

Aerospace World

By Peter Grier

Homeland Defense Now Key

In the wake of terrorist attacks on US territory, the Department of Defense needs to put great new emphasis on the defense of the homeland. So declared Gen. Richard B. Myers, the new Chairman of the Joint Chiefs of Staff, to members of the Senate Armed Services Committee.

Myers addressed the panel Sept. 13, two days after the hijacking massacre that unfolded in New York, Washington, D.C., and Pennsylvania. More than 6,000 Americans died in the attacks.

Exactly what the military's role should be in this area is unclear. Myers said that he and the nation's defense establishment had not yet developed a comprehensive new homeland defense outline. "I just know that the debate needs to take place now," he said.

The attacks on the World Trade Center and Pentagon made it clear that local civil authorities do not have all the resources they need to cope with a major catastrophe. If anything on such a scale ever happens in the US again, the US military will inevitably be involved.

Sorting through homeland defense issues now will ensure "we are ready to act in a unified way and a focused way," said Myers.

If weapons of mass destruction are involved, for instance, the National Guard might be called upon to play a larger role. Response to such a disaster is something Guardsmen can train for, according to the nation's new military chief.



USAF photo by SSgt. Jeremy T. Lock

USAF personnel build tri-wall aerial delivery system boxes to hold Humanitarian Daily Rations for Operation Enduring Freedom. On Oct. 8, C-17s air-dropped the first load of HDRs to refugees in Afghanistan.

"I think those missions are perhaps more natural for the National Guard than some of the current missions," said Myers.

Myers Affirms Transformation Effort

At the same hearing, Myers said transformation of the military to meet the threats of a new era is something on which DOD is now seeing a unified effort.

Under guidance from the Office of the Secretary of Defense, the services are developing joint operational

concepts. Much of the work is being done by US Joint Forces Command in Norfolk, Va. "They've got the role of experimentation, which you would think would lead our transformation efforts," said Myers.

Transformation is now likely to include changes in ways of using forces. Myers pointed out that the Air Force did scramble fighters, radar aircraft, and tankers in response to the terror attacks and would do so if another wave of attacks occurred.

Among his previous jobs, Myers was commander in chief of North American Aerospace Defense Command. The command had clear plans to deploy fighters against an external threat, he noted, but did not practice operations against aircraft flying within American airspace.

Bush Establishes Office of Homeland Security

President Bush, in a Sept. 20 address to a joint session of Congress, set in motion plans for creation of a new Cabinet-level Office of Homeland Security.

Named to head the new coordi-

McGuire Served as Crisis Port

McGuire AFB, N.J., served as an important transportation hub for federal emergency teams in the days following Sept. 11.

Technicians from the 305th Aerial Port Squadron worked around the clock to handle more than 250 tons of emergency management cargo. Some 250 members of Federal Emergency Management Agency search-and-rescue teams, as well as 300 military personnel, moved through the base within two days of the disasters.

"McGuire Air Force Base has served as an important staging area for several of our urban search-and-rescue teams," said Douglas Welte, of FEMA public affairs. "We appreciate their support. They've done a tremendous job."

Twelve Hours in America

What follows is a chronology of events on Sept. 11. Eastern Daylight Time is used throughout.

- 8:45 a.m. First hijacked aircraft, American Airlines Flight 11 from Boston, crashes into north tower of World Trade Center.
- 9:03 a.m. Second hijacked aircraft, United Airlines Flight 175 from Boston, slams into WTC south tower.
- 9:17 a.m. FAA shuts down all New York City area airports.
- 9:21 a.m. Authorities close New York area bridges and tunnels.
- 9:30 a.m. In Florida, President Bush says events of the morning are result of an "apparent terrorist attack."
- 9:38 a.m. Third hijacked aircraft, American Airlines Flight 77 from Dulles Airport near Washington, hits Pentagon, setting it ablaze.
- 9:40 a.m. FAA halts US flight operations, orders aircraft to land.
- 9:45 a.m. White House workers evacuate the building.
- 9:57 a.m. Bush departs Florida for Barksdale AFB, La.
- 10:00 a.m. WTC south tower collapses.
- 10:03 a.m. Fourth hijacked aircraft, United Airlines Flight 93 from Newark, N.J., and on a heading to Washington, crashes in Pennsylvania.
- 10:10 a.m. Part of Pentagon collapses.
- 10:13 a.m. United Nations building evacuates.
- 10:22 a.m. State and Justice Departments are evacuated.
- 10:24 a.m. FAA diverts all inbound trans-Atlantic flights to Canada.
- 10:28 a.m. WTC north tower collapses.
- 10:45 a.m. US evacuates all federal buildings in Washington.
- 10:46 a.m. Secretary of State Colin Powell departs Latin America for Washington.
- 11:02 a.m. Mayor Rudolph Giuliani orders evacuation of New York City, south of Canal Street.
- 12:04 p.m. Authorities evacuate Los Angeles Airport.
- 12:15 p.m. The INS imposes highest state of alert on borders.
- 1:04 p.m. Bush, at Barksdale, addresses nation, puts military on worldwide alert.
- 1:27 p.m. Officials declare state of emergency in Washington.
- 1:48 p.m. Bush departs Barksdale for Offutt AFB, Neb.
- 2:30 p.m. FAA bans commercial air traffic until further notice.
- 4:30 p.m. Bush departs Offutt for Andrews AFB, Md.
- 5:20 p.m. WTC Building 7 collapses.
- 6:40 p.m. Rumsfeld holds news conference, says DOD is functioning.
- 6:54 p.m. Bush arrives at White House.
- 8:30 p.m. Bush addresses the nation, declares US will pursue those who planned and executed the attacks and nations harboring them.

nating organization was Republican Pennsylvania Gov. Tom Ridge, a military veteran and longtime friend of the President.

The new office is charged with finding ways to coordinate various federal, state, and local agencies to lessen the nation's vulnerability to terrorist strikes.

"Today, dozens of federal departments and agencies, as well as state and local governments, have responsibilities affecting homeland security," Bush said. "These efforts must be coordinated at the highest level."

Ridge will report directly to the President. He was sworn in Oct. 8.

White House officials provided only sketchy details of planning for the new office. Spokesman Ari Fleischer said the office will function in much the same way as the National Security Council, a White House office that has a "coordinating capacity involving State, involving Defense, involving CIA."

