

2018 MUNITIONS EXECUTIVE SUMMIT

MUNITIONS READINESS AND MODERNIZATION:
MEETING CURRENT AND FUTURE WARFIGHTER NEEDS



April 16 – 18, 2018

Hilton Parsippany

Parsippany, NJ

NDIA.org/2018MES

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WHO WE ARE

The National Defense Industrial Association is the trusted leader in defense and national security associations. As a 501(c)(3) corporate and individual membership association, NDIA engages thoughtful and innovative leaders to exchange ideas, information, and capabilities that lead to the development of the best policies, practices, products, and technologies to ensure the safety and security of our nation. NDIA's membership embodies the full spectrum of corporate, government, academic, and individual stakeholders who form a vigorous, responsive, and collaborative community in support of defense and national security. For more information, visit NDIA.org

SCHEDULE AT A GLANCE

MONDAY, APRIL 16

Reception
Nobel Ballroom C
5:00 - 6:30 pm

Continental Breakfast
Nobel Assembly
7:00 - 9:00 am

WEDNESDAY, APRIL 18

Registration
Preassembly
7:00 - 9:00 am

General Session
Nobel A/B
7:00 am - 1:00 pm

TUESDAY, APRIL 17

Registration
Preassembly
7:00 am - 5:00 pm

General Session
Nobel A/B
8:00 am - 5:00 pm

Reception
Nobel A/B
5:00 - 6:30 pm

EVENT INFORMATION

LOCATION

Hilton Parsippany
1 Hilton Ct.
Parsippany, NJ

EVENT WEBSITE

NDIA.org/2018MES

EVENT CONTACT

K. Ashley Phayme
Meeting Planner
(703) 247-2540
aphayme@ndia.org

PLANNING COMMITTEE

Tim Bagniefski
Event Chair

Charles Feldmayer
Kevin Knotts
Bart Olson
Tammy O'Meara
Nicholas Perry

Jon Phillips
Bill Sanville
Lisa Spinelli
Douglas Stark
Matt Butler

EVENT THEME

Munitions Readiness and Modernization: Meeting Current and Future Warfighter Needs

ATTIRE

Business attire for civilians or uniform of the day for military personnel.



LEADERSHIP

Tim Bagniefski
Division Chair

MUNITIONS TECHNOLOGY DIVISION

WHO WE ARE

NDIA's Munitions Technology Division works to maintain the open exchange of technical information among government and industry programs and technical managers, and to identify changes and trends in policy, guidance and organizational functions that affect the development, production, maintenance and demilitarization of munitions.

SURVEY AND PARTICIPANT LIST

A survey and list of attendees (name and organization only) will be emailed to you after the conference. NDIA would appreciate your time in completing the survey to help make our event even more successful in the future.

SPEAKER GIFTS

In lieu of speaker gifts, a donation is being made to the Fisher House Foundation.

HARASSMENT STATEMENT

NDIA is committed to providing a professional environment free from physical, psychological and verbal harassment. NDIA will not tolerate harassment of any kind, including but not limited to harassment based on ethnicity, religion, disability, physical appearance, gender, or sexual orientation. This policy applies to all participants and attendees at NDIA conferences, meetings and events. Harassment includes offensive gestures and verbal comments, deliberate intimidation, stalking, following, inappropriate photography and recording, sustained disruption of talks or other events, inappropriate physical contact, and unwelcome attention. Participants requested to cease harassing behavior are expected to comply immediately, and failure will serve as grounds for revoking access to the NDIA event.

AGENDA

MONDAY, APRIL 16

4:00 – 6:30 pm **REGISTRATION – SPONSORED BY ORBITAL ATK**
PREASSEMBLY

5:00 – 6:30 pm **OPENING RECEPTION – SPONSORED BY BAE SYSTEMS OSI**
NOBEL BALLROOM C

TUESDAY, APRIL 17

7:00 am – 5:00 pm **REGISTRATION – SPONSORED BY ORBITAL ATK**
PREASSEMBLY

8:00 – 8:10 am **WELCOME AND INTRODUCTIONS**
NOBEL A/B
Tim Bagniefski
Vice President of Marketing and Business Development, General Dynamics
Chairman, NDIA Munitions Division

Frank Michael
Senior Vice President, Programs and Membership, NDIA

8:10 – 9:00 am **OPENING REMARKS**
NOBEL A/B
BG Alfred Abramson III, USA
Program Executive Officer- Ammunition

John Hedderich
Executive Director SES, ARDEC

JoEtta Fisher
US Army, JMC - Deputy Director, MLRC

9:00 – 10:00 am **2018 MES KEYNOTE SPEAKER**
NOBEL A/B
LTG David D. Halverson, USA (Ret)
Chairman and CEO, Cypress International

10:00 – 10:15 am **NETWORKING BREAK – SPONSORED BY L3 DEFENSE**
NOBEL ASSEMBLY

10:15 – 11:00 am **U.S. THREAT BRIEFING – UNCLASSIFIED**
NOBEL A/B
Mike Santaspirt
US Army, RDECOM

11:00 – 11:45 am **US DOD BUDGET UPDATE & OUTLOOK**
NOBEL A/B
Charles “Chick” Feldmayer
Senior Executive Service, Feldmayer Consulting

11:45 am – 1:00 pm **LUNCH – SPONORED BY GENERAL DYNAMICS**
NOBEL C/D

1:00 – 3:15 pm **AMMUNITION ENTERPRISE CROSS- SERVICE UPDATE**
NOBEL A/B

BG Alfred Abramson, III, USA
Program Executive Officer-Ammunition
Moderator

John Hedderich
Executive Director SES, ARDEC

Lt Col Greg Voth, USAF
Air Force Liaison and Principal Advisor, AFLCM/EBH

Scott Rideout
Program Manager for Ammunition, USMC

JoEtta Fisher
Deputy for MLRC, Joint Munitions Command

3:15 – 3:30 pm **NETWORKING BREAK – SPONSORED BY L3 DEFENSE**
NOBEL ASSEMBLY

3:30 - 4:30 pm **“THE EYE OF THE STORM”: ADDRESSING THE DRAMATIC INCREASE IN EXPLOSIVE REQUIREMENTS**
NOBEL A/B

Kevin Knotts
CEO, Azimuth Consulting
Moderator

David Dunavin
Director and General Manager,
General Dynamics - OTS

Michael Ervin
Director, Research and Development
BAE Systems

Kevin McDonald
President, Chemring North America

COL Joseph H. Chan, USA
Project Director, Joint Services

Col Brad Tannehill, USAF
Project Director - Joint Products

4:30 – 5:00 pm **INDUSTRY UPDATES: ICAP REPORT AND MIBTF REPORT**
NOBEL A/B

John McGuinness
President and CEO, American Ordnance, LLC

Nick Perry
Executive Director, MIBTF

5:00 pm **ADJOURN**
NOBEL A/B

5:00 – 6:30 pm **RECEPTION – SPONORED BY WINCHESTER AMMUNITION-MILITARY**
NOBEL C BALLROOM

WEDNESDAY, APRIL 18

7:00 am – 10:00 am **REGISTRATION – SPONSORED BY ORBITAL ATK**
PREASSEMBLY

8:00 – 8:15 am **ADMINISTRATIVE REMARKS**
NOBEL A/B

Tim Bagniefski
Vice President of Marketing and Business Development, General Dynamics
Chairman, NDIA Munitions Division

8:15 - 9:00 am **US ARMY CROSS-FUNCTIONAL TEAMS**
NOBEL A/B
COL Will McDonough, USA
Project Manager, CFTs (Long-Range Precision Fires)

9:00 – 9:30 am **JOINT CAPABILITIES & ACQUISITION PRIORITIES**
NOBEL A/B
COL Moises Gutierrez, USA
Chief CAD Division, OSD-J8

9:30 - 9:45 am **NETWORKING BREAK – SPONSORED BY L3 DEFENSE**
NOBEL ASSEMBLY

9:45 – 11:45 am **PM ACQUISITION PANEL**
NOBEL A/B

Bob Kowalski
Business Manager, Program Executive Officer-
Ammunition
Moderator

COL Will McDonough, USA
Project Manager, CFTs (Long-Range Precision Fires)

COL Joseph H. Chan, USA
Project Director, Joint Services

Col Brad Tannehill, USAF
Project Director, Joint Products

Joe Pelino
Director of Technology, ARDEC

Matt Zimmerman
Deputy Project Manager, Maneuver Ammunition Systems

William Sanville
Deputy Project Manager, Close Combat Systems

11:45 am - 12:00 pm **CLOSING REMARKS – ADJOURN**
NOBEL ASSEMBLY
Tim Bagniefski
Vice President of Marketing and Business Development, General Dynamics
Chairman, NDIA Munitions Division

The NDIA has a policy of strict compliance with federal and state antitrust laws. The antitrust laws prohibit competitors from engaging in actions that could result in an unreasonable restraint of trade. Consequently, NDIA members must avoid discussing certain topics when they are together at formal association membership, board, committee, and other meetings and in informal contacts with other industry members: prices, fees, rates, profit margins, or other terms or conditions of sale (including allowances, credit terms, and warranties); allocation of markets or customers or division of territories; or refusals to deal with or boycotts of suppliers, customers or other third parties, or topics that may lead participants not to deal with a particular supplier, customer or third party.

BIOGRAPHIES



BG ALFRED F. ABRAMSON III, USA

Program Executive Officer Ammunition, Commanding General Picatinny Arsenal, New Jersey

Brigadier General Alfred F. Abramson III became the Program Executive Officer Ammunition and the Commanding General, Picatinny Arsenal on December 29, 2017, leading the mission to develop and procure conventional and leap-ahead munitions to increase the Warfighter's combat power. Prior to this, BG Abramson served as the Deputy Program Executive Officer Ammunition and Senior Commander Picatinny Arsenal.

