42nd Annual Armament Systems: Gun and Missile Systems Conference & Exhibition

Conference





"Meeting Warfighter Needs for the Asymmetric Threat"



April 23-26, 2007 Charlotte, NC Event # 7590



Agenda

Monday, April 23, 2007

11:00 am -	Registration and Exhibit Set-up
6:30 pm	

5:00 pm - Networking Reception in Exhibit Hall 6:30 pm

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Tuesday, April 24, 2007

7:00 am - Registration 6:30 pm

7:00 am Continental Breakfast

8:00 am Welcome and Introductory Comments

Mr. Sam Campagna, Director, Operations, NDIA

Mr. Mike Till, Head, Gun Systems & Light Weapons Division (G30), NSWC Dahlgren

8:15 am Industry Keynote Speaker

Mr. Mike O'Brien, Vice President & General Manager, GDATP Gun Systems Strategic Business Unit

8:40 am Government Keynote Speaker

MG David Ralston, USA, Commanding General, US Army Field Artillery Center and Fort Sill Commandant, US Army Field Artillery School

BG Mike Cannon, USA, Program Executive Office for Missiles and Space

COL Mark Rider, USA, Project Manager for Maneuver Ammunition Systems

9:55 am Break in Exhibit Hall

9:10 am

9:35 am

	Breakout 1	Breakout 2
10:30 am	Effectiveness Session Chair:	Emerging Technology Session Chairs:
	Mr. Steve French, BAE Systems	Mr. Steve Liss, US Army, ARDEC Mr. Joe Buzzet, General Dynamics Corporation
10:35 am	Capabilities of Penetrator with Enhanced Lateral Efficiency (PELE) Medium Caliber Cartridge Versus KE or HE Rounds	Low Recoil, Heat Transfer Mitigating Rarefaction Wave Gun Engineering, Modeling and Large Caliber System Demonstrator Development
	Mr. Don Gloude, ATK	Mr. Kevin Miner, Benet Labs
11:00 am		Rapid Fire Testing of Advanced Gun Barrel Bore Coatings
		Mr. William Vezina, BAE Systems
11:25 am	Urban Operation Solutions with Medium & Large Caliber Ammunition	Mid Range Munition (MRM)
_	Mr. Jan Hasslid, Nammo	LTC(P) Kenneth Tarcza, USA, PEO Ammunition
		T&E of Electromagnetic Railguns
11:50 am		CDR Thomas Boucher, USN, NSWC Dahlgren
12:15 pm	Lunch in Exhibit Hall	Lunch in Exhibit Hall

Tuesday, April 24, 2007 (Cont.)

	Breakout 1	Breakout 2
1:25 pm	Energetics Session Chair:	Direct Fire: EAPS Overview Session Chair:
	Mr. Brian Tasson, ATK	Mr. Matt Solverson, GD-OTS
1:30 pm	Energetic Materials to Meet Warfighter Requirements: An Overview of the US Army- REDCOM-ARCEC Energetic Materials Program Dr. Rao Surapaneni, US Army, ARDEC	Extended Area Protection and Survivability (EAPS) Mr. Phil Brislin, US Army, ARDEC
1:55 pm	ECL - A New Propellant Family for Small and Medium Caliber Applications	Phalanx for Defense Against Rockets, Artillery and Mortar Protection System
	Mr. William Worrell, ATK	Mr. Scott Martin, Raytheon Missile Systems
2:20 pm	Qualification Test Results for the EFSS 120mm Rifled Mortar System	Counter Rocket Artillery and Mortar Protection System
	Mr. Joe Buzzett, GD-OTS	Mr. Borje Nyquist, BAE Systems, Sweden
2:45 pm	Break in Exhibit Hall	Break in Exhibit Hall
3:15 pm	Energetics (Cont.) Session Chair: Mr. Brian Tasson, ATK	Indirect Fire Session Chair: Dr. Steve Piper, Piper Pacific International
3:20 pm	Processing and Sensitivity Testing of the Insensitive TNT Based Explosive - PAX-44 <i>Mr. Duncan Langlois</i> , ATK	Enhanced Lethality with the 105mm XM1025 Performed Fragment Projectile Mr. George Kurzik, GD-OTS
	Medium Caliber Lead Free Electric Primer	120mm XM325 Mortar
3:45 pm	Ms. Sarah Ford, NAWCWD, China Lake	Mr. David Smith, Benet Labs
4:10 pm	Environmentally Friendly Medium Caliber Percussion Primers	155mm XM324 for NLOS Cannon
	Dr. Rao Yalamanchili, US Army, ARDEC	Mr. Christopher Aiello, Benet Labs
4:35 pm	Development of Exploding Foil Initiators and Microchip EFI's	155mm XM1063 Non-Lethal Personnel Suppression Projectile
	Mr. Gert Scholtes, TNO, Netherlands	Ms. Jennifer McCormick, GD-OTS
5:00 pm - 6:30 pm	Reception in Exhibit Hall	Reception in Exhibit Hall