Reservists Called Up

On Sept. 14, President Bush authorized the call-up of up to 50,000 reservists to active duty. Of those, up to 13,000 could come from the Air National Guard and Air Force Reserve Command.

Pentagon officials did not quickly make a determination as to which units would be called up and how the call-ups would be distributed between the National Guard and Reserve. But those most likely to be mobilized would include specialists in port operations, medical support, engineer support, general civil support, and homeland defense.

The number of people involuntarily called to active duty will almost surely be significantly less than the personnel requirement, as volunteers will fill the majority of positions, predicted officials.

Guardsmen, Reservists Guaranteed Jobs Upon Return

The thousands of National Guard members and Reservists called to active duty in the wake of Sept. 11's terrorist attacks should rest easy on at least one matter—employment should be waiting for them when they return.

"Guardsmen and Reservists will have job protection," said Rep. Chris Smith, House Veterans Affairs Committee chairman.

Under the federal Uniformed Services Employment and Re-employment Rights Act of 1994, employers are required to re-employ Guard members and Reservists at the same position or better. They must also

receive the same benefits and seniority they would have accrued had they not been on military leave.

"If they would have been eligible for a promotion during their leave, they must be given that promotion upon their return if they are qualified,

or allowed time to become qualified," said Smith.

USERRA also provides some protection for employers. Employees must provide notice when they are called to active duty, unless doing so might compromise military operations.

When NORAD Scrambled the Fighters

At a Sept. 13 hearing of the Senate Armed Services Committee, many questions were asked about how North American Aerospace Defense Command responded to the airborne terror attacks.

Gen. Richard B. Myers, then the vice chairman and now the Chairman of the Joint Chiefs of Staff, said NORAD ordered fighters into the air when notified of the hijackings. However, they never were in a position to take armed action against the hijackers.

The first three aircraft hit their targets before the defending fighters arrived. The fourth could have been intercepted, but it crashed before it threatened its target. (See below.)

"When it became clear what the threat was, we did scramble fighter aircraft, AWACS, radar aircraft, and tanker aircraft to begin to establish orbits in case other [threatening] aircraft showed up in the FAA system," said Myers.

"We had plans to deploy our fighters to defend from external threats," said Myers, a former NORAD commander in chief. "I never thought we'd see what we saw the last few days, where we had fighters over our cities, defending against a threat that originated inside the United States of America."

AA Flight 11 (Boston–Los Angeles)

FAA notifies NORAD's North East Air Defense Sector of problem	8:40 a.m.
Fighter scramble order (at Otis ANGB, Mass.)	8:46 a.m.
Airliner strikes WTC north tower	(estimated) 8:46 a.m.
Fighters airborne (two F-15s)	8:52 a.m.
Fighter time/distance from impact point: (not airborne)/153 miles	

UA Flight 175 (Boston–Los Angeles)

FAA notifies NEADS of problem	8:43 a.m.
Fighter scramble order (at Otis ANGB, Mass.)	8:46 a.m.
Fighters airborne (same two F-15s as above)	8:52 a.m.
Airliner strikes WTC south tower	(estimated) 9:02 a.m.
Fighter time/distance from impact point: approx. 8 minutes/71 miles	

AA Flight 77 (Washington Dulles–Los Angeles)

FAA notifies NEADS of problem	9:24 a.m.
Fighter scramble order (at Langley AFB, Va.)	9:24 a.m.
Fighters airborne (two F-16s)	9:30 a.m.
Airliner strikes the Pentagon	(estimated) 9:37 a.m.
Fighter time/distance from impact point: approx. 12 minutes/105 miles	

UA Flight 93 (Newark–San Francisco)

FAA notifies NEADS of problem	9:24 a.m.
Fighter scramble order (at Langley AFB, Va.)	9:24 a.m.
Fighters airborne (same two F-16s as above)	9:30 a.m.
Airliner crashes in Pennsylvania	(estimated) 10:03 a.m.
Fighter time/distance from impact point: approx. 11 minutes/100 miles	

Source: Sept. 17 NORAD release. All times EDT.

They must report for work within a specified number of days upon returning home.

Early Call-Ups Go Smoothly

So far call-ups haven't created much workplace tension. The need to mobilize in the fight against terrorism has been obvious to all, according to the Pentagon's ombudsman

for employers of Guard members and Reservists.

"Employers from across the country are asking what they can do to help," said Army Lt. Col. Jess Soto, director of ombudsman services at the National Committee for Employer Support of the Guard and Reserve.

Employers' major concerns are what happens when their employees

are called up and what benefits they must continue to provide. Health insurance must be maintained for up to 18 months for called-up workers, if they choose to stay with their employer's policy, for instance.

Employers can ask for deferral of a call-up on a case-by-case basis. The final decision rests with military authorities.

"If you are a small business operation a call-up can affect you more," Soto said.

Mortuary Soldiers Perform Difficult Duty

Two Army soldiers from Ft. Lee, Va., performed perhaps the toughest job in Washington this fall: mortuary duty at the Pentagon.

SSgt. James Frazier and Pvt. Khiran Corbitt, 54th Quartermaster Co., were on duty at the crash site the day after a hijacked airliner plowed into the building. Their job was to gather remains and transport them to a temporary morgue.

The remains were driven to Ft. Belvoir, Va., and then shipped to Dover AFB, Del.

Frazier and Corbitt are active duty mortuary specialists. "It is unbelievable, what happened here," said Frazier.

Dover Picks Up Mortuary Duty

Some 200 Air Force Reserve Command specialists volunteered for active duty in mid-September to help handle and process remains of Pentagon bombing victims at the US military's port mortuary facility at Dover Air Force Base.

The Reservists were drawn from AFRC's 10 port mortuary units from around the country. Overall, these units have 266 Reservists and another 48 individual mobilization augmentees.

The units provide 84 percent of the service's port mortuary capability.

While the job of identifying and handling the dead is a grim one, all were eager to help in this case.

"It's an important job. It helps the families of these people gain closure," said 1st Lt. Libby Itanen, an AFRC port mortuary officer.

Renovations Lessened Pentagon Damage

A recent renovation of the area of the Pentagon into which a hijacked jetliner crashed helped lessen the shock of the blow and saved lives within the building.

