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CRANE ARMY AMMUNITION ACTIVITY

# CRANE Quarterly

MAGAZINE



## In This Issue:

QASAS VS MEQ

REPORTING QUALITY  
PROBLEMS

CRANE ARMY'S LINES  
OF EFFORT - HOW IT  
IMPACTS WHAT WE DO



# THE QUALITY ISSUE

LOGISTICS MANUFACTURING RENOVATION SURVEILLANCE DEMILITARIZATION

# Commander's Comments



Team Crane Army,

I cannot believe that we are already into the second quarter of the fiscal year looking ahead to a busy spring. I have had a chance to get out and meet with many of you and observed you while you were doing your jobs. I can't say enough about the enthusiasm and energy you bring to the table every day. I saw it most recently when "old man winter" hit Indiana. When people see that Crane Army employees are committed to accomplishing their missions no matter what the conditions, it sends the message that we are truly giving our best. It isn't hard to figure out why we are committed to becoming the best ammo depot in the Army. When people talk about providing readiness to the Warfighter - they are defining what each and every one of you are doing on a daily basis.

I want to challenge you to take your passion for professional excellence to another level by thinking about quality. Usually when I mention quality people assume I am simply talking about our inspectors checking our products that are rolling off the line. This is an important part of the equation, but far from the totality of the subject. Quality products off of the production line are important - every bomb and bullet has to function every time or else our uniformed men and women might not come home - but quality is also important in all the little things we do collectively every day. And it is a standard that every single one of us must meet. You who are on the production line, the inspection bay, and the loading dock - you know when something doesn't "feel" right. I empower you as Army professionals who are experts in the explosives and munitions business to act when things aren't quite right. I need you to pay attention to what is happening and let your supervisor know when there is a problem. Just as every Crane Army employee is a safety inspector, every person must also be a quality assessor. If you see something - say something!

  
Col. Michael P. Garlington

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The editorial content of the Crane Quarterly is the responsibility of the Public Affairs Office at CAAA.

# FINDING THE BEST



In an effort to find the best talent, Crane Army sends its employees to various career fairs and workshops - allowing those interested in CAAA a chance to talk to the people who do the work. Pictured here Lara Zilafro, Pyrotechnics Commodity Manager, and Trish Staggs, Supervisory Quality Assurance Specialist, traveled to Purdue University to talk to potential

## Mailbag

**Q.** Where can people find out the latest information on employment at CAAA?

**A:** Information about working at Crane Army, including job postings, can be found on the official CAAA public web site's career's page at <http://www.crane.army.mil/pa/careers.html>

CAAA welcomes feedback from readers. Feedback can be submitted via email and must include sender's name, phone number and valid email address. Send feedback emails to: [usarmy.crane.jmc.mbx.caaa-cdr-site@mail.mil](mailto:usarmy.crane.jmc.mbx.caaa-cdr-site@mail.mil).

Postal address: CAAA Newsletter, ATTN: JMCN-PA, 300 Highway 361, Crane, Indiana 47522-5099.

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Cover photo: A Crane Army employee works on the illumination candle production line.

# Rapid Fire

## LEMC Team Supports USS Truman

1



In support of an urgent request from the U.S. Navy to upgrade Advanced Anti-Radiation Guided Missiles on board the USS Truman while at port, Letterkenny Munitions Center's Joint Missile Systems' Mobile Maintenance team traveled to the ship December 18-21.

The team accomplished the required upgrades within one week of receiving notification from the USN's Program Office.

LEMC's completion of the required upgrades while the USS Truman was at port prevented AARGM system downtime on board the ship and ensured USN munitions readiness.

## NEWS & NOTES

Overheard

2



SECRETARY of the ARMY  
MARK ESPER



Improving readiness is the benchmark for everything we do; it should guide our decision-making.



3

## Providing Readiness Support for PACOM

A mobile maintenance team comprised of Precision Fires Rocket and Missile Systems, Project Office personnel and LEMC technicians, travelled to the Republic of Korea to perform testing, inspection, depot and field-level maintenance to Army Tactical Missile Systems onsite, maintaining stockpile reliability and improving readiness levels.

LEMC delivered in-theatre support, prevented unnecessary down time and significantly reduced transportation expenses, thus delivering critical munitions readiness at the speed of operations for commanders in-theatre.

