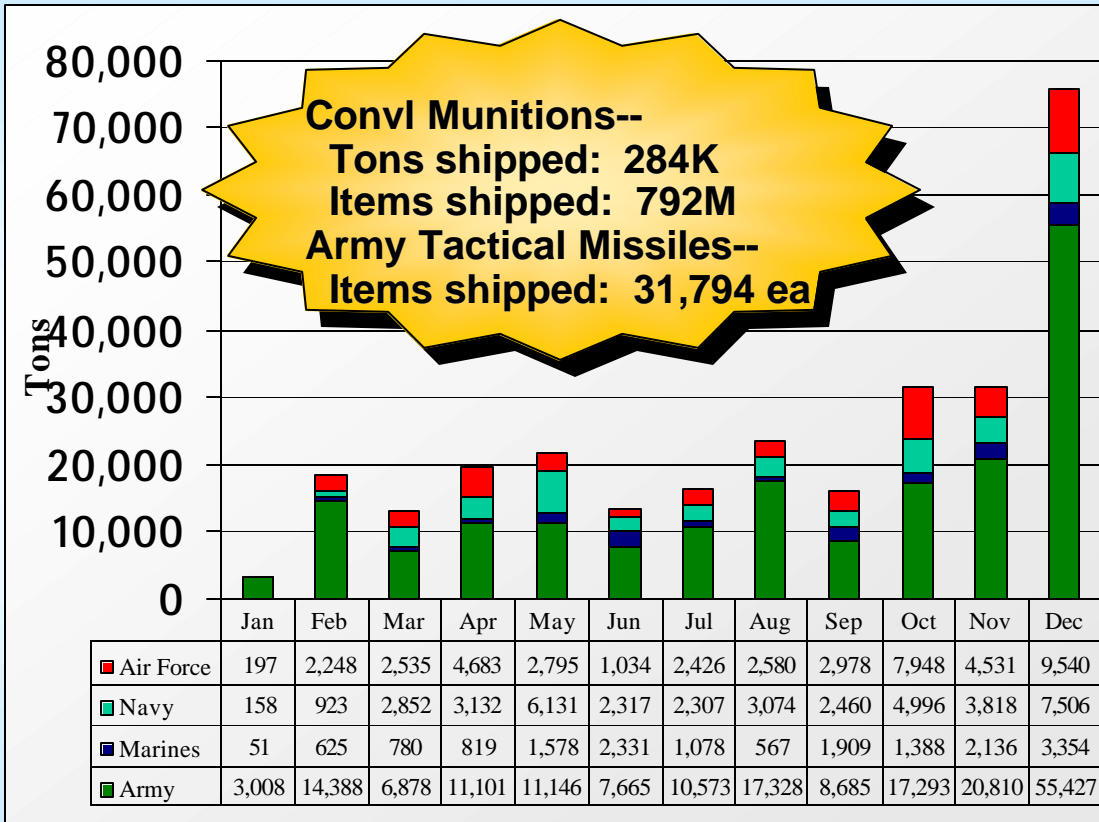


Supply, Maintenance, Distribution, Finance, Contracting, Technical Data

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Ammunition Shipments -- By Service

