



PROJECT MANAGER COMBAT AMMUNITION SYSTEMS

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Presented by:
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(PM CAS)
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FORGING THE FUTURE OF INDIRECT

PM Combat Ammunition Systems Organization



Project Manager
COL Leon L. Rogers II



Executive Assistant
Angela Prelich



Deputy Project Manager
Mr. Peter Burke

Product Support Manager
Shaji John

Chief Engineer
Jason Foultz

Test & Evaluation
Jacob Friedman

Operations Officer
Sam Rush



PdM Precision Attack Cannon Munitions

PdM, LTC Brian J. Adkins
DPdM, Mr. Pete DeMasi

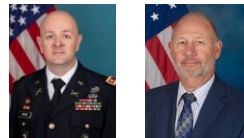


- Excalibur Block Ia-1
- Excalibur Block Ia-2
- Excalibur Block Ib
- BONUS
- C-DAEM Armor
- C-DAEM DPICM Replacement



PdM Precision Fires & Mortars

PdM, LTC John McGee
DPdM, Mr. Greg Bischer



- Mortar Weapons & Fire Control
- Guided Mortars
- PGK
- PGK-ER
- LR-PGK
- XM1210
- EPIAFS/PEFCS



Conventional Ammunition Division

Chief, Mr. Ray Colon
APPI, Mr. Matthew Glaser



- Artillery Ammunition
 - XM1128, XM1113
 - ERCA Propulsion
- Mortar Ammunition
- Fuzes
- Energetics
- JMC Commodity Team



Business Management

Director,
Ms. Chary Hernandez



- Conventional Ammo Branch
- Precision Munitions/ Weapons & Fire Control Branch
- Acquisition Planning Team
- Program Control Cell



International Programs

Director,
Mr. Dan Napolitano



- Defense Export Policy
- Foreign Military Sales
- Project Agreements (NATO/bilateral)
- International Business Development & Relations



PM CAS Family of Products

ARTILLERY

MACE

155mm ERAP

MOFA II w Next Gen Prox

M82E3 Primer

XM659 Stub Charge

EPIAFS Modernization

LR-PGK M1171/M1172

XM855E1 Supercharge

XM1210 RAP HE

XM1208

HTK

C-DAEM

155mm XM1113, XM1210 RAP HE

M1156 PGK

XM660 Stub Charge

105mm M1 HE

155mm M110A2 SMK

155mm M107 HE

105mm M314A3 Illum/M1064 IR Illum

155mm M485A2 Illum/M1066 IR Illum

155mm M549A1 RAP

Projectile Gun Unit 105mm PGU 43/B TP 44/B HE 45/B

155mm M795 HE

155mm M1128 BB HE

105mm M1130

M1123IR/M1124 VL

M1122

155mm BONUS

M767A1 ET

M782 MOFA

Excalibur Inc. 1a/1b M982/M982 A1

EPIAFS M1155A1

155mm MACS M232A1/A2/M231

Smoke M1121 WP

M1155 PIAFS

Concept

Development

Production/Sustainment

MORTARS

Turreted Mortar Concept

IBMS Concept

M32A2 LHMBC (Nett Warrior)

XM395 APMI

M150 MFC5 Dismounted

Commanders Interface

SINGARS Radio

Pointing Devices

Gunners/Drivers Display

MFC5 Software

M1064

Stryker

AMPV

M95/M96 MFC5 Mounted

M224 60mm Mortar

M32/M32A1 LHMBC

M326 Mortar Storage Kit

M776 MT Fuze

M772

M120/M121 120mm Mortar

IR Illum 60mm - M767 81mm - M816 120mm - M983

Smoke 60mm - M722A1 81mm - M819 120mm - M929

MOFM M734A1/M783 Fuze

High Explosive 60mm - M720A1/M888/M768/M1061 81mm - M821A4/M889 120mm - M933A1/M934A1

Training 60mm - M769 81mm - M879 120mm - M931

Concept

Development

Production/Sustainment



Project Manager Combat Ammunition Systems

MISSION

To develop, produce, and equip the Warfighter w/conventional artillery & mortar ammunition, precision munition, mortar weapons, and mortar fire control.



JPEO A&A Priorities

Develop and Field Overmatch Capabilities to Warfighters

Develop Agile People, Teams and Acquisition Leaders

Innovate and Operate Effectively and Efficiently

Modernize and Maintain Viable Strategic Capabilities to Ensure Current and Future Readiness

Strengthen Alliances and Establish New Partners

Initiative

Measures of Effectiveness

End State

OBJ 1: People – “If Winning Matters,” “We Choose to Win”

- 1.1 Hire, Train & Retain Workforce
- 1.2 Improve Organizational Readiness
- 1.3 Optimize Available Resources

- Command Climate Survey
- CAPPMIS Certification
- Recognition
- Hiring Actions

A professional, responsive, trained, experienced, motivated and resilient civilian and military workforce capable of providing the absolute best possible munitions to the Warfighter in a timely manner.