This maintenance support is critical in maintaining and delivering munitions readiness to the point of need, ensuring our nation's commanders with a full range of military options within their AORs. LEMC's repair efforts deliver a significant cost avoidance while increasing critical munitions readiness.



# Recon



Wintery weather did not stop Crane Army employees from making sure the Warfighters received munitions and equipment on time. Crews faced a variety of challenges including freezing air hose lines, clearing covered rail line switches and plowing the roads to various magazines. Despite the snow, sleet, ice and freezing temperatures, CAAA Depot Operations personnel safely executed multiple ammunition outloads.



## LINES OF EFFORT

Throughout the year, Crane Army leaders develop **Lines of Effort** for upcoming fiscal years to focus their time and resources on specific opportunities that will create a change in the workforce and overall warfighter readiness. The lines of effort identified for fiscal years 2018 and 2019 are:

### READINESS PEOPLE FUTURE FORCE

#### READINESS

- Supply Chain Management Advances
- LMP Data Quality/Quantity
- Program Management Advances
- ISO 450001 Safety Certification
- Rate Reduction
- In-Process Quality Improvement
- Preventative / Predictive Maintenance
- Receiving / Inspection Facility
- Command Supply Discipline Program
- Process Mapping
- Rail Holding Yard
- Plating Shop
- Continuous Improvement
- Crane Flexible Manufacturing Complex (CFMC)
- Expense Visibility



## PEOPLE

- SafeStart
- Lock Out / Tag Out
- Inspired Innovative Thinking
- Leader Development
- Mentorship
- Onboarding Improvement
- Pathways Program
- Computer Skills Training
- Workforce Rightsizing
- Occupational Health
- Performance Based Evaluations (DPMAP)
- Culture Maturation
- Succession Planning

## FUTURE FORCE

- Depot Ops Tablet Initiative
- Wireless Inventory
- Drone Security / Delivery
- Smart Weapon Manufacturing
- Closed Cycle Demil Processes
- Academic Partnerships
- Rapid Prototyping
- Business Development
- Communication Strategy
- Recycling Program
- Facilities Modernization
- Continuous Improvement



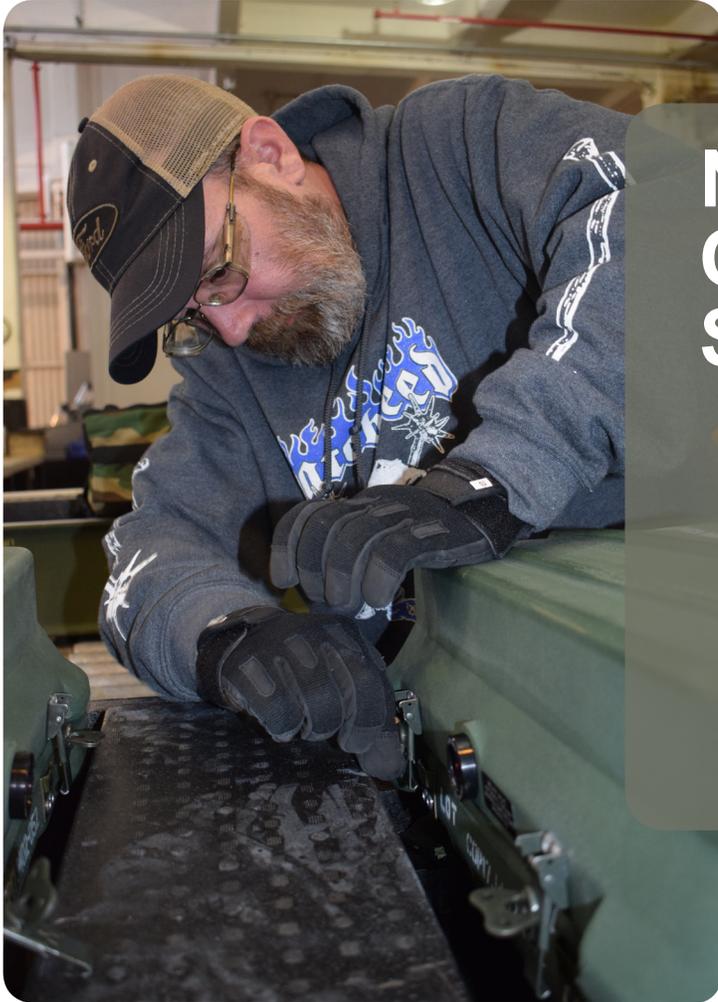
### BRAND PROMISE

"Only Our Best  
For The World's Best"

### SHARED VISION

To be the BEST ammo  
depot in the world!





