NDIA Joint Armaments Conference

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Near Term Main Priorities

- Excalibur Ib Full Rate Production
- Complete PGK First Article Test (FAT)
- 120mm High Explosive Guided Mortar (HEGM) HQDA Program of Record Decision
- DPICM Study Results
- 155mm XM1123/XM1124 Visible Light/Infra Red (VL/IR) (M483 Reuse) Full Materiel Release (FMR)
- M549 Stockpile Test
Budget Outlook

FY14/FY15 PB Comparison

<table>
<thead>
<tr>
<th>Category</th>
<th>FY14/FY18</th>
<th>FY15/FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 mm Mortar</td>
<td>229,662</td>
<td>356,544</td>
</tr>
<tr>
<td>81 mm Mortar</td>
<td>257,928</td>
<td>231,302</td>
</tr>
<tr>
<td>120 mm Mortar</td>
<td>289,094</td>
<td>390,255</td>
</tr>
<tr>
<td>75/105 mm Artillery</td>
<td>255,628</td>
<td>282,572</td>
</tr>
<tr>
<td>155 mm Artillery</td>
<td>316,028</td>
<td>594,591</td>
</tr>
<tr>
<td>Conv Fuzes and Props</td>
<td>19,195</td>
<td>135,018</td>
</tr>
<tr>
<td>Excalibur</td>
<td>77,326</td>
<td>81,190</td>
</tr>
<tr>
<td>PGK</td>
<td>343,146</td>
<td>316,733</td>
</tr>
<tr>
<td>Mortar Weapons</td>
<td>15,446</td>
<td>43,008</td>
</tr>
<tr>
<td>Mortar OPA Systems</td>
<td>43,709</td>
<td>112,776</td>
</tr>
</tbody>
</table>
Conventional Ammo Stockpile

- Mortars - FRPC, Short Range Training Rounds and Refurbish Kit are not included
- Artillery - 75mm/105mm Blanks and 90mm Recoilless Rifle not included.

Thousands

<table>
<thead>
<tr>
<th>Year</th>
<th>Mortars</th>
<th>Artillery</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>5267</td>
<td>1895</td>
</tr>
<tr>
<td>2013</td>
<td>4228</td>
<td>1983</td>
</tr>
<tr>
<td>2014</td>
<td>3753</td>
<td>1455</td>
</tr>
</tbody>
</table>
Ammunition Stockpile Health

155mm HE

STOCKPILE FORECAST: P20 PLANNED TRAINING AND TEST

MACS M232A1

STOCKPILE FORECAST: P20 PLANNED TRAINING AND TEST

120mm Mortar HE

STOCKPILE FORECAST: P20 PLANNED TRAINING AND TEST

Artillery Prox Fuze

STOCKPILE FORECAST: P20 PLANNED TRAINING AND TEST
Army Training Ammunition Expenditure
2002 - present

- 155mm Artillery
- 105mm Artillery
- 120mm Mortar
- 81mm Mortar
- 60mm Mortar
### Industrial Base Challenges

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Declining Budget vs. Industrial Base Sustainment</strong></td>
<td>- Continue to Support PEO Industrial Base (IB) Strategic Plan and “Watch List”</td>
</tr>
<tr>
<td>✓ Fuze</td>
<td>✓ Renewed emphasis on Make or Buy process</td>
</tr>
<tr>
<td>✓ Propellant/Energetics/Melt-pour</td>
<td>✓ Restated Industrial Base Concern to G-8</td>
</tr>
<tr>
<td>✓ Metal Parts Forging</td>
<td>✓ Assessing Future Acquisitions to Minimize impact</td>
</tr>
<tr>
<td>✓ Illum Candle/Smoke Mfg</td>
<td></td>
</tr>
<tr>
<td><strong>Counterfeit Parts</strong></td>
<td>- Tightened Contract/Language to Verify Component OEM Authenticity</td>
</tr>
<tr>
<td>✓ GPS receiver Module</td>
<td>- Ensure Compliance with OSD Cyber Acquisition Policy</td>
</tr>
<tr>
<td>✓ SRAM</td>
<td></td>
</tr>
<tr>
<td>✓ Protect Critical Program Information from Cyber Attack</td>
<td></td>
</tr>
<tr>
<td><strong>International Competition</strong></td>
<td>- Increased Foreign Military Sales (FMS) Focus</td>
</tr>
<tr>
<td>✓ Fewer World Market Opportunities</td>
<td>- Leveraging Stockpile Surplus Where Possible</td>
</tr>
<tr>
<td>✓ Increasing CONUS Involvement by Foreign Based Companies</td>
<td>- Supporting CRADA Approach to Address Direct Commercial Sales (DCS) Opportunities</td>
</tr>
</tbody>
</table>
### FY15 Competitive Opportunities

