Sept. 11, 2001 — another day that will live in infamy. More than 3,000 innocent people died in the attacks in New York, Washington DC and Pennsylvania. The terrorists got our attention. They woke up the “sleeping giant,” brought our nation together, and focused our resolve on fighting and eliminating terrorism at the source.

The Department of Defense responded with operations on two fronts — one at home and the other anywhere that terrorists hide, against any country that hides them. President Bush advised the American people to go to work “with a heightened sense of awareness,” an awareness that, unlike America’s past wars, the war against terrorism will not be fought exclusively “over there.”

The mission of Operation NOBLE EAGLE is to protect America “over here.” Homeland defense and civil support services are being provided by DoD’s Total Force, including 50,000 members of the military reserves who have now been called to active duty.

The mission of Operation ENDURING FREEDOM is to fight terrorism at its source — and the U.S. Air Force and its civil engineers have risen to the challenge.

What’s Underway

The Air Force responded to the call to fight terrorism with its full range of assets — literally thousands of airlift, bomber and fighter operations. Air Force civil engineers responded in kind, serving in our traditional roles and fighting our own kind of battle to bed down troops and aircraft in a hostile environment. In all, more than 400 CEs responded directly to the Sept. 11 attacks, providing firefighter, construction and explosive ordnance disposal (EOD) support, not to mention those at Air Force and major command headquarters who stood up Crisis Action Teams (CATs).

In New York, the governor called up more than 150 Air National Guard firefighters and Prime BEEF members for direct support in New York City. CE troops from fighter wings assigned to First Air Force responded to the...
At War with Terrorism Civil Engineer Support to Operations NOBLE EAGLE and ENDURING FREEDOM

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immediate increase in flights for the Southeast Area Defense Sector. EOD personnel supported President Bush, following him from Sarasota, FL, back to the White House. EOD also supported personnel at McGuire Air Force Base, NJ, and Dover AFB, DE. Throughout the Air Force CE community, CATs stood up immediately and have been manned continuously since the attacks.

other commitments, deploying more than 1,600 engineers per month last year. In May and June, there were more than 2,100 CEs deployed, with more than 1,050 at bases in and around the Persian Gulf. As of Dec. 31, more than 2,000 CE members were in the Operation ENDURING FREEDOM area of responsibility (AOR) or on their way.

Today, Air Force CEs are providing the lion’s share of manpower for base operating support at places most of us had never heard of before — from beddown to infrastructure improvements to fire protection, EOD and nuclear, biological and chemical (NBC) defense.

“We should be proud of what we have accomplished so far,” said Col Tim Byers, chief, Readiness and Installation Support Division (AF/ILEX), Office of The Civil Engineer. “We have constructed tent cities, water plants, power generation and supply, and other infrastructure. We are building two new air bases and reconstituting others, and are supporting more than 19,000 personnel and hundreds of aircraft.”

The 823rd and 820th RED HORSE Squadrons have deployed and tasked more than 500 personnel for heavy construction in the AOR, with other active, Guard and Reserve RED HORSE squadrons contributing personnel. More than 450 firefighters are deployed, with more than 60 vehicles in theater. We are also providing the

“Homeland defense” has taken on new meaning since Sept. 11. ANG and Air Force Reserve forces are actively engaged in supporting Combat Air Patrols (CAPs) across the United States, as well as airport security and other requirements. The Air Force is flying CAPs continuously over key areas in the country, as well as randomly over cities and major public events. More than 500 CE troops are directly supporting these CAPs, but it would be safe to say that all 19,000 members of the Air Force’s active duty CE force — with hundreds of members of the Guard and Reserve — are supporting Operations NOBLE EAGLE and ENDURING FREEDOM.

Prior to Sept. 11, CE forces were already providing support to various missions all over the world. CE is highly involved in the Aerospace Expeditionary Force and...
majority of EOD capability in the AOR, with about
100 specialists deployed. Nearly 150 readiness
troops have deployed with protective and detection
equipment. They are training Air Force person-

nel to use individual

establishing joint NBC detection and decontamination
operations with the U.S. Army in the AOR.

CE personnel have evaluated numerous airfields and
potential air bases all over Central Asia, producing quality
reports for the warfighters, including matrices of airfield
capabilities for each aircraft being flown in the AOR.
These evaluations are taking place on the ground, often
augmented by “GeoReach,” a global expeditionary
planning system technology.