# NOT ALL QUALITY IS THE SAME...

## QASAS VS MEQ

Quality is second only to safety at Crane Army. Experienced QASAS and MEQ employees help maintain CAAA's high standards through quality assurance. QASAS, or Quality Assurance Specialists Ammunition Surveillance, guarantee that all munitions leaving Crane Army are serviceable and will function properly the first time, every time for the Warfighter. QASAS focuses on munitions Crane Army ships or stores here. Conversely, Manufacturing and Engineering Quality workers ensure that all products and munitions built at CAAA meet the brand promise, "Only Our Best for the World's Best." MEQ employees monitor CAAA's operations and test, inspect and investigate samples of all Crane Army products to verify that each item meets strict quality standards. This includes authenticating the condition of raw materials shipped to Crane for production use and confirming the proper handling of waste generated from product manufacturing. Both QASAS and MEQ employees are vital to Crane Army's functions.

Despite the similarities of QASAS and MEQ missions, training for these specialties is incredibly different. QASAS personnel attend a one-year school that immerses aspiring QASAS in all types of ammunition used by the Department of Defense. After completing the academic component, QASAS-in-training intern for another year under the supervision of veteran QASAS staff.

All QASAS are proud of the support they provide the Warfighter, but Crane stands out even among different QASAS operations in the Department of Defense. Rodney White, a Crane Army QASAS with 11 years' experience, thinks CAAA's program is one of the best.

"There's a better standard for quality here," White said. "Everyone at Crane wants to do the right thing, and people are accepting of change. At other depots, I've seen a lot of the 'This is the way we've always done it' mindset. We don't have that here."

"...we have ethical people who want to provide high quality products to the Warfighter. This is essential."

-Cindy Colvin,  
Nondestructive Testing  
Supervisor

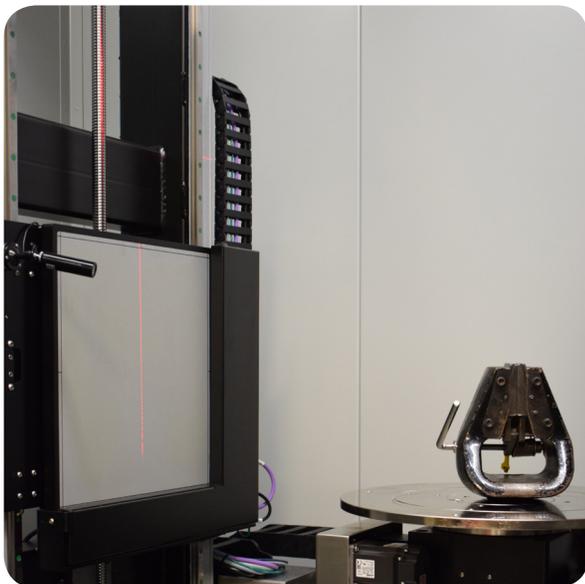
See QUALITY, page 14



## QUALITY SCANS

The new X-5000 CT/DR is a 3D imaging machine capable of taking x-rays of ammunition and components, verifying foreign material and identifying defects the naked eye cannot see. The system scans and breaks down interior components so operators can identify defects not easily visible. Nondestructive Tester, Brandon Inman says the system allows operators to look at the object internally.

“For instance, if we have an item that is known to have a piece of foreign material (something not intended to be part of the round) we can run a scan on it and once it is complete, we can look inside the unit and see what the foreign object is,” Inman said.



The system performs two basic functions, digital radiography and 3D computed tomography.

### Digital Radiography

Digital Radiography is a 2D inspection process that allows the operator to view components instead of waiting for a piece of film to be developed. DR also screens and inspects ammunition or its components for various defects.

“This allows us to use a digital X-ray detector verses X-ray film,” Inman said. “This is great because you can make changes as you take the X-ray itself instead of making numerous attempts to get the right image on an object,” Inman said.