"The Department of Defense finds this event meets the minimum regulatory standards for attendance by DoD employees. This finding does not constitute a blanket approval or endorsement for attendance. Individual DoD component commands or organizations are responsible for approving attendance of its DoD employees based on mission requirements and DoD regulations."

Wednesday, April 25, 2007

7:00 am - Registration

5:00 pm

7:00 am

Continental Breakfast

8:00 am

Opening Remarks

Mr. C.J. Toombs, NAVAIR-WD

8:05 am

Keynote Speaker

Mr. David Clagett, Senior Program Analyst, Joint Rapid Acquisition Cell (JRAC), Office of the Under Secretary of Defense (USD), Acquisition, Technology and Logistics (AT&L)

8:35 am

Requirements & Program Trends Session

Mr. Dave Broden, Broden Resource Solutions, LLC

Mr. Bob Glantz, ATK

8:50 am

US Army ARDEC Update

Mr. Antony Sebasto, US Army, ARDEC

9:15 am

Review of the Most Credible Terrorist Standoff Weapons

Mr. Bernard Halls, MSIOC Belgium

9:40 am

Break in Exhibit Hall

	Breakout 1	Breakout 2
10:15 am	Armament Subsystems Session Chairs:	Tactical Rockets and Missiles Session Chair:
	Mr. Greg Hill, Western DesignMr. John Resch, US Army, ARDEC	Mr. Edwin DePasqual, Talley Defense Systems
10:20 am	MK44 IPT Update (MK44 Operational Commonality and Airburst)	Hazard Assessment Testing of the SM-3 Block IA Missile
	LtCol Kenny Lewton, USMC, EFV	Mr. Dave Houchins, NSWC Dahlgren
	Weapons Updates: LW25mm, .50 cal Bushmaster	PRODAS Rocket Simulation Software
10:45 am	Mr. Rockne Carter, ATK	Mr. Francis Davis, Talley Defense Systems
11:10 am	20mm Linear Linkless Feed System for the AH-1W Cobra Helicopter	PRODAS Rocket Artillery in Future Scenarios, First Answer
	Mr. Larry Pollard, Meggitt Western Design	Dipl. Ing. Harald Wich, Diehl
11.05	M197 Environmental Kit	The Success of the AMRAAM DBMS/DAS
11:35 am	Mr. Robert Brewer, NAWCWD, China Lake	Mr. John Gerdine, V, Wyle Laboratories
12:00 pm	Lunch in Exhibit Hall, Awards Ceremony	Lunch in Exhibit Hall, Awards Ceremony

Trifiletti Award Recipient: Mr. Ralph F. Campoli, Consultant, General Dynamics Ordnance and Tactical Systems *Presented by Mr. Joe Buzzett, Director, Techology Programs, General Dynamics Ordnance and Tactical Systems*

Military Operations Award Recipient: LtCol Kenny Lewton, USMC, Director of Firepower, Expeditionary Fighting Vehicle, Advanced Amphibious Assault

Presented by Mr. Jim McConkie, Senior Engineer, Gun Weapon Systems Branch, NSWC Dahlgren

Wednesday, April 25, 2007 (Cont.)

