# THE RUGGED BRIGADE'S IMPACT ON THE DEFENSE CBRN RESPONSE FORCE:

**READY TO RESPOND TO CONUS CBRN DISASTERS** 



## ENGINEER RELEVANCE AND HISTORY

Engineers have always been the problem solvers of the battlefield and remain the most versatile and diverse branch within the Department of Defense across the spectrum of military applications today, both in Large Scale Combat Operations (LSCO) and Defense Support of Civil Authorities (DSCA) operations. Evidence of engineers' impact on warfare can be found throughout world history and dates back to the beginning of war itself. From the defensive fortifications and watch towers of the Iron Age, the sophisticated Greek catapults of the 3rd century BC, and innovative Roman fortresses of the 5th century AD, the history and impact of the military engineer is recognizable wherever you find advances in fortifications, armament, or terrain shaping techniques and technology. Famously, the French employed Sappers, or "trench diggers", during 17th-century siege warfare, who dug trenches towards and underneath besieged forts to explosively breach enemy positions. Essentially, the military engineer has always answered the call to find and apply innovative solutions to the rising military challenges of every era.

#### MODERN ENGINEER VERSATILITY

In the modern US Army, almost 20 engineer military occupational specialties collectively comprise the versatile, problem-solving Engineer branch. Each specialty contributes to shaping the operational environment and addressing relevant challenges. Notably, there are engineer divers, surveyors, firefighters, power production and distribution specialists, geospatial experts, electricians, plumbers, carpenters, masons, concrete and quarrying specialists, heavy equipment operators, and combat engineers, among numerous others. Whether the engineers are tasked to construct tactical obstacles, build infrastructure, fix airfields, destroy minefields, clear routes, or make maps, each specialty enables the Engineer Branch to fill any job description and tackle any task. Fittingly, the motto, Essayons, translated from French as "Let Us Try", hints at the branch's versatile application and inherently adaptable nature necessary on the modern battlefield.

Above: U.S. Marine Corps Lance Cpl. Jacob Whitecomb, a decontamination Marine assigned to the Chemical Biological Incident Response Force, scans a U.S. Army Soldier for notional radiation and chemical particulates during Exercise Sudden Response at Coryell Health Hospital, Gatesville, Texas, Dec. 10, 2022. (U.S. Marine Corps photo by Staff Sgt. Jacqueline A. Clifford)

### THE DEFENSE CBRN RESPONSE FORCE

Today, one of the challenging missions required of the Army is to train, maintain, and employ a joint CONUSbased all-hazards no-notice response force known as the Defense Chemical, Biological, Radiological, Nuclear (CBRN) Response Force (DCRF). The DCRF formation is one portion of the greater DoD CBRN Response Enterprise (CRE), which comprises dedicated and allocated local, state, and federal forces to conduct emergency CBRN response operations against CBRN incidents within the United States and its Territories (See Figure 1). While probable response scenarios encompass chemical plant explosions or other emergencies potentially caused by large natural disasters like hurricanes or wildfires, the most dangerous response scenario is the detonation of a nuclear device in a major metropolitan city. Ultimately, DCRF aims to augment local and state efforts to save lives and minimize human suffering. The DCRF mission resides on the Defense Support of Civil Authorities (DSCA) side of military application. Therefore, it requires a thorough understanding of the legal implications of employing Title 10 military forces within the United States and its Territories. Training, maintaining, and employing a joint all-hazards response force requires versatility and sufficient skill in a broad spectrum of specialties instead of a narrow application of a niche skillset. It is no wonder why the Department of Defense continues to rely on US Army Engineer Brigades to command and control the tactical elements of this consequential joint response force.

#### TASK FORCE OPERATIONS (TF-OPS)

Annually, FORSCOM tasks an active-duty US Army Engineer Brigade to command and control Task Force Operations (TF-OPS), the tactical core of the DCRF formation (See the DCRF TASKORG). DCRF falls under USNORTHCOM, which tasks Joint Task Force Civil Support (JTF-CS) to command and control the entire DCRF force, including Three Brigade and one Battalionlevel task forces—Task Force Operations (TF-OPS), Task Force Aviation (TF-AVN), Task Force Medical (TF-MED), and Task Force Logistics (TF-LOG) - and various other specialty enablers that offer additional signal, human resources, legal, chemical, medical, and religious support capabilities. It is the responsibility of the TF-OPS commander and staff to synchronize task force movement in and around the response area, receive guidance from JTF-CS, liaise with the Incident or Area Commander of the civilian emergency response infrastructure within the lead federal agency, and coordinate for aviation, logistics, and medical



Figure 1. DCRF Concept of Employment.

support from the other brigade task forces. The two-year DCRF assignment in TF-OPS consists of training and equipping nearly 5,200 Soldiers during the first year and sustaining readiness in the second year, or "mission year". During the train-up year, units receive special equipment, conduct key leader conferences and tabletop exercises, validate technical training, and command post operations, and execute internal staff exercises and leader development courses. During the mission year, units receive a Prepare to Deploy Order (PTDO), requiring TF-OPS units to be ready to deploy in 24 or 48 hours from a no-notice disaster event, depending on the force package to which the unit is assigned. Units maintain readiness through regular task force status update briefs and by executing various joint sustainment exercises.

