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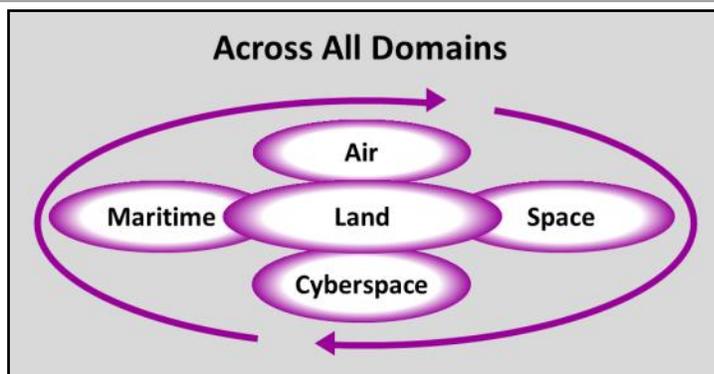


Chief's Corner

It has definitely been a busy quarter. One of the highlights was welcoming Mr. Joseph W. Kirby as the newest member of our regimental team. He brings with him a wealth of talent and expertise gained over a 20-year military career and 10 years as a DA Civilian

contributing to the U.S. Army Ordnance School (USAOS) mission. In his dual-role as Director of Training and Deputy to the Commandant of the USAOS, he will serve as my primary advisor on all matters related to budget; management; and the development, conduct, and resourcing of education and training for Active Duty, National Guard, and Reserve Soldiers as well as the Civilians in the Ordnance Corps.

In my last article, I touched briefly on the Army's cultural shift away from counter-insurgency operations toward preparing an expeditionary Army for sustained, large-scale ground combat operations (LSGCO). For more than a decade, U.S. military operations focused on the global terrorist threat. During that time, Russia, China, North Korea, and Iran gained military parity, and in some areas achieved overmatch. They now present challenges our Army has not faced in the last 25 years. They have adapted, modernized, and developed capabilities to counter U.S. advantages in air, land, maritime, space, and cyberspace domains. Conducting effective and prolonged LSGCO against these peer threats has become our Army's greatest readiness challenge.



Army doctrine, which lays out the principles for how the Army fights, is being revised to address unified land operations against peer threats across **multiple domains**. The first to be updated was FM 3-0, Operations in October 2017. It focuses on LSGCO and is structured around the Army's **strategic roles** of shaping the operating environment, preventing conflict, prevailing in combat, and consolidating gains. This doctrine is the basis for revising all Army doctrine. The Combined Arms Support Command (CASCOM) began its doctrine revision campaign with FM 4-0, Sustainment Operations in March 2018.

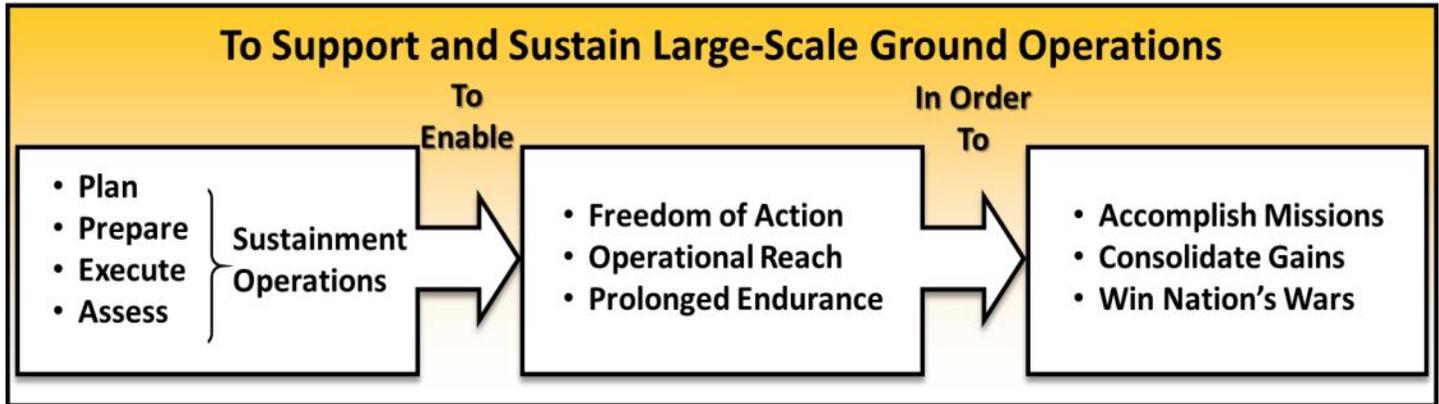
Now in its final stages of revision, FM 4-0 is also structured around strategic roles; however, it informs sustainment commanders and staffs on how to employ the **elements of sustainment** shown on [page 2](#) to support LSGCO on a multi-domain, extended battlefield. The updated FM 4-0 does not prescribe any changes to the Ordnance core competencies of maintenance, ammunition and explosive ordnance disposal (EOD), but it does highlight certain critical aspects of each as it pertains to LSGCO. These are addressed in FM 4-0 primarily as planning considerations including the following:

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Chief's Corner Continued from page 1



Maintenance. Maintenance capability for main weapon systems (M1 family, M2/3 family, M109A6, and Stryker family) reside only in the forward support companies (FSC) in the BCT. This requires a complete understanding of the FSC capability and proper task organization of maintenance capability to support the main effort. The fact that the FSC contains this capability also presents challenges to maintenance evacuation since there is no source of maintenance at echelons above the FSC.