Brigadier General Abramson was commissioned a Second Lieutenant in the Chemical Corps after graduating from Virginia State University where he received a Bachelor of Science degree in Chemistry. Brigadier General Abramson

served in a variety of positions overseas as well as the contiguous United States to include: Battalion Chemical Officer, 6-37th Field Artillery; Smoke Platoon Leader, 172nd Chemical Company; Company Commander, 266th Quartermaster Battalion; Chemical Staff Officer, Project Manager's Office for NBC Defense; Aide-De-Camp, Soldier Biological Chemical Command; Assistant Product Manager, NBC Point Detection; Program Executive Office Liaison Officer, Coalition Forces Land Component Command; Assistant Product Manager, NBC Reconnaissance Systems; Budget Team Chief, Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology); Joint Product Manager, Biological Detection Systems; Military Assistant to the Under Secretary of the Army; Joint Project Manager for NBC

Contamination Avoidance; Executive Officer for the Principle Military Deputy Assistant Secretary of the Army (Acquisition Logistics, and Technology); and previously served as the Deputy, Joint Program Executive Officer for Chemical and Biological Defense.

His civilian education includes a Master's degree in Chemistry from Johns Hopkins University, a Master's degree in National Security and Strategic Studies from the Naval War College, and a Master's degree in Strategic Studies from the Army War College. His military education includes the Chemical Officer Basic and Advanced Courses, the Combined Arms and Services Staff School, Command and General Staff College, the Advanced Program Management Course, the Senior Service College and Senior Leaders Course.



JOHN HEDDERICH

Executive Director, SES ARDEC, Munitions Engineering & Technology Center.

John F. Hedderich III was assigned as Director of the U.S. Army Armament Research, Development and Engineering Center (ARDEC) at Picatinny Arsenal, New Jersey, on February 8, 2015.

As Director, Mr. Hedderich provides strategic leadership and managerial accountability to ARDEC's obligation of over \$1.3 billion, 64 laboratories, and a workforce of over 4,000 government and support personnel, including engineers and technical staff dedicated in delivering superior lethal and non-lethal armament solutions to the warfighter.

Prior to his current position, Mr. Hedderich was the Executive Director of the Munitions Engineering and Technology Center at ARDEC. He was responsible for providing guidance and direction to an engineering

and scientific community. He was also responsible for developing, directing and managing ARDEC investment strategies to ensure state-of-the-art facilities, people and equipment, as well as the center's extensive research, development and engineering efforts for fielding new ammo, munitions, and combat systems.

Mr. Hedderich previously served as the Director of the Armaments Engineering Technology Center from January 2007 to June 2008. He also served as Acting Director for ARDEC from November 2004 to August 2005.

Mr. Hedderich was Director for Enterprise Management from October 2003 to January 2007. In this capacity, he was responsible for ARDEC's technology base and manufacturing technology programs, strategic planning, and portfolio and knowledge management.

From June 2002 to October 2003, Mr. Hedderich served as Senior Technical Executive in the former ARDEC Close Combat Armaments Center, where he was responsible for developing and executing scientific and technology strategies for small, medium and large caliber weapons, ammunition, mines and countermine, non-lethal weapons and ammunition and special operations gear. He also served as Associate Technical Director (Systems Concepts and Technology) where he was responsible for the Armament Technology Base Program executed by ARDEC.

A career executive, he was appointed to the Senior Executive Service, the highest level of civilian government service, in November 1998.



JOETTA FISHER

Director, Supply Planning Directorate HQ, Joint Munitions Command (JMC)

Ms. Joetta Fisher is the Deputy for MLRC at Headquarters, Joint Munitions Command. She serves as the deputy to the Executive Director for Ammunition, with oversight in providing joint conventional munitions acquisition sustainment, readiness, and logistics direction for all U.S. military services and allies. She also serves as the Ammunition Management (CP-33) Career Program Representative for JMC.

From February 2014 to December 2015, she served as the Director of Supply

Planning, a directorate that consists of approximately 60 personnel responsible for developing a consolidated and integrated supply plan for all JMC products and services to include production, logistics, financial integration, and demilitarization missions. She coordinated the Command Organic Industrial Base Reviews and Sales and Operations Planning Initiatives and championed the Enterprise Integrated Logistics Strategy.

Ms. Fisher's previous assignments at JMC include: the Deputy Chief of Staff for MLRC; Chief, Readiness Assessment Division; and

team leader, Logistics Integration Planning and Execution Division. She also held various inventory and logistics management positions during her 29 years with the Joint Munitions Command.

She is a graduate of Truman State University, Kirksville, Missouri, with a bachelor's in business management. She completed the Ammunition Management Internship from the Defense Ammunition Center.



LTG DAVID D. HALVERSON, USA (RET.)

CEO Cypress International, Inc.

LTG David D. Halverson, USA (Ret.) became the Chief Executive Officer of Cypress International, Inc. in Alexandria, Virginia on 1 October. On 1 January 2018, he became the Chairman and Chief Executive Officer.

He grew up in Babbitt, Minnesota and graduated from the United States Military Academy with a Bachelor of Science Degree and was commissioned a second lieutenant in the Field Artillery. He attended the U.S. Naval Postgraduate School in Monterey, California, where he was awarded a Master of Science degree in Operations Research and Systems Analysis. He graduated from the Kenan-Flagler Business School's Executive Development Program at the University of North Carolina.

Dave's last active duty assignment was the U.S. Army Assistant Chief of Staff for Installation Management, where he transformed the business approach to the global installation management and

programmed the \$19B annual energy, general services, force protection, construction and quality of life programs for over 154 installations in the Total Army. He has served in various staff and leadership positions including command at every level from Battery to Post Command to the Commanding General of the U.S. Army Installation Management Command. He has served in Continental America, Europe, Korea, Panama, and South West Asia. His staff positions, focused on program development, testing, concept and requirement development, strategic planning, cost-benefit and risk analysis, with assignments as the Senior Military Analyst in the Joint Wargaming and Policy Division of the U.S. Southern Command in Panama, joint requirements and Army budget development in positions such as the Commander in Chief Team Chief in the Office of the Chief of Staff of the Army, Program, Analysis, and Evaluation Directorate. He was the Central Command J3, Chief of Plans, and planned, coordinated, and executed war plans for OPERATION ENDURING FREEDOM and OPERATION IRAQI FREEDOM after 9-11.

He deployed as the Deputy Commanding General (Support) for the 4th Infantry Division for OIF 5/7. After his deployment, he assumed duties on the Army Staff, as the Director of Operations, Readiness, and Mobilization, G-3 and then became the Director of Force Development, G-8, where he developed the RDT&E investment, modernization and equipping programs for the Army totaling \$200B across the POM. He transformed the training and modernization as the Commanding General of the U.S. Army Fires Center of Excellence and Fort Sill, Oklahoma, where the Air Defense and Field Artillery merged.

under one post. Dave served as the Deputy Commanding General, U.S. Army Training and Doctrine Command where the newest doctrine and concepts were developed, along with leader development, training and learning models programs were revamped.

His military education includes the Field Artillery Basic and Advanced Courses, the Armed Forces Staff College, the Army War College, and the British Higher Command and Staff College.



KEVIN KNOTTS

President and CEO
Azimuth Consulting Services

Kevin Knotts is the president and CEO of Azimuth Consulting Service

and is a certified Project Manager Professional.

Kevin has over 30 years' experience in logistics, industrial engineering, and acquisition. The first 21 years were in Army logistics operations and acquisition as an Ordnance Officer. Kevin's assignments were in both the Army's wholesale logistics and field service organizations. His wholesale logistics experience was at the Tank and Automotive Command where he was a contracting/project officer, and later the Executive Officer to the Commanding General. His field service positions included, Army G4 Staff as the Readiness

Branch Chief, Battalion Commander, and the 1st Armored Division DISCOM XO & S3. During Desert Storm, Kevin was the Executive/Operations Officer of the 66th Maintenance Battalion supporting the 10th Special Forces Group, Operations Support Command.

Kevin traded Army Green for Corporate Grey in 1998. He cut his teeth in consulting with PricewaterhouseCoopers, and IBM focusing on industrial base supply chain logistics and acquisition. Kevin then partnered with Dr. Jay Sculley (former Assistant Secretary of the Army for Acquisition Logistics and Technology) at Horne Engineering in 2004 and established a supply chain logistics group specializing in munitions. In 2005 Kevin moved his group to CSC and in 2013 Kevin

established Azimuth Consulting Services. He is currently its president and CEO and continues to lead his management consulting company that specializes in supply chain logistics to include: supply chain management, industrial base assessments, acquisition, financial management, public private partnerships, and business process re-engineering.

Kevin holds a Bachelors of Arts degree in Economics from the Virginia Military Institute and a Masters Degree in Business Administration with a concentration in finance and accounting from Babson College. His military schooling includes the Materiel Acquisition Management Project Mangers Course and Contract Management Courses required for an unlimited Procuring Contracting Officer's (PCO's) Warrant.

SPONSORS



WINCHESTER AMMUNITION-MILITARY

CONFERENCE RECEPTION SPONSOR

Considered one of the world's leading ammunition manufacturers, Winchester has built its reputation on delivering innovative ammunition products, providing top-shelf customer service and demonstrating industry leadership. Our legacy in servicing U.S. warfighters runs deep, with decades of support at the highest levels including delivering technologically advanced products for its U.S. warfighters. From our research and development efforts to our manufacturing processes, we understand the value of product quality and performance in critical moments.

With a reputation steeped in tradition, we have earned the moniker, 'The American Legend' by delivering on our commitment to excellence in everything we do.

Winchester's manufacturing operations include a state-of-the-art manufacturing facilities in Oxford, MS and East Alton, IL.

E-mail: winmilitary@olin.com
Phone: 662-281-7929
Winchestermilitary.com



GENERAL DYNAMICS

TUESDAY LUNCH SPONSOR

General Dynamics Ordnance and Tactical Systems empowers the U.S. military and its allies with an extensive range of overarching product segments applied across all levels of strategic and tactical operations. A business unit within the Combat Systems Group of General Dynamics, we are a world leader in the manufacture of large, medium and small caliber direct and indirect-fire munitions; and a leader in the development and production of lightweight tactical vehicles, weapons and armament systems. The company designs and produces shaped charge and penetrator warheads; and manufactures precision metal components for missiles, rockets and composite structures for the commercial, aerospace and defense markets. The company also produces propellants and non-lethal and force-protection products; and provides

explosive load, assemble and pack services for a variety of munitions, tactical missile and rocket programs. Our explosive array of capabilities and services include innovative engineering and design, advanced modeling, simulations, system integration and management, precision machining and forging, as well as testing and evaluation. Combining proven ammunition development and production capabilities with advanced research and development strengths in key technological areas, we continue to meet the needs of the armed forces of the United States, its friends and allies with the highest quality "best value" combat solutions. More information about General Dynamics Ordnance and Tactical Systems is available online at www.gd-ots.com.