## THE TF-OPS HQ AND FORMATION

The TF-OPS formation includes three Battalion Task Forces (BN TFs) and five distinct enabler units (See Figure 2). Each of the BN TFs are identical in capability and purpose but are led by either an Engineer, Chemical, or Military Police battalion HQ. Each battalion has a CBRN company (Hazard Response), an Area Support Medical Company (MCAS), an Urban Search and Rescue (US&R) platoon, and a General Purpose Force (GPF) company. An Engineer Construction Company usually fills the US&R sourcing requirement, and each GPF may comprise either an engineer company or a military police company. The enablers under TF-OPS are critical to overall DCRF mission success and create a joint force that consolidates the necessary specialized capabilities from the US Army, Air Force, and Marines under one command. Specifically, TF-OPS enablers include the Air Force Radiation Assessment Team (AFRAT), an Army Engineer Construction Company (ECC), an Army Mortuary Affairs Platoon, and the Air Force Rapid Engineer Deployable Heavy Operational Repair Squadron Engineers (RED HORSE). The USMC Chemical Biological Incident Response Force (CBIRF) primarily supports the National Capital Region but allocates one of its two Incident Response Forces (150 pax) to support DCRF. For some of the units in the TF-OPS TASKORG, like the MCAS or the CBRN Company, their assigned DCRF tasks align with their unit's organic Mission Essential Task List (METL). For others, like the Battalion Headquarters, the engineer construction company sourcing the US&R platoon, or the engineer or MP companies sourcing the General Purpose Force (GPF), the required



Figure 2. Mission Year 2022 JTF-CS Task Organization.

DCRF tasks may have little resemblance to their unit's METL. Regardless, each BN TF must come together to provide six core capabilities as outlined in Contingency Plan (CONPLAN) 3500: Mission Command and Communications, CBRN Identification and Detection, Urban Search and Rescue, Mass Casualty and Non-Casualty Decontamination, Medical Triage, and Stabilization, and Air and Ground Evacuation.

## THE RUGGED BRIGADE LEADS MISSION YEAR 2022 <u>The Train Up Year</u>

FORSCOM tasked the 36th Engineer Brigade headquarters element as the TF-OPS sourcing unit for DCRF Mission Year 2022 (MY22). Beginning in June 2021, the Rugged Brigade received a series of in-briefs that began the MY22 train-up year. From June 2021 to May 2022, the Rugged Brigade conducted internal leader development classes, hosted mobile training team visits from JTF-CS, initiated regular touch points with the TF-OPS down trace battalions and companies, and executed a series of train-up exercises in preparation for the joint multi-echelon collective training validation exercise.

## Mission Validation

Before officially assuming the mission on 01 June of the assigned mission year, units must validate their training at the Muscatatuck Urban Training Center (MUTC) near Camp Atterbury, Indiana, in the GUARDIAN **RESPONSE** exercise The ARNORTH Civil Support Training Activity (CSTA) observes, coaches, trains, and validates each unit at GUARDIAN RESPONSE and sources hundreds of other contractors and role players for the exercise. MUTC is home to top-tier urban training facilities that can replicate various realistic response scenarios, including, among many others, a train crash, underground tunnel networks, a flooded neighborhood, a prison, a church, a hospital, certified rubble piles, and the capability to create rubble roads where hundreds of cars are placed on a route to be cleared by the TF-OPS ECC enabler. GUARDIAN RESPONSE is the only DCRF exercise encompassing the entire JTF-CS formation, allowing units to test their response mission systems, processes, and procedures. The Rugged Brigade took the opportunity to test inherited operating procedures and pave the way for new and enhanced response techniques and procedures for various aspects of the response force during their GUARDIAN RESPONSE validation exercise in May of 2022.

### The Mission Year

Once validated at GUARDIAN RESPONSE, the Rugged Brigade officially assumed the DCRF mission, and the associated 24-hour Prepare To Deploy Order (PTDO). From 01 June 2022 to 31 May 2023, the Rugged Brigade led monthly status update briefs and regular task force touchpoints. The brigade continued conducting leader development sessions on DCRF topics and maintained contact with higher, adjacent, and subordinate units. Mission planning conferences hosted by JTF-CS enable mentoring relationships between the units currently on mission and those preparing to assume the mission. The conferences covered critical topics like the "N hour" deployment sequence, operation synchronization, and DCRF equipment use, storage, and handover planning factors. They also allow for key leader face-to-face engagements at the battalion, brigade, and division levels, ensuring adequate knowledge sharing and management between all pertinent stakeholders.