The hijacked airplane, traveling low and diagonally, hit a wedge section

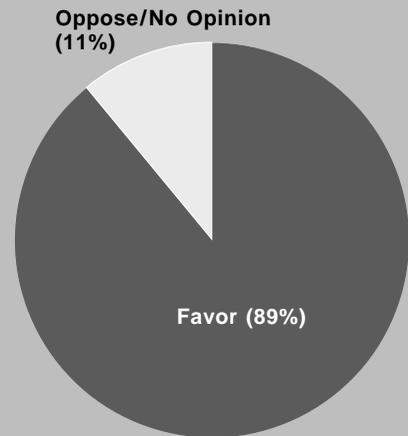
Gallup Poll Found Strong Support for Retaliation

Even weeks after the terror attacks, the Gallup Organization found Americans supportive of mounting a military response.

The polling company announced Sept. 24 that, as of the weekend of Sept. 21–22, retaliatory military action was favored by some 90 percent of Americans.

Key conclusions from the Gallup survey:

- Given a choice, Americans favored a long-term war to defeat global terrorism networks over focusing on the specific terrorist groups responsible for the attacks.
- More than eight out of 10 Americans favored direct military action in Afghanistan, and more than seven out of 10 favored direct military action in Iraq.
- Americans were willing to wait until the perpetrators were identified, rather than rushing in with immediate strikes.
- A strong majority of Americans supported military action against those responsible for the terrorism even when Americans are explicitly advised of possible negative consequences.
- There was strong support for conducting military action against the countries harboring the terrorists, as well as against the terrorists themselves.
- More than eight out of 10 Americans said it was very important to capture or kill Osama bin Laden.



The vast majority of Americans support the general idea of military action against the groups or nations responsible for the attacks. Support levels, in fact, are generally at or around an extraordinary 90 percent level. The most recent Gallup/CNN/USA Today poll, conducted Sept. 21–22, shows that 89 percent of Americans want action.

near the heliport on the Pentagon's west side. Floor-to-floor, interconnected vertical steel beams, sturdier windows, and Kevlar armor panels placed in the affected area's outer wall during a recent rebuilding project slowed the airplane and helped mitigate the effects of the blast.

"This was a terrible tragedy and people lost their lives," said Pentagon renovation manager Lee Evey in a Sept. 15 briefing for reporters. "But ... had we not undertaken this effort in the building, this could have been much, much worse."

The floors above the point of impact did not collapse for 30 to 35 minutes, noted Evey. This enabled many injured to escape.

The Pentagon has already awarded an initial \$145 million contract to Hensel Phelps Construction Co. of Chantilly, Va., to start repairs on the damaged section. The contract also covers renovation of remaining portions of the building and has a potential value of \$748 million.

USS Cole In Action Again

USS *Cole*, heavily damaged last year by a terrorist attack in the port of Aden, Yemen, was launched back into the water Sept. 14 after extensive repairs at Northrop Grumman's Pascagoula, Miss., shipyard.

After a bomb carried by a small craft nearly destroyed the ship, *Cole* was taken back to the United States aboard the Norwegian heavy-lift ship

US to Award Medals to DOD Victims

The Defense Department will award medals to those uniformed and civilian defense personnel who were killed or injured in the September terror attacks.

Secretary of Defense Donald Rumsfeld authorized the awards to recognize the sacrifice of those who were caught in the carnage.

Rumsfeld said Sept. 27 that military members would receive the Purple Heart. Civilians were to receive a new Medal for the Defense of Freedom. The Defense of Freedom medal will be the civilian equivalent of the Purple Heart.

The Pentagon chief described the dead and wounded as "combat casualties—brave men and women who risked their lives to safeguard our freedom, and they paid for our liberty with their lives."

As of the time of the announcement, about 90 DOD civilians qualified to receive the medal. The recipient must have been killed or wounded as a result of hostile actions.

The award can be made to DOD civilians killed or wounded at the Pentagon, at the World Trade Center, or aboard any of the four hijacked airliners.

The new medal is a golden medallion that hangs from a ribbon of red, white, and blue. The circle frames a bald eagle holding a shield. On the reverse side is a laurel wreath.



Reservists Raced to Attack Site

Air Force reservists raced to the World Trade Center after it was struck by a hijacked jetliner—despite the fact that they had yet to be officially mobilized.

SrA. Edward Blunnie, a rapid runway repair specialist with Air Force Reserve Command's 514th Air Mobility Wing at McGuire AFB, N.J., was watching television in his Brooklyn, N.Y., home when the disasters struck. He called 14 other local airmen. All took quick leaves from civilian jobs and arrived at ground zero within hours.

"I just couldn't sit home and just watch this happen," said Blunnie.

Among those who joined him were Brooklyn-based recruiters, others from the 514th, and Air National Guard members from a nearby airport.

SSgt. Carlos Aponte, a member of the 514th Communications Squadron at McGuire, arrived two days after the attacks. An emergency medical technician in civilian life, Aponte also felt he couldn't just sit by and not help.

"I'll take every vacation day I have from work if that's what it takes," he said.

Capt. Brent Unger was not even in the area. An instructor with AFROTC Det. 440 at the University of Missouri, he was on leave from his job when he learned of the attacks.

He quickly changed his leave paperwork and drove 12 hours from Columbia, Mo., to New York City, where he was immediately put to work digging in the rubble.

Unger had been thinking of leaving the Air Force entirely. Now, he is thinking of staying as part of any military response to the attacks.

US is about fighting the era's new plague.

"A significant piece of this is going to be to bring our armed forces to the highest level of preparedness," he said.

DIA Wants New Strain of Anthrax for Tests

The Defense Intelligence Agency wants to cultivate a new Russian-developed strain of anthrax to help test the effectiveness of US vaccines.

In an effort code-named Project Jefferson, DIA has been working with a Russian agency to obtain a sample of a new or modified anthrax strain to use in tests to determine if current US vaccines will work against the strain. The project began in 1997, according to Pentagon spokeswoman Victoria Clarke, when reports that Russia might have developed a modified anthrax strain first surfaced in a medical journal.

DIA officials have asked the Russians for a sample but to date have not received one, Clarke told reporters Sept. 4.

Earlier this year, as part of Project Jefferson, DIA also began the legal and coordination process to be able to produce "small, limited quantities" of the agent to use in tests with US

Blue Marlin. In a construction bay in Pascagoula, workers made more than 550 tons' worth of steel structural repairs to the damaged exterior plating. They replaced or repaired other damaged equipment and recertified such critical systems as shafts and propellers.

Employees of Northrop's shipyard "display immense national pride in the restoration of *Cole*," said Capt. Philip N. Johnson, US Navy supervisor of shipbuilding, Pascagoula.

