Munitions Executive Summit
February 2012
PM Acquisition Panel

Presented by:
Mr. Shields
DPEO Ammunition
FY 13 PEO Ammo Funding

Portfolio Summary

Programs:
- ACAT I: 1
- ACAT II: 4
- ACAT III: 645+
- QRCs: 22

Product Phases*:
- Pre-System Acquisition: 22
- Eng & Mfg Dev: 2
- Prod & Dep: 272
- Operations & Support: 376+

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*Some programs in multiple phases
### FY13 PresBud FYDP by Ammunition Families (in $M)

<table>
<thead>
<tr>
<th></th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navy Guns</td>
<td>51</td>
<td>25</td>
<td>25</td>
<td>60</td>
<td>59</td>
</tr>
<tr>
<td>Bombs</td>
<td>174</td>
<td>194</td>
<td>199</td>
<td>191</td>
<td>196</td>
</tr>
<tr>
<td>Misc Items</td>
<td>23</td>
<td>14</td>
<td>13</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>Other AMMO</td>
<td>169</td>
<td>149</td>
<td>180</td>
<td>195</td>
<td>211</td>
</tr>
<tr>
<td>Mines</td>
<td>48</td>
<td>76</td>
<td>10</td>
<td>40</td>
<td>11</td>
</tr>
<tr>
<td>Mortar AMMO</td>
<td>249</td>
<td>117</td>
<td>206</td>
<td>125</td>
<td>184</td>
</tr>
<tr>
<td>Artillery AMMO</td>
<td>525</td>
<td>309</td>
<td>226</td>
<td>296</td>
<td>237</td>
</tr>
<tr>
<td>Tank Family</td>
<td>112</td>
<td>145</td>
<td>154</td>
<td>140</td>
<td>151</td>
</tr>
<tr>
<td>Medium Cal</td>
<td>422</td>
<td>363</td>
<td>346</td>
<td>374</td>
<td>386</td>
</tr>
<tr>
<td>Small Cal</td>
<td>585</td>
<td>524</td>
<td>528</td>
<td>577</td>
<td>569</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,361</strong></td>
<td><strong>1,915</strong></td>
<td><strong>1,888</strong></td>
<td><strong>2,015</strong></td>
<td><strong>2,023</strong></td>
</tr>
</tbody>
</table>

*Data Source: B&P System PBD13 cycle, funding requirements for all SMCA services. *This data excludes FMS, Production Base and Demil.

*FY13 includes OCO in the amount of $450M.*
Comparison of FY12 vs. FY13 by Ammunition Families FY13 PresBud (in $M)

- FY12 includes OCO in the amount of $386M.
- FY13 includes OCO in the amount of $450M.

*Data Source: B&P System PBD13 cycle, funding requirements for all SMCA services.*

<table>
<thead>
<tr>
<th></th>
<th>Small Cal</th>
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<th>Artillery AMMO</th>
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<th>Misc Items</th>
<th>Bombs</th>
<th>Navy Guns</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY12 (M)</td>
<td>614</td>
<td>456</td>
<td>79</td>
<td>373</td>
<td>262</td>
<td>29</td>
<td>255</td>
<td>23</td>
<td>169</td>
<td>15</td>
<td>2,275</td>
</tr>
<tr>
<td>FY13 (M)</td>
<td>585</td>
<td>422</td>
<td>112</td>
<td>525</td>
<td>249</td>
<td>48</td>
<td>169</td>
<td>23</td>
<td>174</td>
<td>51</td>
<td>2,361</td>
</tr>
<tr>
<td>$ (M) Change</td>
<td>(28)</td>
<td>(34)</td>
<td>34</td>
<td>153</td>
<td>(13)</td>
<td>19</td>
<td>(86)</td>
<td>(0)</td>
<td>(6)</td>
<td>36</td>
<td>86</td>
</tr>
<tr>
<td>% Change</td>
<td>(4.62%)</td>
<td>(7.40%)</td>
<td>43.00%</td>
<td>41.02%</td>
<td>(4.85%)</td>
<td>63.57%</td>
<td>(33.82%)</td>
<td>(1.39%)</td>
<td>3.36%</td>
<td>243.64%</td>
<td>3.8%</td>
</tr>
</tbody>
</table>

*Approved for Public Release; distribution is unlimited.*
PEO Ammo Portfolio Reviews

• First Session: PM / PD, TRADOC, contracting centers, ARDEC, JMC, and other Services
  – Prioritizes efforts and results in identification of opportunities to modify or terminate requirements where capability redundancy exists, and/or reduce/stop production and/or delay development

• Second Session: Includes HQDA representatives from G3, G4 and G8
  – Recommendations from HQDA and feeds the Ammunition Management Processes
  – Controls redundancy and supports the POM build

• Third Session: GO/Executive level review
  – Assess/Agree: capability roadmaps and Warfighter modernization S&T efforts
  – Assess/Agree: should-cost, requirements, capability redundancy, opportunities to reduce production quantities

Ensures a common understanding and full visibility of requirements driving fiscal investment across R&D, procurement, and sustainment
# PEO Modernization Strategy