## **Developing Joint Service TTPs**

The 62nd "Hammer" Engineer Battalion of the 36th Engineer Brigade was sourced as Battalion Task Force 1 for the DCRF mission year 2022. During DETERMINED RESPONSE in December of 2022, the Hammer Battalion developed new joint service tactics, techniques, and procedures (TTPs) by commanding and controlling an unprecedented relief operation between CBIRF and a battalion task force. The process included eight deliberate steps: an Initial link up, an operations

Below: U.S. Marine Corps Lance Cpl. Ethan Renteria, a decontamination Marine assigned to the Chemical Biological Incident Response Force (CBIRF), Bravo Company, assists a U.S. Army soldier with the 172nd Chemical, Biological, Radiological, Nuclear (CBRN) Company with providing emergency medical care to a simulated casualty during Exercise Sudden Response at Fort Cavazos, Texas, Dec. 12, 2022. (U.S. Marine Corps photo by Staff Sgt. Jacqueline A. Clifford)



overview and debrief, a key leader terrain walk, new unit area occupation, new operator equipment familiarization, gradual force integration, process management handover, and operator exfiltration by the previous unit. This type of operation is advantageous in a scenario where CBIRF establishes initial operations in a new response site and reaches the point of needing relief to maintain sufficient patient throughput. In preparation, the Hammer Battalion conducted multiple terrain model rehearsals with all stakeholders and refined tactical command procedures to include connections between the civilian Incident Commander and staff, the MCD command team, the CBIRF commander, the US&R teams, the GPF commander, the medical treatment and evacuation commander. To command and control such a complex and multi-faceted formation, the 62nd Engineer Battalion TAC embedded a team of liaisons with each major component of the operation. Having occupied an operationally advantageous area, the battalion TAC could receive and process information quickly, track operational status through execution checklists, and report progress to higher echelons. With up to six liaisons employed at once, tactical-level feedback was rapid, enabling operational decision-making to be flexible and effective.

## Lessons Learned

The keys to success for the Rugged Brigade during the DCRF mission year 2022 include the implication of a joint LSCO and DSCA training glide path, effective knowledge management, and consistent stakeholder management (See the 36E DSCA and LSCO Training Glide Path). Each unit within the TF-OPS formation has competing requirements and commanders with differing priorities. However, every unit must still conduct DCRF training, validation, and sustainment activities. The Rugged Brigade implemented a joint glide path that trained Soldiers and leaders in LSCO and DSCA operations simultaneously where possible, preparing for Warfighter 23-04 as the culminating LSCO training event, while also staying ready to respond in support of DSCA operations. Incorporating clear training objectives for both lines of effort will maximize valuable multiechelon collective training exercises. Planning efforts, communication across the formation, and knowledge management systems will all be more effective through aligning the right human and material resources to the DCRF line of effort. Each unit will undergo heavy turnover during the two-year assignment, but keeping the same trusted agents, liaisons, and lead planners will make a substantial difference in mission success.

## ENGINEERS ARE APT TO LEADING JOINT FORCES

Engineers have always been problem solvers on the battlefield and remain the most versatile and diverse branch within the Department of Defense across the spectrum of military applications. Evidence of engineers' impact on warfare can be found throughout history and remains overtly significant in LSCO and DSCA operations. The Engineer Regiment will continue to answer the nation's call, whether to shape the modern battlefield's ever-changing operational environment or to lead joint task forces in response to a disaster on the home front. The Engineer Soldier has no choice but to fill any job, tackle any required task, and continue singing *"Essayons*, whether in war or peace ... *Essayons*, we serve America and the US Army Corps of Engineers." ■

# CAPT. BRENT M. STOUT

currently serves as the Commander of the 104th Engineer Construction Company located at Fort Cavazos, Texas. He served as the lead planner, lead trusted agent, and lead liaison for the 36th Engineer Brigade (TF-OPS) during the 2022 DCRF train up year (01 June 2021 to 31 May 2022), and as the 62nd Engineer Battalion (DCRF BN TF 1) Plans Chief during DCRF Mission Year 2022 (01 June 2022 to 31 May 2023). Capt. Stout has a degree in Mechanical Engineering from the United States Military Academy at West Point and holds an advanced degree in Engineering Management from Missouri University of Science & Technology. He earned a graduate certificate in nuclear weapons effects, policy, and proliferation from the Air Force Institute of Technology in September of 2022.