Ammunition. FM 4-0 includes planning considerations for munitions support during large-scale combat operations and discusses proper allocation and placement of modular ammunition companies to support the operations. Specifics such as supporting critical specialized munitions for air defense and long-range precision fires are also discussed.

Explosive Ordnance Disposal. FM 4-0 discusses EOD's role in supporting operations to prevent conflict, especially during the reception, staging, onward-movement and integration (RSOI) operations. Although EOD supports the protection warfighting function it's important that it has been highlighted in support of this critical strategic role.

Although CASCOM's doctrine developers have the primary responsibility for updating doctrine, the USAOS assisted the overall effort of developing FM 4-0. We reviewed initial drafts and provided recommended changes especially with regard to Ordnance core competencies and the role of Ordnance in LSGCO. We also facilitated the Sustainment Quick-Look and the Sustainment Tabletop Exercise, two events that provided key insights for the development of FM 4-0.

CASCOM's doctrine developers are working final revisions to FM 4-0 and expect to publish in

the third quarter of FY19. Electronic versions will be available for download from the [Army Publishing Directorate](#) and CASCOM's [Sustainment Unit One Stop](#). Following the release of FM 4-0, two additional Ordnance publications will be updated in the near term: Army Techniques Publication (ATP) 4-33, Maintenance Operations, which is scheduled for completion in the fourth quarter of FY19 and ATP 4-35, Munitions Operations and Distributions Techniques, which is programmed for publication in FY20.

To stay abreast of these changes and other topics of interest to the Ordnance Corps, I encourage you to participate the next LIVE Ordnance Connect video-teleconference scheduled for May 29, 2019. These quarterly sessions are vital for distributing information to the operational force as well as gathering feedback on your challenges and best practices. If you have never attended our live video-teleconference, I encourage you to make this your first time. Connection instructions and discussion topics will be posted on our Ordnance [Facebook](#) and [website](#) at the beginning of May.

We have several other important events planned for the month of May, including Sustainment Week and the Ordnance Corps' birthday. I am especially looking forward to hosting an official ceremony to induct 15 outstanding Ordnance professionals into our Ordnance Hall of Fame. A list of dates and locations for these and other events are provided on [page 12](#). I hope that you will mark your calendars and join us if you are in the area.

Go Ordnance!

BG Heidi J. Hoyle
41st Chief of Ordnance





Soldiers conduct a 3-mile ruck march during the Ordnance Situational Training Exercise (ODX) on February 26, 2019. The ODX tests and validates Soldiers-in-training on their warrior tasks and battle drills. (Photo provided by the 832nd Ordnance Battalion)



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Regimental Command Sergeant Major Highlights



Greetings from the Home of the Ordnance Corps! I hope you've had a productive quarter thus far. I would like to take this opportunity to thank each of you for your continued support to our Corps and Army profession. In an effort to improve readiness, I will highlight our progress on some of the Ordnance School's near-term

and enduring priorities that serve to challenge and shape our Soldiers and leaders.

Army Combat Fitness Test (ACFT). Recently, I had the opportunity to take the ACFT that will replace the Army Physical Fitness Test (APFT) in October 2020. I can tell you that the six events will test your strength, endurance, and resiliency. It was definitely a challenge the first time, but I have taken the ACFT twice since then and I can confirm that it is not unrealistic; passing is completely attainable if preparation becomes a priority. Full implementation of the ACFT in 2020 may seem like a long way off, but I highly recommend our Soldiers and NCOs take advantage of that time by incorporating a training program to prepare for each of the six events. Proper training is important to minimize the risk of injury from inexperience and incorrect form.

The ACFT is a meticulously researched, well-thought out, and extensively vetted test of comprehensive physical fitness that will go a long way in replacing our present fitness culture. The current physical training program limits Soldiers to a structured plan of movements and exercises which falls short of testing (or developing) the physical stamina required of a sustainment warfighter. By design, the ACFT events are comparable to actual activities Soldiers perform during operations, therefore it more accurately measures the conditioning of our Soldiers and their readiness to meet those physical demands. I encourage you to visit the [ACFT website](#) for information that can help our Soldiers and their leaders develop a training plan.

AIT Warriorization. The Army is an organization of professionals. Recruiters enlist civilians who learn the fundamentals during the Soldierization process in Basic Combat Training. The transformation into professional Soldiers is reinforced during Advanced Individual Training (AIT) where



A drill sergeant observes as an Ordnance Soldier prepares to throw a grenade at the hand grenade range on February 7, 2019 at Fort Lee, Virginia. (Photo provided by the 832nd Ordnance Battalion)

they learn their military occupational specialty. At the Ordnance School, we are committed to continue building and developing Soldier fundamentals while providing instruction on the Ordnance core competencies of maintenance, ammunition, and explosives ordnance disposal. We accomplish this 'AIT Warriorization' by adding rigor to our AIT training. For example, the drill sergeant led program known as Tactical Tuesday builds confidence and reinforces tactical training in preparation for the end-of-cycle Ordnance Training Exercise. Also, I recently took a terrain walk over the hand grenade familiarization and qualification range that opened on February 7, at Fort Lee, Virginia. The range serves as another example of how we are adding rigor to AIT training and increasing our Soldiers' readiness and lethality.