### 3D Computed Tomography

According to Inman, the other function, CT, is the most critical portion of the machine because it provides operators the ability to view and inspect both external and internal structures of a given component in open air. The machine can take thousands of small images in 2D and reconstruct them in 3D format, allowing operators to dissect a component by sections.

“With this capability, interpretation errors are eliminated and we can note 100 percent of the defects,” Inman said.

# Quality Starts with You

See something, say something. Most of us have heard that before (usually with security or safety), but at Crane Army that saying could potentially save lives, money and resources. When it comes to quality control with munitions, it is extremely important everything functions properly and is tested to ensure it functions when Warfighters depend on it.

Quality assurance does not always mean waiting for an inspection or performance evaluation, there is a human element that can be just as important.

"Humans have the innate ability to be very perceptive and we can pick up on things even when we don't know something may be wrong," Lara Zilafro, Pyrotechnics Commodity Manager, said. "It's a feeling that something just isn't right."

Using the human element allows leaders to get ahead of a potential issue before it leads to something worse. For Bryan Baxter, an explosives handler, seeing a slight change in canisters raised an important question.

Baxter worked for pyrotechnics on fiberboard liners. The fiberboard liner is a cardboard tube that is staked inside the metal canister where pyro composition is pressed in to. This staked liner is key for the pyro comp to stay inside the canister when the round is fired. There are specific dimensions for the liners and if the liner is not compliant, the candle is no longer compliant. Being able to detect noncompliant liners is an important part of candle production.

"Early detection is key," Zilafro said. "It is much cheaper to screen out noncompliant liners than it is to scrap noncompliant candles."

## Keeping an Eye Out for Trouble

Baxter worked the line for three weeks and understood the specific requirements of how the canister and tubes fit together.

"The tubes have to be smooth and right up to the top of the canister," Baxter said. "When I worked this specific batch, I kept looking at them but they were just a hair short and I knew it just wasn't right."

Baxter immediately informed his supervisor who verified the tubes were short and stopped using that particular batch until they could figure out a solution.

"It was a really great catch for us," Josh Shipman, a mechanical engineer for the Manufacturing and Engineering Directorate, said. "We learned there is a potential to receive tubes that meet the drawing requirements, but are not acceptable for use. As a result this is now something that we will be inspecting for in future procurements."

One constraint using the human element is the fact that a person would need to know what normal is. New employees may not have enough experience at first. However, Zilafro pointed out that an employee could potentially know the process well enough to be noticing differences in a day.

"Honestly, if you're running a particular piece of equipment in the morning and then in the afternoon it sounds different, you can question that," Zilafro said. "We just have to be really careful that we positively reinforce the questioning behavior because if we don't positively reinforce the questions, questions won't be asked and we could be missing out on a huge opportunity."

The work done at Crane Army is inherently dangerous and extremely important for Warfighter readiness. In any job here it is important to remember that if you see a problem, say something.



See a Problem

Say Something

Make A Difference

## Trusting That Your Nose Knows Best

Dennis Wagler works in pyrotechnics on the vacuum line, and has experience working in the final steps of pressing candles. At the end of the press line, pyro comp that "flashes" from under the ignition disk as the candle is pressed. An operator works at the end of the press line cleaning up this flashing, which is then vacuumed off the top of the candle.

While cleaning the vacuum hose during that final step, he noticed a strange odor coming from the hose. Wagler immediately knew something was not right.

"As soon as I started cleaning and got some comp knocked out of hose, it just smelled like straight ammonia," Wagler said. "In five years I've never smelled that before. It also looked a different color than it normally does."

Josh Shipman, mechanical engineer for the manufacturing and engineering directorate, explained the prolonged exposure of scrap composition in the hose to the moisture was likely the cause of the odor. Pyrotechnic teams will work with CAAA's chemist to confirm the source and cause. With that information they can make efforts to mitigate or eliminate those issues in the future.

"It was good that this was brought to the supervisor's attention, Shipman said. "It made us aware of an issue that warrants further investigation."



### Did you know?

"Comp" is short for pyrotechnic composition. A pyrotechnic composition is the mixture of chemicals that is burned to produce the desired effect such as visible light, infrared light, fire and heat to initiate another composition, or a time delay before another composition initiates.