Support of Current Operations – Jan through Dec 2002



Top items shipped--

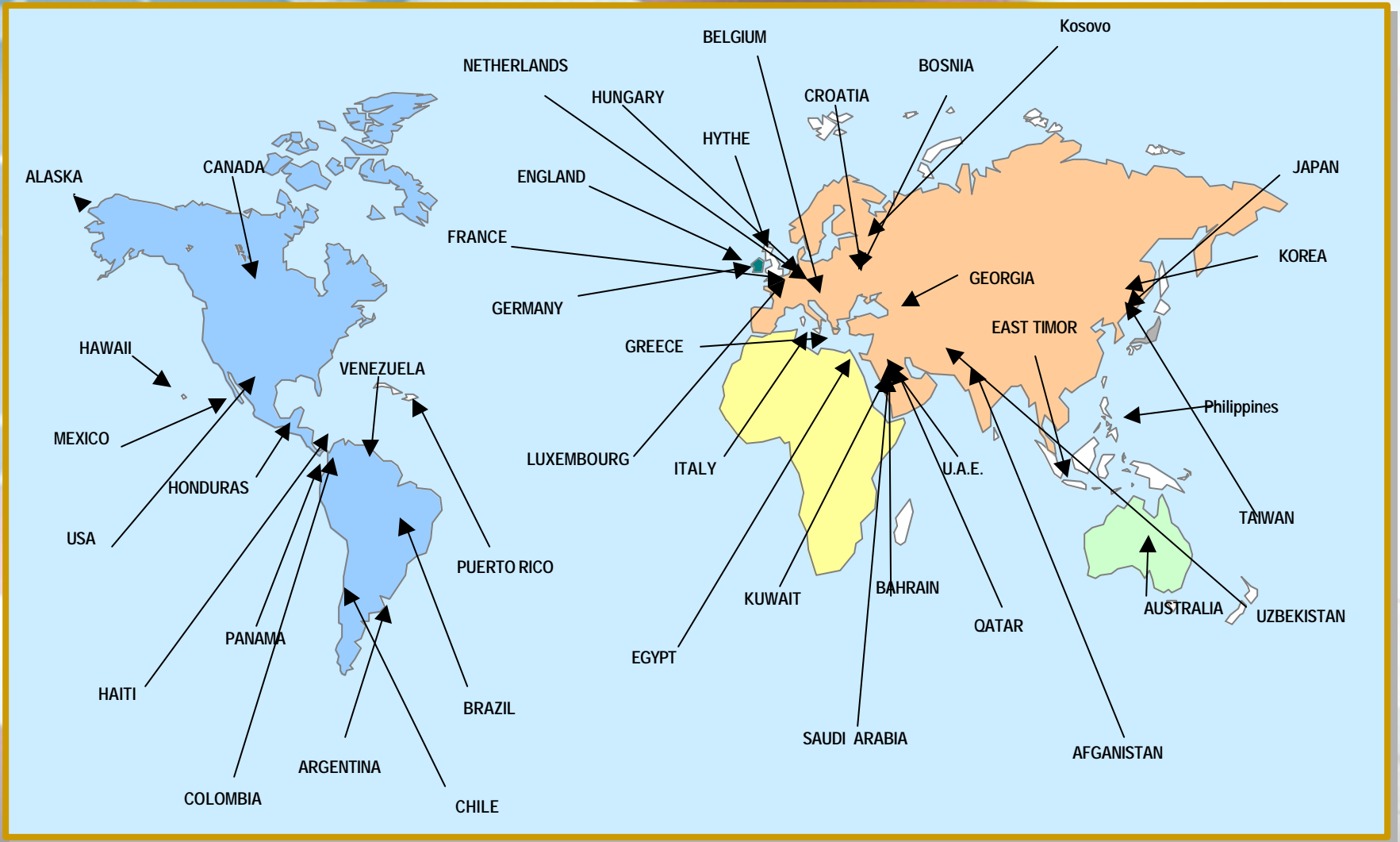
- * Bombs (all types)
- * 155mm projectiles
- * 105mm projectiles
- * 120mm Tank TP
- * Ctg 40mm HEDP
- * 155mm propellant
- * Line Chg C4
- * 120mm mortar
- * 120mm Tank AP
- * Ctg 25mm AP

Army:	19,425 reqs.
Marines:	3,849 reqs.
Navy:	7,197 reqs.
Air Force:	5,651 reqs.
Total:	36,122 reqs.



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AMC Personnel In Combatant Command AOR



*Providing Support to Soldiers Across the World;
24 Hours a Day, 7 Days a Week, 365 Days a Year*
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Contractors On The Battlefield



Advances in technology mean we won't deploy without them. New challenges and key decisions to be made.....