REGISTER TODAY

61ST ANNUAL FUZE CONFERENCE

May 15 – 17, 2018

Marriott San Diego Mission Valley

San Diego, CA

NDIA.org/Fuze18

BAE SYSTEMS

BAE SYSTEMS OSI

OPENING RECEPTION SPONSOR

Headquartered in Radford, Virginia, BAE Systems Ordnance Systems Inc. (OSI) operates the Holston and Radford Army ammunition plants in support of U.S. Department of Defense (DoD) and commercial requirements. In addition to production, OSI provides a host of ammunition related services including modernization program management, inventory management, and energetics research and development.

Holston Army Ammunition Plant is the single source for U.S. DoD high explosives. Portfolio product mix includes RDXs, HMXs, IMXs, and PBXs. Radford Army Ammunition Plant is the single source for high-volume U.S. DoD Nitrocellulose / Propellants.

Portfolio product mix includes Nitrocellulose, single-base propellants, multi-base propellants and rocket propellants.

OSI is an innovation leader in next generation explosives and propellants development thru its robust IR&D program. OSI is an active supporter of U.S. DoD and commercial product development through a wide variety of CRAD programs. In addition, OSI has provided total Program Management for all modernization projects conducted at its two ammunition plants. This extensive program includes modernization planning, project management, design, construction, and prove-out of a wide variety of projects.



MUNITIONS INDUSTRIAL BASE TASK FORCE

AGENDA SPONSOR

The Munitions Industrial Base Task Force (MIBTF) is a consortium of defense companies formed to advocate for the continued health and viability of the Nation's munitions industrial base. Created twenty five years ago in response to an existential threat, we have worked constantly to enhance the knowledge and understanding of decision makers and organizations in government and industry. That knowledge and understanding are key to ensuring adequate funding and policy support for sustainment of a responsive, capable U.S. munitions industrial base able to develop, produce, and support

superior munitions for the U.S. and its allies. The Task Force is comprised of small, medium and large companies – and serves as the single unified voice on the status of the entire munitions industrial base, on concerns relevant to preservation of key capabilities for U.S. national security, and on recommended actions tailored to effect that preservation. The Task Force remains a strong, credible advocate for our industry in its interactions with the Department of Defense, the Congress, and other sectors of the total defense Industrial base.



PacSci EMC

AGENDA SPONSOR

Pacific Scientific Energetic Materials Company (PacSci EMC) is the leader in energetic component / system technology and lean manufacturing. Whether you require defense or commercial pyrotechnic solutions, we work as a partner to address your unique program or technical needs. Off-the-shelf, semi-custom or fully-customized, our team takes a proactive approach, leveraging our decades of engineering and chemical experience throughout the design process. At PacSci EMC, we produce energetic solutions that work as commanded, when commanded, while providing superior reliability and safe energetic performance.

Our production facilities in Chandler, Arizona and Hollister, California are comprised of more than 300,000 square feet, including engineering, manufacturing, and testing. We utilize the most comprehensive engineering design and analysis tools, including Solid Works 3D Modeling & Drawings, COSMOS

Module For Structural & Static Analysis, ProEngineer 3D and have 3D printing capability onsite. In addition, we also incorporate industry-leading analytical tools such as PEPCAL, CHETA, OSLO and SYNOPSIS - all critical for product design and optimal performance.

At PacSci EMC, our engineering and design expertise supports multiple product lines, encompassing ESAD/ESAF, CAD/PAD, Linear Explosives, Electronic & Laser Initiated Ordnance Systems (LIOS), Missile Attitude Control/Divert Thrusters, including cubesat and smallsat Modular Architecture Propulsion System (MAPS™). We also offer Vehicle Arresting systems and extreme environment oil exploration networked ordnance systems. PacSci EMC offers munition solutions for land, sea and air that aides in the support of the warfighter.

To find out more about our unique capabilities and products, please visit www.psemc.com

REGISTER TODAY!

INTERNATIONAL EXPLOSIVES SAFETY SYMPOSIUM & EXPOSITION

August 6 – 9, 2018

Sheraton San Diego Hotel & Marina
San Diego, CA

NDIA.org/Intl-Explosives-Safety

THANK YOU TO OUR SPONSORS



GENERAL DYNAMICS
Ordnance and Tactical Systems

BAE SYSTEMS



PACSCI EMC



NOTES

REGISTER TODAY!



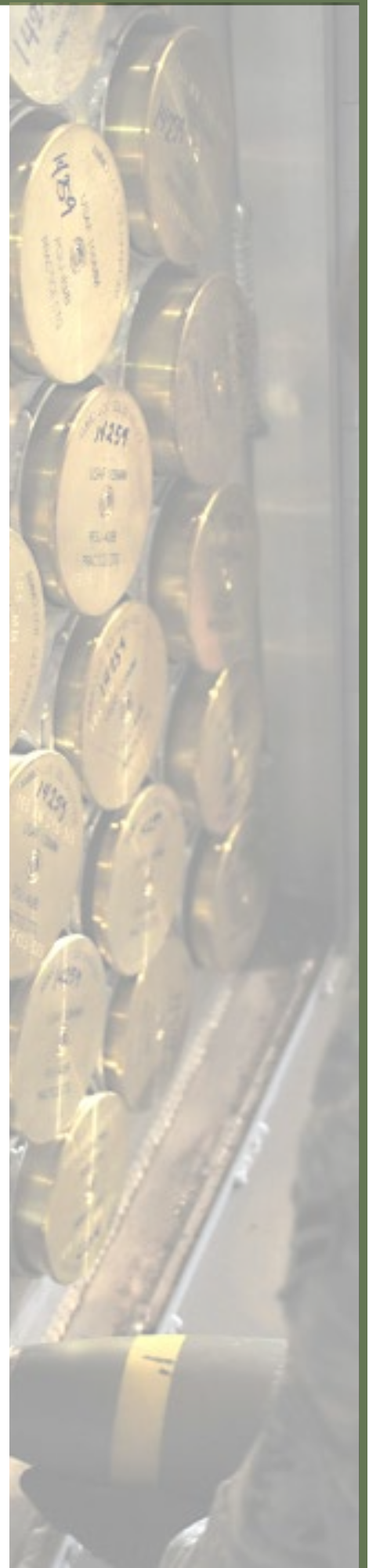
2018 ARMAMENT SYSTEMS FORUM

May 7 – 10, 2018

Sheraton Indianapolis Hotel at Keystone Crossing

Indianapolis, IN

NDIA.org/Armament-Forum





Project Director Joint Products 2018 Munitions Executive Summit

PM Panel Brief

18 April 2018

Colonel Brad Tannehill (USAF)
Project Director Joint Products
973-724-6487

michael.b.tannehill.mil@mail.mil



Project Director Joint Products Portfolio Snapshot

BOMBS



Navy and Air Force General Purpose Bombs



Navy and Air Force Practice Bombs



Prox Sensors, Fins and Lugs



Navy and Air Force Penetrator Bombs



Air Force Cast Ductile Iron Bombs

CAD/PAD

Cartridge Actuated Devices



Propellant Actuated Devices



NAVY GUN AMMO



Navy Gun Ammo



Deck Gun firing 5"/54 Cal Ammo



Multi Option Fuze Navy



5"/54 Cal Gun Ammo Projectiles and Propelling Charges



ENERGETICS



HMX RDX



PBXN-9



LX-14



IMX 101



LX-14



Main Priorities

- Support increased Military Service requirements for General Purpose and Penetrator Bombs
- Award new contracts for:
 - Tritonal-filled General Purpose and Penetrator Bombs
 - General Purpose Bomb Bodies
 - Cast Ductile Iron Bombs
- Complete First Article Testing and enter into production of:
 - BSU-33 Conical Bomb Fins
 - BDU-33 Small Practice Bombs
- Continue production of:
 - Tritonal filled MK84 2000 lb General Purpose Bombs
 - General Purpose Bombs (all variants)
 - BLU-109 2,000 lb Penetrator Bombs (dual source)
 - BDU-50 500 lb Cast Ductile Iron Bombs
 - BSU-33 Conical Bomb Fins
 - MK 76 Small Practice Bombs
 - DSU-33 Proximity Sensors
- Complete SMCA production of:
 - 5"/54 Cal Navy Gun Ammo Projectiles (all variants)
 - 5"/54 Cal Navy Gun Ammo Propelling Charges