-Lara Zilafro

Pyrotechnics Commodity Manager

## Leadership Guidance

-Col. Garlington



Speaking up can be intimidating for some, so I want to address another integral aspect of a top-shelf quality culture - the ability to listen to the warning. Very often workers don't say something because they are afraid the idea won't be well received or they may possibly be "blown off." I need leaders who understand that listening to the ideas that generate from the shop floor about quality are a golden opportunity to get better. Sometimes that means being humble enough to accept that you as a supervisor don't always have the perfect solution. I learned that first hand early in my career.

It was a winter training rotation in Hohenfels, Germany, and I was a young 2nd Lieutenant getting my tank platoon ready for maneuvers. I was trying to pitch in and "lead from the front,"

helping to get my tank ready to move out by removing the rain tarp from on top by myself. It was cold and windy and I was fighting this large, green tarp trying to manhandle into submission when a Private First Class yelled up at me, "Hey [sir] (not the word he used) where's your three-points-of-contact!?!?"

**I need leaders who understand that listening to the ideas that generate from the shop floor about quality are a golden opportunity to get better.**

Despite his methods (which I do not endorse!) his message was loud and clear. Three points of contact is a safety measure to prevent falling off of the top surface of a combat vehicle, and I knew better, however, I neglected the norm in a rush to be ready faster. A

mistake that could have caused me personal injury or damage to government equipment due to my carelessness. I never forgot that the actions of that PFC were more like a 2LT than I had displayed, and vowed that I would always listen to my subordinates' recommendations. I understood then as I do now that I do not hold the patent on good ideas!

# A PATHWAY TO SUCCESS



## CAAA's Internship Program Boosts Workforce

Readiness is a major focus of Crane Army, and that includes the readiness of the CAAA workforce. To draw in new talent, Crane Army employs the Pathways Internship Program, which offers internships in the federal government and is open to students ranging from high school through post graduate school, as well as recent graduates.

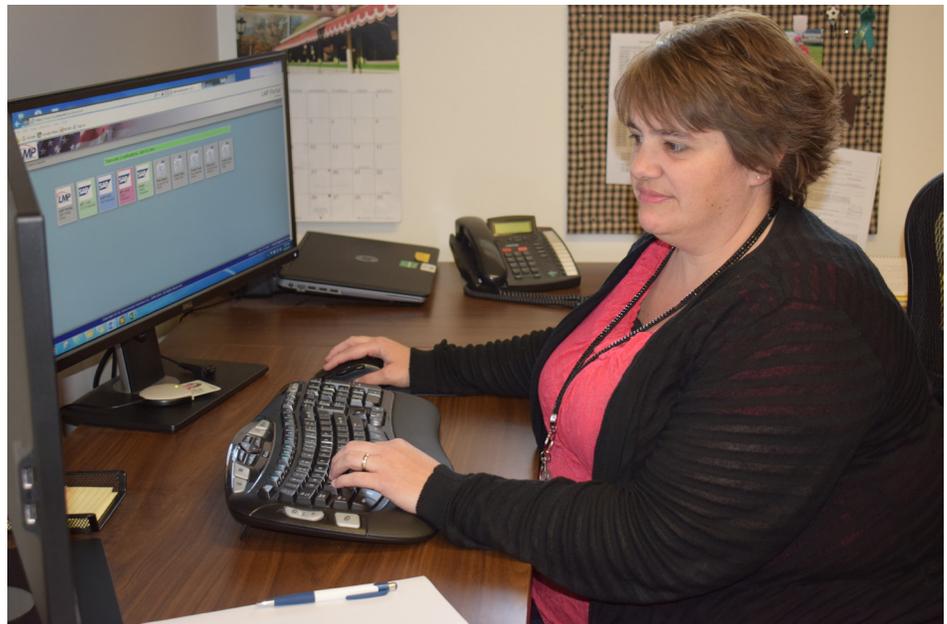
CAAA focuses most of its Pathways recruiting efforts within 200 miles of NSA Crane, but does recruit from universities that teach specialized skills vital to Crane Army, such as New Mexico Tech's Explosive Engineering Program. Hiring interns allows CAAA to succession plan and creates a talent pool so Crane Army can fill positions more quickly than traditional hiring methods allow.