GOV'T CONTRACT
LAW vs. UCMJ

CONTRACTORS
AS RESERVISTS

COMMAND &
CONTROL vs.
MANAGEMENT

CONTRACTOR
STATUS:
COMBATANT OR
NON-COMBATANT

Culture Change

GREATER RISK =
GREATER COST

SECURITY

FORCE
PROTECTION

LOCATION IN
COMBAT ZONE

LOCALLY-HIRED OR
DEPLOY W/ UNITS

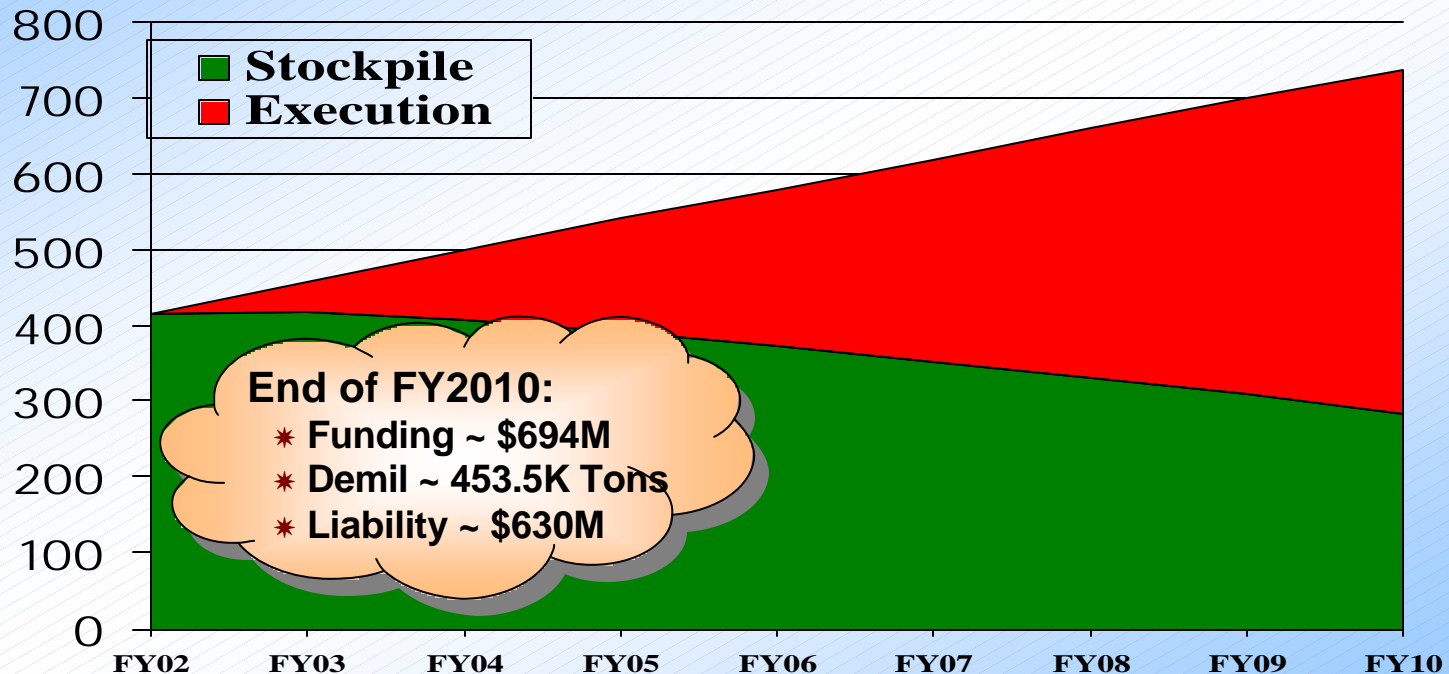


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Issue: Demilitarization Stockpile

Conventional Ammunition—

* Current POM projections – 285K tons by end of FY2010



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Conclusions

- **AMC organizational changes to be in a better position for 21st Century logistics challenges.**
- **Our Industrial Base is evolving: More to come!**
- **Our enterprise efforts will change the way we operate.**
- **Current operations are ongoing.**
- **Still quite a bit of work to do in demilitarization of ammunition.**
- **Arsenals, ammunition plants and depots - continue to improve efficiency and effectiveness - and manage risk.**





SUSTAINING THE
TRANSFORMING ARMY
WHILE
TRANSFORMING THE
SUSTAINING ARMY

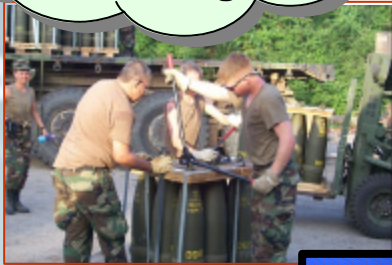
Backups



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Joint Munitions Command

Single Command for All Strategic Ammunition Products & Storage



AMC

JOINT MUNITIONS CMD
★ ★



PEO AMMO

Direct Support from CONUS to the Battle Force

AMMO PRODUCTION

Joint Munitions Center

AMMO STORAGE

AMC can leverage limited ammunition support dollars & people to weigh the fight



No geographical moves. Total visibility & responsibility of munitions logistics.



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Ammunition Responsibilities

JMC

EDCA
SMCA

**Oversight and
Assessment**

PEO/PMs

Inventory Accountability
Receipt
Storage
Issue
Safety
Security
Transportation
Quality Assurance
Maintenance
**OMA (Funds & Program
Mgmt)**
SMCA Field Operating Agency

Industrial Base
**Execution of
PAA Funds**

RDT & E
Acquisition/Procurement
Program Budget for PAA Funds
**Procurement Review to Restrict
to North America
(Section 806 Review)**
**Hardware Production Resources
(Funds & Program Mgmt)**
Renovation Components
DEMIL
SMCA Executor



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Joint Projects

- **TNT for Air Force**
- **Bomb bodies for all Services**
- **Insensitive RDX**



**Greater Customer
Involvement with
Procurement Actions**



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Industrial Mobilization Reality

