

# Masters of Nuclear Deterrence

By Brian W. Everstine, Pentagon Editor

**I**n the decades since the end of the Cold War, the Air Force's weapons, delivery systems, and nuclear infrastructure have not been the only parts of the strategic deterrent that have grown old and waned from public view.

The expertise of the airmen themselves has also atrophied.

In 2015, the Air Force decided to address a lack of professional education and institutional knowledge concerning nuclear deterrence. The service created a new way to handpick its best officers

to shape future policy and ensure they are experts in the entire nuclear enterprise. It did this through the creation of the School for Advanced Nuclear Deterrence Studies, or SANDS, at Kirtland AFB, N.M.

"There was a shift away from a focus on nuclear deterrence after the collapse of the Soviet Union and the onset of terrorism in the '90s and 2000s. We stood up in 2015, basically 25 years since the end of the Cold War," SANDS Director Adam Lowther said in an interview with *Air Force Magazine*. "Having a

school that really focuses on deterrence and builds up that expertise, and sends those experts back out into the force so that they can spread the knowledge and provide that assistance to senior leaders: That is invaluable. It does a lot of good to correct some of the challenges that we faced in the past."

The school, which grew from idea to reality in just a few months in 2015, was scheduled to graduate its first six officers in September. They will be tasked with reshaping the Air Force's institutional thinking on nuclear deterrence.

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**USAF's new SANDS school aims to create experts in the art and science of deterrence.**



USAF photo by A1C J. T. Armstrong



Between 2007 and 2014, there was a long string of problems in USAF's nuclear community that triggered numerous reviews, recommendations, and soul-searching within the service. The criticisms and reviews corresponded with a time of deep morale problems in the Air Force's nuclear community. In response, the service directed a grassroots review of its personnel called the Force Improvement Program. Teams of experts interviewed airmen of all ranks to determine what could be done to improve the nuclear community. Part of this review stressed the need for increased professional military education in the ranks of nuclear-related career fields.

"Strategic deterrence is really important," Gen. Stephen W. Wilson, Air Force vice chief of staff, said in January 2015 when he was commander of Air Force Global Strike Command. "It's having the capability, the will, and an incredible force that will do that. It's something we're thinking a lot about. This year our focus is kind of on education and training, and it's a focus on what is strategic deterrence in the 21st century? What does that really mean?"

It was during this Force Improvement Program review, and a critical evaluation of the education pipeline for nuclear officers, when Wilson received a briefing on what Air Mobility Command does for its top officers.

### A BROADER VIEW

Air Mobility Command in 2007 started the Advanced Study of Air Mobility program at the US Air Force Expeditionary Center at JB McGuire-Dix-Lakehurst, N.J., with the help of the Air Force Institute of Technology. Under the program, a hand-selected cadre of officers and civilians participate in a 13-month master's-level course designed specifically for officers in air mobility-related career fields. The students travel across the Air Force and to allies around the world to get "a much broader view of the Air Force and the Department of Defense," Maj. John Lacy, a student in the first AMC class, said in a press release at the time. These students moved on to planning jobs in the Joint Staff, Air Mobility Command, and NATO.

Wilson saw this program and said, he "wouldn't mind having a school like that," Lowther said.

"SANDS is for the best and brightest of the command," Wilson said as the first class convened. "It will draw on educators and curricula from across the nation. These students will be the 'Jedi Knights,' the really smart folks every combatant command wants."

In January 2015, the command got the ball rolling. With help from instructors with AFIT and Lowther himself as director, the group formed a curriculum focused on nuclear deterrence combined with a business degree-like study of leadership. By May, the first class of Air Force majors was hand-selected by their commanders and top officials within Air Force Global Strike Command. By August, the students had arrived at Kirtland for classes.

"By Air Force standards, by federal bureaucracy standards, it was incredibly fast," Lowther said, noting that normally the development of a program like this would take years, not months.

The classes in the yearlong program vary from intense classroom work at Kirtland to globe traveling to meet with allies, Lowther said.

Faculty members from AFIT come down for weeks at a time, and students focus on one topic at a time. About two-



B-52Hs taxi during Exercise Constant Vigilance at Minot AFB, N.D., in April.



thirds of the classes focus on operations management, with the rest focusing on nuclear weapons effects, policy, and history, Lowther said.

