Overview

- Introduction
- Quality -- Medium Caliber Ammo – “The Bad Boy”
- Industrial Base
- Winds of Change
- Summary
Introduction

- **Sustainment** – from IOC to the grave
  - Maintain – it breaks, we fix it
  - Restock – it gets used up, we buy more
  - Distribute – get it to wherever & whenever needed
  - Work Problems – Too much effort in this area

- **Reactive vice active sustainment**
Medium Caliber Ammunition
“The Bad Boy”

- Med Cal - a history of problems

- Lots of Competition for Title
  - Fuzes
  - Countermeasures
  - Others
Fuze Safety Device Defect

Correctly applied epoxy on set screws

No epoxy on set screws – fuze failed critical safety requirement
FZU-55 A/B Lanyard Defect

- Improper Routing of Lanyard
- Correctly Routed Lanyard
BBU-36 Impulse Cartridge

Good Bridge-Wire

Corroded Bridge-Wire
LUU-2C/B ILLUMINATING FLARE VIDEO
JAU-8 Initiator
Medium Caliber Ammunition
“The Bad Boy”

Med Cal a history of problems:

- 4 stockpiles suspended for design/production flaws
  - PGU-38/U (twice) $52M; PGU-28/B $100M; 30MM combat mix (Honeywell design) $1B
- 4 propellant problems
  - Improper blending, separation after blending, missing component, wrong propellant
- 3 primer problems
  - Primer integrity, contamination, improper installation

- Stuck in a “reactive cycle” of problem–test–fix–test–ECP–buy new/suspend old–new problem...
Medium Caliber Ammunition
“The Bad Boy” Video
Medium Caliber Ammunition
“The Bad Boy”

- Reality check
  - Wasted resources – large dollar losses ($1B+)
  - Ammo shortages – 30MM TP at 20% of objective
  - Warfighting impact – F-15, F-16 & AC-130 reverted to using less capable ammo
  - Result – gear-up landings, fragged airplanes, aircraft fire, blown barrels

- Lagging indicators of systemic quality problems

Or leading indicators of munitions enterprise frailty?
Munitions Enterprise Frailty

“Frail”
- Capacity down 68% in last decade
- Sustaining Engineering Funds Reduced
  - Limits Aging/Surveillance Testing
- Decreased engagement with Industry

- 2+ primes for each end product not necessarily an indicator of health
- Numerous sole sources exist at component level
  - Limited capacity
  - Age/condition of facilities, equipment and personnel
  - Technology stagnation
Munitions Enterprise Frailty

- Little awareness of industrial base frailty
- Two prime suppliers is not a guarantee of health
- Crisis management not a viable approach
The Winds of Change

- Industrial base preparedness – a team effort

- Air Force perspective
  - Services provide better long-range forecasts
    - Advise industry of potential for profitability
  - Services/suppliers jointly review supply chain and production line health annually
    - Better understand program costs
  - Assess risks and identify areas needing attention
    - GOCO – government action; Private – industry action
The Winds of Change

Air Force on a new path

- Medium Caliber quality engineer initiative
- Technical issue industry days - PGU-15 & FMU-143
  - Technical spec reviews/re-writes
- Conduct Requirements symposium biennially
  - Project needs through FYDP
- Prime contractor production
  - Sub contractor reviews
  - Working closer with DCMA
The Winds of Change

- Active participant in procurement process
  - Better risk assessment
    - Which proposal has the best likelihood needs
    - How well has this supplier done in the past
  - Quality supplier preference
    - Best-value
    - Quality history
Summary Thoughts

“Reactive vs. Active”
- Air Force is committed to a landscape quality change – across the munition enterprise
- A capable industrial base is essential to the Air Force – team effort required

- Quality products in the hands of our warfighters is our top priority
QUESTIONS?