Leader Development. I encourage our leaders to broaden their development by applying the three pillars of success (training, education and experience) across operational, institutional and self-development domains. With some creative thinking, I am confident that you will discover unique opportunities for self-development and the development of the Soldiers in your ranks. To help you in this effort, the [Central Army Registry website](#) offers a single access point to Army training resources including field manuals,

[Continued on page 5](#)



RCSM Highlights [Continued from page 4](#)

training support packages, individual and collective task drills, courseware and more. This online registry can be accessed via mobile device and offers multiple apps that have been vetted for use. Regardless of where you are, if the opportunity to develop your Soldiers emerges, you have tools readily available.

Key assignments are important for professional growth; that holds true for our junior enlisted Soldiers all the way up to our senior ranking NCOs. Here is an opportunity to consider: Security Forces Assistance Brigades (SFAB) are considered a tactical broadening assignment and are currently searching for Staff Sergeants in Career Management Field (CMF) 89. They are also seeking Command Sergeants Major (CSM) in CMF 89/91 to serve as a Brigade Support Battalion CSM in the following locations: 1st SFAB at Fort Benning, Georgia; 4th SFAB at Fort Carson, Colorado; and 5th SFAB at Joint Base Lewis-

McChord, Washington. SFAB will provide language and cultural training to prepare incoming personnel to assist, enable and accompany host nation forces. Ultimately, Soldiers assigned to an SFAB will deploy to support the combatant commander requirements worldwide. Contact the SFAB recruiting team at usarmy.bragg.forscom.mbx.g1-ag-sfab@mail.mil or (910) 818-9538 to learn more about these opportunities.

Finally, on behalf of the Regimental Command Team and the USAOS staff, I would like to wish those eligible for the upcoming Sergeant First Class Board all the best!

Go Ordnance!

CSM Terry D. Burton
13th Regimental Command Sergeant Major

Read this article in the [Fort Lee Traveller](#) to learn more about the new hand grenade range.



An Ordnance Soldier throws a grenade from a prone position at the hand grenade range on February 7, 2019 at Fort Lee, Virginia. (Photo provided by the 832nd Ordnance Battalion)



Regimental Chief Warrant Officer Highlights



Team Ordnance, As the Army makes modernization a high priority, our equipment will continue to grow in complexity. It is now more critical than ever that we use the approved Technical Manuals (TM) to support our equipment. TMs are not only necessary for proper training and the

operation of our equipment, they are also crucial for conducting routine services and maintenance tasks that keep our vehicles and weapon systems in the fight.

Our Ordnance Soldiers are responsible for the maintenance and repair of a vast array of vehicles, equipment and weapon systems. Training on every type and model is simply not feasible. At the U.S. Army Ordnance School, we use a skills-based training approach to teach our students the basic principles and fundamentals of maintenance. For example, a 91B Wheeled Vehicle Mechanic trains on automotive groups like: electrical systems, hydraulics, engines, drive trains and brakes. When apprentice-level Soldiers arrive at their first unit, their skill sets will need continued development and reinforcement. Leaders play a key role in ensuring their Soldiers use the proper references to perform their assigned tasks today and to grow into the master mechanics and technicians we need for tomorrow.

There is no excuse for performing maintenance tasks without having the most current TM. The Maintenance Support Device (MSD) is the maintainer's resource solution. It provides the information and references required to ensure tasks are completed safely and as prescribed by the experts. The MSD remains the Army's solution for an At-Platform Automatic Test System (APATS) and our maintenance supervisors must ensure their MSDs are always functional and kept up-to-date. This includes making sure units have current copies of our Electronic Technical Manual and Interactive Electronic Technical Manual (ETM/IETM).

Here are a few things I want to pass on to the team to make sure you are maintaining technical reference libraries that are both relevant and current.

What publications are required for your equipment? To find out which publications are required for your unit go to the Army Enterprise Systems Integration Program (AESIP) [Army Enterprise Portal](#) and use the Logistics Modernization Reporting (LMR) application located in the apps warehouse. Under the publications tab in LMR, you will find a set of tools where you can input your unit's information to generate a list of all