“The idea is that when someone graduates from SANDS and they go back to the unit, go to the planning staff, they will have already visited and understand the vast array of organizations and entities that make up the military and Department of Energy aspects of the nuclear enterprise,” he said.

The classes go on about 20 trips during the program, including visiting all the nuclear weapons labs. Students visit Air Force nuclear operational bases and weapons storage areas, along with headquarters trips to US Strategic Command, Air Force Global Strike Command, and Headquarters Air Force at the Pentagon, along with other agencies in Washington. Students travel throughout Europe to visit allies and NATO, along with another trip through Asia to discuss nuclear issues and threats with Japan and South Korea.

Additionally, top leaders such as Gen. Robin Rand, commander of Global Strike Command, and Adm. Cecil D. Haney, commander of US Strategic Command, conduct long visits with students at Kirtland. Rand was scheduled to speak at the commencement of the first class.

*An inert Minuteman III ICBM re-enters the atmosphere near the Ronald Reagan Ballistic Missile Test Site at Kwajalein Atoll, in the Marshall Islands.*



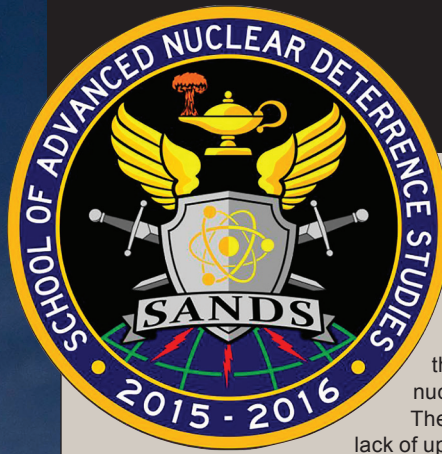
Air Force Global Strike Command photo



*Capt. Robert Shannon (foreground) and Capt. Brooke Lake run through a launch procedure checklist during simulation training at Malmstrom AFB, Mont.*

USAF photo by SSgt. Jonathan Snyder





## A Long Time Coming

The decline in nuclear institutional expertise and education wasn't a new issue in 2015. There were warnings.

A two-phase report on the Air Force and Defense Department's nuclear mission, chaired by former Defense Secretary James R. Schlesinger and released in 2008, warned that officers inside the Air Force and the Pentagon were not learning enough of the role of nuclear deterrence.

The first phase of the report singled out the Air Force's lack of updated nuclear deterrence doctrine, saying the service needs to require that airmen connected to the nuclear mission take professional military education courses on deterrence and defense.

"Training and professional education are the key tools for generating a culture of nuclear excellence," the report stated. "After the Cold War ended, both training and education in nuclear matters were streamlined to the point of near elimination."

The second phase criticized the Pentagon as a whole, calling on then-Defense Secretary Robert M. Gates to conduct a complete review of the curricula at all service academies, service schools, and senior-level military education institutions to focus on the role and importance of nuclear deterrence.

"The task force found a distressing degree of inattention to the role of nuclear weapons in deterrence among many senior DOD military and civilian leaders," the report on the Defense Department's overall nuclear mission stated. "Many lack the foundation of experience for understanding nuclear deterrence, its psychological content, its political nature, and its military role—which is to avoid the use of nuclear weapons. A lack of education on nuclear deterrence has contributed to this problem. This shortfall of experience and understanding will become even more acute among senior leaders in the future."

As years went by, more warnings and distressing incidents occurred. In 2014, dozens of nuclear missile officers at Malmstrom AFB, Mont., were implicated in a cheating scandal. An investigation found commanders at the base failed to exercise proper oversight of their force.

"A consequence of the division of responsibilities in the Air Force is that essential activities receive only intermittent attention from the set of leaders and managers who are at the level necessary to ensure the degree of continuing attention to the needed mission, focus, culture, priorities, education and training, political and moral support, and material support," read an independent review of the DOD nuclear enterprise, written in 2014 by former Air Force Chief of Staff retired Gen. Larry D. Welch and former Navy Fleet Forces Commander retired Adm. John C. Harvey Jr.