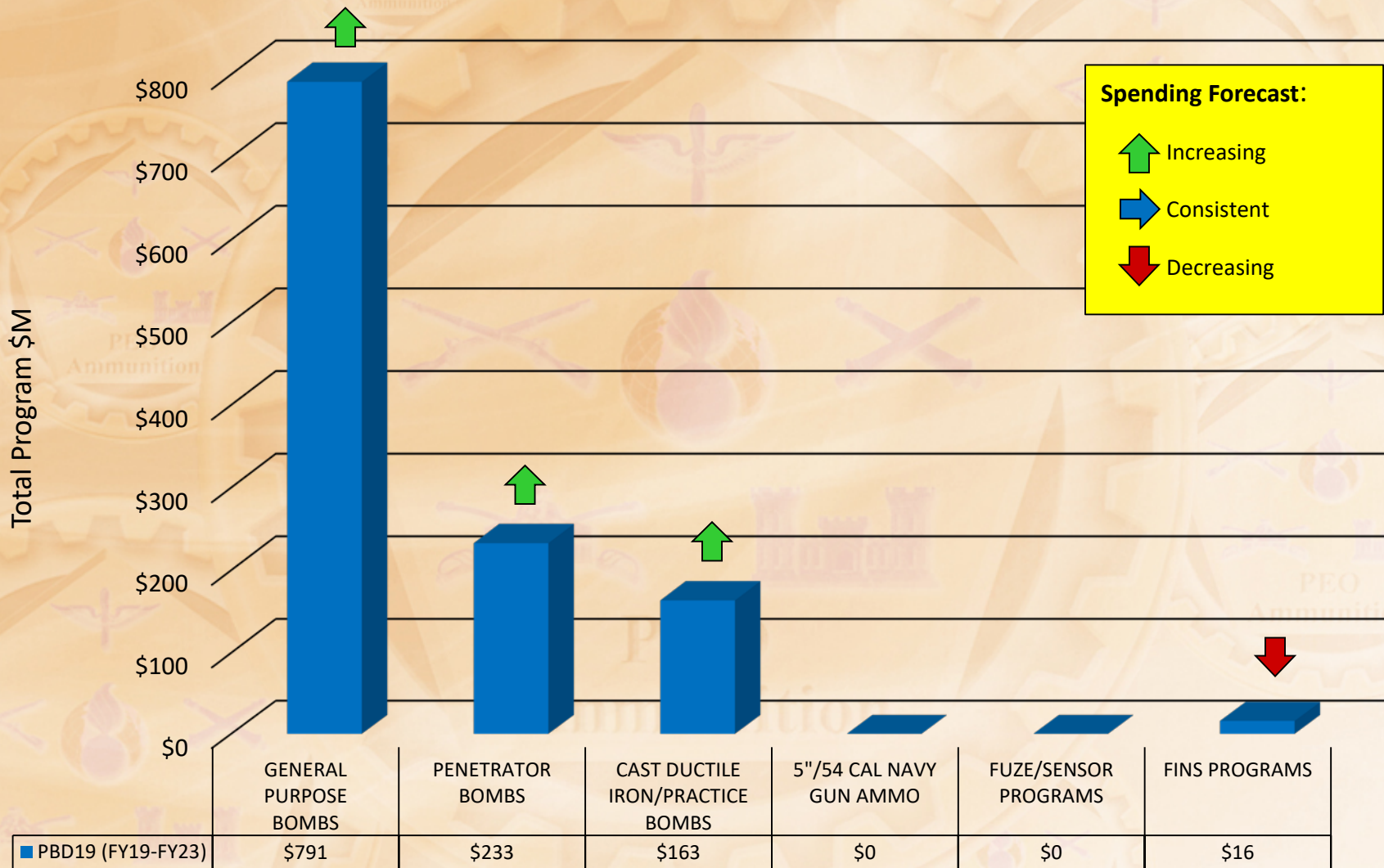


Industrial Base Challenges

- Increased demand for General Purpose and Penetrator Bombs has resulted in unprecedented demand for some components above existing industrial capacity and increased requirements are expected to continue
- Reduction in SMCA 5"/54 Cal Navy Gun Requirements will potentially be offset by planned Navy systems acquisition
- We still need flexibility in both contracts and production facilities to absorb fluctuations in customer funding and continue to ask for your support as appropriate



Funding Outlook



Represents Other Service Funding (Air Force and Navy)

4/10/2018

PBD19: Total Portfolio ~\$1.2B



Competitive Opportunities

Product	Projected RFP Release	Projected Award Date	Dollar Amount	Contract Strategy	Contract Type
MK12 & MK3 Pallets	3QFY18	4QFY18	\$3.7M	SBSA	5 Year FFP
Nose Plugs/Support Cups	3QFY18	2QFY19	\$1.2M	SBSA	2 Year FFP
MK45 Primers	3QFY18	2QFY19	\$5.8M	Competitive	2 Year FFP
Cast Ductile Iron Bombs	4QFY18	1QFY20	\$485M	Competitive	5 Year FFP
MK72/73/74 Bomb Cables	2QFY19	1QFY20	\$2.1M	SBSA	5 Year FFP
BLU-109 Penetrator Bombs	3QFY19	2QFY20	\$1.4B	Competitive	5 Year FFP
Small Practice Bombs	3QFY19	3QFY20	\$91M	SBSA	5 Year FFP



Closing Message to Industry

- Thank you for your sustained commitment and support to the Ammunition Enterprise and the Joint Warfighter
- Overall, General Purpose and Penetrator Insensitive Munition bomb quantities are increasing, thereby necessitating the increase in demand for Tritonal-filled bombs to address surging requirements
- Energetics consumers - please plan early and make no assumptions
- Request your assistance in raising the quality of proposals submitted in response to Government solicitations
- Special thanks to GD-OTS, for their assistance in addressing the spike in General Purpose Bomb requirements



**SCIENCE & TECHNOLOGY ENABLING
ARMAMENTS ACQUISITION
MODERNIZATION**

Joe Pelino
ARDEC Director of Technology
18 April 2018

**UNPARALLELED
COMMITMENT
& SOLUTIONS**

Act like someone's life depends on what we do.



**U.S. ARMY ARMAMENT
RESEARCH, DEVELOPMENT
& ENGINEERING CENTER**



Long Range
Precision
Fires



Next Gen
Combat
Vehicle



Future
Vertical Lift



Network



Air & Missile
Defense



Soldier
Lethality



- **DoD Priorities on Modernization**
 - Build a more lethal force
 - Lead innovation & leverage technology effectively
 - Organize & innovate to win
- **Army Modernization focus: make Soldiers and units more lethal to win our Nation's wars, then come home safely**
- **RDECOM-ARDEC, as the Army's RD&E lead for armaments directly supports the Modernization Focus**

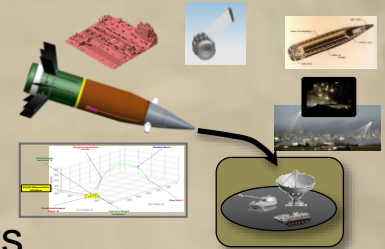


Long Range
Precision
Fires



• OBJECTIVES

- Extend range of surface fires
- Engage imprecisely located, moving targets in a GPS denied, EW environments

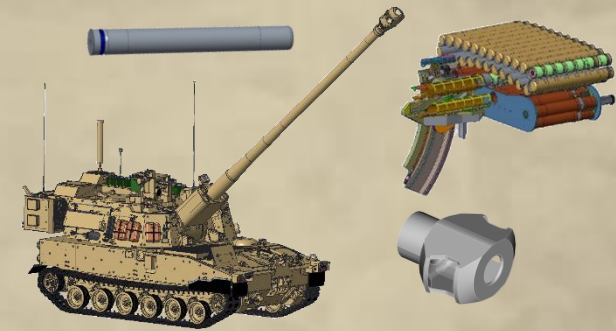


Next Gen
Combat
Vehicle



• NEAR-TERM (2018-2023)

- Advanced lightweight cannon
- Supercharge propellant
- High rate of fire autoloader
- Unitary and Cargo projectiles
- Counter adversary IADS



Future
Vertical Lift



Network



• FAR-TERM (2024+)

- Range extension
- Novel AM propellants
- Collaborative engagement / re-targeting amongst multiple projectiles in-flight



Air & Missile
Defense



Soldier
Lethali



Modernize a cannon for extended range, volume and increased missile capabilities to restore Army dominance in range.



Long Range
Precision
Fires



• OBJECTIVES

- Efficiently engage NGCV target sets at extended ranges for both manned and robotic platforms
- Engage targets in a dense urban environment
- Optimize armament systems for automation
- Reduce cognitive load on the operator



Next Gen
Combat
Vehicle



• NEAR-TERM (2018-2023)

- Advanced medium caliber armament system capable of target defeat
- Precision “fire and forget” tank munition to engage threats at extended range
- Semi automated engagement of targets
- Lightweight 120mm Cannon with Autoloader



Future
Vertical Lift



• FAR-TERM (2024+)

- High elevation reduced recoil armament systems for increased effectiveness against multi-domain targets and in dense urban
- Tank-fired ammunition that can achieve hyper-velocity at extended range
- Velocity and Course correction technology for Ammunition that improves accuracy and lethality at extended range



Network



Extended Line of Sight
120mm Tank Munition

Air & Missile
Defense



Reduced Recoil
High Elevation
Armament System

Soldier



Develop prototypes that lead to the replacement of our current fleet of infantry fighting vehicles and later tanks in manned, unmanned & optionally-manned variants

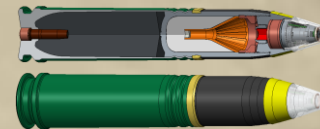


Long Range
Precision
Fires



• OBJECTIVES

- Aviation lethality with air launched effects
- Holistic situational awareness & decision making
- Full spectrum targeting



Advanced airburst multi-purpose ammunition

Next Gen
Combat
Vehicle



• NEAR-TERM (2018-2023)

- Legacy medium caliber armament system integration
- Advanced fire control leveraged from ground armament system
- Open system armament architecture
- Air burst for legacy & future weapons



Future
Vertical Lift



*Medium Cal (20MM)
Development*



*Advanced Fire
Control*

Network



*Small Cal
Remote
Development*



*Counter-Measure
Concepts*

Air & Missile
Defense



• FAR-TERM (2024+)

- Advanced countermeasure/decoy dispense module
- Small caliber remote weapons station firing multiple munitions



Soldier
Lethality



Incorporate manned, unmanned and optionally-manned variant vertical lift platforms that provide superior speed, range, endurance, altitude and payload capabilities.



Long Range
Precision
Fires



• OBJECTIVES

- Provide advisement that enables Armament & Lethality capabilities across other modernization priorities
- Serve as conduit between CFT and Other Transaction Authority (OTA) vehicles provided by ARDEC/ACC-NJ (i.e. C5, DOTC, DIUx)



Network Enablers for In Flight Retargeting

Next Gen
Combat
Vehicle



• NEAR-TERM (2018-2023)

- Swarming Munitions – Round to Round Communications
- Munition In-Flight Communications – Command and Control (C2) to include Retargeting
- Manned-Unmanned Teaming (MUM-T) – Unmanned Weapon System C2 and Positive ID



DARPA Hedgehog Wideband Radio – Smart Munition Employment

Future
Vertical Lift



Network



• FAR-TERM (2024+)

- Leverage Artificial Intelligence, Machine Learning, and Big Data Lethality Enablers
- Leverage Low Earth Orbiting Satellite Network Enablers
- Leverage Non Traditional Waveforms for Machine-to-Machine Communications (LIFI, mmWave, etc.)



