RDX Production Capacity Program

- RDX capacity at Holston is running at maximum rates, primarily driven by high demands for CXM-AF-5/CXM-AF-7 for Air Force bombs.
- Demand, in total, is projected to remain high for the next several years.
- PEO Ammo/PD Joint Services is leading a Joint IPT and modernization program that will increase Holston's overall explosives production capacity.
- Continuous improvement initiatives are being executed with an effort to realize incremental throughput increases.
  - Significant capacity increase will not be seen until the completion of the modernization programs.
- Challenges remain in requirements definition to ensure successful design, construction and facility hand-over.
- Government/Industry IPT working to define all constraints and solutions.

RDX Capacity Expansion underway to meet War Fighter demand.
### RDX Expansion Schedule

#### Awarded Projects

<table>
<thead>
<tr>
<th>Project Description</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21</th>
<th>FY22</th>
<th>FY23</th>
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<tbody>
<tr>
<td><strong>1 &amp; 2</strong> Recrystallization FEM Facility</td>
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<td><strong>3</strong> FEM Point Source</td>
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<tr>
<td><strong>4</strong> Steam &amp; Gas*</td>
<td>Rqmts</td>
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<td><strong>5</strong> Change House*</td>
<td>Rqmts</td>
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<tr>
<td><strong>6</strong> Improved Staging Area*</td>
<td>Rqmts</td>
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<td><strong>7</strong> Analytical Lab</td>
<td>Rqmts</td>
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<td><strong>8</strong> AnSol Filtration Project*</td>
<td>BAE R&amp;D</td>
<td>Rqmts</td>
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<tr>
<td><strong>9</strong> ANSOL Tech Project**</td>
<td>Govt Ansol R&amp;D – GPR &amp; Fly Ash</td>
<td>Thermal Test Technology Eval</td>
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<tr>
<td><strong>10</strong> Weak Acetic Acid Recovery*</td>
<td>Rqmts</td>
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<tr>
<td><strong>11</strong> Acid Tank Farms</td>
<td>Rqmts</td>
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<tr>
<td><strong>12</strong> A2B new train</td>
<td>Rqmts</td>
<td>FMEA</td>
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<tr>
<td><strong>13</strong> Nitration, Wash, &amp; Recrystallization</td>
<td>Wash/Filter LCP</td>
<td>Requirements</td>
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<td><strong>14</strong> Stainless Steel Nutsches</td>
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</table>

#### Planned Projects

- Additional AF Bomb Capacity
- RDX ~ 14-16M lbs/yr
- Simultaneous: HMX @ 2.5M lbs/yr
- IMX @ 8M lbs/yr

**Requirements**

- Design & Construction
- Prove Out

**Additional Information**

- Environmental Assessment Complete
- Procure & Test

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Current Status

- Joint IPT Formed between BAE Systems, PD Joint Services, ARDEC and JMC
- Conducted 8 RDX Workshops to review status, projects, and program risks
- Seven projects awarded for analysis, design and construction of initial capacity constrained facilities
  - Fluid Energy Mill (FEM) facility design
  - Recrystalization facility design
  - Pilot technology test and demonstration for wash/filter capability
  - Change House Design and Construction
  - Improved Staging Area Design and Construction
  - ANSol Filtration Design
  - Weak Acetic Acid Recovery Process Design
- Environmental Assessment and Air Permitting critical to beginning construction
- Internal BAE Systems Operational Improvement Activities underway to optimize
RDX Capacity Expansion Summary

- Joint IPT working very well to develop strategies for implementing solutions to meet future demands

- RDX workshops allow continued dialogue with all stakeholders to promote collaborative decision making

- Seven projects awarded and progressing on schedule; substantial progress on requirements and SOWs for future projects

- Continue to address challenges with finalization of requirements, proposal timelines through award
  - Nitration/Wash/Recrystalization biggest challenge to date

- Additional FY17 funding allowed for the acceleration of four programs to be awarded by September 30

- Internal BAE Systems Operational Improvement Activities underway to optimize existing processes and slightly improve through-put in near-term