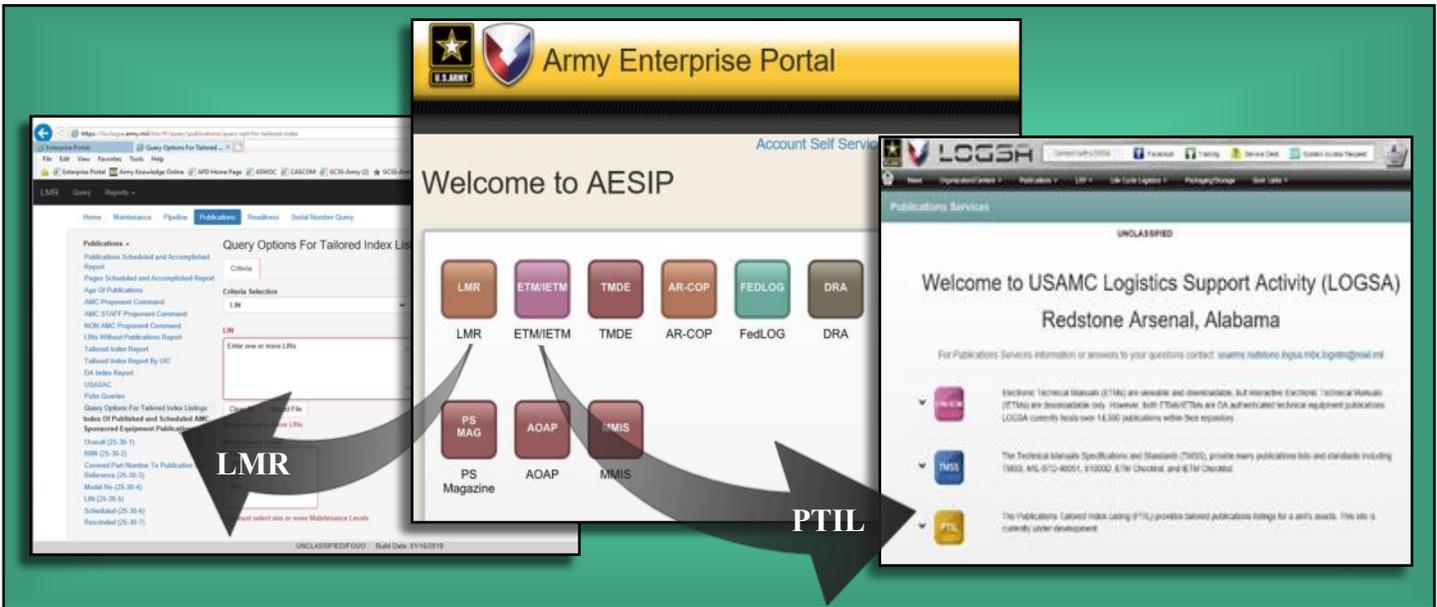


A Soldier uses an electronic technical manual on a prototype MSD to perform maintenance.

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RCWO Highlights Continued from page 6



the publications required for your unit. This tool provides a great start to building your publication library. It lists everything needed on your publication account subscription, ensuring that you automatically receive updates as they are released, similar to the way a magazine subscription works.

Why aren't publications coming to your unit? We often find that publications are not getting to the unit or down to the maintenance shops. The two most common reasons for this are suspended accounts due to inactivity or incorrect delivery addresses. The publication account holder (pubs clerk) for your organization is usually located in your battalion S1. Since our maintainers are the key stakeholders for publication, it is up to maintenance leaders to be proactive in keeping the S1 on track. Ask the pubs clerk to show you your publication account and verify that the appropriate references are included in your unit's subscription. Note that hard copies of technical manuals may still be supported, but priority has been given to produce and fill the operator level (-10) TMs and copies of the ETM/IETM. Both are absolutely critical to mission success.

What are other ways to get updated TM? Technical manuals can be downloaded directly from the ETM/IETM application which is also located in the apps warehouse of the Army Enterprise Portal. An internet connection is still required, and because these are compressed files, it can take a while to

download. However, this is a viable workaround when needed. While in this application you can also request notification alerts be sent to your email account when the publication has an update.

There is another tool in the ETM/IETM application, the Publications Tailored Index Listings (PTIL), which provides a list of all Army Materiel Command (AMC) equipment publications for an individual unit. To request a PTIL, send an email to usarmy.redstone.logsa.mbx.eopdb@mail.mil. All the information required for the request is on the application site.

Knowing which publications your unit requires and where to get them is only the first step. The second is to build subscriptions to support your maintenance libraries. Next, once subscriptions are in place, follow up to ensure the publication clerk distributes the updated manuals to the subaccount point of contact for each shop. Last, update your MSD and post changes in the hard copies manuals.

Professionals do maintenance by the book; anything less puts our Soldiers and their equipment at risk. Doing things right is how we remain technically proficient as Ordnance Soldiers - we have no greater responsibility!

Go Ordnance!

CW5 Norman G. May
10th Regimental Chief Warrant Officer



U.S. Army Ordnance Crucible Lessons Learned

Observations and lessons learned from the 2018 Explosive Ordnance Disposal (EOD) Team of the Year (ToY) assessment represent an improvement from 2017, particularly in areas of technical intelligence and tactical operational speed when supporting EOD missions. We believe this to be attributed to better communication of observations to the operational force via the 2017 Center for Army Lessons Learned Bulletin, and increased familiarity with the two-Soldier team. This year's event provided many valuable insights, including the following.

There is a strong correlation between fitness and performance across the scope of EOD operations. Over the past five years, teams who performed the best during physical fitness events were the teams that displayed the best overall performance, including technical aspects.

Teams consistently lacked familiarity with EOD organic MTOE items. The SmartRay Vision X-Ray system and Panther vehicle are both fairly new, and with time, those familiarity issues will resolve. However, this gap demonstrates the importance of educating the force in tandem with fielding new equipment.

The wide variety of Hand Held Detectors (HHD) fielded to EOD units is causing some discontinuity

on HHD best practices. Continued pursuit of a single, more dismount-friendly detector for inclusion into the Render Safe Sets, Kits and Outfits will alleviate the challenges presented by multiple platforms.