Unmanned Weapon System Enablers

Air & Missile
Defense



Soldier
Lethality



Develop expeditionary infrastructure solutions to fight reliably on the move in any environment



U.S. ARMY
RDECOM

OBJECTIVES & OPPORTUNITIES

ASSURED POSITION, NAVIGATION AND TIMING



Long Range
Precision
Fires



Next Gen
Combat
Vehicle



Future
Vertical Lift



Network



Air & Missile
Defense



Soldier
Lethality



• OBJECTIVES

- Mid-course guidance in GPS denied environments to enable range extension out beyond 70km
- Terminal Guidance to enable engagement of imprecisely located targets at extended ranges

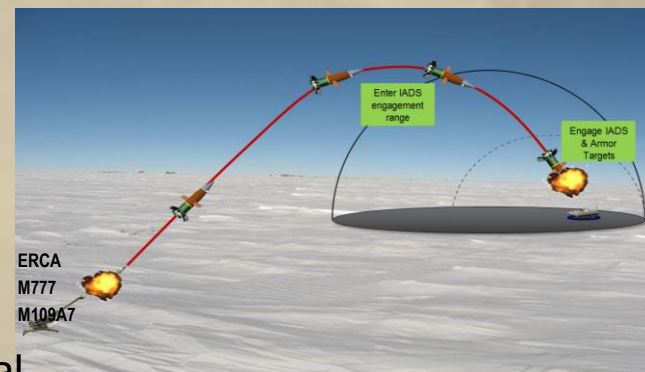
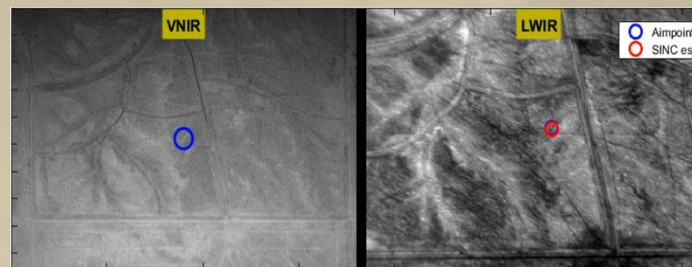
• NEAR-TERM (2018-2023)

- Implementing Image Navigation w/ TRL-6 demo in FY18
- Tactical grade Inertial
- Multi-mode terminal seekers both Passive & Active
- Converged RF solutions

• FAR-TERM (2024+)

- Gun hardened nav grade inertial through gun launch

Image Based Terminal Guidance



Develop expeditionary infrastructure solutions to fight reliably on the move in any environment



Long Range
Precision
Fires



• OBJECTIVES

- Provide Maneuver Short Range Air Defense (M-SHORAD) maneuver elements & base camp security



Next Gen
Combat
Vehicle



• NEAR-TERM (2018-2023)

- Systems of System approach for defeat of Group 1 & 2 Unmanned Aerial Systems (UASs)
 - Effective low collateral, low cost warheads/ effectors
 - Precision Targeting capability
 - Low SWAP-C remote weapon system
 - Programmable airburst munitions



Future
Vertical Lift

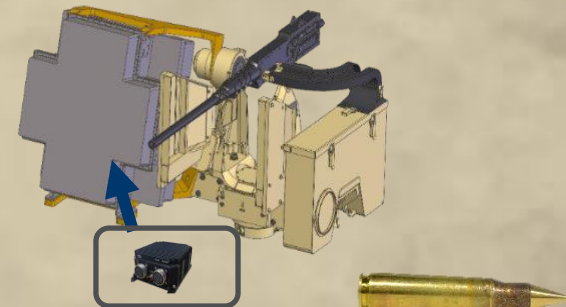


Network



• FAR-TERM (2024+)

- Defeat of Group 2/3 UASs using directed energy & guided munitions
- Squad level defeat of Group 1 UASs
- Cannon delivered defeat of aerial targets



Air & Missile
Defense



Soldier
Lethality



Ensure our future combat formations are protected from modern and advanced air and missile delivered fires, including drones



U.S. ARMY
RDECOM

OBJECTIVES & OPPORTUNITIES



Long Range
Precision
Fires



• OBJECTIVES

- Fight, win & survive in a multi-domain environment now & tomorrow
- Treat the Soldier/Squad same as a combat platform
- Initially focus on the Close Combat soldiers



Next Gen
Combat
Vehicle



• NEAR-TERM (2018-2023)

- Next Generation Squad Weapons (AR and Carbine)
- Small Arms Fire Control
- Next Generation Family of Ammo



Future
Vertical Lift



• FAR-TERM (2024+)

- Advanced Ballistics Technology
- Propulsion & Terminal Mechanisms
- Counter Defilade Technology
- Signature Reduction

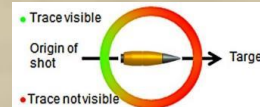
Next Gen. Common Cartridge (NGSWT)



General Purpose & Special Purpose



Reduced Range Training Ammo (RRTA)



One Way Luminescence (OWL)

Network



Develop the next generation of individual and squad weapons; improve body armor... and develop a synthetic training environment...

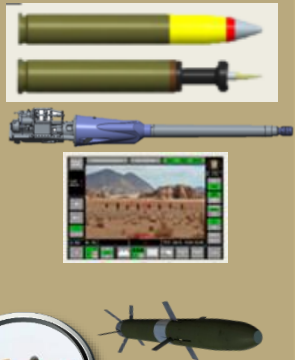
Air & Missile
Defense



Soldier
Lethality



**NEXT GENERATION
COMBAT VEHICLE**



**FUTURE VERTICAL
LIFT**



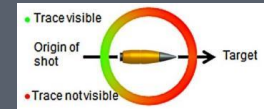
NETWORK



**AIR AND MISSILE
DEFENSE**



**SOLDIER
LETHALITY**



TOP MUNITIONS NEEDS

- Extended Range Projectile Technologies
- Advanced Small Caliber Ammunition
- Air Burst for Medium Caliber Weapon Systems
- Additive Manufacturing for Energetics
- Power Sources for Indirect Fire Precision Munitions
- CUAS Munitions Fired From Fielded Systems
- Novel Warhead Materials

**LONG RANGE
PRECISION FIRES**



“ENABLING”





Long Range
Precision
Fires



Next Gen
Combat
Vehicle



Future
Vertical Lift



Network



Air & Missile
Defense



Soldier
Lethality



- **Army Modernization**
 - Near-term capability
 - Developing prototype “systems” vs. component level
 - Incremental capability vs. disruptive
- **Armaments portfolio is well positioned to support Modernization & transition to PORs**
- **Innovation exists across the Government labs, industry partners, academia & international partners**
 - **Must be exploited to maintain/regain overmatch**



Project Director Joint Services (PD JS) 2018 Munitions Executive Summit

PM Panel Brief

18 APR 2018

Joseph H. Chan
Project Director Joint Services
PEO Ammunition
Picatinny Arsenal, NJ
973-724-5157
joseph.h.chan.mil@mail.mil



What We Do for the Ammunition Enterprise



- Coordinate and Integrate the DoD's **Single Manager for Conventional Ammunition (SMCA)** responsibilities
- SMCA & Industrial Base Policy

- Manufacturing Technology
- Ammo Logistics R&D

- Demilitarization**
- Execute All DoD Conventional Ammunition
 - R&D of New Capabilities
 - Resource, Recovery & Recycle Program
 - Ammunition Peculiar Equip



- Interface with the Services**
- SMCA Service Issue Resolution
 - SMCA Customer Survey
 - Joint Ordnance Commander's Group (JOCG) EXCOM Chair



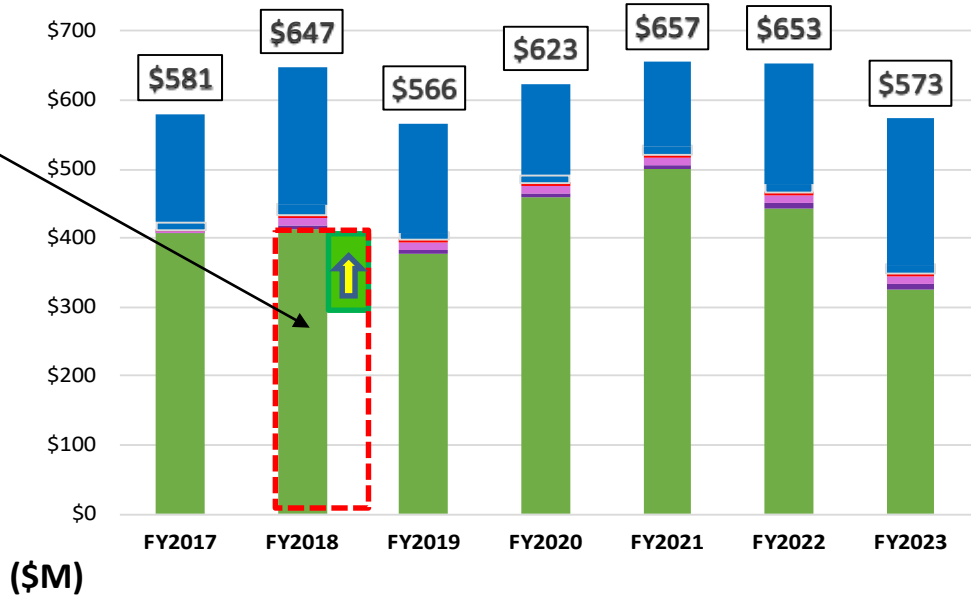
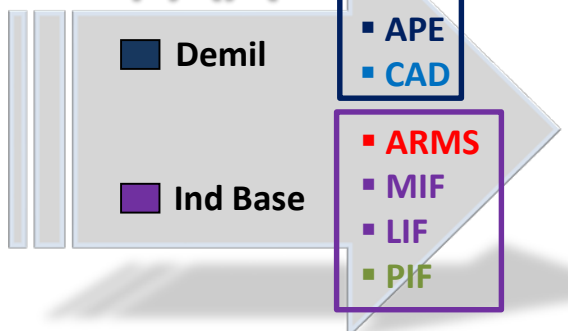
- Manage Industrial Base**
- Update / Execute Strategic Plan
 - Supply Chain Management
 - Implement Section 806, PL 105-261
 - Single Point Failure Program
 - Industrial Committee of Ammo Producers
 - Army Ammo Plant Production Base Support
 - Acquisition, Sustainment, & Modernization Strategies
 - Layaway & Maintenance of Inactive Facilities
 - Armament Retooling & Manufacturing Support
 - GOCO Facility Competitions