Myth vs Reality: Dec '41 Decisions ➡ Execution in '42

- **1938 - Great Powers abrogate Naval Limitations Treaty - US begins planning for Pacific War . 130+ munitions production facilities authorized**
- **1939 - site surveys begin**
- **1940 - some facilities under construction - additional impetus from Lend-Lease Act**
- **1941 - first wave of facilities complete construction- in production before Dec 7, 1941**
- **1942 - 1944 additional facilities constructed**

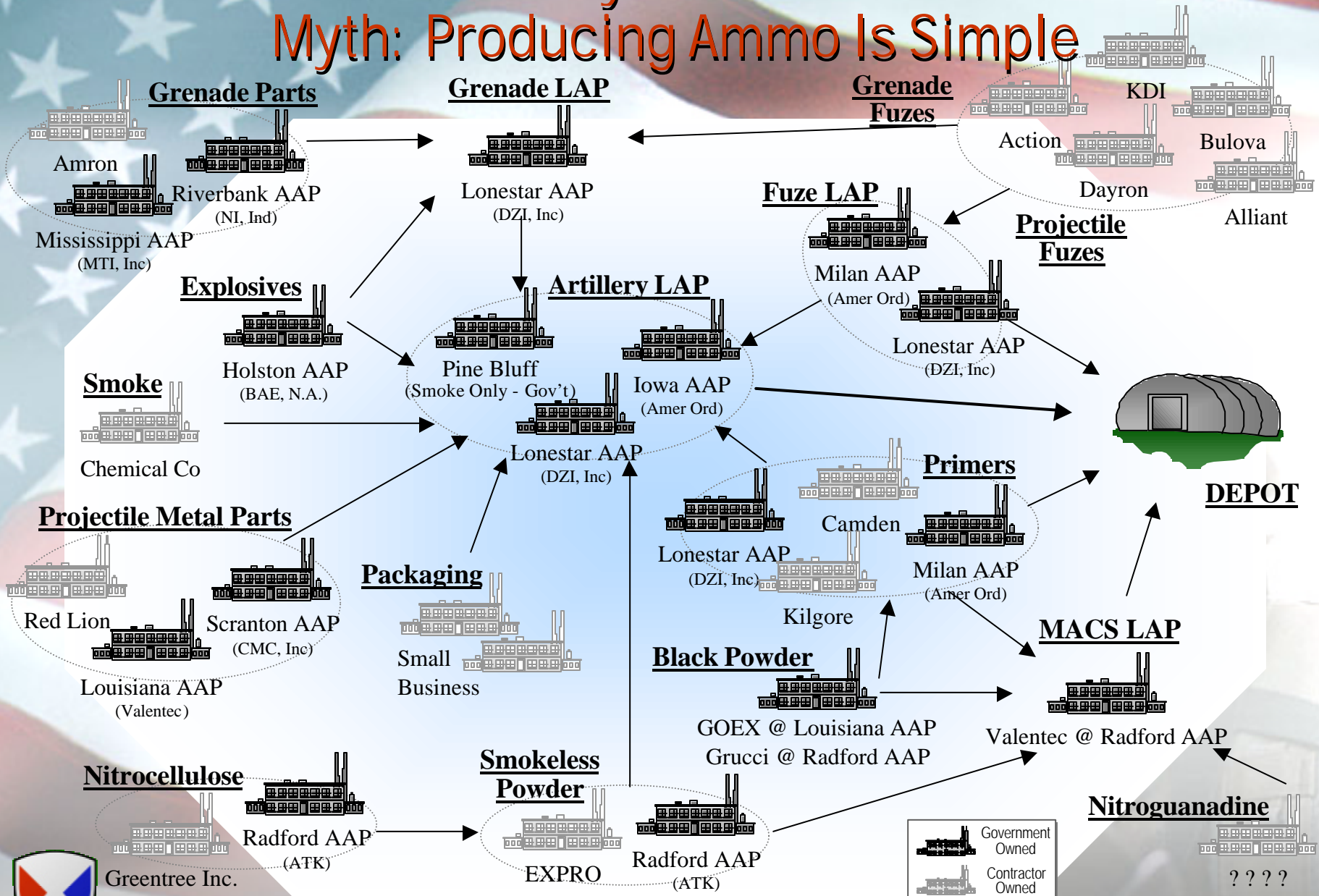
Bottom line - munitions production facilities were in planning 3 years before outbreak of war