Work still to be completed includes alignment of machinery, energizing, testing of all systems, and completion of logistics and supply support outfitting.

Emergency Funding Headed Toward Pentagon

A significant portion of the \$20 billion in emergency funds requested by President Bush on Sept. 12 will go toward readying the US military to fight terrorism.

Deputy Secretary of Defense Paul Wolfowitz said Sept. 13 that he could not elaborate on exactly how much of the money would help which part of the military. He did say he hoped the enormity of the sums involved would help the world see how serious the

Air Force Implements Stop-Loss Order

In the wake of the terror attacks, the Air Force announced it implemented Stop-Loss effective Sept. 22, 2001.

Stop-Loss allows the Air Force to retain its members beyond established dates of separation or retirement. Donald Rumsfeld, the Secretary of Defense, authorized Stop-Loss to support the American campaign against terrorists and their nation-state accomplices.

The first phase of that operation, Noble Eagle, was superseded by Operation Enduring Freedom.

Lt. Col. Jan Middleton, chief of promotion, evaluation, and separation policy for the Air Force, made this statement:

"The purpose of this action is to meet mission requirements in support of Operation Noble Eagle and any follow-on operations regarding the Sept. 11 terrorist attacks on the nation."

The initial Stop-Loss period for all Air Force career fields will extend for at least 30 days.

The announcement said USAF will use a Total Force approach, calling on active duty, Guard, and Reserve forces to capitalize on the unique composition of its career fields.

All retirement, separation, or component transfer actions were to be suspended until termination of Stop-Loss, unless an exemption is applicable or waiver is granted.

The Defense Department instituted a Stop-Loss provision in the run-up to the 1991 Gulf War.

War on Terrorists—The Legal Foundation

S.J. Res. 23 Joint Resolution

To authorize the use of United States armed forces against those responsible for the recent attacks launched against the United States.

—Whereas, on Sept. 11, 2001, acts of treacherous violence were committed against the United States and its citizens; and

—Whereas, such acts render it both necessary and appropriate that the United States exercise its rights to self-defense and to protect United States citizens both at home and abroad; and

—Whereas, in light of the threat to the national security and foreign policy of the United States posed by these grave acts of violence; and

—Whereas, such acts continue to pose an unusual and extraordinary threat to the national security and foreign policy of the United States; and

—Whereas, the President has authority under the Constitution to take action to deter and prevent acts of international terrorism against the United States: Now, therefore, be it

Resolved by the Senate and the House of Representatives of the United States of America in Congress assembled,

Section 1. Short Title

This joint resolution may be cited as the "Authorization of Use of Military Force."

Section 2. Authorization for Use of United States Armed Forces.

(a) In General.—That the President is authorized to use all necessary and appropriate force against those nations, organizations, or persons he determines planned, authorized, committed, or aided the terrorist attacks that occurred on Sept. 11, 2001, or harbored such organizations or persons, in order to prevent any future acts of international terrorism against the United States by such nations, organizations, or persons.

(b) War Powers Resolution Requirements.—

(1) Specific Statutory Authorization.—Consistent with section 8(a)(1) of the War Powers Resolution, the Congress declares that this section is intended to constitute specific statutory authorization within the meaning of section 5(b) of the War Powers Resolution.

(2) Applicability of Other Requirements.—Nothing in this resolution supercedes any requirement of the War Powers Resolution.

Approved Sept. 18, 2001.

Statement by the President

Today I am signing Senate Joint Resolution 23, the "Authorization for Use of Military Force."

On Sept. 11, 2001, terrorists committed treacherous and horrific acts of violence against innocent Americans and individuals from other countries. Civilized nations and people around the world have expressed outrage at, and have unequivocally condemned, these attacks. Those who plan, authorize, commit, or aid terrorist attacks against the United States and its interests—including those who harbor terrorists—threaten the national security of the United States. It is, therefore, necessary and appropriate that the United States exercise its rights to defend itself and protect United States citizens both at home and abroad.

In adopting this resolution in response to the latest terrorist acts committed against the United States and the continuing threat to the United States and its citizens from terrorist activities, both Houses of Congress have acted wisely, decisively, and in the finest traditions of our country. I thank the leadership of both Houses for their role in expeditiously passing this historic joint resolution. I have had the benefit of meaningful consultations with members of the Congress since the attacks of Sept. 11, 2001, and I will continue to consult closely with them as our nation responds to this threat to our peace and security.

Senate Joint Resolution 23 recognizes the seriousness of the terrorist threat to our nation and the authority of the President under the Constitution to take action to deter and prevent acts of terrorism against the United States. In signing this resolution, I maintain the long-standing position of the executive branch regarding the President's constitutional authority to use force, including the armed forces of the United States and regarding the constitutionality of the War Powers Resolution.

Our whole nation is unalterably committed to a direct, forceful, and comprehensive response to these terrorist attacks and the scourge of terrorism directed against the United States and its interests.

*George W. Bush
The White House,
Sept. 18, 2001*

vaccines, she said. Creating a small amount of agent would be in compliance with the 1972 Biological Weapons Convention, which allows purely defensive research, stated Clarke.

"We take the threat of the spread of biological and chemical warfare very, very seriously."

She spoke one week before the Sept. 11 terror attacks, which has measurably increased concern about biological warfare.

Reserve Chaplains Mobilize

Air Force Reserve Command chaplains and chaplain assistants mobilized to provide what comfort they could to the service personnel who handled the bodies of those killed in the attack on the Pentagon.

An AFRC chaplain team accompanied the port mortuary personnel who traveled from Travis AFB, Calif., to Dover AFB, Del., to help process remains. Individual mobilization augmentee chaplains also traveled to Dover to help ease the stress involved with this incredibly difficult task.

"People are vulnerable at this time," said Lt. Col. Jeffrey L. Neuberger, chief of personnel and readiness for Headquarters AFRC Chaplain Service. "These teams will need our ministry for days, weeks, and months after exposure to this situation."

Civil Air Patrol Springs Into Action in Disaster

At the request of US authorities, the Civil Air Patrol conducted dozens of flights across the country following the Sept. 11 terrorist attacks.

Among CAP's missions were three passes over the site of the World Trade Center the day after the disaster.

These flights, carried out by a Cessna 172 piloted by CAP Lt. Col. Jacques Heinrich, provided high-resolution digital images of the zone for the New York State Emergency Management Office.