PD JS Budget Outlook (FY18-FY23)

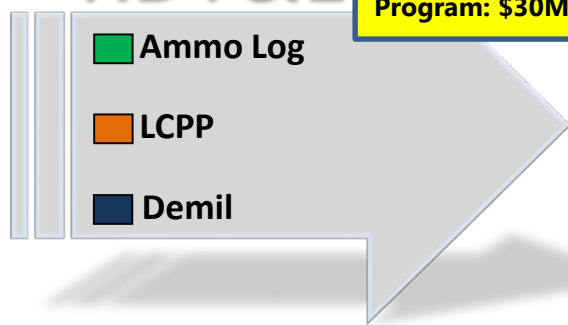


Ind Base Modernization
 • FY18 Add: \$100M
 Total Mod Program: \$429M

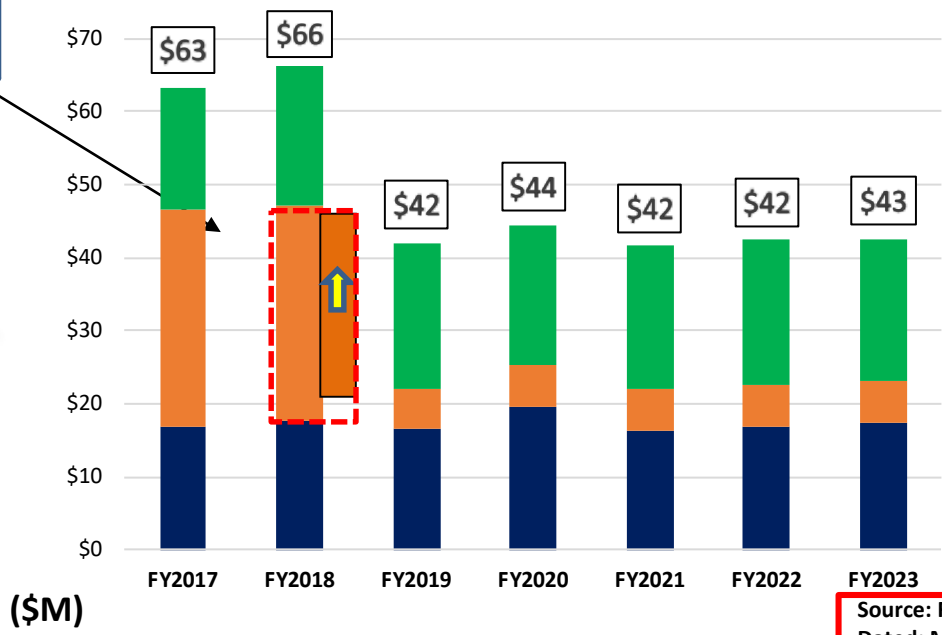
PAA



RDT&E



• FY18 Add: \$24M
 Total LCPP Program: \$30M



- PAA- Procurement of Ammunition Army
- RDT&E- Research Development Test & Engineering
- PIF - Provision of Inactive Facilities
- MIF - Maintenance of Inactive Facilities
- LIF - Layaway of Industrial Facilities
- ARMS - Armament Retooling and Manufacturing Support
- CAD - Conventional Ammunition Demil
- APE - Ammunition Peculiar Equipment
- LCPP - Life Cycle Pilot Process, RDTE 6.6
- Ammo Log - Ammunition Logistics

Source: FY18 Appropriations
 Dated: March 2018



Main Priorities & Challenges



1. Modernizing Without Disrupting Production

- PB19 adds \$1.25B over FY19-23 for Production Base Support (PBS).
- Additional tools needed to execute, i.e. Corps of Engineers and /or direct to an Architecture / Engineering Firm
- Articulation of full PBS requirements to HQDA

2. Execute HSAAP Explosives Capacity Increase

- RDX increase by FY23 / IMX increase by FY22
- Understand implications of new National Defense Strategy on explosive capacity requirements
- ANSOL remediation technical solution

3. Conclude SCAAP Facility Competition

4. Complete RFAAP Nitrocellulose Facility

5. Reducing Operations and Maintenance Costs of AAPs

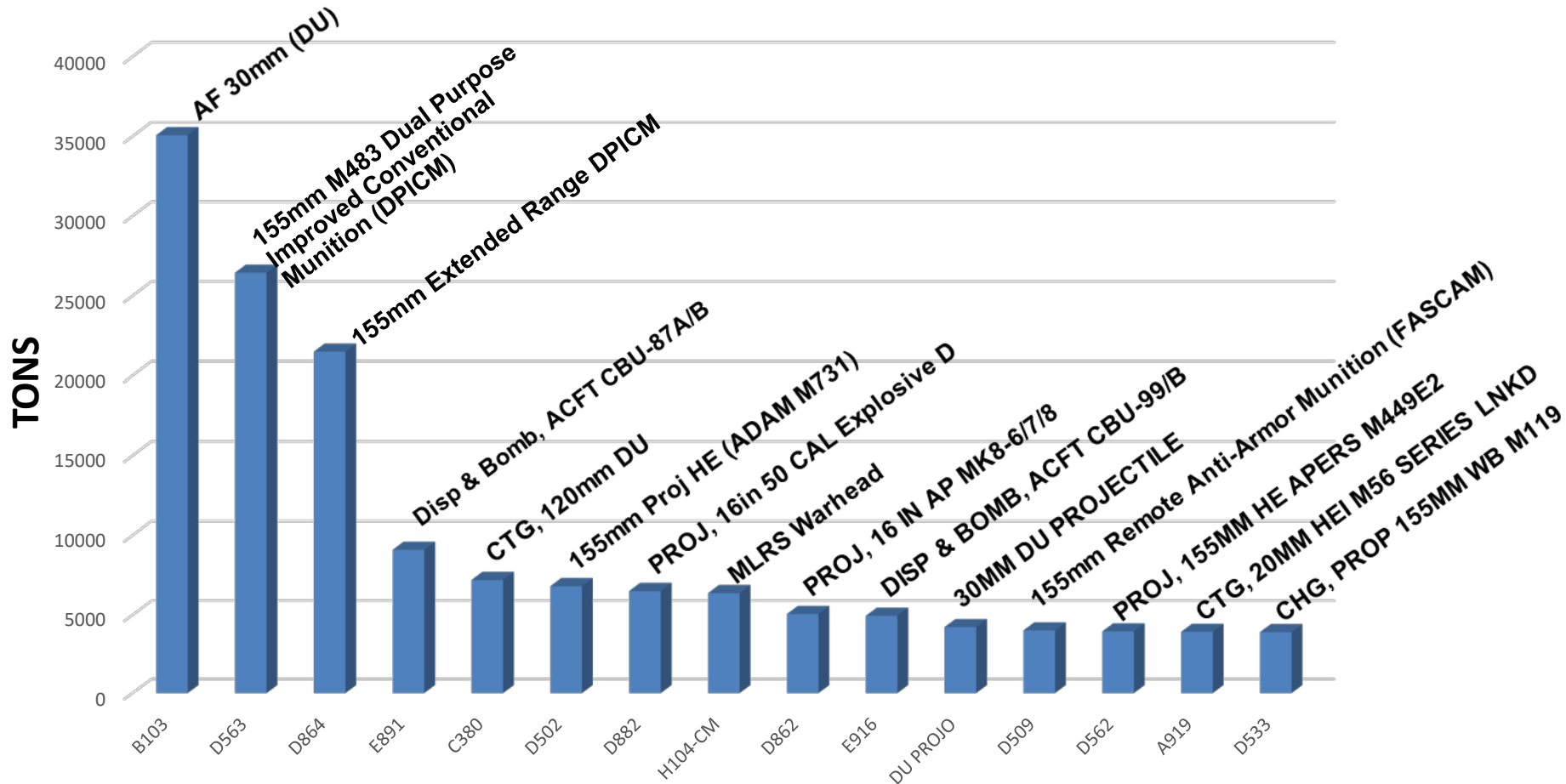
- Must incorporate new requirements affordably
- Look for opportunities to reduce or better incentivize execution of existing requirements

6. Demilitarization

- Restriction on demil of selected serviceable munitions drives uneconomical execution
- Lack of stable funding limits flexibility in work-loading depots



Major Demil Stockpile Items



*Data as of Feb 2018

New Navy Projectiles IDIQ Contract:

Miscellaneous Rounds CLINs being Evaluated
16" Rounds CLIN Proposals Due 15 May 2018

***Stockpile: 387,162 tons ammo; 27,152 tons missile**



Questions?