Finally, teams tended to focus on the render safe of a hazard and the actions leading up to it. Once an item was rendered safe, teams tended to shortcut or disregard the steps that would "complete" an EOD incident such as sensitive site exploitation and properly handing a scene over to the on-scene commander. With the battlefield ever-changing and future enemies unknown, it is imperative to continue training the proper techniques to complete an incident.

The EOD ToY has provided valuable insights to the operational and institutional force since 2014. The vastly improved performance by EOD teams in the areas of technical intelligence and operational speed demonstrated that well-organized and articulated input from an assessment at the institutional level can add value to the development of readiness and tactical competence for the operational force.

CPT Jacob A. Walsh
EOD Instructor, 73rd Ordnance Battalion



An EOD technician uses a digital camera to document the characteristics of an explosive device during the U.S. Army Ordnance Crucible EOD ToY event, on June 6, 2018. (U.S. Army photo by PFC Christian Simmons)



HRC Implements New Cycle-Based Assignment Process



Human Resources Command (HRC) has initiated a new cycle-based assignment process known as the Enlisted Manning Cycles (EMC). This process allows for better validation of assignment requisitions for enlisted Soldiers and available eligible population. A cycle period is for nine weeks and covers a nine-month window. For example, the January cycle lasts through Feb 28 with report dates primarily in August and September 2019. The following frequently asked questions may help you better understand this new assignment process.

What is EMC? Enlisted Manning Cycles (EMC) resulted from the Enlisted Management Improvement Initiative, an HRC pilot program designed to review and improve the manning processes that validate assignment requisitions with the eligible and available population for assignments occurring six to nine months out. As part of this assignment initiative, requisitions and Soldiers who are determined eligible and available by the order of merit list (OML) will be grouped into a nine-week manning cycle.

What does EMC mean for the individual Soldier? Soldiers will continue to communicate with their assignment manager for career progression and professional development requirements and assignments; however, they need to understand that they will be placed on an OML for each cycle.

How will Soldiers be placed on assignment? The Army Manning Guidance prioritizes how the Army fills its units based on current operational requirements and distributable inventory. HRC balances the Army's needs with Soldiers' career progression and professional development as

prescribed in DA PAM 600-25, and by the OML during the timeline defined by the nine-week manning cycle.

How is the OML determined? Several factors are used to determine the OML: key and critical leadership time completed in accordance with the Soldier's professional development model, time on station, and manner of performance.

What is the timeline for EMC? Each EMC cycle lasts nine weeks and there are a total of five EMC cycles each year. Each career branch will communicate when new cycles are beginning by using the NCO Contact Program (SSG and above). Soldiers, unit chains of command, and G1 personnel should continue to dialogue and communicate with HRC.

Is there an impact on units? No. Brigades and Divisions will continue to be filled in accordance with Army Manning Guidance; however, the EMC initiative creates efficiencies in the identification of available and eligible Soldiers to fill requisitions.

How will EMC help Soldiers in the future? Over time, EMC could increase the advanced notice of report date to at least 12 months. Increased predictability benefits Soldiers and Family members as well as losing and gaining units. The additional lead time will assist in NCOPDS scheduling, increase Soldier time on station for CONUS-based assignments, and offer better predictability for talent management opportunities.

Below is a schedule of upcoming assignment cycles. Soldiers may contact their assignment manager for additional information on the EMC process.

MSG Marie M. Legros
Ordnance Proponent Liaison

| CYCLE | Lock in REQs | Identify Shortfall | Contract | F2 | Finalize | Verification | Brief Status | Closeout | Next Cycle PREP | Last Day of Cycle |
|----------|--------------|--------------------|-----------|-----------|-----------|--------------|--------------|-----------|-----------------|-------------------|
| | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 | Week 9 | |
| EMC 1901 | 9-Jan-19 | 16-Jan-19 | 23-Jan-19 | 30-Jan-19 | 6-Feb-19 | 13-Feb-19 | 20-Feb-19 | 27-Feb-19 | 6-Mar-19 | 12-Mar-19 |
| EMC 1903 | 13-Mar-19 | 20-Mar-19 | 27-Mar-19 | 3-Apr-19 | 10-Apr-19 | 17-Apr-19 | 24-Apr-19 | 1-May-19 | 8-May-19 | 14-May-19 |
| EMC 1905 | 15-May-19 | 22-May-19 | 29-May-19 | 5-Jun-19 | 12-Jun-19 | 19-Jun-19 | 26-Jun-19 | 3-Jul-19 | 10-Jul-19 | 16-Jul-19 |
| EMC 1907 | 17-Jul-19 | 24-Jul-19 | 31-Jul-19 | 7-Aug-19 | 14-Aug-19 | 21-Aug-19 | 28-Aug-19 | 4-Sep-19 | 11-Sep-19 | 17-Sep-19 |
| EMC 1909 | 18-Sep-19 | 25-Sep-19 | 2-Oct-19 | 9-Oct-19 | 16-Oct-19 | 23-Oct-19 | 30-Oct-19 | 6-Nov-19 | 13-Nov-19 | 19-Nov-19 |
| EMC 1911 | 20-Nov-19 | 27-Nov-19 | 4-Dec-19 | 11-Dec-19 | 18-Dec-19 | 25-Dec-19 | 1-Jan-20 | 8-Jan-20 | 15-Jan-20 | 21-Jan-20 |
| EMC 2001 | 22-Jan-20 | 29-Jan-20 | 5-Feb-20 | 12-Feb-20 | 19-Feb-20 | 26-Feb-20 | 4-Mar-20 | 11-Mar-20 | 18-Mar-20 | 24-Mar-20 |
| EMC 2003 | 25-Mar-20 | 1-Apr-20 | 8-Apr-20 | 15-Apr-20 | 22-Apr-20 | 29-Apr-20 | 6-May-20 | 13-May-20 | 20-May-20 | 26-May-20 |
| EMC 2005 | 27-May-20 | 3-Jun-20 | 10-Jun-20 | 17-Jun-20 | 24-Jun-20 | 1-Jul-20 | 8-Jul-20 | 15-Jul-20 | 22-Jul-20 | 28-Jul-20 |
| EMC 2007 | 29-Jul-20 | 5-Aug-20 | 12-Aug-20 | 19-Aug-20 | 26-Aug-20 | 2-Sep-20 | 9-Sep-20 | 16-Sep-20 | 23-Sep-20 | 29-Sep-20 |
| EMC 2009 | 30-Sep-20 | 7-Oct-20 | 14-Oct-20 | 21-Oct-20 | 28-Oct-20 | 4-Nov-20 | 11-Nov-20 | 18-Nov-20 | 25-Nov-20 | 1-Dec-20 |
| EMC 2012 | 2-Dec-20 | 9-Dec-20 | 16-Dec-20 | 23-Dec-20 | 30-Dec-20 | 6-Jan-21 | 13-Jan-21 | 20-Jan-21 | 27-Jan-21 | 2-Feb-21 |
| EMC 2102 | 3-Feb-21 | 10-Feb-21 | 17-Feb-21 | 24-Feb-21 | 3-Mar-21 | 10-Mar-21 | 17-Mar-21 | 24-Mar-21 | 31-Mar-21 | 6-Apr-21 |