<table>
<thead>
<tr>
<th>Product</th>
<th>Projected Award Date</th>
<th>Dollar Amount</th>
<th>Contract Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>M795 Artillery Projectile Bodies</td>
<td>1QFY15</td>
<td>$172M</td>
<td>NTIB IDIQ</td>
</tr>
<tr>
<td>Mortar Fire Control Systems</td>
<td>2QFY15</td>
<td>$102M</td>
<td>F&amp;OC IDIQ</td>
</tr>
<tr>
<td>M762A1 Safe &amp; Arm (S&amp;A) Assemblies</td>
<td>3QFY15</td>
<td>$7.6M</td>
<td>NTIB IDIQ</td>
</tr>
<tr>
<td>120mm M931 (FRPC), M933A1 and M934A1 High Explosive (HE) Mortar Cartridge LAP</td>
<td>4QFY15</td>
<td>$85.3M</td>
<td>NTIB</td>
</tr>
<tr>
<td>Mortar Weapon Systems: 60mm/81mm LW Components and Basic Issue Items (BII)</td>
<td>3QFY15</td>
<td>$88.4M</td>
<td>SB</td>
</tr>
<tr>
<td>Mortar Weapon Systems: 60mm, 81mm, and 120mm (Lightweight and Legacy Systems) and the M326 120mm</td>
<td>4QFY15</td>
<td>$102M</td>
<td>F&amp;OC</td>
</tr>
<tr>
<td>120mm Mortar Fuze Adapter</td>
<td>3QFY15</td>
<td>$12.3M</td>
<td>SB</td>
</tr>
<tr>
<td>105mm M1064 IR Illum</td>
<td>4QFY15</td>
<td>$20M</td>
<td>NTIB</td>
</tr>
<tr>
<td>M734A1 Multi Option Fuze &amp; M783 PD/DLY Fuze</td>
<td>4QFY15</td>
<td>$156.5M</td>
<td>NTIB</td>
</tr>
</tbody>
</table>

NTIB: National Technical Industrial Base  
IDIQ: Indefinite Delivery Indefinite Quantity  
SB: Small Business  
F&OC: Full and Open Competition
Planned Mortar Weapons Acquisition Strategy

**Mortar Weapons Systems Contract**
- M224/M224A1
- M252/M252A1
- M120
- M121
- M326
- M1064
- M1017
- M170A1
- M7A1
- M177A1
- M3A2

**Mortar Weapon Component SBSA**
- Kitting, Staging, Fielding

**Two (2) Prime Contractors**
- Systems contract for complete mortar systems (ceiling price $102M)
- Small Business Set Aside (SBSA) contract for Light Weight (LW) Components and Basic Issue Items (BII) (ceiling price $97M)
Planned Mortar Fire Control Systems Acquisition Strategy

Fire Control Systems Contract

- **One Prime Systems Contract**
  - Complete fire control systems Army Acquisition Objective (AAO)
  - Includes Fielding, Installation and New Equipment Training services
  - FY15 – 19 Contract ceiling price: $102M
Indirect Fire Capability Gaps

- Range
- Lethality – Cannon Cluster Munition Replacement; Scalable Effects
- Precision
- Less Toxic/Less Incendiary Smoke
- More lethal with less weight
- Less corrosive; less wear-causing propellants (no spiral wear)
- Ammo management and resupply
- Moving/fleeting targets
Future CAS Initiatives (1 of 2)

**Android LHMBC Project**

**Accomplishments**
- Using USMC funding, completed an Android application
  - Supports Direct Lay and Hipshoot Missions
- Technology developed provides core functionality needed for Army objective efforts including:
  - A Ballistic Kernel that runs on an Android Platform
  - Geo-trans libraries that run on an Android Platform

**Future Efforts**
- Fully Funded in FY16 to complete software integration and begin procuring M32A2s (converge with Nett Warrior)

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**155mm XM1128 HE IM BB**

**Accomplishments**
- Potential Material solution for USMC 155mm Suite of Cannon Artillery Munitions CPD
- USMC RDTE funding leveraged to establish TRL6 maturity:
  - Live Fire demonstrations from both US 39 Caliber and Allied 52 Caliber 155mm Cannon
  - Static detonation testing with HF-1 steel and IMX 101 fill proves greater lethality than M549A1
- Fully Range Zoneable replacement for both M795 and M549A1
- Production tooling and process developed

**Future Efforts**
- Airframe readily modified to potentially become cargo carrier for Illumination smoke and other variants at 30km ranges
Product Concepts

Top Program Manager S&T priorities:

- Enhanced/Scalable/Affordable Lethality
- Insensitive Munitions and Advanced Propellants
- Non Toxic/Non Incendiary Multi Spectral Screening Smoke
- Extended Range Cannon Munitions
- High Explosive Guided Mortar

Enhanced/Scalable/Affordable Lethality
IM Post-Launch Propulsion
Non Toxic/Non Incendiary Multi-Spectral Smoke
Super Extended Range Cannon Artillery Munition (SERCAM)
High Explosive Guided Mortar (HEGM)
Closing Message to Industry

- Declining Budgets May Drive Change in Future Acquisition Strategies
- Continued Communication is critical
- FMS and DCS Represents Potential Business Opportunities
- Potential for Select New Start Development Programs
  - DPICM Replacement
  - Extended Range 155mm Program
  - 120mm HEGM
Questions