OBJ 2: Deliver Lethality

- 2.1 Execute Presidential Drawdown
- 2.2 Increase and Accelerate 155mm
- 2.3 Produce Safe and Quality Munitions
- 2.4 Produce and Field a Suite of Lethal Munitions

- MRR Assessment
- SMCA CRDDs
- Field Five New Rounds On Schedule
- Risk Assessment, 1-E
- Meet Quarterly Ramp-up Metrics

Increased manufacturing capability that is integrated and synchronized in delivering safe and reliable munitions at the point and time of need.

OBJ 3: Strengthen Interoperability / Interchangeability

- 3.1 Foreign Military Sales and Direct Commercial Sales
- 3.2 Execute CRADAs and Co-Development Project Agreements
- 3.3 Demonstrations on foreign platforms

- Foreign Comparative Testing
- Number of Project Arrangements
- Cooperative Production MOU
- Bilateral & Multilateral Forum
- Foreign Industry Engagement

Strengthen Industrial Base through approved international partners, while advancing shared equities. Exploiting Opportunities for interchangeability and interoperability.

PM CAS PRIORITIES

The Defense of Ukraine

U.S. Army Modernization

International Partners

VISION

To deliver lethal conventional & Leap-Ahead munitions and weapons to the Warfighter, Giving them a material edge over adversaries.



PM CAS Focus Areas

- **Deliver Ammunition & Weapon Systems to meet or exceed Customer Required Delivery Dates**

- Presidential Drawdown support to Ukraine
- Increase production capacity for 155mm HE (M795)
- Continued emphasis on Safety and Quality
- Produce and field BONUS and M Capable PGK



- **Develop Long Range Precision Effects**

- Transition XM1113 and M1128 into production
- Deliver ERCA Munitions to support the Operational Assessment (Excalibur, ERCA Propulsion, XM1210, PER, Fuze Setter)
- Develop LRPG as the next generation course correcting munition
- Qualify/Deliver Can Delivered Area Effects Munition (CAEM) Armor & DPICM Replacement solutions

- **Enable and Fulfill International Requirements to Strengthen Partnerships and All**

- Interoperability demonstrations on foreign platforms (Caesar, K9, AS90, F)
- Foreign Military Sales/Direct Commercial Sales
- Execute Co-development Project Agreements and support Cooperative Res Development Agreements (CRADAs)





Industrial Base Feedback

COVID 19 Impacts

- Supply chain disruptions (cost and schedule) starting to improve, keep communicating risks/issues as you see them
- Workforce stability (operators/engineers) is still an area of concern
 - Paradigm change for Remote work and Tele needed to be competitive
- Working with Army Contracting Command to review/mitigate impacts

Assured Munitions Initiative

- Black Powder issue is being worked by USG and Industry
- Continuing to identify raw material sources and assessing risks/issues
- Looking to expand Industry involvement on risk identification/assessments/solutions

Quality and Production Trends

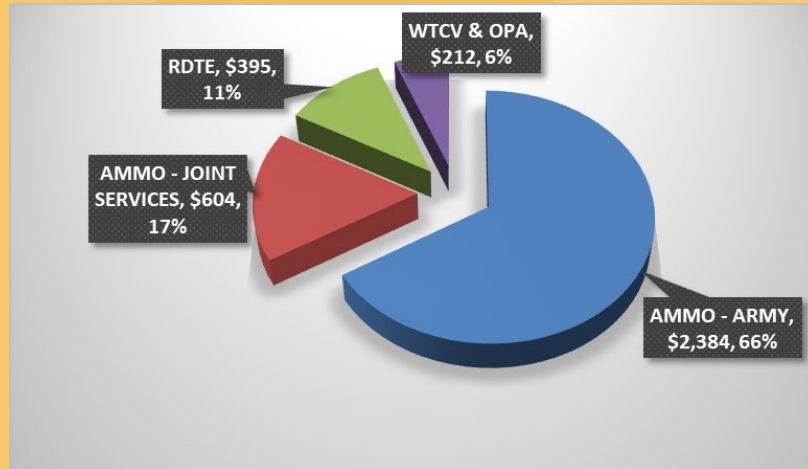
- Noticing an increase in quality issues across the portfolio
- X-ray and UT expertise remains a watch item
- Achieve smart balance between development, modernization, and production work
- YPG continues to be a program constraint that needs to be planned for effectively

