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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.
AMC Efforts Underway to Transform for the 21st Century

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

- HQ AMC
  - TACOM
  - AMCOM
  - SBCCOM
  - OSC
  - USASAC
  - CECOM
  - ARL
  - STRICOM
• 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
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

ESSENTIAL IN PEACE, INDISPENSABLE IN WAR
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
Chip Foundry
Production of Flat Panel Displays
Demilitarization
EMP Hardening Technologies
Virtual parts supplier
Flexible Packaging
INTEGRATED-MATRIXED CAPABILITIES
Integrated Nano & Biomechanical Technologies
Virtual Prototyping
Electronic Product Data Management
Source of supply for Obsolete items or Single point items
Flexible for small quantity production
Storage & Out-loading

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

ESSENTIAL IN PEACE, INDISPENSABLE IN WAR
Integrating Army Logistics Automation

The Plan

SSF & National Maintenance

- 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

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

Installation / Tactical Modernization

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

Continuous Upgrades

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

Fully Integrated Logistics Enterprise Environment

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

ESSENTIAL IN PEACE, INDISPENSABLE IN WAR
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

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Army: 19,425 reqs.
Marines: 3,849 reqs.
Navy: 7,197 reqs.
Air Force: 5,651 reqs.
Total: 36,122 reqs.
Providing Support to Soldiers Across the World; 24 Hours a Day, 7 Days a Week, 365 Days a Year

ESSENTIAL IN PEACE, ININDISPENSABLE IN WAR
Contractors On The Battlefield

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

- CONTESTORS AS RESERVISTS
- COMMAND & CONTROL vs. MANAGEMENT
- GREATER RISK = GREATER COST
- FORCE PROTECTION
- LOCATION IN COMBAT ZONE
- LOCALLY-HIRED OR DEPLOY W/ UNITS

ESSENTIAL IN PEACE, INDISPENSABLE IN WAR
Issue: Demilitarization Stockpile

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

End of FY2010:
* Funding ~ $694M
* Demil ~ 453.5K Tons
* Liability ~ $630M

Funding ~ $694M
Demil ~ 453.5K Tons
Liability ~ $630M
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.
Backups

ESSENTIAL IN PEACE, INDISPENSABLE IN WAR
AMC can leverage limited ammunition support dollars & people to weigh the fight.

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

Single Command for All Strategic Ammunition Products & Storage.
Ammunition Responsibilities

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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
Joint Projects

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

Greater Customer Involvement with Procurement Actions

ESSENTIAL IN PEACE, INDISPENSABLE IN WAR
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

ESSENTIAL IN PEACE, INDISPENSABLE IN WAR
Artillery Ammo Base
Myth: Producing Ammo Is Simple

Grenade Parts
Amron
Riverbank AAP (NI, Ind)
Mississippi AAP (MTI, Inc)

Mississippi AAP
(NTI, Inc)

Explosives
Holston AAP (BAE, N.A.)

Smoke
Chemical Co

Projectile Metal Parts
Red Lion
Scranton AAP (CMC, Inc)
Louisiana AAP (Valentec)

Projectile LAP
Pine Bluff (Smoke Only - Gov’t)

Artillery LAP
Iowa AAP (Amor Ord)

Primers
Milan AAP (Amer Ord)

Black Powder
GOEX @ Louisiana AAP
Grucci @ Radford AAP

Nitrocellulose
Greentree Inc.

Smokeless Powder
EXPRO
Radford AAP (ATK)

Nitroguanadine

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
Where Is the Organic Ammunition Base?

- 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

ESSENTIAL IN PEACE, INDISPENSABLE IN WAR
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

ESSENTIAL IN PEACE, INDISPENSABLE IN WAR
U.S. Army Materiel Command
- Today's Organic Base -

All with Joint Missions!

ESSENTIAL IN PEACE, INDESPENSABLE IN WAR

Note: (1) GOCOs (2) GOGOs
Ammunition Government-owned Production Base
Under Concept of Sizing to Peacetime/Surge

- Smoke Munitions Mixing>Loading
- Cold Cast Cure Bomb LAP
  - 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)
- Small Cal LAP
- Forge, Heat Treat Large Cal Metal Parts
- Deep Drawn Cartridge Cases
- Grenade Metal Parts

Pine Bluff Arsenal
McAlester 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!