	Breakout 1	Breakout 2
	Armament Subsystems (Cont.)	Precision Weapons
	Session Chairs:	Session Chairs:
1:25 pm	Mr. Greg Hill, Western Design	<i>Mr. Jim Ripley</i> , Marine Corps Systems Command
•	Mr. John Resch, US Army, ARDEC	Mr. Dave Wallestad, Wallestad & Associates, LLC
	M61 Handoff Improvements	120mm Mid-Range Munition (MRM) Science &
1:30 pm		Technology Efforts
	Mr. John Fletcher, III, GDATP	Mr. Robert Nodarse, US Army, ARDEC
	Universal Portable Fire Control for US and Allied	MRM-KE: A Lethal Solution
1:55 pm	Conventional and Precision Guided Ammunition	
	Mr. Gregory Schneck, US Army, ARDEC	Mr. Eric Volkmann, ATK
	Ultrasonic Temperature and Heat Flux Sensor	20mm Life Cycle Tests
2.20 mm	Technology	
2:20 pm	Mr. Mark Mutton, Industrial Measurement	
	Systems	Mr. Robert Brewer, NAWCWD, China Lake
0.45	Extended Area Protection & Survivability (EAPS)	Recent Developments in Affordable Laser Guided
2:45 pm	Gun and Ammunition Design Trade Study	Precision Weapon Capabilities
	Mr. Daniel Ericson, ASIC	Mr. James Franciscovich, BAE Systems
3:10 pm	Break in Exhibit Hall	Break in Exhibit Hall
	Modeling and Simulation	Precision Weapons (Cont.)
3:40 pm	Session Chair:	Session Chairs:
or to pin		Mr. Jim Ripley, Marine Corps Systems Command
	Mr. Al Hathaway, Arrow Tech Associates, Inc.	Mr. Dave Wallestad, Wallestad & Associates, LLC
2.15	System Modeling of a 40mm Automatic Grenade Launcher	Swedish Studies of Extreme Long Range Projectiles
3:45 pm	Launener	for Tube Artillery
	Dr. Daniel Corriveau, Defense R&D Canada	Mr. Borje Nyquist, BAE Systems, Sweden
	A Quest for Practical Design for Six Sigma (DFSS)	Trade Space on Appropriate Caliber Ammunition for
4:10 pm	Tools - PGMM Case Study	Terminal Defense Guided Projectile
	Mr. James Kalberer, ATK	Mr. Chris Geswender, Raytheon Company
	Advanced Engineering Design Modeling and	
4:35 pm	Simulation as a Management Tool	
	Mr. Steve Liss, US Army, ARDEC	
5:00 pm	Adjourn	Adjourn

Thursday, April 26, 2007

7:00 am - Registration 1:25 pm

7:00 am Continental Breakfast

Thursday, April 26, 2007 (Cont.)

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		Breakout 1	Breakout 2
	8:00 am	Modeling and Simulation (Cont.) Session Chair:	Direct Fire Session Chair:
		Mr. Al Hathaway, Arrow Tech Associates, Inc.	Mr. Matt Solverson, GD-OTS
	8:05 am	A Guided Projectile Enterprise Modeling and Simulation Environment	120mm Line-of-Sight Multi-Purpose (LOS-MP) Munition Science & Technology Efforts
		Mr. John Kimball, NSWC Dahlgren	Mr. Jesse Sunderland, US Army, ARDEC Mr. Eric Scheper, US Army, ARDEC
	8:30 am	Instrumented Ballistic Test Projectile (IBTP)	Development of the M1040, 105mm Anti-Personnel Round
		Mr. Roger St. Ours, US Army, ARDEC	Mr. Stephen Ginetto, US Army, ARDEC 1LT Neil Friedberg, USA, ARDEC
	8:55 am	Structural Reliability of Flawed Mortar Bodies	APAM MP-T 120mm XM329 Development Status
	0.55 am	Dr. Jennifer Cordes, US Army, ARDEC	Mr. Danny Schirding, Israel Military Industries
	9:20 am	Simulations of Head Space Case Failure in Medium Caliber Ammunition	GD-OTS 20mmx120mm Mechanically Fuzed Projectile Program
_		Dr. Aaron Caba, ATK	Mr. Zach Kemp, GD-OTS
	9:45 am	Internal Ballistic Modeling Using 1-D FNGUN Code	The ATK Air Burst Munitions Program
		Dr. Jang-Horng Yu, ATK	Mr. Larry Mason, ATK
	10:10 am	Modular Charge Ignition Modeling	30mm MK46 MOD1 Gun Weapon System (GWS) At-Sea Evaluation
		Mr. Clive Woodley, QinetiQ, Ltd.	Mr. Andrew Green, NSWC Dahlgren
	10:35 am	Break in Exhibit Hall	Break in Exhibit Hall
	10:50 am	Platform and Weapon System Integration Session Chair:	Direct Fire Session (Cont.) Session Chair:
		Mr. Jim Talley, GDATP	Mr. Matt Solverson, GD-OTS
	10:55 am	Lightweight 30mm Remote Weapon System	M789 LW 30mm HEDP Cartridge In-BoreDetonation Investigation
		Mr. James Lamb, ATK	Mr. John Hirlinger, US Army, ARDEC
	11:20 am	Remote Armaments Mr. Richard Ciekurs, US Army, ARDEC	M789 LW 30mm HEDP Cartridge In-BoreDetonation Investigation (Cont.)
			Mr. John Hirlinger, US Army, ARDEC
	11:55 am	F-35 Joint Strike Fighter Gun System Update	
		I Mr. David Maher. GDATP	
ļ	12:20 pm	Mr. David Maher, GDATP Lunch in Exhibit Hall	Lunch in Exhibit Hall

Thursday, April 26, 2007 (Cont.)