“We are experiencing exciting things with
GeoReach,” said Lt Col Brian Cullis, chief, Information
Systems Integration Branch under AF/ILEX. “It’s
presenting users with opportunities to gain insight into
the AOR prior to deployment using satellite imagery and
layers of digital information. Whether coming from the
GeoReach teams at Air Combat Command (ACC),
Pacific Air Forces (PACAF) or AF/ILEX, the war
planners have had geographic information system tools
like no other.”

GeoReach has already provided great assistance in
supporting airfield assessments, while enabling the
sharing of site survey data, photography and other
information. The GeoReach imagery and global positioning
system processes will ultimately serve as core elements for an integrated site survey framework being formed by the Services.

What Lies Ahead

Many challenges exist as we bed down in new
locations, from fixing drainage problems, purifying water
and excavating rock-hard soils, to force protection and
host nation issues and preparing for winter opera-
tions. We are reconstituting bases that we previously
bombed. Our pavement evaluation and RED
HORSE teams reported that one base had excellent
pavement for aircraft operations — except for 23
craters and three spall fields!

Challenges will exist
with sustaining forces in the
AOR, especially with a likely
increase in humanitarian assistance. We also have
challenges at home, especially with CE manning. Deploy-
ments for ENDURING FREEDOM and requirements for
NOBLE EAGLE are impacting our continental U.S. base
operations, with CE forces stretched thin between
operations and home base support. In addition, this
winter should prove especially busy for EOD personnel
with support needed in Utah for the Winter Olympics.

The Sept. 11 terrorist attacks shifted the U.S.
military’s NBC passive defense paradigm, high-
lighting our vulnerability to unconventional attacks.
The terrorist attacks, and the anthrax incidents that
followed, identified adversaries with an NBC
capability and the will to use it directly against the
United States. The anthrax attacks accelerated the
Counter Biological Warfare Defense initiative. Efforts,
originally scheduled a year out, were reprogrammed
Service sometimes means the ultimate sacrifice, and the first American casualty of Operation ENDURING FREEDOM was a civil engineer, MSgt Evander Earl Andrews. Maj Gen Earnest O. Robbins, The Air Force Civil Engineer, said, “The next time you hear someone describe engineers as ‘tail’ in some inane discussion of tooth-to-tail ratio, I suggest you show them this photo. We are grateful for MSgt Andrews, his service and the service of all the members of Air Force civil engineering. The nation is grateful, too.”
from Operation DESERT STORM and the Kosovo conflict, and are now applying lessons learned at the start of this campaign.

Examples include: get CE representation on site survey teams, improve sourcing of Harvest Eagle/Harvest Falcon kits that are essential to force beddown, and work with the Army at sites deploying their Force Provider kits. Also, as the clamor for more ramp space was heard throughout the AOR, AFCESA put together a simple matrix for the operators that explains the full capabilities of AM-2 matting.

Satellite communication and other state-of-the-art technology is making the job easier for pavement evaluation teams, RED HORSE and other CEs dispersed throughout the AOR, and we are looking to make that communication even more efficient. As flying bases were built up, a concept of operations was needed to assess fire protection risks and deploy a finite number of fire protection assets in concert with the operations tempo. NBC operations have had to be flexible to meet the new threats — threats that are evolving every day.

One of the biggest lessons learned is simply getting CE forces into bare bases and other locations early so they can evaluate potential air bases before a majority of other forces arrive. Whether our mission is to assess damage, evaluate pavements, or set up the base infrastructure, CE forces are “early enablers” and have expertise needed by the warfighting commanders.

For example, as of December, two separate pavement evaluation teams from AFCESA had conducted surveys of more than a dozen airfields in the AOR. The U.S. Central Command Air Forces Civil Engineer, Lt Col Dave Nelson, reported, “Both of these teams have done one hell of a job. They provided and continue to provide incredible support, not only to Combined Forces Air Component Command needs, but also to Combined Forces Land Component Command and U.S. Central Command requirements.”

Before it’s all over, no doubt we will capture and refine many more lessons learned. And we need your help. If you have lessons learned or new ideas on how to work smarter,