EOD Talent Management



I would like to take this opportunity to introduce myself as your 89D Talent Manager NCO at Human Resources Command. The last few months, I have been supporting career management for the 89D community. My duties include strength management, professional development, nominative screenings, unit outreach and individual counseling.

With several promotion boards and nominative assignments coming up this year, I encourage you to review and update your records to ensure your highest probability of selection. The three most important records are your DA Photo, your Soldier Record Brief (SRB), and your Army Military Human Resources Record (AMHRR). Update your DA Photo within one year of the board, ensure your SRB is clear, correct, and consistent and verify that your AMHRR contains all required documents.

The most competitive candidates are those who have earned service school evaluation reports (DA 1059) that exceeded course standards and those who were recognized on the commandant's list, as honor graduates, or were recipients of leadership awards. Soldiers who take advantage of civilian education opportunities and leadership programs such as the Sergeant Audie Murphy Club communicate to the board their dedication to learning and commitment to excellence. Competitive assignment profiles display a combination of leadership, staff, special positions, and broadening positions while consistently demonstrating strong performance.

If you have questions regarding assignments or career progression, please call me or Mr. Jeffery F. Herbert (89D Assignment Manager). We can be reached at (502) 613-5367.

SFC James E. Shoemaker III
89D Talent Manager



Army National Guard Instructors Train Active Duty Soldiers in Europe

In 2018, the Idaho Army National Guard (ARNG) Regional Training Site – Maintenance (RTS-M) sent four Ordnance instructors to Hohenfels, Germany, as part of a multi-institutional mobile training team (MTT) to train and qualify 40 active duty Soldiers in additional skill identifier (ASI) H8, Recovery Operations. The MTT, which also included instructors from the California and Hawaii ARNG RTS-Ms, mobilized in response to a shortage of qualified recovery vehicle operators in U.S. Army Europe.

Recovery operations are a critical warfighting capability. Every vehicle or weapon system recovered from the battlefield, repaired, and returned to the fight sustains combat power for large-scale combat operations. To earn the H8 ASI, Soldiers must demonstrate their ability to execute recovery methods and techniques such as extracting, towing, lifting, winching, rigging and hoisting equipment in various stages of inoperability, including vehicles that are battle damaged, mired, overturned, or missing tracks or wheels.

It would have been significantly more expensive, and a scheduling challenge, to send all 40 Soldiers to the U.S. Army Ordnance School at Fort Lee, Virginia or any of the Ordnance School's 17 RTS-M training locations where the H8 course is offered. Instead, this multi-institutional team of instructors deployed forward to meet the immediate needs of the Army for



SFC Karl Ransom, an instructor from the Idaho Army National Guard Ordnance Training Battalion, guides Soldiers from the 173rd IBCT on various methods of catastrophic recovery operations.

a fraction of the cost. This is one example of how the One Army School System (OASS) standardization of education across Active and Reserve Component schools ensures Soldiers receive quality training on time, regardless of component (Active, Reserve, or National Guard).

CW5 Terry L. Gulick
Commandant, Idaho Ordnance Training Battalion



HAZMAT - What Commanders Need to Know

Hazardous Material (HAZMAT) and the training, precautionary actions, regulatory and legal requirements associated with it are multi-layered. Commanders at all levels and functioning in any operational environment (OE) should ask and understand the answers to the following questions: What are 'regulated' hazardous materials? Who needs HAZMAT training and under what conditions? What are the risks of non-compliance?

