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'So others may live'

New explosive ordnance disposal technology complex aims to save lives



Dedication ceremony for the Master Sergeant Alan Richwald Explosive Ordnance Disposal Disassembly and Robotics Complex. Pictured from left are David Castellano, executive director of the Munitions Engineering and Technology Center; Chris J. Grassano, director of the U.S. Army Combat Capabilities Development Command Armaments Center; Congresswoman Mikie Sherill (NJ-11); Wendy Pavlat (Richwald's daughter); Sister MaryAnn Miranda Richwald; Arthur David Richwald; Maj. Gen. Heidi J. Hoyle, Director of Operations G-43/5/7, Office of the Deputy Chief of Staff, G-4; and Brig. Gen. John T. Reim, Commanding General Picatinny Arsenal, and Joint Program Executive Officer Armaments and Ammunition. Credit: Picatinny Arsenal Public Affairs.

‘So others may live’

New explosive ordnance disposal technology complex aims to save lives

By JoAnne Castagna

Master Sergeant (Retired) Alan Richwald was a veteran who fought for the United States and also for his fellow soldiers by becoming an expert in how to render safe unexploded or live foreign ordnance on the battlefield to protect soldiers. He researched, wrote books and shared his knowledge with many agencies and military services.

Recently, a new complex at Picatinny Arsenal named after him aims to operate in the spirit of his motto: “So others may live.”

The Master Sergeant Alan Richwald Explosive Ordnance Disposal Disassembly and Robotics Complex was designed and constructed by The US Army Corps of Engineers, New York District. The complex is the first of its kind in the Army to research and develop ways (including



Close up of dedication ceremony plaque. Credit: Picatinny Arsenal Public Affairs.



EOD DISASSEMBLY AND ROBOTICS COMPLEX

THIS COMPLEX IS DEDICATED TO MSG (RET.) ALAN RICHWALD



MSG (RETIRED) ALAN RICHWALD WAS BORN IN QUEENS, NEW YORK, IN 1938 AND ENLISTED IN THE ARMY IN 1954. HE COMPLETED EOD SCHOOL IN 1957 AND CONTINUOUSLY SERVED THE U.S. ARMY AS AN EOD TECHNICIAN, BOTH AS A SOLDIER THEN CIVILIAN, FOR A COMBINED TOTAL OF 59 YEARS. MSG RICHWALD'S EARLY CAREER LEAD HIM FROM FT. STEWART, GEORGIA, TO KOREA, AND THEN TO VIETNAM. HE RETURNED TO FT. STEWART FOR A SECOND TOUR, THEN WENT ON TO GERMANY WHERE HE PARTICIPATED IN ONE OF THE FIRST NATO EOD CLASSES. DUE TO HIS EXTENSIVE KNOWLEDGE OF AMMUNITION, HE WAS ASKED TO RETURN SEVERAL TIMES AS A GUEST INSTRUCTOR. THE CONTACTS HE MADE IN GERMANY ALLOWED HIM ACCESS TO FIRST-SEEN AMMUNITION BEING USED BY NATO. HE WAS ABLE TO PARLAY THIS INTO INFORMATION FOR USE BY THE UNITED STATES.

AS A RESULT OF HIS OUTSTANDING SCORES ON EOD PROFICIENCY TESTING, MSG RICHWALD WAS GIVEN THE OPPORTUNITY TO GO TO PICATINNY ARSENAL, NEW JERSEY, WHERE HE ESTABLISHED THE EOD FOREIGN ORDNANCE SECTION. HERE, HE WAS INSTRUMENTAL IN THE AMMUNITION RECOVERY AND EXPLOITATION PROGRAM. HIS EXTENSIVE KNOWLEDGE OF FOREIGN AMMUNITION WAS ALSO RECOGNIZED BY SOF AND THE INTELLIGENCE COMMUNITY WHO FREQUENTLY REQUESTED HIS ASSISTANCE. ON RETIRING AFTER 24 YEARS OF MILITARY SERVICE, ALAN REMAINED IN THE SAME POSITION IN THE FOREIGN ORDNANCE SECTION AND CONTINUED THIS WORK FOR THE NEXT 35 YEARS AS AN ARMY CIVILIAN. HIS DEDICATION RESULTED IN OVER 1000 EOD PUBLICATIONS, INCLUDING THE 60-SERIES PUBLICATIONS, ORDNANCE IDENTIFICATION COUNTRY GUIDES FOR FORMER YUGOSLAVIA, IRAQ, AFGHANISTAN AND KOREA, AND THE HIGH-RISK MUNITIONS HANDBOOK. MANY OF THESE PUBLICATIONS COVERED ITEMS HE PERSONALLY COVERED. HE WAS RECOGNIZED AS A SUBJECT MATTER EXPERT IN FOREIGN ORDNANCE FUNCTIONING AS WELL AS MECHANICAL DESIGN, ARMING, FUNCTIONING AND DEFEAT.