1:25 pm	Exhibit Hall Closes
1:25 pm	Armament Division Overview Mr. Dave Broden, Broden Resource Solutions, LLC
1:50 pm	Platform and Weapon System Integration (Cont.)
	Session Chair: Mr. Jim Talley, GDATP
1:55 pm	Telepresent Rapid Aiming Platform (TRAP) - Spiral Development of a Lightweight Remote Weapon System and Integration into a Mobile Sensor-Shooter Network <i>Mr. Brian McConnell</i> , NSWC Dahlgren
2:20 pm	F-22A Lightweight Gun System Comparison Mr. Peter Wolff, GDATP
2:45 pm	Integration of a Remotely Operated, Breech Loaded 120mm Mortar Platform <i>Mr. Thomas DeVoe</i> , US Army, ARDEC
3:10 pm	Shock Aspects of Lightweight Artillery on Mounting Electronics <i>Mr. William Zepp</i> , US Army, ARDEC
3:35 pm	Conference Adjourns

THANK YOU FOR ATTENDING WE'LL SEE YOU NEXT YEAR IN NEW ORLEANS APRIL 21-24, 2008

Please take a moment to complete the Survey, found in your registration materials. Surveys may be returned to the Registration Desk. Your feedback is greatly appreciated!

Trifiletti Award Recipient: Mr. Ralph F. Campoli Consultant, General Dynamics Ordnance and Tactical Systems

Mr. Campoli is recognized world wide as an innovative design expert in the field of ammunition design. His significant contributions have enhanced the performance of US tank kinetic energy ammunition to its recognition today as the most lethal in the world. The dedication to providing our war fighters with only the best was evident during his 38 years of civil service at Picatinny Arsenal and has continued with his consulting efforts for over 25 years in the defense industry. Mr. Campoli is currently a respected design expert with General Dynamics Ordnance and Tactical Systems.

Mr. Campoli is affectionately known around the world as the "Godfather of modern tank KE ammunition." His contributions to ordnance have not been limited to KE ammunition. The fluted liner designed to enhance performance of HEAT rounds to compensate for projectile spin, sabot design for the current 120mm tank multipurpose round (M830A1), folding fin assembly for high explosive projectiles both tank and artillery, and obturator designs for all US tank ammunition are among Mr. Campoli's many contributions.

The unique talents of Mr. Campoli have been applied to numerous items which, unfortunately, failed to go to inventory for various reasons. They did, however, demonstrate his gifted design capability. These included XM578 projectile for the 152mm, a target practice round that was range limited by controlled aerodynamic heating, an ultra light aluminum sabots for tank KE projectiles, and improved ignition systems.

Mr. Campoli continues to apply his expertise in evolving technologies. He is currently assisting ARDEC engineers in developing saboted projectile concepts for electromagnetic guns.

Mr. Campoli continues to have a great impact on Army ordnance through his mentoring of R&D personnel. During his career of over 60 years, his insights and knowledge of the industry have been instrumental to the success of many individuals and the programs they have managed.

Military Operations Award Recipient: LtCol Kenny Lewton, USMC Director of Firepower, Expeditionary Fighting Vehicle, Advanced Amphibious Assault

LtCol Lewton was commissioned as a Second Lieutenant via the Naval Reserve Officer Training Corps Program at Iowa State University in December 1989 with a Bachelor of Arts Degree in Political Science. He reported to The Basic School in March 1990, and upon graduation in August 1990, LtCol Lewton reported to 3rd AA Bn, 1st MARDIV. Nearly all of 3rd AA Bn was deployed to Operation Desert Shield/Desert Storm. LtCol Lewton conducted OJT with the MEU platoon until Basic Amphibious Officer's Course convened in February 1991.

After graduating from Basic Amphibious Officers Course in April 1991, LtCol Lewton reported to B Co, 3rd AA Bn. He was promoted to First Lieutenant in January 1992. He then deployed to Okinawa as part of the Unit Deployment Program and was attached to 31st MEU. As part of 31st MEU, he deployed to the Republic of Philippines and Hong Kong.