"It's an unprecedented opportunity to see the nuclear enterprise up close and personal and get to talk to leadership," Lowther said. "You just don't get it anywhere else."

The first class of students included three missileers, a B-52 navigator, a B-52 electronic weapons officer, and a career missile security forces officer.

"I hope to gain a broader understanding of the policy and strategy that goes into how the US executes nuclear deterrence around the world," said Maj. Matthew Boone, deputy director of AFGSC's Commander's Action Group, in a news release when the class began. "This is also a great opportunity to learn from experts who are on the cutting edge of our field."

### EXPANDING CLASSES

The group is expanding beyond just Air Force students. The second class

that just started this summer includes a B-2 pilot, a B-52 pilot, a B-52 navigator, a B-52 electronic weapons officer, three missileers, a British Ministry of Defense civilian, a civilian with Air Force Global Strike Command, and a US Navy officer.

"This course has given me the opportunity to work closely with Air Force professionals who represent the other two legs of the triad," Lt. Jeremy Dawson, a US Navy submarine officer in the second class, said in a news release. "Their experiences and perspectives, combined with the curriculum, have provided insights into the overall strategic enterprise that cannot be replicated in any other environment. This will help me to communicate the significance of nuclear deterrence to my sailors in a way that helps them to appreciate" [the importance of] their day-to-day roles and responsibilities," he said.

The third class, which is scheduled to begin in June 2017, is expected to include US Army explosive ordnance disposal and nuclear and counterproliferation officers, among others, Lowther said. The plan is to have 12 Air Force officers, plus a mix of other services and international students in future classes.

The classes themselves will evolve, be tweaked "to make the program better every single year," Lowther said.

"We are constantly trying to adapt as we learn and develop best practices," he said. "It definitely changes as we see things that can be done differently or better."

The SANDS graduates have their next jobs handpicked for them, with an emphasis on planning. Each job is approved by Maj. Gen. Michael E. Fortney, AFGSC vice commander. The students will go on to Headquar-





Missile Defense Agency photo



USAF photo by SFA Stephanie Morris



USAF photo by A1C Andrew Moua

**Top:** A ground-based interceptor is launched from Vandenberg AFB, Calif., for a test over the Pacific Ocean. **Top right:** Gen. Robin Rand (l), chief of AFGSC, and Adm. Cecil Haney (r), head of US Strategic Command, at Vandenberg to watch the launch of a Minuteman III missile shipped from Minot. **Right:** SSgt. Daniel Santell (l) and SrA. Gildo Pena-Lopez de-arm an AGM-86B cruise missile during a training exercise at Barksdale AFB, La.

ters Air Force, to STRATCOM, or to command units. The goal is for them to become experts in the breadth of nuclear deterrence and recreate institutional knowledge that has been depleted over the past few decades, Lowther said.

### EXPERTS NEEDED

“As we develop people who understand and can articulate what deterrence means in the 21st century, how do we get the workforce the right education, training, and experience to do that?” Wilson said in May in Washington when he was deputy commander of STRATCOM. “How do we get deterrence thinking in their lexicon? How do we use that human capital to help us solve some of our hard problems? ... How do we develop the human capital, the people, in the

changing and thinking that needs to go forward for 21st century deterrence?”

Wilson described human capital as one “of our major lines of effort because what will be successful is when our folks really understand this deeply, that they can articulate it, they can articulate why it’s important, and that we have a foundational level across not just places like STRATCOM, but throughout our military.”

Despite its inspiration in a similar AMC program, SANDS’ in-depth study and emphasis on the future is unprecedented in its nuclear focus.

“There’s really been nothing like SANDS before it existed,” Lowther said. “Part of the reason it was cre-

ated is because the nuclear career force and Global Strike Command identified there’s a need for greater nuclear expertise.”

In fact, the Air Force seems to “have lost a good bit of knowledge in the years following the stand down of Strategic Air Command,” Lowther said. The program is “in part to restore some of that knowledge and understanding of how deterrence works, of nuclear policy, and understanding of adversaries and how they act—to help design a better nuclear strategy and policy.”

The Air Force is starting small, with the six graduates this fall, but nuclear deterrence studies are a front-burner issue once again. ★