THROUGHOUT HIS CAREER, MSG RICHWALD WAS DIRECTLY OR INDIRECTLY INVOLVED WITH TRAINING VIRTUALLY 100% OF ALL MILITARY EOD PERSONNEL THROUGH THE DEVELOPMENT OF CURRICULUM, TRAINING ORDNANCE AND TECHNICAL DOCUMENTS. IN VIETNAM, HE STARTED THE LANDMINE AND BOOBYTRAP CLASS FOR THE 1ST CAVALRY DIVISION WHERE HE TRAINED THOUSANDS OF SERVICEMEN ON THE INHERENT HAZARDS. AT PICATINNY ARSENAL, HE INSTRUCTED PRE-DEPLOYMENT TRAINING TEAMS OF CONFLICT AROUND THE WORLD, INCLUDING BOSNIA, IRAQ AND AFGHANISTAN. DURING DESERT STORM, HE WAS ABLE FOR BRIEFING ALL PARTICIPATING EOD UNITS ON THE THREAT IN IRAQ AND EVENTUALLY DEPLOYED TO IRAQ TO SUPPORT THESE TROOPS.

MSG RICHWALD HOLDS PATENTS FOR THREE EOD SPECIFIC TOOLS, WHICH INCLUDES THE SMALL CALIBER DEARMER USED TO DEFEAT IEDS AND ANTI-PERSONNEL MINE FUZES.

MSG RICHWALD WAS INDUCTED INTO THE U.S. ARMY ORDNANCE CORPS HALL OF FAME.

using robotic technology) to render safe live foreign ordnance on the battlefield to protect soldiers. This includes those responsible for recovering them and those performing missions down range.

Former District Commander Col. Matthew Luzzatto says the complex highlights the diversity of missions the Army serves. "As a District, we provide support to the military. It's not just barracks and airfields: It's that unique capability we have to help protect soldier's lives."

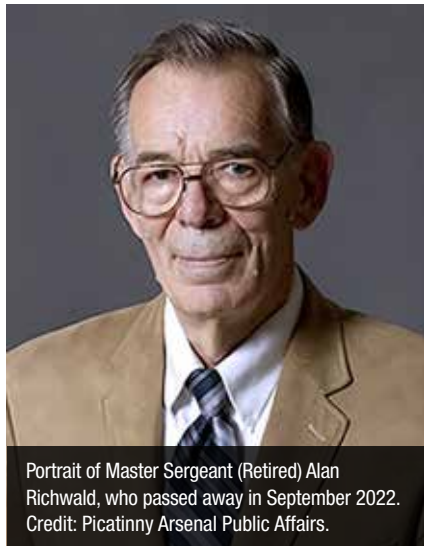
The Picatinny Arsenal Army installation sits on more than 6,000 acres in Morris County, New Jersey. There, 6,000 scientists, engineers and support personnel have the unique responsibility of developing virtually all of the Army's weapons. To support this mission, the Army Corps was asked to create the new complex.

This was done in collaboration with the Baltimore District, US Army Corps of Engineers, New Jersey Department of Environmental Protection, Picatinny Enhancement Coalition, contractor Mason and Hanger Group Inc. of Lexington, Kentucky, and contractor Benard Associates of Wayne, New Jersey.

The new state-of-the-art complex has three functions, which includes a 10,234-square-foot concrete facility that uses specialized equipment to safely disassemble and analyze conventional foreign ordnance such as grenades and landmines; a 10,040-square-foot robotics building that is testing, researching and developing robotic devices to retrieve explosives from battlefields; and five earth-covered concrete ordnance-storage magazines, covering 6,000 square feet of land, that are designed to contain an explosion within a designated area.

Not only will this complex work to save soldier lives, but it was constructed with robust features to make it a safe work environment for the personnel performing the research and development.

Brent Donahue, US Army Combat Capabilities Development Command, Armaments



Portrait of Master Sergeant (Retired) Alan Richwald, who passed away in September 2022. Credit: Picatinny Arsenal Public Affairs.

According to the Wounded Warrior Project's Annual Warrior Survey, 84.2% of Wounded Warrior Project Warriors reported being injured during military service as a result of a number of events including blast or explosions.

Center, Picatinny Arsenal says the goal of his team is to make as many operations related to the explosive ordnance disposal mission remote. This happens often, with the use of robots that can be sent downrange instead of a person.

"Our priority is reducing or eliminating the amount of time an actual person has to be within range of the explosive hazard," Donahue says. "The work from this complex will help to save the lives of soldiers in two ways. First, the complex will be used to engineer and test robotic systems which will lessen the number of times trained explosive ordnance disposal soldiers will have to physically approach explosive hazards. Second, the more explosive hazards we can detect and render safe remotely on the battlefield, the more soldiers we will save from unexpected explosions."

The work this complex is performing is extremely important to the Army. According to the [Wounded Warrior Project's Annual Warrior Survey](#), 84.2% of Wounded Warrior Project Warriors reported being injured during military service as a result of a number of events including blast or explosions. In addition, 73.2% of these individuals experienced head-related trauma immediately following these events.

The Army Corps received a taste of what soldier's deal with on the battlefield. While excavating during the project, workers discovered unexploded ordnance. The project was halted and explosive ordnance disposal professionals from the Army Corps' Baltimore District were called in to safely remove them.

This didn't come as a complete surprise to the project team because years ago the Arsenal was a major producer of weapons for World War I and World War II. "It was sort of a reminder of the importance of why we were building this facility," says Andrew Andreeko, project manager, New York District, US Army Corps of Engineers.

Richwald who has passed, devoted nearly 60 years of his life to developing ways to defeat and neutralize the hazards presented by live ordnance. This included traveling to dangerous war zones such as Bosnia, Iraq, and Afghanistan and personally recovering some of these explosives. The engineers at Picatinny believe he would be proud of this new complex that is using the latest robotic technology to make explosive recovery even safer for the men and women in uniform that are protecting the United States. **FC**