LtCol Lewton elevated to B Co Executive Officer and deployed to Somalia for Operation Restore Hope in December 1992. There, he conducted relief operations as part of the JTF. He redeployed to CONUS in May 1993.

In July 1993, LtCol Lewton transferred to Marine Corps Recruit Depot (MCRD), San Diego, where he served as a Series Commander for L Co, 3rd Recruit Training Bn. He was promoted to Captain on September 1, 1994, and then resigned his commission and left active duty.

During February 1996, LtCol Lewton reassessed to active duty and reported to 3rd AA Bn, 1st MARDIV. He served as Commanding Officer of F Co, 3rd AA Bn from February 1996 to May 1998. Company F deployed to Okinawa as part of the Unit Deployment Program and was retired on May 1, 1998 as part of Marine Corps downsizing.

LtCol Lewton attended the Command and Control Systems Course from August 1998 to May 1999. He then reported to A Co(-), 4th AA Bn as Inspector-Instructor. He served as Company I-I from June 1999 to June 2002 and was promoted to Major in September 1999.

In July 2002, LtCol Lewton was assigned to 2nd Assault Amphibian Battalion, 2nd MARDIV where he served as Operations Officer for 2nd AA Bn and deployed to Operation Iraqi Freedom-1 from January 2003 to May 2003. He completed his tour of duty as OpsO in June 2004. Then, he reported to Direct Reporting Program Manager, Advanced Amphibious Assault (DRPM AAA) in July 2004. Currently, LtCol Lewton serves as Director of Firepower for the Expeditionary Fighting Vehicle. He was promoted to Lieutenant Colonel in September 2005.

LtCol Lewton's personal awards include: Navy Achievement Medal (2), Navy Commendation Medal (2), Meritorious Service Medal and Combat Action Ribbon (2).

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ATK

ATK is a leading provider of advanced weapon and space systems with \$3.5 billion in annual sales, approximately 15,500 employees and operations in 21 states.

ATK is the nation's largest manufacturer of small and medium caliber ammunition. Our ammunition product portfolio spans a broad range, from 5.56mm through .50 caliber rounds for handguns, shotguns and rifles to 20mm, 25mm and 30mm rounds for air, land and sea platforms and large caliber ammunition for main battle tanks. We are developing environmentally friendly training ammunition, enhanced tactical ammunition, next-generation energetic materials and advanced propellants that will increase performance and lethality.

ATK is also a leading producer of Chain-gun® family of medium-caliber gun systems for ground combat, naval and air armament applications. ATK produces the M242 25mm cannon used on Bradley Fighting Vehicles, the MK44 30/40mm cannon for the US Marine Corps' new Expeditionary Fighting Vehicle and the 30mm M230 cannon for the AH-64 Apache and AH-64D Apache Longbow helicopters.

ATK is the world leader in the design, development and production of solid rocket propulsion systems for space, strategic-missile defense and tactical applications. Our tactical rocket motor portfolio includes propulsion systems for air-to-air, air-to-surface, surface-to-air and surface-to-surface missiles.

Building on the capabilities of our core ammunition and rocket motor businesses, ATK is developing several breakthrough advanced weapon systems, such as the US Navy's Advanced Anti-Radiation Guided Missile (AARGM) and the US Army's Precision Guided Mortar Munition (PGMM), Precision Guidance Kit (PGK) and Mid-Range Munition (MRM). Using state-of-the-art guidance, navigation and control systems, targeting systems, high-energy propellants and advanced warheads, ATK is developing weapons that will fly farther and faster and strike their targets with unprecedented precision and lethality.

Additional ATK news and information can be found at www.atk.com.

General Dynamics Armament and Technical Products

General Dynamics Armament and Technical Products (GDATP), an operating unit of the General Dynamics Corporation, is a proven systems integrator of detection, protection and lethality defense products for all branches of the US Department of Defense (DoD) and the Ministries of Defense of more then 30 allied nations.

GDATP provides our customers with advanced capabilities through our Advanced Materials, Detection Systems, Gun Systems and Weapon Systems. GDATP designs, develops and produces high-performance armament systems, a full range of high-performance composite products for the aerospace industry, biological and chemical detection systems, advanced sensor and vision-enhancement systems and mobile shelter systems. GDATP also provides system management for key DoD programs, including the 2.75-inch (70mm) Hydra-70 rocket family.