Industrial Committee of Ammunition Producers

ICAP

ICAP Sector	Sector Representative
Chairman	BG (R) John J. McGuiness Email: john.mcguiness@aollc.biz Phone: 319.753.7927
Secretary	Lorie Streeter Email: lorie.streeter@aollc.biz Phone: 319.753.7369
Demilitarization	Jeff Brunozzi, General Dynamics – OTS Email: Jeffrey.brunozzi@gd-ots.com Phone: 727.578.8121
GOCOs	Bill Barnett, BAE Systems Email: William.m.barnett@baesystems.com Phone: 540.639.8400
Large Caliber/Bombs	Don Halferty, American Ordnance LLC Email: Donald.Halferty@aollc.biz Phone: 319.753.7038
Propellants & Explosives	David Siggers, Spectra Technologies, LLC Email: david.siggers@spectra-tech.net Phone: 870.574.2555
Pyrotechnics	Kevin McDonald, Chemring Ordnance Email: kmcdonald@chemringordnance.com Phone: 850.223.5225
Small/Medium Caliber	Jim Kalberer, Orbital ATK Email: james.kalberer@orbitalatk.com Phone: 763.744.5406
Systems, Sensors, Electronics & Fuzes	Todd Anderson, AMTEC Corporation Email: tanderson@amteccorp.net Phone: 608.752.2699
Warheads & Rockets	Dan McKenrick, Day & Zimmermann Email: dan.mckenrick@dayzim.com Phone: 903.255.2802

INDUSTRIAL COMMITTEE OF AMMUNITION PRODUCERS (ICAP)

Agenda – 108th Meeting – 16 April 2018

1300-1600 hrs (EST)

Parsippany, NJ

Location:

Hilton Parsippany
 1 Hilton Court
 Parsippany, NJ 07054
 NDIA POC: Ms. Carol Dwyer (703) 247-2582

Meeting Room:

Elements Ballroom

Dress:

Civilian – Business
 Military – Duty Uniform

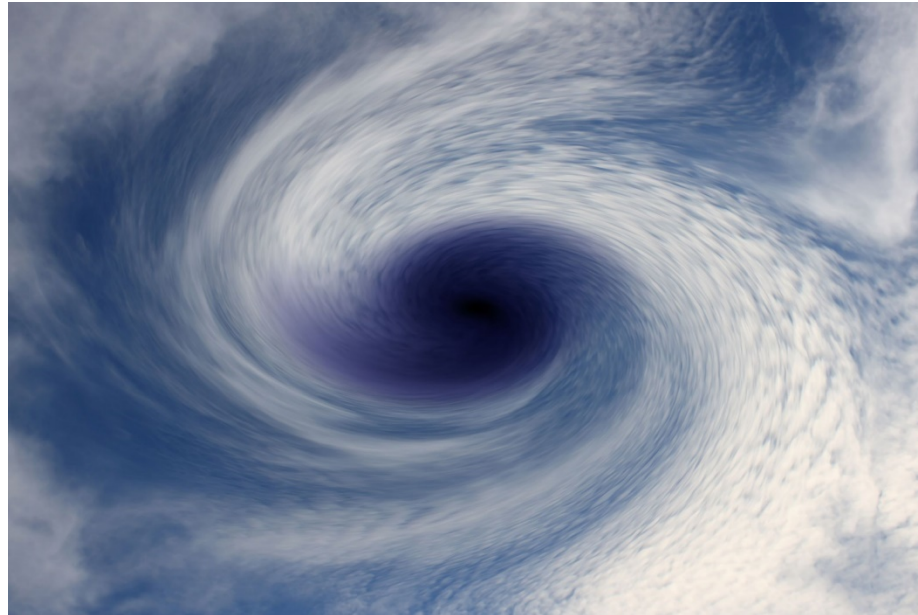
v6

Time	Topic	Responsible Party
1230	Registration	
1300	Introductions & Opening Remarks	ICAP Chair PEO Ammo JMC
1310	Action Item Review	All
1315	Holston RDX Expansion Status	PD Joint Services/BAE Systems
1335	Explosives Prioritization and Scheduling	PD JS/PD JP/BAE
1355	Local Clause Elimination	PM CCS
1415	Cyber Security Briefing	Mr. Thomas JMC
1435	Case Study in GOCO Performance Work Statement (PWS) Management	PD JS
1445	Break	
1455	Industry Sector Reports • Accomplishments, Issues, Concerns	ICAP
1550	Round Table Discussion & Wrap Up	All
1600	Adjourn	

Industry- Government Panel Munitions Executive Summit



“The Eye of the Storm” Addressing the Dramatic Increase in Explosive Requirements



Panel Members

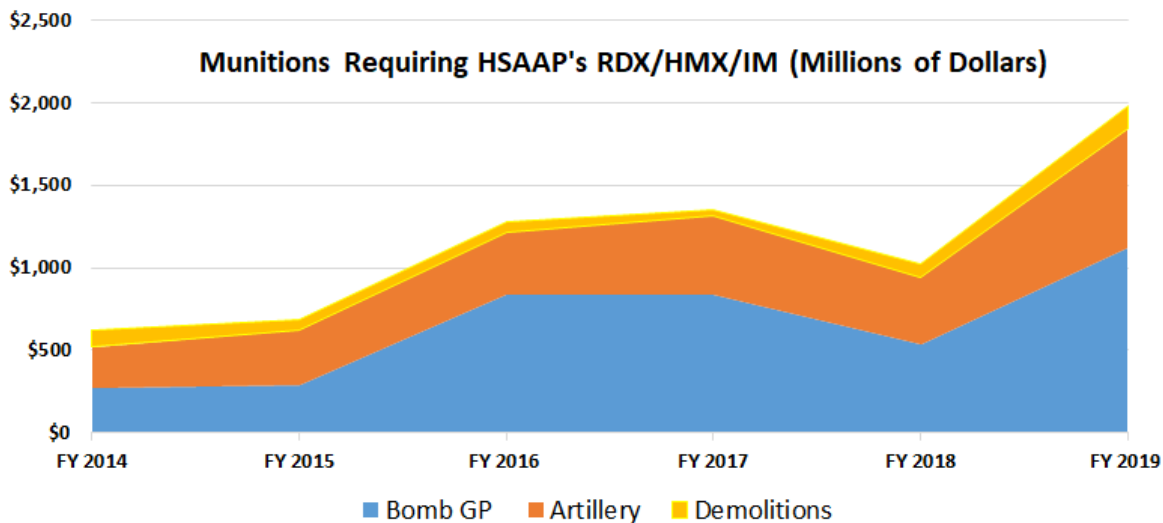
- Moderator:
 - Kevin Knotts – President, Azimuth Consulting Services
- Panel Members
 - Kevin McDonald – President, Chemring Ordnance
 - David Dunavin – General Manager, GD-Garland
 - Col. Joseph Chan – Project Director, Joint Services, PEO Ammunition
 - Col. Brad Tannehill – Project Director, Joint Products, PEO Ammunition
 - Mike Ervin – Director, R&D and Sales & Marketing BAE Systems Ordnance Systems

Agenda

The Eye of the Storm

- Intro and Background – Kevin Knotts
- Industry’s Perspective– Kevin McDonald
- Collaboration – the TNT Vignette – David Dunavin
- Addressing the Problem
 - Modernization of Holston AAP – Col Chan
 - Interim solution – Col Tannehill
 - BAE’s Commitment - Mike Ervin
- Questions

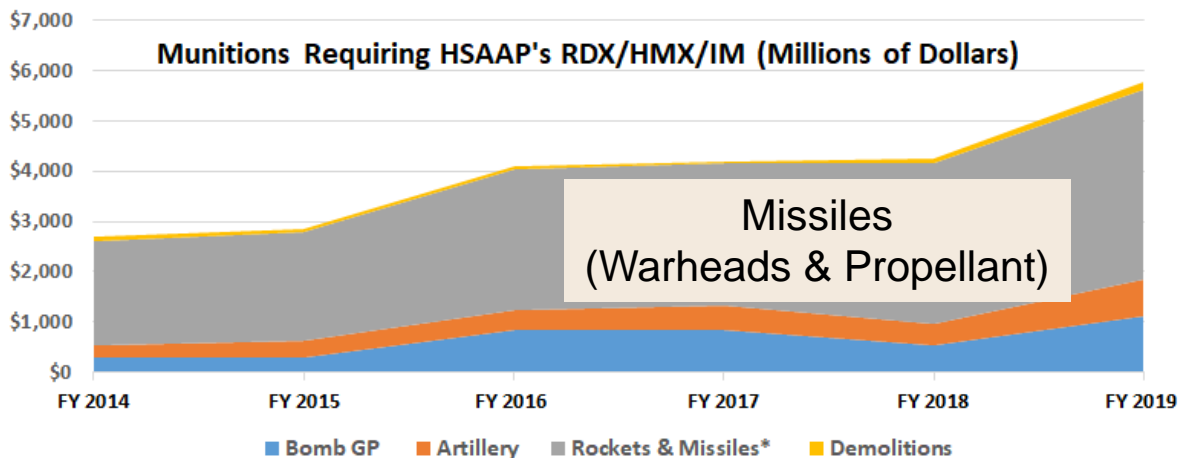
Our Storm - Background



HSAAP Requirements

- Bomb
- Artillery
- Rockets/Missiles
- Mortar
- Warhead
- Demo Products
- Fuzes

Four fold increase in requirements



Source: MIBTF Pres. Budget 2019

“The Eye of the Storm”

Addressing the Dramatic Increase in RDX Explosive Requirements

Munitions Executive Summit - Panel Discussion

April 17, 2018

Kevin McDonald
President

Industry Perspective

- Our Issues: Lack of Explosive Supply has resulted in:
 - RFP compliance challenges from HSAAP –
 - HSAAP has been able to provide pricing
 - HSAAP has been unable to commit to a schedule during the bidding process
 - Production Planning/Scheduling – challenges
 - Upon award HSAAP committed to schedule for DPAS rated programs
- Commercial (DMS) Explosives Significance-
 - Commercial contracts (Direct Military Sales) HSAAP estimates 18-24 months delivery at the earliest, probably later with non DPAS rated programs
 - Commercial work offsets overheads for lower prices on DoD work
- Work Arounds / Mitigations
 - Commercial work includes having customer accept alternate explosives (TNT or like) or using international suppliers for RDX explosives
 - Continue to allow responses to RFP's to allow the following: "due to high demand of xyz explosive at HSAAP we can meet the customer schedule provided HSAAP can deliver on product by abc date"
 - Communication by DOD customers for their demand for explosives is communicated with HSAAP to allow delivery to the RFP winner.