Regulated hazardous materials are defined in Title 49 Code of Federal Regulations (CFR) [section 171.8](#) with a complete table of hazardous materials topics is listed in [part 172](#). Safety Data Sheets (SDS), developed and provided by the chemical manufacturer or importer, serve as the primary (but not the only) method of determining if materials are hazardous, if they are regulated, and under what conditions. A copy of the safety data sheet for each hazardous chemical present must be readily available in the workspace. Detailed SDS requirements and usage guidelines are provided in OSHA's Hazard Communication Standard, [29 CFR 1910.1200\(g\)](#).

Whether their personnel perform functions as HAZMAT handlers, drivers, inspectors, certifiers, or simply occupy a workspace where hazardous material is present, commanders should understand and enforce the varying levels of HAZMAT safety training required for each function. Clear regulatory HAZMAT training guidance for the varied functions is established by Defense Transportation Regulation, Part II, [chapter 204, paragraph D](#); FORSCOM/

ARNG Regulation 55-1, Appendix J, and Army Regulation 600-55, The Army Driver and Operator Standardization Program, [chapter 4-9](#).

Three training requirements commanders need to know: HAZMAT training is required for all personnel meeting the definition of a HAZMAT employee as defined in Title 49 CFR, Section 171.8. As directed by FORSCOM/ARNG 55-1, Appendix J-5, each unit (company/detachment) requires at least two people who are trained to certify hazardous cargo (one primary, E6 or above, and one alternate, E5 or above). Regardless of the function performed, all HAZMAT employees require refresher training every 24 months.

Non-compliance poses a risk to leaders, their personnel, and the mission. Knowing disregard of specific legal and regulatory guidance could result in fines and/or incarceration depending upon the intent. Failure to manage training and certification timelines may result in delayed movement of hazardous materials compounding security concerns as well as loss of time, equipment and financial resources. Finally, and most importantly, non-compliance jeopardizes the safety of personnel and could result in loss of life. For more information contact the Defense Ammunition Center's HAZMAT Transportation Assistance Team at (501)-212-4775.

Mr. Stephen M. Hale
Supervisor, HAZMAT Transportation
Assistance Team



A convoy of HEMTT Tankers transports fuel during pre-deployment training.



AMMO-62

**TECHNICAL TRANSPORTATION OF
HAZARDOUS MATERIALS COURSE
9E-F58/322-F37 (MC)**

This 2-week course provides certification training as mandated by Public Law and DoD 4500.9-R for those individuals required to sign hazardous material (HAZMAT) transportation documentation.

The training is provided to personnel who perform duties in some phase of transportation of hazardous materials including shipment planning, equipment selection and inspection, shipment receiving or release, documentation, or any other aspect of traffic management. **Refresher training is required every two (2) years.**

Defense Ammunition Center (DAC) instructors conduct the training at multiple satellite training locations (STL) including, but not limited to:

- Fort Bliss, Texas
- Fort Bragg, North Carolina
- Fort Campbell, Kentucky
- Fort Carson, Colorado
- Fort Drum, New York
- Fort Hood, Texas
- Fort Polk, Louisiana
- Fort Riley, Kansas
- Fort Stewart, Georgia
- Joint Base Lewis McChord, Washington
- McAlester, Oklahoma
- National Guard Professional Education Center at Little Rock, Arkansas
- Schofield Barracks, Hawaii
- Vilseck, Germany

DAC STL instructors also conduct Mobile Training Team (MTT) missions to support training requests from all services, DLA, DoD Civilians, and DoD Contractors worldwide.

Visit the Army Training Requirements and Resources System ([ATRRS website](#)) for more information (Common Access Card required). Click on the course catalog button to access the search engine. Enter the course number **9E-F58/322-F37 (MC)** to view schedules.

Additional course information is available on the [DAC website](#). Contact your local training or ATRRS representative to enroll in the course.

Save the Date!

4 May

EOD Memorial Ceremony
Eglin Air Force Base, Florida

7-9 May

Sustainment Week
Fort Lee, Virginia

7 May

HoF Induction Ceremony
Ball Auditorium, Fort Lee, Virginia

9 May

Sustainment Ball
Virginia State University
Petersburg, Virginia

14 May

Ordnance Corps' Birthday
Worldwide!

29 May

Ordnance Quarterly Connect
Video-Teleconference
Broadcast LIVE from Fort Lee, Virginia





Army COOL for a Smoother Transition



Supporting service members in a successful transition to civilian life is an Army priority. Often, finding civilian employment is the most stressful part of that transition.

Translating military experience into language civilians understand can

be challenging, but industry-recognized credentials are one way of communicating your experience level to a prospective employer.

Army Credentialing Opportunities On-Line (COOL) provides service members with information on certifications and licenses related to their Military Occupational Specialty (MOS). Civilian certifications or licenses may make you more marketable to civilian employers and could put you ahead of others competing for the same job. You may think that your military experience and time in service

should be sufficient to qualify you for a civilian job in your specialty, but not having credentials where they are required could lead to a period of under-employment until you are able to meet the requirements. Obtaining credentials takes time so you should plan accordingly to complete the requirements prior to your transition.