For more information, please visit www.gdatp.com.

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Meggitt Defense Systems, Inc. (MDSI)

formerly known as Meggitt Western Design

Specializing in the design, development and production of medium caliber Linear Linkless Ammunition Handling Systems and large caliber Compact Autoloader and Storage Systems, MDSI provides state-of-the-art weapon system capabilities in support of the United States Military and her allies.

MDSI has a solid track record in meeting design-to-production requirements for provision of increased capacity, reliability and volumetric storage efficiency for Ammunition Handling Systems (AHS).

MDSI provides a wide range of medium caliber Linear Linkless Ammunition Handling Systems, all of which have been battle proven. These include the world's largest, a 3,000-round, 1,800 shot-per-minute 25mm AHS onboard the AC-130U Gunship, a 1,200 round Magazine and a 250 round Combo PAK Magazine providing 30mm ammunition on the Apache Helicopter, two 30mm Magazines (1,200 rounds and 660 rounds) on the Blackhawk Helicopter, a 1,500 round 20mm reload Magazine for Phalanx and a 2,100 round 20mm aircraft reload system called LALS. Additionally, development programs are underway for 30mm, Mk44 Feed Systems for AC-130U and FCS MGV and a 20mm Linkless Magazine to replace the existing Linked system on the Cobra Helicopter.

Our state-of-the-art chain ladder Linkless Feeding Systems allow simultaneous upload and download of rounds and spent cases (where required), providing weapon system efficiency on the battlefield. Linear Linkless Systems are more efficient, weigh less and, most importantly, are more reliable than Linked systems. Our feed and transfer systems maintain complete control of rounds as they are fed directly into the gun system without wasted space. In the end, this means maintaining multi-year reliability records. More importantly, it means that in the heat of combat warfighters don't have to be concerned with whether or not their ammunition system will jam and fail them.

MDSI has developed large caliber Compact Autoloader and Magazine systems for 105mm, 120mm, 140mm and 155mm. They are electrically or hydraulically-driven, fully automatic systems designed for easy integration to modern combat systems. Patented breakthroughs range from legacy engineering designs for Main Battle Tank test beds to today's Stryker Mobile Gun System to innovations in robotics for FCS MCS, future main battle tanks and other next-generation combat platforms. Production continues for 105mm Re-supply Magazines on Stryker, and 120mm full scale development is underway for FCS MCS.

As the technology leader in Ammunition Handling and Storage Systems, Meggitt Defense Systems, Inc. is proud to be a sponsor for the NDIA 42nd Annual Armament Systems: Gun and Missile Systems Conference & Exhibition.

For more information, please visit www.wd.com.

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OSRAM SYLVANIA Global Tungsten & Powders Division

For over 40 years, OSRAM SYLVANIA's Global Tungsten & Powders Division, located in Towanda, PA, has been designing and manufacturing tungsten and molybdenum powders and parts for defense and aerospace applications. Our facility is the only facility of its kind in North America; vertically integrated from processing the ore into powders to final part production. Additionally, we are the premier recycle point for Tungsten on the continent.

We are ISO 9001:2000 and 14001 compliant and have institutionalized a Six Sigma culture through our "PQI" program. Our state-of-the-art environmental program has garnered us numerous awards for exceeding state and federal environmental safety and stewardship requirements.

SYLVANIA's Research and Development Department is comprised of dedicated scientists who have helped make us the leading Tungsten technology company in the world. Our facilities are world class, featuring one of the premier inorganic labs in the industry. Our capabilities include: Chemical Analysis, Surface Analysis, Environmental Analysis and Microscopy. SYLVANIA's R&D prowess has resulted in robust partnerships with the Department of Defense's most important laboratories, leading prime contractors as well as many of our country's most prestigious universities and private labs.

We have manufactured products for all Department of Defense Services and key prime contractors. Our defense applications include small, medium and large caliber penetrators, custom powders, fragmenting warheads, canister rounds, shape charges, sheet, plate, wire, ballast, thermal sprays, hard metal tooling and powders for thermal management applications. We are currently in production of a significant array of products supporting critical defense and aerospace functions.

SYLVANIA's culture fully embraces and supports the necessarily dynamic requirements of today's defense environment. Whether it is leading edge research for the products of tomorrow or an ongoing enhancement to a dependable legacy system, SYLVANA is the ideal source for your tungsten, molybdenum and other hard material applications.

For more information, please visit www.sylvania.com.

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Armament and Technical Products

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formerly known as Meggitt Western Design