Industry Perspective – Recommendations

- Communication concerning demand and delivery with all parties is critical
 - Industry with HSAAP
 - DoD with HSAAP
 - DoD with Industry
- DoD provides information to HSAAP concerning their requirements and deliveries to ensure there are placeholders for their specific explosive material
- DoD willingness to accept alternatives for existing RDX requirements (i.e. TNT, Tritonal, etc)

Collaboration – The TNT Vignette

Munitions Executive Summit - Panel Discussion
April 17, 2018

David Dunavin
General Manager Garland Operations
GD-OTS

GENERAL DYNAMICS
Ordnance and Tactical Systems

TNT Requirements Surge Background

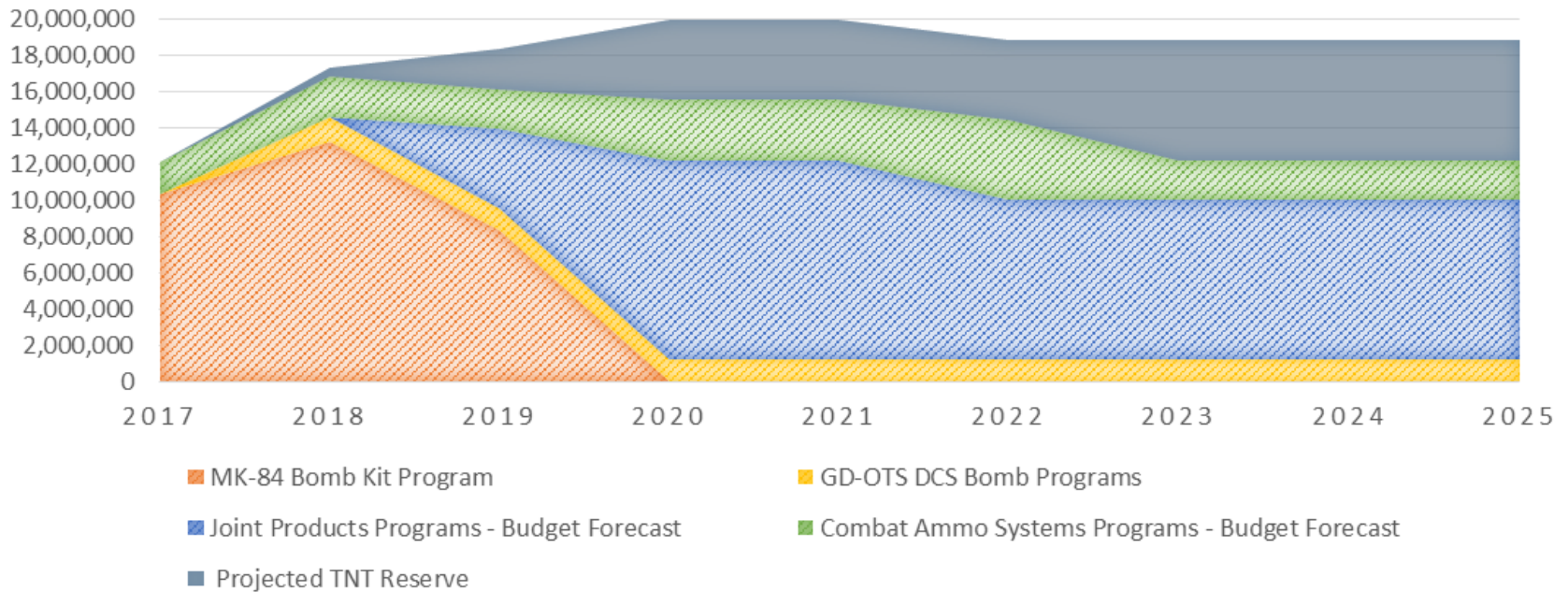
- Nitro Chem in Bydgoszcz, Poland is currently the only qualified TNT source for U.S. Bomb Programs
- As one of the world's largest producers with maximum annual production up to 22,000,000 pounds of military grade TNT per year, Nitro Chem is facilitated to support sustainment of large, long-term production programs
- In 2016, the USG released a requirement for 40,000 MK-84 Tritonal Bombs requiring 31,800,000 lbs. of TNT from Poland for all 2017 – 2019 contracted deliveries
- A multi-year agreement was established in 2016 to support the MK-84 Bomb Kit Program with TNT deliveries from Poland directly to load, assemble, pack facility for production
- The GD-OTS U.S. TNT Distribution Agreement contains minimum and maximum TNT production capacity options for 2019 – 2022 to support the USG Tritonal Bomb Program Sources Sought, to which GD-OTS responded in 2016. Additional options have since been added to the Agreement to support other Programs

Collaboration to Manage Risk

- Collaboration with Joint Products allowed a structure to be put in place to protect McAlester Army Ammunition Plant (McAAP) bomb production
- What once created risk to the General Purpose Bomb programs now impacts all USG ordnance programs
- Utilization of TNT for approved ordnance products preserves the Holston capacity for other applications
- Supporting the Joint Products investigation into the utilization of reclaimed RDX from demilled ordnance from our GD-OTS Joplin, MO facility to support commercial needs further preserving Holston capacity
- Distribution of TNT can be further optimized through prioritization of USG Programs, collaboration of industry partners to collectively support production schedules, and proper Program allocations

Future TNT Requirements

FORECASTED USG TNT REQUIREMENTS



NOTES:

- 1) GD-OTS TNT agreement min / max annual requirement was intended to secure the USG's urgent need TNT requirements for MK-84 and future TNT Bomb Programs, the current agreement allows for long-term USG capacity based on maximum annual production
- 2) Distribution of TNT can be further optimized through prioritization of USG Programs, collaboration of industry partners to collectively support production schedules, and proper Program allocation

Program Prioritization, Energetic Allocation, and Stakeholder Collaboration
is the Path to Success

Modernization of Holston AAP – Col Chan

The Army's Modernization Program at HSAAP

NDIA

National Defense Industrial Association



Project Director Joint Products 2018 Munitions Executive Summit

Explosives Panel Brief

Prioritization of HSAAP's Workload

17 April 2018

Colonel Brad Tannehill (USAF)
Project Director Joint Products
973-724-6487

michael.b.tannehill.mil@mail.mil

Prioritization of HSAAP Workload



- Industry has identified extended lead times for obtaining explosive material from HSAAP
- The current prioritization paradigm for HSAAP explosive orders of negotiating schedules, prioritizing deliveries, and awarding delivery orders on a first-come, first-served basis works
- Conflicts may arise during schedule negotiations or after delivery order award when customers determine that explosive delivery schedules do not meet program requirements
- Concerns have surfaced related to industry proposals that rely on explosives availability. Recommend identifying any concerns related to explosives deliveries that arise during proposal development / submission to the Procuring Contracting Officer.



Prioritization of HSAAP Workload



To manage potential conflicts and address industry's concerns, an IPT was established and has:

- Finalized a communication process by which prioritization conflicts will be identified to and managed through a single POC
- Generated a prioritization hierarchy by which potential conflicts will be adjudicated
 - DPAS rated orders, operational and industrial base impacts, service priority considerations
 - Attempts will be made to first manage conflicts within service specific trade-space
 - The process will not result in prioritization of a strictly commercial requirement over any requirement intended to support a DOD, FMS, or DCS program
- Developed a strategic communications (STRATCOM) message to the broad stakeholder base requesting they:
 - Plan for contract award of explosive requirements as early as practical
 - Prepare for extended explosive lead times
 - Manage delivery schedule concerns/conflicts through established US Government Program Management Office chains of command to the single POC

The Perfect Storm –

US Army Response at Holston AAP is Commendable

- As Operating Contractor of the Holston (HSAAP) and Radford (RFAAP) Plants, Ordnance Systems (OSI) appreciates our relationship with the Army
 - HSAAP - JMC - AMC - PEO Ammo - ACC - OSI (“It takes a Team!”)
 - Investing in Holston AAP and Radford AAP as valued national assets
 - Supporting today’s mission for energetic materials
 - Ensuring readiness for needs of future generations
- Elements of the overall HSAAP modernization
 - **Expansion of capacity (RDX, HMX, IMX, etc)**
 - New technology / capabilities
 - Environmental compliance
 - Safety
 - Replacement of aging infrastructure
 - Quality of workplace environment

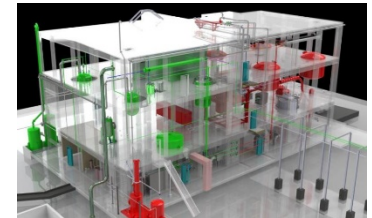
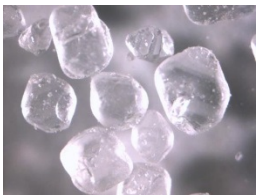


BAE SYSTEMS

The Perfect Storm –

Key Challenges During Program Execution

- Execution of Comprehensive Modernization / Capacity Expansion Program at HSAAP while
 - Running the plant at or near full capacity for most explosive products
 - Balancing deliveries of explosive products across the entire industrial and Customer base
 - Performing critical preventive and routine maintenance on operational infrastructure
 - Maintaining compliance with ever tightening environmental regulations
 - Ensuring safety and security of staff and facility
 - Advancing the development and scale-up of “next generation” explosive products
 - **Modernization is the long-term solution to mitigate explosive capacity constraints**



BAE SYSTEMS

The Perfect Storm –

Path Forward for Addressing Capacity Challenges

Short-Term (ongoing):

- IPT and Lean Manufacturing teams working to maximize efficiency in existing operations (i.e. “getting the most out of what we have”)
- Curtailed explosive production for true commercial markets (ex. oil /gas)
- Restructured maintenance shutdowns to maximize efficiency / reduce downtime
- Extensive Customer engagement, planning, coordination
 - Reduced size of production runs, JIT deliveries
- Scheduling & Prioritizing Production
 - DPAS ratings, receipt of orders, feedback from PMs, etc



Medium-Term (1-3 years):

- Evaluating OCONUS sourced RDX & HMX for select DOD applications
 - Qualify as feedstock in Holston FEM systems
 - Limits scope of qualification effort (primarily for bomb applications)
 - Frees up Holston produced RDX / HMX product for other applications



BAE SYSTEMS

Questions