"Civil Air Patrol provided the first direct aerial perspective of the disaster site for the state of New York," said Dan O'Brien, graphic information program manager for the state's emergency management operations center in Albany.

In other missions, CAP volunteers from North Carolina flew 50 cases of blood from Raleigh, N.C., to an American Red Cross facility in Baltimore.

The New York CAP wing flew 30 noise-canceling headsets to the New

Bereaved Americans Visit Pentagon

Family members and loved ones of those missing or dead in the crash of a hijacked jetliner into the Pentagon were taken to the site Sept. 15 for an emotionally wrenching close-up visit.

Holding hands, crying, clinging to each other, the group created a makeshift memorial by stacking flowers and personal mementos on a nearby flatbed truck.

The visit was prompted by questions asked at the twice-daily briefings of the Family (Casualty) Assistance Center at an Arlington, Va., hotel.

"Among the questions was, 'Will we have a chance to see the crash site?'" said a DOD spokesman, Navy Lt. Dave Guy. "The answer was always, 'Yes, that's our intention.' We took nearly 350 family members, loved ones, volunteers, and staff members to the site."

There was a dramatic change in some of the visitors on the way back to the hotel, according to Guy. Some seemed more at peace after actually seeing the site.

USAF Bolstered NY Rescue Crews

The horde of rescue workers that swarmed over the wreckage of the World Trade Center in the aftermath of the terror attacks included more than 100 Air Force reservists who are civilian policemen or firemen in their day jobs.

These airmen, Guardsmen and Reservists, were intensely affected by their experience at the site, as were all who rushed to help the thousands of victims.

"It's horrible," said TSgt. Nick Marchisello, a fireman with AFRC's 514th Civil Engineer Squadron at McGuire AFB, N.J., on Sept. 14.

Marchisello was in New York with the Clifton, N.J., fire department, working with rescue dogs in an attempt to locate any survivors in the pile of concrete that was once among the world's tallest buildings.

His military background has only helped him in his civilian career, he said.

"The [Air Force] fire program expects and encourages you to constantly upgrade and continue your education about the firefighting profession," said Marchisello. "People come to you because of the excellent training that you have received."

SSgt. Anthony Latona, a member of the Air National Guard's 105th Airlift Wing at Stewart Airport in Newburgh, N.Y., is also a Clifton firefighter. He could only describe the scene at the site in comparison to Rwanda, which he had seen while on Air Force active duty.

"I served in Rwanda. ... Going in there, you're expecting to see death and devastation, but to be here like this is just ... " he said, not finishing his sentence.

Air Force service helped him prepare for the difficulties of work in the midst of such a catastrophe, said Latona.

"Being in the military has made me a better fireman and prepared me to do what I have to do," he said.

A1C Francis Perillo, from the ANG's 106th Air Rescue Wing at Francis S. Gabreski Airport, N.Y., also helped at the World Trade Center site. As part of the New York City Emergency Response Team, he spent off-duty time combing the rubble.

"I felt something inside me," said Perillo, a native of Bayshore, N.Y. "I just had to do something."

York City area for use by rescue workers listening for faint sounds in the World Trade Center rubble.

The Connecticut, Massachusetts, and Rhode Island wing of CAP flew 12 sorties and delivered 3,000 pounds of medical supplies to New York's JFK Airport for delivery to Mount Sinai Hospital.

The Georgia CAP wing transported from Dobbins ARB, Ga., to Hanscom AFB, Mass., supplies for robots used by the US Army at the disaster sites.

The Tennessee Wing flew camera equipment to Trenton, N.J., from McGhee Tyson Airport, Tenn.

Many other wings provided communications, blood transport, and other services.

"For the first three days following the [attacks], Civil Air Patrol flights were the only nonmilitary aircraft in the skies," said Col. Rick Greenhut, Northeast Region commander. "The flights were authorized by NORAD, [which] invoked wartime aviation restrictions following the attack."

Guard's Civil Support Team Scrambles

The Sept. 11 attacks led to the first operational employment of a certified National Guard civil support team.

The 22-person New York National Guard Weapons of Mass Destruction Civil Support Team, based in Scotia, N.Y., was activated by the state within hours of the attacks on the World Trade Center and the Pentagon.

By 8:30 p.m., the team was near the site of the World Trade Center, sampling air to help ensure no biological or chemical contamination was present.

The air-sampling mission continued for some 18 hours. Subsequently, the team provided communications services for FBI agents at the site.

The team handled "satellite communications, secure e-mail, telephone and radio support—they're providing all types of communications for the FBI," said an ANG spokesperson Maj. Ellen Krenke.

Red Flag Gets Space-Related Twist

This year's Red Flag warfighting exercise came with a twist—adversary forces able to use space to their own advantage.

For the first time, the 527th Space Aggressor Squadron from Schriever AFB, Colo., took part in the annual test of the Air Force's best fighter pilots. A truck loaded with electronic warfare equipment from the 527th deployed to a far corner of Nellis AFB, Nev., and jammed Global Positioning System satellite signals during the Aug. 10–Sept. 7 exercise.

Loss of the signals denied GPS communications to “downed” airmen and rescue pilots. The move created enough problems for the search-and-rescue event that the truck eventually became a high-priority target for blue forces and was “killed” by an F-16 tasked with threat suppression.

“Times have changed and we have to look at the broader threat,” said Lt. Col. Conrad Widman, 527th commander. “Not only do we have to understand the things in the air, we have to understand how the loss of space capabilities affects combat operations.”

The Electronic Warfare Flight uses commercially available equipment and known adversary capabilities and tactics. The 527th's other units include an Imagery Exploitation Flight, which uses commercial satellite photos to piece together a picture of US forces and capabilities, and a Space Control Flight, which analyzes future countermeasure capabilities and develops new tactics to protect US space assets.

USAF Turns Away From X-33, X-37

On Sept. 7, the Air Force announced that it will not pick up responsibility for NASA's X-33 experimental technology demonstrator and will end support of NASA's X-37 program at the end of Fiscal 2002.

Both the X-33 and X-37 are unmanned vehicles. The X-33 was intended to test technologies usable in a replacement for the aging space shuttle system. The X-37 is a prototype of a reusable, flexible spacecraft that can be launched into space by another vehicle, maneuver using its own engine, and then re-enter the atmosphere to land.

In March, NASA allowed its X-33 contractor agreement to expire and deferred X-37 work.