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Artillery Ammo Base

Myth: Producing Ammo Is Simple



Lower Tier Suppliers Pace the Whole Convoy

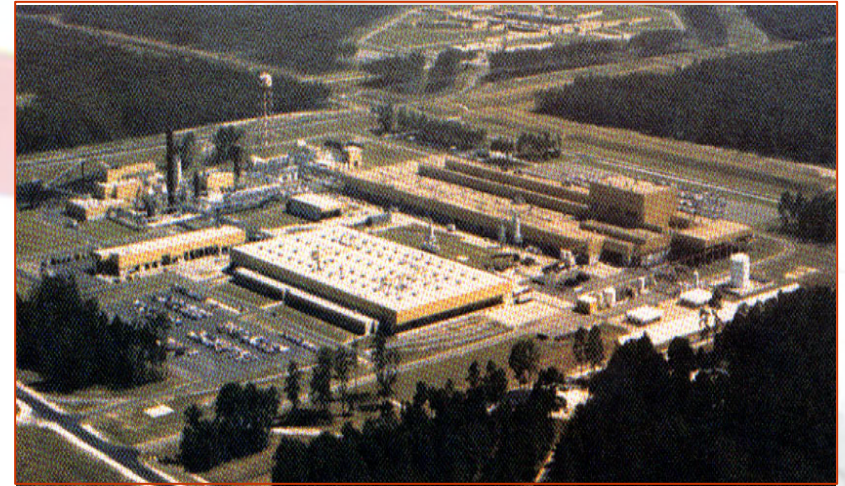
Just How Big IS the Production Base ?

14 Government Owned Facilities With:

- 351,00 Acres
- 302,000 Pieces of Equipment
- 73 Production Lines
- 7,000 Production Personnel

69 Contractor Facilities

11 Contractor Facilities w/Government Owned Equipment



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Where Is the Organic Ammunition Base ?



**526K to 351K acres
483K to 302K pieces
of equipment**

- Defense Production Occurring at ALL Plants
- Ammo Production Occurring at 13 of 14 Plants

IOWA, LONE STAR, MILAN	- LAP
RADFORD	- PROPELLANT
HOLSTON	- EXPLOSIVE
PINE BLUFF	- SMOKE
LAKE CITY	- SMALL ARMS
McALESTER*	- BOMB
CRANE	- NAVY GUN & PYRO

LOUISIANA	- PROJECTILE
RIVERBANK	- CTG CASES
MISSISSIPPI	- GRENADES
SCRANTON	- LARGE CAL
KANSAS	- SUBMUNITION

***Key role in support of Balkan and Afghanistan Operations**



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What Is In Our Current Ammunition Inventory?

Over 972 DODICS in Inventory

Limited Warm Base

Average Around 120 DODICS a Year Bought Between 99-02

Current Capacity for Producing 171 DODICS Which Include:

Large Caliber

- Artillery
- Bombs
- Tank
- Mortars

Medium Caliber

- Cannon
 - 20mm
 - 25mm
 - 30mm
 - 40mm

Small Caliber

- 5.56
- 7.62
- 50 cal

Other

- Demo
- Mines
- Fuzes
- Prop Chgs
- Pyrotechnics
- Rockets
- Grenades

2.7M S/T

\$23B

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U.S. Army Materiel Command

- Today's Organic Base -



All with Joint Missions!

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Note: (1) GOCOs
(2) GOGOs

Ammunition Government-owned Production Base Under Concept of Sizing to Peacetime/Surge

- Smoke Munitions Mixing/Loading — Pine Bluff Arsenal
- Cold Cast Cure Bomb LAP — McAlester AAP
 - Demilitarization
- Pressed Navy Gun LAP
- Cold Cast Cure Navy Gun LAP
- Illumination Candles
- Pressed LAP
- Artillery High Exp Melt Pour
- Tank LAP
- PBX Pressed Warheads
- Detonators/Primers/Relays
- DU Demilitarization
- Improved Conventional Munitions LAP
- Comp C4 Extrusion
- Med Cal (40mm) Pressing & LAP
- High Exp Mortar Melt Pour
- Explosive (Nitramine)
- Propellants (Exclude Ball) — Holston AAP
- Small Cal LAP — Radford AAP
- Forge, Heat Treat Large Cal Metal Parts — Lake City AAP
- Deep Drawn Cartridge Cases — Scranton AAP
- Grenade Metal Parts
- Riverbank AAP

Crane AAA

Iowa AAP

Milan AAP

Holston AAP

Radford AAP

Lake City AAP

Scranton AAP

Riverbank AAP

All Processes...Private Sector confirmed an unwillingness or inability to provide...Must be retained until superseded by technology!

Requires Continuous Refinement!