

# Backing Missile Defense

By Maj. Gabriel Stokes

In June 2018 the world watched as President Donald Trump met with Kim Jong Un, the leader of the Democratic People's Republic of Korea. This historic event potentially represented a significant step toward a new, peaceful relationship.

With much of the focus on the negotiations surrounding the future of North Korea's nuclear weapons program, one can't help think back to the blistering rhetoric between these two nations that occurred just months ago. Until then, younger Americans had not known the threat of nuclear attack. The question rang, "How do we stop this from happening?" and the answer was the U.S. Ground-based Midcourse Defense (GMD) program.

The GMD program sometimes finds its way into the national spotlight and into your living room on the evening news. You see eerie footage of missile silos and the frozen Alaskan landscape, you watch soldiers in operations centers and meet Army commanders. You learn that there is great confidence that this intercept system can protect the United States from limited ballistic missile threats. What you don't see are the people behind the GMD program, the ones who are not in the spotlight.

## **Dedicated Team**

There are thousands of men and women who have dedicated their careers to develop, design and build the system in place today. One small piece of this network of professionals is the Training and Doctrine Command Capability Manager (TCM) office at U.S. Army Space and Missile Defense Command/Army Forces Strategic Command.

A TCM provides a dedicated team of subject matter experts who are focused on the management of capability development within a designated Army mission area or materiel acquisition program. TCMs ensure horizontal and vertical integration of all doctrine, organization, training, materiel, leadership and education, personnel, facilities and policy (DOTMLPF-P) issues for chartered capabilities across the total Army force. They also serve as a focal point for ensuring materiel system developers produce effective capabilities that meet the Army's needs. They implement the supporting concepts key to developing soldier training, documentation, supportability systems and facilities.

TCMs are the voice of the Warfighter. Their participation in materiel developers' system concept development, cost-performance trades and cost-benefit analyses ensures that Army equities are met throughout the acquisition process.

There are more than 25 different TCMs Army-wide, including combat units, aviation, communications, training and mission command. TCMs are dedicated to a specific capability. They have different focuses such as unit types, training practices, strategic information systems and sustainment functions.

A new TCM can be created at the request of a Capability Development Integration Directorate director and with the recommendation of the director of the Army Capabilities Integration Center. The Army Training and Doctrine Command's commanding general approves

all TCMs via formal charter. TCMs are typically aligned under each of the warfighting Centers of Excellence.

TCM Global Ballistic Missile Defense (TCM GBMD) represents the commanding general of TRADOC and reports to the commanding general of U.S. Army Space and Missile Defense Command/Army Forces Strategic Command (USASMDC/ARSTRAT). Since 1999, TCM GBMD has served as the Army's user representative and centralized manager and integrator for all DOTMLPF-P considerations for its assigned areas of interest. These include global ballistic missile defense (GBMD) and Army applications of the Command and Control, Battle Management and Communications system. TCM GBMD is aligned under the Future Warfare Center, one of the three major lines of effort within USASMDC/ARSTRAT.

### **Unique**

Led by Col. Matt Tedesco, TCM GBMD has 62 members, including active duty soldiers, full-time Army National Guardsmen, government civilians and contractors. Their diverse combination of backgrounds and operational experience allows them to solve complex issues across the capability development spectrum. The TCM GBMD is centrally located at USASMDC/ARSTRAT headquarters in Huntsville, Ala., and maintains satellite offices at Joint Base Anacostia-Bolling in Washington, D.C; Arlington, Va.; and two locations in Colorado Springs, Colo.

TCM GBMD addresses Army and user equities for three specific Missile Defense Agency (MDA) acquisition programs: Ground-based Midcourse Defense, AN/TPY-2 Forward Based Mode radars and Command and Control, Battle Management and Communications. Each of these programs supports the ballistic missile defense mission, and each has its own challenges.

TCM GBMD is unique from other Army TCMs because in addition to the three programs, it also has a Requirements Branch and a Prototype and Experimentation Branch. These branches normally are located in a Capability Development Integration Directorate but not within the TCM office.

The GMD program is the cornerstone of the TCM's effort. The GMD program operates within a unique cooperative relationship among three major players, the Missile Defense Agency, U.S. Northern Command and USASMDC/ARSTRAT. Each organization plays a role in the GMD program in support of the homeland defense mission.

As the Army component of U.S. Strategic Command, USASMDC/ARSTRAT is the force provider and trainer for the operation of the GMD system. This mission belongs to the 100th Missile Defense Brigade.

The brigade is a multi-component unit comprised of active duty soldiers and Colorado, Alaska and California Army National Guardsmen. Its headquarters are in Colorado Springs, Colo. The brigade and its subordinate units of the 49th Missile Defense Battalion at Fort Greely, Alaska, and Detachment 1 at Vandenberg Air Force Base, Calif., operate the GMD system. Teams of operators man the GMD Fire Control System in operation "nodes" at Schriever Air Force Base, Colo., and Fort Greely. Each team, known as a missile defense crew, has five soldiers: three officers and two noncommissioned officers.

As a result of the most recent GMD system software release, the 100th Missile Defense Brigade has recognized a need for expanded crew manning. With four major software updates in the last nine years, the GMD Fire Control System has matured in its ability to receive, process

and display accurate threat data. The GMD system operators analyze a vast amount of actionable information in order to make the most effective decisions on the system.

Due to this increased analysis, a need for an additional sixth operator now exists. TCM GBMD works closely with the 100th Missile Defense Brigade and the Future Warfare Center's Organizational Development Branch to document the new requirement. This addition continues to create new challenges across the DOTMLPF-P spectrum.

### **Increasing Interceptors**

The GMD program also is increasing its missile interceptor inventory. Currently, 44 mission-ready ground-based interceptors exist in the GMD inventory and are located at Fort Greely and Vandenberg AFB. TCM GBMD is an active participant in a new effort that will add 20 additional interceptors by the year 2024. Fort Greely celebrated the groundbreaking of a new third missile field in June 2018.

Each of the new missiles will have the next-generation interceptor, the Redesigned Exoatmospheric Kill Vehicle. It replaces the Exoatmospheric Kill Vehicle. Kill vehicles are designed to seek out, directly strike and destroy the threat with kinetic force. The Redesigned Kill Vehicle incorporates lessons learned from the design and production of the exoatmospheric unit into a more reliable, more cost-effective and more producible and maintainable kill vehicle.

It is the TCM GBMD that maintains GMD Army equities and ensures that the requisite DOTMLPF-P rigor is applied to ensure the needs of the soldier operators are met.

We must wait to see the lasting impacts of the U.S.-North Korea summit in hopes that the nuclear threat is eradicated. In the meantime, the GMD program will continue to grow and further develop its defensive capabilities. The combined efforts of the MDA, U.S. Northern Command and SMDC/ARSTRAT effectively integrate these capabilities to ensure 100 percent confidence in the missile defense system.

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