Both programs have made significant contributions toward understanding spaceplane vehicle performance and cost and integration issues. But after a 60-day assessment the Air Force concluded that “neither of these programs provide a level of military utility needed to continue development and funding by the Air Force,” according to a news release announcing the decision.

White House Taps Six for Aerospace Commission

The White House announced Aug. 22 that it will nominate John W. Douglass, president of the Aerospace Industries Association, to the Presidential Commission on the Future of the US Aerospace Industry.

Other intended Administration ap-

pointments to the panel include Robert Walker, a former member of Congress and chairman of the Wexler Group; Buzz Aldrin, former astronaut and president of Starcraft Enterprises; Edward M. Bolen, president of the General Aviation Manufacturers Association; Heidi R. Wood, Morgan Stanley aerospace defense analyst; and Neil de Grasse Tyson, director of the Hayden Planetarium, American Museum of Natural History.

Congress established the aerospace panel last year in an effort to identify problems that might weaken the nation's

aerospace industry if left unaddressed. Among the specific items on its agenda are possible methods for increasing US aerospace access to the global economy and removal of barriers to public/private cooperation.

Earlier Congress appointed these individuals to the panel: John Hamre, former deputy secretary of defense; Robert J. Stevens, Lockheed Martin president and chief operating officer; William Schneider Jr., former under-secretary of state for security assistance, science, and technology; Tillie K. Fowler, former member of Congress; R. Thomas Buffenbarger, president of the International Association of Machinists and Aerospace Workers; and F. Whitten Peters, former Secretary of the Air Force.

Disorientation Caused Fatal Korea Crash

Pilot spatial disorientation was the likely cause of a June 12 F-16 crash 35 miles southeast of Kunsan AB, South Korea, according to the accident investigation report.

The pilot, 1st Lt. Randolph E. Murff, 35th Fighter Squadron, 8th Fighter Wing, was killed in the incident.

Murff was the wingman in a two-ship formation on a night training mission. He followed the lead pilot into a left turn at an altitude of about 20,000 feet. He then continued rolling left for 23 seconds while the nose of the F-16 dropped into a dive. He made no effort to correct the roll until his aircraft was plunging, inverted, toward the ground. Subsequent erratic control inputs were ineffective.



Randolph AFB, Tex., has been designated a national historical landmark in recognition of its role in the formation of military aviation and its unique architecture, such as this building, nicknamed Taj Mahal.

According to Brig. Gen. Dale C. Waters, accident investigation board president, Murff apparently failed to check his attitude references because his attention was focused on watching his instructor pilot through his night vision goggles, with which he was relatively unfamiliar. This caused him to unknowingly begin his steep dive.

After he realized his situation, the pilot made unproductive efforts to regain control via rapidly alternating left and right rolls. This is evidence that he was experiencing incapacitating spatial disorientation, according to Waters.

Thirteen seconds after he began trying to pull out of his dive and one second before impact, Murff attempted to eject. At that point he was "outside the survivable envelope for the ACES II ejection system," summarizes the accident report.

Edwards Ready for ABL Tests

A team of military, civilian, and contract employees is working hard at Edwards AFB, Calif., to ready facilities for the upcoming tests of one of the Air Force's major development efforts—the Airborne Laser.

The ABL prototype, currently housed at a Boeing plant in Wichita, Kan., will be moved to Edwards by spring. The test effort is scheduled to reach its climax in 2003, with an attempt to shoot down a ballistic missile in flight using the laser aboard the ABL, a modified Boeing 747.

ABL is a unique test program for Edwards, said base officials. In part, that is because of the industrial grade chemicals needed to produce the laser beam.

Handling the chemicals will require support and cooperation from virtually every unit on the base.

"The only way this test program can succeed is to have total support from all Edwards organizations, not only the test wing but our medical clinic, fire department, transportation, security forces, among others," said Col. Howard Lewis, 412th Test Wing vice commander.

Unlike most Edwards test efforts, the ABL will also require significant initial ground integration and test. Work has almost been completed on a new 7,000-square-foot Systems Integration Laboratory to handle this job.

Once the laser technology is tested in the SIL, the Edwards team will integrate both it and the advanced laser optics into the ABL aircraft in preparation for flight testing—some-



NASM photo by Eric Long

The forward fuselage of the Enola Gay travels down Independence Avenue in Washington, on its way to the Garber restoration facility in Maryland.

Here Comes the Enola Gay

Motorists driving into Washington, D.C., Sept. 5 met an unusual sight: the forward fuselage of the *Enola Gay*—the B-29 that dropped the atomic bomb on Hiroshima—rolling along on a flatbed truck, gleaming brightly in the morning sunshine.

The historic bomber was on its way from the National Air and Space Museum downtown to the Paul E. Garber Preservation, Restoration, and Storage Facility in Suitland, Md., where it will be prepared for display as the centerpiece of a huge new museum annex that will open in 2003.

In 1994, a previous administration at the Air and Space Museum had planned to use the *Enola Gay* as a prop in a political horror show. The scheme began to untangle when *Air Force Magazine* exposed the plan in "War Stories at Air and Space" in April 1994. Under fire from Congress and public opinion, the museum canceled the horror show and fired the museum director.

A de-politicized exhibit, built around the 53-foot forward fuselage of the airplane and featuring facts, film, and artifacts from the mission, opened to the public in 1995. By the time it closed in May 1998, it had drawn nearly four million visitors, making it, by far, the most popular special exhibition in the museum's history. Since 1998, the forward fuselage has been stored in a walled-off section of the museum.

Fully assembled for the first time in many years, the *Enola Gay* will be on display at the museum's Udvar-Hazy Center when it opens in 2003 at Dulles Airport outside Washington. The entire airplane, 99 feet long with a wingspan of 141 feet, is too large for exhibit in current facilities.

When the *Enola Gay* was brought to the museum for the 1994 exhibit, it was transported through the streets in the middle of the night. This time, museum officials decided to transport it openly and invited the news media to come watch.

The wide-load truck and escort vehicles moved from the west entrance to the museum along Independence Avenue and Pennsylvania Avenue into the Maryland suburbs and on to the Garber facility by Silver Hill Road.

thing that will require the support of such neighbors as the Army's White Sands Missile Range in New Mexico.

New Path for USAF Leader Program

The Developing Aerospace Leaders initiative, originally a two-year chartered program, will be institutionalized as a long-term function within the Air Staff, according to Air Force officials.