"We bring in younger students and have them work with older, more knowledgeable employees so that the students can learn on-the-job," Aaron Siek, a management analyst, said. "Eventually we'll be able to transition the interns smoothly into that full-time position." Pathways is a paid internship program. Students must work 640 hours for the organization and obtain their degree before converting to regular

employment without further competition.

"The internship program at Crane has been active for two years and we've been able to convert 12 of the 13 interns to either permanent or term positions through the Pathways initiative," Siek said.

Ginger Shumar, a management analyst with the Depot Operations Directorate, was a Pathways intern who completed the program and now works full-time for Crane Army. She said the program provided multiple opportunities to learn about CAAA and its mission.



Former CAAA Intern Ginger Shumar works full-time as a management analyst for Depot Operations.

"As an intern, I have been afforded a wide variety of opportunities that have provided an overall picture of what Crane Army is really about," Shumar said. "If I had started in one certain position, I might not have had those same opportunities."

The process can seem lengthy, but Shumar said it helps build character.

"With hard work and a lot of patience, it can pay off," Shumar said. "I have found people to work with that are like family; people who make coming to work something that I want to do every day."

The Pathways Internship Program has a unique ability to not only build relationships between the intern and the supervisor, but also with academic organizations.

"We've also fostered connections with academic institutions, which helps increase the potential applicant pool and provides access to resources such as research and development and specialized training opportunities," Siek said.

According to Siek, CAAA's main recruiting focuses are electrical and mechanical engineers, as well as professional positions such as auditors and lawyers. In Indiana, CAAA recruits at Indiana University, Purdue University, the University of Evansville, Indiana State University, and Rose-Hulman Institute of Technology. "I'd like to see the Pathways internships program continuously utilized, and made permanent so we can always have the ability to bring students here and let them experience what federal employment and careers at Crane are like," Siek said.



## RISK VS REWARD

Evan Prichard, a native of Socorro, New Mexico, hired on as a mechanical engineer at Crane Army through the Pathways Internship Program. He attended New Mexico Tech for college and learned about Crane during a job fair at his school.

"During a career fair, there was a person from Crane who had set up a booth," Prichard said. "I had never even heard of the place before."

Crane Army attracted Prichard because of his background in explosives and munitions. For the past five years he worked at the Energetic Materials Research and Testing Center.

Toward the end of his studies, Prichard applied for the various internships through USAJOBS, Crane Army one of them. "When I went to school I told myself that I wouldn't care where I ended up going for a job," Prichard said. "There were certain companies that I wanted to work at, but I also know that you have to make the best of what you can get. If I liked where I worked then I would stay, if not then I would put in some time and see what other opportunities I could find."

Prichard accepted an internship at Crane Army and moved across the country. He hoped the internship would lead to a full-time position.

"I took a risk," Prichard said. "But it was a fairly confident risk because I felt prepared for the job, but it was still a bit of a risk."

According to Prichard, a risk that turned out to be a reward in the end. He said his education prepared him for the internship, along with his experience as a project manager. After his internship ended, he earned a full-time mechanical engineer position with Manufacturing and Engineering Demilitarization. His job focuses on analyzing drawings of munitions and creating methods to safely take them apart and destroy them.

"I really like my job here," Prichard, said. "I like the people I work with and I like that the projects change most of the time. Each project deals with a new munition and requires new methods."

Crane Army provides internship opportunities and pathways to civilian Army careers for a variety of positions. More information is available at <http://www.crane.army.mil/pa/careers.html>.

At Crane, QASAS fall under Depot Operations and oversee all aspects of ammunition inspection. QASAS manage the ammunition inspection bays, working with ammunition inspector supervisors, also referred to as WG-10s, and ammunition inspectors to conduct hands-on inspections of ammunition.

These inspections involve far more than checking boxes. QASAS, WG-10s, and ammunition inspectors are on the line every day opening boxes of munitions, verifying that all requisite parts are present and in good condition, determining if the munitions are serviceable, repacking everything and closing the boxes back up. They work carefully and efficiently with the knowledge that their fellow Americans' lives depend on their efforts and expertise.

