



Program Manager, Ammunition

Infantry Equipping Challenge (IEC)

Industry Day Brief



26 September 2016

Mrs. Mary Flower LeMaster

mary.flowerlemaster@usmc.mil

Assistant Program Manager, Engineering

Program Manager for Ammunition

Marine Corps Systems Command



Agenda:

1. PM Ammo Mission and Vision
2. Ammunition Portfolio
3. IEC Assessment Approach
4. Requested Vendor Information
5. PM Ammo POCs



PM Ammunition

- **Our Mission**

- Equip Marine forces with most capable, high quality and cost effective Class V(W) ammunition
- Provide worldwide Marine Corps Class V(W) integrated logistics supply chain, distribution management, surveillance maintenance and strategic prepositioning capability
- Manage Marine Corps Environmental and Explosive Safety Program

- **Vision**

- Ensure Marines have a safe and reliable ammunition when and where they need it in support of the Commandant's priorities



Ammunition Portfolio:

- Small Arms
- Line Charges
- 25mm
- 40mm
- 60mm, 81mm, 120mm Mortars
- 120mm Tanks
- Demolition
- Rockets
- Artillery
- Fuzes
- Non-Lethal Ammo
- Grenades/ Pyrotechnic



120mm M1105 Illumination Cartridge (DODIC CA46)



40mm MK281 Mod3 Practice Cartridge Day/Night Marker (DODIC BA21)





Assessment to include: 9mm, 5.56mm (linked and unlinked), 7.62mm (linked and unlinked), .50 cal (linked and unlinked) and .300WM

Late Oct - Live Fire Test and Navy Lab (NSWC Crane)

- Experimental Pressure, Velocity, & Action Time (EPVAT) at three temperatures
- Non-destructive Visual & Dimensional to include bubble testing
- Accuracy/Dispersion test at ambient temperature
- Ballistic Gelatin testing with Barrier/penetration testing to compare against performance of existing cartridges
- Function and Casualty

Dec 2016 - Live Fire Range Test (Quantico)

- Comparative analysis against legacy cartridges

Please Note: Only inert tactical or training rounds will be assessed as part of the 2016 IEC. Pyrotechnics, incendiary, energetics, armor piercing, tracer and high explosives will not be accepted nor assessed.



1. Identify caliber(s) submitted for assessment
2. Product Description to include (to extent available):
 - a. Brief description of the round and the advantage it provides
 - b. Requirements specification or the Government POC to obtain the specification
 - c. Intended use (general purpose, precision, etc.)
 - d. Cartridge Overall Length (COAL)
 - e. Primer type
 - f. Propellant type and nominal charge weight
 - g. Bullet type, weight and dimensions
 - h. Packaging requirements/specifications and design considerations, or the Government POC to obtain the requirements and considerations
 - i. The ability/impact to be packaged in military pack configurations, or the Government POC to obtain this information
 - j. Shipping, transport and handling requirements and design considerations, or the Government POC to obtain the requirements and considerations
 - k. Identify the involvement of other Services or Government Organizations that are or have been involved in the development or testing of the ammunition. Please include the Government POC information.

Information requested to enable USG to make an informed assessment



3. Safety Assessments

- a. Safety Assessment Reports
- b. List of malfunctions and anomalies experienced
- c. Resolution/mitigations implemented to address malfunctions and anomalies
- d. Safety Data Sheets (SDS) – formerly called MSDS
- e. If previously tested by the U.S. Government (USG), a copy of the test report or the Government POC to obtain the report
- f. Health hazard assessments, specifically addressing personnel exposure to noise and hazardous materials and combustion products
- g. Hazards/hazard logs if available

4. Performance Data

- a. Internal Ballistics (would prefer round by round data if available)
- b. Average peak chamber pressure (at ambient, -25F and +145F temperatures)
- c. Standard deviation of chamber pressure at ambient (at ambient, -25F and +145F temperatures)
- d. Average muzzle velocity (at ambient, -25F and +145F temperatures, indicate distance measurement was taken from muzzle)



4. Performance Data (cont'd)

- a. Muzzle velocity standard deviation (at ambient, -25F and +145F temperatures)
- b. External Ballistics
- c. Dispersion data from firing (indicate what type of weapon, average group size, and number of groups. shot by shot data is preferred)
- d. Functional test results: description of what and how functional testing in weapons was completed. For examples, which weapons (and magazines) the cartridge was fired it in, how many cartridges have been fired, in what conditions (hot, cold, ambient, humid, sand and dust, mud, etc.) and where failures were experienced. A Government POC may also be provided to obtain these test results.
- e. Types of weapons the cartridge has been successfully fired in and at what temperature
- f. Test reports from live fire range testing, name of range where testing was conducted, what standards testing was conducted against or the Government POC to obtain the report
- g. First Article Acceptance Testing (FAAT) test results or the Gov't POC to obtain the results
- h. Environmental and shock test results or the Government POC to obtain the results

5. 2,000 rounds of each caliber of ammunition is requested as samples

- a. 1,000 for October lab evaluation
- b. 1,000 (minimum) for December user evaluation



PM Ammo POCs

Mrs. Mary Flower LeMaster
Assistant Program Manager- Engineering
mary.flowerlemaster@usmc.mil
(703) 432-8756

Mr. Mavrick Powell
Business Manager
mavrick.powell@usmc.mil
(703) 432-8766

Mrs. Thanh Janney
Principal for Environment, Safety and
Occupational Health (PESOH)
thanh.janney@usmc.mil
(703) 432-8753

CWO3 Michael Ruegger
Project Officer- Small Arms
michael.ruegger@usmc.mil
(703) 432-8764

WO Garrett Pellerzi
Project Officer- Small Arms
garrett.pellerzi@usmc.mil
(703) 432-8771