The DAL program office began operation in March 2000. Its purpose has been to review current Air Force developmental policies and procedures and recommend any changes necessary to develop 21st century-ready service leadership.

The new organization will consist of a DAL Support Office and a DAL Advisory Board, which will report to the Chief of Staff.

"We must make the same commitment to our human resource development as we have to the development of our systems and platforms," said Gen. Michael E. Ryan, then Air Force Chief of Staff, when announcing the change on Sept. 5.

Housing, Recruitment Are Priorities

Improvement of bachelor and family housing is one of the biggest quality-of-life challenges facing the Department of Defense, said Charles S. Abell, assistant secretary of defense for force management policy, at a wide-ranging Aug. 31 briefing for reporters.

"Facilities are our first priority at

this point," he said. Pentagon officials have realized that military construction will not be able to build and renovate as much or as quickly as is necessary. All signs point to an increasing involvement of private contractors.

"Privatization ... that's where [Defense Secretary Rumsfeld's] priorities are," said Abell.

On other issues, Abell said DOD officials are continuing to study major changes in the military's long-standing up-or-out retention policies, as well as longer tours of duty, longer careers, and possible changes to the retirement system.

Both the services themselves and outside consultants will weigh in on this effort to develop comprehensive new human resource strategies.

All branches of the military will meet recruiting goals this year, added Abell. But that does not mean it is time for DOD to rest on its recruiting laurels.

The services "made their numbers because a lot of people worked 20-hour days, six and seven days a week, to attract and contract those high-quality young men and women," said Abell.

B-52 Launches Updated CALCM

A Reserve B-52 crew from the 93rd Bomb Squadron, Barksdale AFB, La., carried out the first operational launch of an AGM-86C Block 1A Conventional Air Launched Cruise Missile on Aug. 16.

The successful test was carried out at the Utah Test and Training Range, near Ogden, Utah. Among

other things, it provided the Reservists with a higher level of training than their normal day-to-day flying.

The shot was "a great chance for us to train with real weapons," said Maj. Rob Burgess, mission aircraft commander.

The AGM-86C is an air-to-ground strategic cruise missile with a range of more than 1,500 miles. Block 1A enhancements include better precision strike accuracy, Global Positioning System anti-jamming, and an improved terminal flight profile.

Top DOD Officials Oppose Spectrum Reallocation

The Pentagon leadership is urging Congress to delay reallocation of government-controlled communications bands until a comparable spectrum can be identified for Defense Department use.

"DOD must not be forced to relocate to other spectrum prematurely," wrote Secretary of Defense Donald Rumsfeld and then Joint Chiefs Chairman Gen. Henry H. Shelton in an Aug. 27 letter to Senate Majority Leader Tom Daschle.

At issue is the 1755 to 1850 MHz band of the radio spectrum. The Federal Communications Commission is considering this slice of the dial as the spectrum of choice for third-generation commercial wireless communications.

Defense officials are concerned that this range of electromagnetic emissions overlaps with satellite control, precision guided munitions, tactical radio relays, and Global Positioning System signals.

Allowing private firms access to 1755-1850 MHz before considering its full impact would "have serious consequences on our national security and increase the risk to military personnel," wrote Rumsfeld and Shelton.

Engine Failure Caused F-16 Crash

Air Force accident investigators have determined that engine failure caused the crash of an F-16 from the 27th Fighter Wing, Cannon AFB, N.M., on March 21.

The pilot received minor injuries after ejecting.

Failure of the No. 3 main thrust bearing was the specific cause of engine shutdown, according to the accident report. Two other factors, in turn, led to the bearing failure. First, a crew chief did not perform a proper preflight maintenance inspection. Second, maintenance personnel missed the fact that a pump filter

USAF photo by Leigh Anne Bierstine



Maj. Kelly Latimer, Air Force Test Pilot School instructor pilot, prepares for takeoff in the Long EZ with its owner Tom Staggs. TPS students at Edwards AFB, Calif., broaden their flying experiences with the canard-controlled, propeller-driven craft.

in the engine's oil system was contaminated.

News Notes

■ James G. Roche, Secretary of the Air Force, and Gen. John P. Jumper, USAF Chief of Staff, on Sept. 13 issued a joint statement thanking all Air Force personnel who had joined the rescue and recovery tasks in the wake of the Pentagon and World Trade Center attacks. "Many of you have performed superhuman feats of heroism and courage," they said.

■ Air Force Reserve Capt. Bernetta Lane was one such hero. A nurse at the DiLorenzo Tricare Health Clinic in the Pentagon, she helped set up patient care facilities in the parking lot and retrieve medical supplies from the damaged building. "I just focused on maintaining my bearing and working with everyone to pull through this," she said.

■ US Department of Defense representatives met with counterparts from China on Guam on Sept. 14 and 15 to discuss principles and procedures for the safety of military aircraft and ships operating in the vicinity of one another. The meeting was "conducted in a professional atmosphere," according to the Pentagon.

■ On Sept. 10, Secretary of Defense Donald Rumsfeld kicked off the 2001 Acquisition and Logistics Excellence Week with a speech that called on Pentagon employees to launch an all-out campaign to shift DOD resources from the bureaucracy to the battlefield. "The modernization of the Department of Defense is a matter of some urgency—in fact, it could be said that it's a matter of life and death," said Rumsfeld.

■ When Air Force Reserve Command pilots from Homestead ARS, Fla., patrol the skies over Iraq on



Contractors implode Minuteman III silo H-22, near Petersburg, N.D., on Aug. 24. It was the last silo required to be destroyed under START I.

USAF photo by TSgt. Mark Bucher

Minuteman Facility Likely To Be Preserved

A Minuteman silo and a missile alert facility in North Dakota are likely to be preserved as a static display of Cold War-era history.

One hundred forty-nine ICBM silos and 14 controlling missile alert facilities spread across the Great Plains have already been destroyed in accordance with START (Strategic Arms Reduction Treaty) I.

But silo N-33 and alert facility O-0, both located near Cooperstown, N.D., and operated by units from Grand Forks Air Force Base, may not share their fate. The Air Force intends to turn both over to the North Dakota State Historical Society as soon as details can be worked out.

"The missiles have been an important part of North Dakota's history, and the state wants the opportunity to preserve some of [that history] through this effort," says Heidi Durako, 319th Civil Engineer Squadron environmental flight cultural resource manager.