**Appreciate
NDIAs Feb
2023 Vital
Signs report**



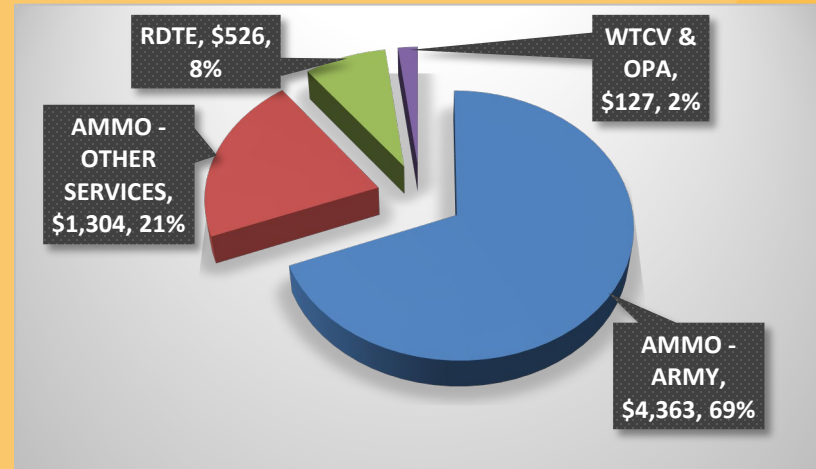
Active Programs and Budget

RDTE FY21-22 & PROC FY20-FY22
Total: \$3.6 Billion

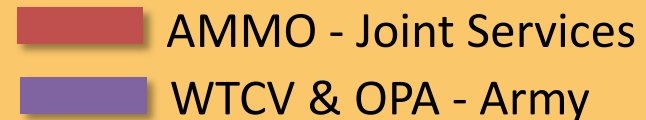


Source: FY22 President's Budget w/Congressional & Execution Adjustments (\$M)

FY23-FY27
Total: \$6.3 Billion



Source: FY23 President's Budget (\$M)



Upcoming 155mm Acceleration and Expansion Market Research Initiatives



NOMENCLATURE:	MONTHLY RATES (PER SUPPLIER):	PERIOD OF PERFORMANCE:	STATUS:
Legacy Propellant Solutions (M119A2/M203A1)	16.7k-33.4k	FY23-28	Market Survey Closed Jan 2023
M762A1/M767A1/M782 Fuze Production	14k/8k	FY24-28	Market Survey Posted Mar 2023
M231/M232 Modular Artillery Charge System (MACS) LAP/Combustible Case	60k/125k & Surge	FY24-29	Market Survey Posted Mar 2023
MACS M31A1 Propellant & WC864 Powder Contract	425k/8k & Surge	FY24-29	Market Survey Posted Mar 2023
M231/M232 MACS Metal Containers	15.6k and Surge	FY24-29	Market Survey Posted Mar 2023
Indirect Fire Artillery Munitions	Maximum Capability	FY24	Market Survey Posted Mar 2023
Rocket Grain Base Bleed	Maximum Capacity	FY23-28	Market Survey Target Apr 2023
155mm M82 Primer	40k	FY25-30	Market Survey Target May 2023
M739 Fuze Production	50k	FY25-30	Market Survey Target Jun 2023

PM CAS Competitive Opportunities



Item	Acq Strategy	Projected Award	Max Ceiling Amount	Request for Proposal (RFP) Date/Remarks
Meltable Fuze Plugs	Small Business	1QFY24	\$5.5M	RFP Posted 28 Feb 2023
60mm/81mm Body Tube and Tail Cones	Small Business	2QFY24	\$29.8M	RFP Projected Mar 2023
Projectile Gun Unit (PGU) 43B/44B/45B, M1 Cartridge	US & Canada	1QFY23	\$213.8M	RFP Projected Apr 2023
M751/M775/M781 Practice Fuzes	US & Canada	1QFY24	\$74.7M	RFP Projected April 2023
60mm/81mm Shell Bodies	US & Canada	1QFY24	\$212M	RFP Projected April 2023
155mm, M1128 High Explosive, Load, Assemble & Pack	US & Canada	4QFY23	\$1.9B	RFP Projected May 2023

PM CAS Competitive Opportunities



Item	Acq Strategy	Projected Award	Max Ceiling Amount	Request for Proposal (RFP) Date/Remarks
60mm/81mm/120mm Mortar Propelling Charges	US & Canada	2QFY24	\$499.2M	RFP Projected June 2023
FireCon-Pro	F&O	2QFY24	\$99M	RFP Projected June 2023
60mm/81mm/120mm Ignition Cartridges	US & Canada	3QFY24	\$219.7M	RFP Projected July 2023
105mm Wood Box	8a	3QFY24	\$40M	RFP Projected Aug 2023
Mortar Metal Containers (PA154/PA157/PA191)	F&O	3QFY24	\$30.6M	RFP Projected Sept 2023
155mm TNT/PBXN-9 Supplemental Charges	US & Canada	4QFY24	\$45M	RFP Projected 1QFY24



Additional P40AS Collaboration Opportunities

1. Accelerated delivery and Improved capacity for 155mm munition manufacturing
2. Automated inspection and classification of explosive pressed, or cast cure defects using X-Ray or other Non-Destructive methods.
3. Improved Digital Engineering tools to enable more rapid product development and improvement
4. System level development of higher muzzle velocity producing propulsion systems
5. Projectile systems that can survive higher pressures and setbacks to take advantage of ERCA high pressure capability, Improved obturator/rotating barrel both spinning and non-spinning projectiles
6. Improved Tactical Rates of Fire and Time to Defeat through Projectile Initialization (“Fuze Setting”) and Autoloader Integration