## Emerging Technologies Programs (next 5 Years)

<table>
<thead>
<tr>
<th>Artillery Munitions and Weapon Systems</th>
<th>Mortar Munitions and Weapon Systems</th>
<th>Direct Fire</th>
<th>Small &amp; Medium Caliber</th>
<th>Non-Lethal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precision Guidance Kit</td>
<td>MAPAM</td>
<td>120MM, Advanced Kinetic Energy</td>
<td>Lightweight Ammo</td>
<td>Individual Non-Lethal System (INS)</td>
</tr>
<tr>
<td>M795 Extended Range</td>
<td>Accelerated Precision Mortar Initiative</td>
<td>Lightweight 60mm/81mm Mortar Systems</td>
<td>7.62 EPR</td>
<td>Dual Mode (Lethal/N-L) Grenade</td>
</tr>
<tr>
<td>Laser Ignition Systems</td>
<td>Enhanced Precision Mortar Initiative</td>
<td>40mm Non Dud Prod.</td>
<td>40mm Non Dud Prod.</td>
<td>Passive and Covert Target Marking</td>
</tr>
<tr>
<td>DPICM Alternative</td>
<td>Advanced Precision Mortar Initiative</td>
<td>30mm Airburst</td>
<td>Advanced Armor Defeat</td>
<td>Next Gen Networked Munitions</td>
</tr>
</tbody>
</table>

## Future Trends (5+ years)

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<th>Non-Lethal</th>
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<tr>
<td>Affordable, GPS Denied Precision</td>
<td>Affordable, GPS Denied Precision</td>
<td>Embedded Propellant Temperature Sensor</td>
<td>30mm Airburst</td>
<td>Passive and Covert Target Marking</td>
</tr>
<tr>
<td>Advanced Lightweight Position Navigation</td>
<td>Non-Toxic, Non-Incendiary Smoke</td>
<td>Non-Toxic, Non-Incendiary Smoke</td>
<td>40mm Airburst</td>
<td>Standoff Explosive Neutralization</td>
</tr>
<tr>
<td>Extended Range Guided Projectiles</td>
<td>Extended Range Guided Projectiles</td>
<td>Imperceptible Trace</td>
<td>Standoff Entry Breaching and Asset Neutralization</td>
<td>Standoff Substance Identification</td>
</tr>
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## Close Combat Systems

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<tr>
<th>IED Defeat &amp; Counter Mine</th>
<th>Industrial Base</th>
<th>Demilitarization</th>
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<tr>
<td>Individual Assault Munition (IAM)</td>
<td>Sm. Cal. Modernization Lake City AAP</td>
<td>Disassembly and Energetic Destruction Technologies</td>
</tr>
<tr>
<td>Spider Improvements</td>
<td>TATB Production Holston AAP</td>
<td>Enhanced Autoclave Equipment and Process for Demilitarizing IM Explosives</td>
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<tr>
<td>Next Gen Networked Munitions</td>
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## Industrial Base

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<tr>
<th>New NC Facility Radford AAP</th>
<th>Sm. Cal. Modernization Lake City AAP</th>
<th>Disassembly and Energetic Destruction Technologies</th>
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<tr>
<td>A2B move Holston AAP</td>
<td>TATB Production Holston AAP</td>
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## Demilitarization

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PEO Ammo Technology Focus Areas

• Lightweight Small Cal Ammo
• Imperceptible Small Cal Tracer
• Advanced Small Cal Armor Piercing
• Non-Lethal Force Application
• Low cost/small package Wireless Initiation Devices
• Next Generation Mounted/Dismounted Breeching Devices
PEO Ammo Technology Focus Areas (cont)

- Extended Range Artillery & Mortars
- Anti-Jam, GPS Denied & Alternate (non-GPS), and M-Code GPS Affordable Precision
- Electronic Countermeasures to disrupt enemy electronics
- Non-Toxic, Non-Incendiary Smoke
- Increased HE Capability and Cannon Cluster Munition replacement technologies
Contracting Opportunities

- DoD Ordnance Technology Consortium (DOTC)
  - Focal point for ordnance system technology research and development [http://www.nwec-dotc.org/](http://www.nwec-dotc.org/)

- National Small Arms Technology Consortium (NSATC)
  - Research, development and engineering of small arms weapons systems and munitions [http://nationalsmallarmscenter.com/](http://nationalsmallarmscenter.com/)

- DoD Small Business Innovation Research (SBIR)

- RFI for Enhanced Lethality for Light, Medium and Hard Targets
  - Develop additional background info to support the artillery lethality roadmap – Release To be Announced
Key Ammo Industrial Base
Risks/Challenges & Opportunities

Risks/Challenges:
• Loss of Defense Unique 2nd/ 3rd tier and Single Point Failure suppliers
• Reduction of industry investment in new technology
• Increased unit prices
• Reduced ability to surge quickly
• Financial viability of ammo supply chain
• Overarching industrial base strategy agreement w/ implementation of Better Buying Power initiatives
• Risk Mitigation of Single Point Failures
• Modernizing AAPs without disrupting production and logistics operations

Opportunities:
• Consolidation of oversized capacity
• Leaning of manufacturing operations
• Large company Merger and Acquisition of 2nd and 3rd tier suppliers
Key Ammo Ind Base Challenges

1. Financial viability of ammo supply chain
2. Overarching industrial base strategy agreement w/ implementation of Better Buying Power initiatives
3. Risk Mitigation of Single Point Failures
4. Modernizing AAPs without disrupting production and logistics operations