QASAS and WG-10s have similar duties, QASAS just have more classroom training. The shipping buildings have both QASAS and WG-10s verifying that all ammo is properly loaded and shipped out of Crane, while those in receiving verify all incoming ammunition was transported correctly and is undamaged. QASAS and WG-10s even work at the demolition range and ammunition burning grounds to ensure the safe destruction of materials. Regardless of their building assignments, all QASAS and WG-10s face different challenges each day and must be capable of adapting to any situation involving ammunition.

Many MEQ employees start out as ordnance equipment inspectors and nondestructive testers, those who run tests on samples of Crane Army products to confirm quality. Each type of item requires different tests based on function. Flares are burned to check the length of burn time, and some munitions are x-rayed to prove all components are present.

Crane Army relies on the hard work of MEQ employees to provide superior munitions. Nondestructive Testing Supervisor Cindy Colvin lauded her MEQ colleagues for just that.

"In MEQ, we have ethical people who want to provide high quality products to the Warfighter," she said. "This is essential."

Instead of studying the intricacies of munitions, many NDT workers attend radiography (x-ray) and dye penetrant school and achieve different stages of certification. Each of the three levels involve increasing amounts of coursework (40 hours of school for each step) and on-the-job training and experience provided by their supervisors and Quality Assurance Specialists, who also guide ordnance equipment inspectors. In addition, Quality Assurance Specialists monitor production lines, review inspection data, and conduct oversight. Regardless of the differences of their day-to-day work, the overall goal of Crane Army's quality professionals is the same. Deanna Sorrells, an ammunition inspector, stated it succinctly.

"We're very mission-driven," Sorrells said. "We all know who the end user is, and we take a lot of pride in our work."



# Serving with the Warfighter

While many employees in different fields deploy overseas, QASAS personnel deploy the most often among the workforce. Rodney White, a CAAA QASAS, recently returned home after a six-month assignment to Bagram Air Force Base, Afghanistan. With 11 years of experience as a QASAS, Rodney knows just how important quality munitions are to the Warfighter, but getting an up-close view left a powerful impression.

“When I was deployed, I was physically handing ammunition to the Soldiers who were actually going to use it. For 12 hours a day, 7 days a week, I was interacting with the people whose lives depend on these munitions doing what they were built to do,” White said.

In Afghanistan, White and two other QASAS worked with contractors handling all munitions issues and turn-ins for Bagram Air Force Base and the surrounding Forward Operating Bases. Only QASAS personnel conducted inspections; contractors operated as material handlers.



QASAS are not required to go overseas but those who do volunteer or willingly accept assignments, often out of a sense of duty. White's former supervisor, a QASAS who encouraged White to become a QASAS himself, contacted him early last year to gauge White's interest in a six-month tour.

“When my old boss called me and asked me to deploy to Bagram for half a year, I told him I'd have to call him back the next day,” White said. “My daughter was getting married during that time period. I asked her if she'd postpone the wedding, and she said she would. A month later, I was in Afghanistan.”

White returned home in October 2017 and quickly went back to work at Crane Army.



## JMC QUALITY DIRECTOR

Joint Munitions Command is responsible for the management of the ammunition production base, storage, receipt, issue, maintenance, and demilitarization of ammunition stock. The mission of JMC is to execute acquisition support, readiness, and logistics sustainment to provide effective, available, and value added munitions for the joint Warfighter. Through careful coordination, JMC ensures that DoD Soldiers, Sailors Airmen, and Marines receive the highest QUALITY ammunition, on time and where needed.

Crane Army is a key component of the organic industrial base and focuses on making sure the Warfighter has the highest quality munitions, on time, every time. JMC's Director of Quality, Celia Hadden, recently visited CAAA to learn more about our quality process. She understands

the importance of quality and shared what she believes every Crane employee should know about QUALITY.

“Every employee should understand the definition of quality, which I believe is adherence to requirements. It's imperative that everyone always does the right thing,” Hadden said.

Hadden also commented on CAAA's brand promise “Only Our Best for the World's Best,” and how it emphasizes quality. She said the employees at CAAA are known for their focus on quality and challenged them to never let that go.



**“The surest way to prevent war is to be prepared to win one.”**

**- Defense Secretary James Mattis**

**Only Our Best For The World's Best**

[www.crane.army.mil](http://www.crane.army.mil)