It's never too early to pursue credentialing opportunities since its benefits are not limited to transitioning service members alone. For those continuing their military service, credentialing may increase job effectiveness, count toward self-development requirements, and improve promotion potential. Visit [Army COOL](#) for more information on the credentialing process and resources that can help.

SSG Ana M. Valencia
Career Manager



Air Traffic Control Equipment Upgrades

The U.S. Army Ordnance School, Ordnance Electronics Maintenance Training Department (OEMTD) Radio Aviation Control and Survivability Division (RACSD) is undergoing major upgrades to its training equipment: the Air Traffic Navigation, Integration and Coordination System (ATNAVICs).

The ATNAVICs is a highly mobile, self-contained system that provides Air Traffic Service (ATS) at designated airfields and landing sites. The ATNAVIC's operations and communication equipment include Tactical Airport Surveillance Radar (ASR) and Precision Approach Radar (PAR), Secondary Surveillance Radar/Identification Friend or Foe (SSR/IFF), and secure jam-resistant voice communications. The upgrades will replace legacy radios with state-of-the-art multi-band radios. In addition, selection panels, voice recorders, ASR and PAR signal data processors, power supplies, and interrogation equipment will also be updated.

The operational Army's ATNAVICs are expected to be fully retrofitted by March 2020; however, the institutional Army's upgrades are on track for completion by the end of April 2019. This is good news for the Army and for the graduates of our 94D10 Air Traffic Control Repairer course who will arrive at their first duty station prepared to conduct maintenance on the updated ATNAVICs equipment as the operational units receive them.

Mr. Anthony T. Ellington
Division Chief, RACSD/OEMTD



A student conducts operational startup procedures on an ATNAVICs as part of the 94D10 Air Traffic Control Equipment Repairer Course at Fort Gordon, Georgia.



M5A1 Stuart Light Tank with Hedgerow Cutter

On June 6, we commemorate the 75th anniversary of D-Day. As this day approaches, it is appropriate that we highlight an important aspect of tank warfare during the Normandy Campaign.

Just four days after landing, the allied invasion stalled only 25 miles from the beaches of Normandy; it remained stalled for weeks partially due to the hedgerows that lined the roads and fields. Many years earlier, rows of closely spaced shrubs had been planted as borders instead of fences. By 1944, the hedges had grown into impenetrable earthen walls of interlaced roots three feet thick and up to four feet high. The hedgerows, topped with large shrubs and small trees measuring four to five inches in diameter, greatly limited tank movement. When pushing through a hedgerow, the front of the tank rose up, exposing the underside and making it extremely vulnerable to enemy fire. With the guns of the tank pointing skyward, the tank was totally defenseless against German forces.

Initially, combat engineers were sent to blast holes in the hedgerows, but they were stopped by German Infantry fire. Leaders at the highest levels of the Army could find no solution, so the commanding officer of the 102nd Cavalry Reconnaissance Squadron sought suggestions from his non-commissioned officers. When Sergeant Curtis G. Culin Jr., a light tank commander, noticed some German iron roadblocks nearby, he suggested attaching sharpened pieces of the iron to their tanks to dig through the hedgerows. The



Ordnance Soldiers welding hedgerow cutters, June 1944.

first hedgerow cutter consisted of four flanges welded to a crossbar and attached to the front of a tank. When the tank pushed through a section of hedgerow, the hedgerow cutter dug into the roots, stopping the tank from rising up and exposing its underside. Any German machine gun position behind the hedgerow was rolled over, and the wide gap left behind allowed American forces to easily pass through. The problem was solved.

After witnessing a demonstration, General Omar Bradley ordered the construction of 500 hedgerow cutters. The iron obstacles were collected and Ordnance Soldiers, working around the clock, welded them together, producing over 500 hedgerow cutters in just two weeks. By July 24, every tank was outfitted with a hedgerow cutter, and at dawn the next day, the allied invasion was on the move. The device caught the Germans completely by surprise, allowing the American Army to successfully break through the German lines at St. Lo.

Sergeant Culin and three others from his unit were awarded the Legion of Merit for his invention. In a meeting with General Eisenhower after the war, Culin, a humble man, insisted that credit for the hedgerow cutter shouldn't go to him alone. Eisenhower replied, "...of course we had the kind of Army in which a really good idea can quickly rise. But remember that someone has to have the idea. And that man was you!"

Culin's hedgerow cutter, an excellent example of innovation and field expedient modification of equipment in a combat zone, allowed the allied forces the freedom of movement to inflict a major defeat on the German Army.



The M5A1 Stuart Tank with hedgerow cutter attached, September 1944.

Mr. James H. Blankenship
Director, Ordnance Training and Heritage Center



ORDNANCE CRUCIBLE

The United States Army Ordnance Corps
is pleased to announce
the dates and locations for the
2019 United States Army Ordnance Crucible

Explosive Ordnance Disposal Team of the Year
July 22-26, 2019
Fort A.P. Hill, Virginia

Ammunition Transfer Holding Point Team of the Year
September 9-13, 2019
Fort Pickett, Virginia

Additional information, memorandums of instruction,
and registration forms can be found on the Ordnance Crucible website
http://www.goordnance.army.mil/OD_CRUCIBLE/



Soldiers respond to EOD (left) and ATHP (right) training scenarios during the 2018 U.S. Army Ordnance Crucible.