Under terms of the START pact, the silo and alert facility must still be rendered inoperable. Facility O-0 has already been stripped of its ability to launch missiles. Silo N-33 must be filled with gravel to within a half-meter of the bottom of the launcher closure door. The door will then be welded shut after a 30-day period in which treaty partners (Russia, Belarus, Kazakhstan, and Ukraine) have the option to inspect silo tube destruction.

Senior Staff Changes

PROMOTIONS: To **General:** Robert H. **Foglesong**. To **Lieutenant General:** Teed M. **Moseley**. To **ANG Lieutenant General:** Daniel **James III**. To **ANG Major General:** Ronald J. **Bath**, Frederick H. **Forster**, Juan A. **Garcia**, Michael J. **Haugen**, Steven R. **McCamy**, Jerry W. **Ragsdale**, William N. **Searcy**, Giles E. **Vanderhoof**. To **ANG Brigadier General:** Higinio S. **Chavez**, Barry K. **Coln**, Alan L. **Cowles**, James B. **Crawford III**, Marie T. **Field**, Manuel A. **Guzman**, Roger P. **Lempke**, George R. **Niemann**, Frank **Pontelandolfo Jr.**, Gene L. **Ramsay**, Terry L. **Scherling**, David A. **Sprenkle**.

CHANGES: Brig. Gen. Elizabeth A. **Harrell**, from Dir., Logistics & Security Assistance, EUCOM, Stuttgart-Vaihingen, Germany, to Dir., Maintenance, DCS, Instl. & Log., USAF, Pentagon ... Lt. Gen. (sel.) Daniel **James III**, from Adjutant Gen., Austin, Tex., to Dir., ANG, Arlington, Va. ... Maj. Gen. (sel.) Quentin L. **Peterson**, from Cmdr., 97th AMW, AETC, Altus AFB, Okla., to Chief, Office of Defense Cooperation to Turkey, EUCOM, Ankara, Turkey ... Maj. Gen. Craig P. **Rasmussen**, from Chief, Office of Defense Cooperation to Turkey, EUCOM, Ankara, Turkey, to Dir., Log. & Security Assistance, EUCOM, Stuttgart-Vaihingen, Germany. ■

deployment this fall, they will be doing it with more powerful engines. The 482nd Fighter Wing received the last of 17 F-16s equipped with peppy Block-30 GE engines earlier this year.

■ The Space Based Infrared System High team, led by Lockheed Martin Space Systems, successfully completed an Air Force system critical design review Aug. 31.

■ ACS Government Services of Rockville, Md., signed a contract with the Defense Finance and Accounting Service to provide pay services to 2.5 million military retirees and annuitants. This outsourcing move by DOD is expected to save \$20 million over the life of the contract. The transition to ACS should be completed by Janu-

ary 2002. Some current DFAS employees may be hired by ACS.

- An Air Force T-37 jet trainer from Columbus AFB, Miss., crashed Sept. 5 in an unpopulated area near Montpelier, Miss. The student pilot, 2nd Lt. James King, ejected safely from the aircraft.

- The Air Force received three firefighting awards at the annual DOD Fire-Rescue International Training Conference in New Orleans in late August. SSgt. Kile W. Stewart from the 18th Civil Engineer Group, Kadena AB, Japan, was named DOD Military Firefighter of the Year and Joseph R. Suddarth from the 96th Civil Engineer Group, Eglin AFB, Fla., DOD Civilian Firefighter of the Year. The 35th Civil Engineer Squadron's fire protection flight, Misawa AB, Japan, earned the DOD Outstanding Fire Department of the Year honor.

- The first guided launch of a Joint Direct Attack Munition from an F/A-18E Super Hornet successfully hit its target at the Navy's China Lake, Calif., test range Aug. 29.

- The Department of Defense needs to make it easier for reservists to come on board for active duty, according to a top reserve official. "I've been told there are 32 ways to come on active duty, depending upon what organization you're in and where you're going and for how long," Charles Duehring, acting assistant secretary of defense for reserve affairs, told reporters Aug. 30. "We've got to ... try to reduce that number with a goal of making it a very seamless transition."

- On Sept. 5 the Federal Services division of Delta Dental Plan of California announced that the Tricare Retiree Dental Program is now open to all Medal of Honor recipients.



SSgt. Merle Hudson, a combat arms instructor with the 355th Security Forces Squadron at Davis-Monthan AFB, Ariz., oversees other base personnel as they attempt to qualify with 9 mm pistols—in preparation for possible deployment.

- An A-10 Thunderbolt II from the 23rd Fighter Group, Pope AFB, N.C., crashed Sept. 3 in Arizona near Mesquite, Nev. The pilot, Capt. Frederick H. Sellers, ejected safely and was released from the hospital that afternoon.

- A launch team at Vandenberg AFB, Calif., successfully launched a prototype rocket motor booster Aug. 31. The prototype is intended for use with the Ballistic Missile Defense Organization's ground-based mid-course interceptor.

- Civil Air Patrol leaders elected Brig. Gen. Richard L. Bowling as the Air Force auxiliary's national commander during CAP's annual convention in Cincinnati, Aug. 15-18.

- EC-18B Advanced Range Instru-

mentation Aircraft made their final ARIA flight at Edwards AFB, Calif., on Aug. 24. The two ARIA airplanes, which can record and relay telemetry from space vehicles, are being transferred to the Joint STARS program.

- Maj. Barry R. Cornish was presented with the 2001 Koren Kolligian Jr. Trophy in a Pentagon ceremony Aug. 24. The award recognizes actions taken to avert or minimize the impact of an aircraft accident. While assigned to the 58th Fighter Squadron, Eglin AFB, Fla., in January 2000, Cornish was able to safely land an F-15 aircraft after failure of a main landing gear upon initial touchdown caused severe damage to the F-15. His swift reaction prevented loss of life and aircraft.

- General Atomics Aeronautical Systems' Predator B Unmanned Aerial Vehicle reached a milestone altitude of 42,000 feet during flight envelope expansion tests at Edwards AFB, Calif., on Aug. 17.

- Air Force Research Laboratory's Information Directorate awarded a contract to Logicon, a Herndon, Va.-based firm, to develop a prototype "Network Early Warning System" capable of alerting DOD of impending Internet-based attacks on department computer networks.

- Beginning Oct. 1, Air Force Reserve Command increased the maximum amount of aid available under its Tuition Assistance Program to \$3,500 a year. At the same time, the program was expanded to include courses up to a master's degree. ■

USAF photo by SSgt. Jeremiah Erickson

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