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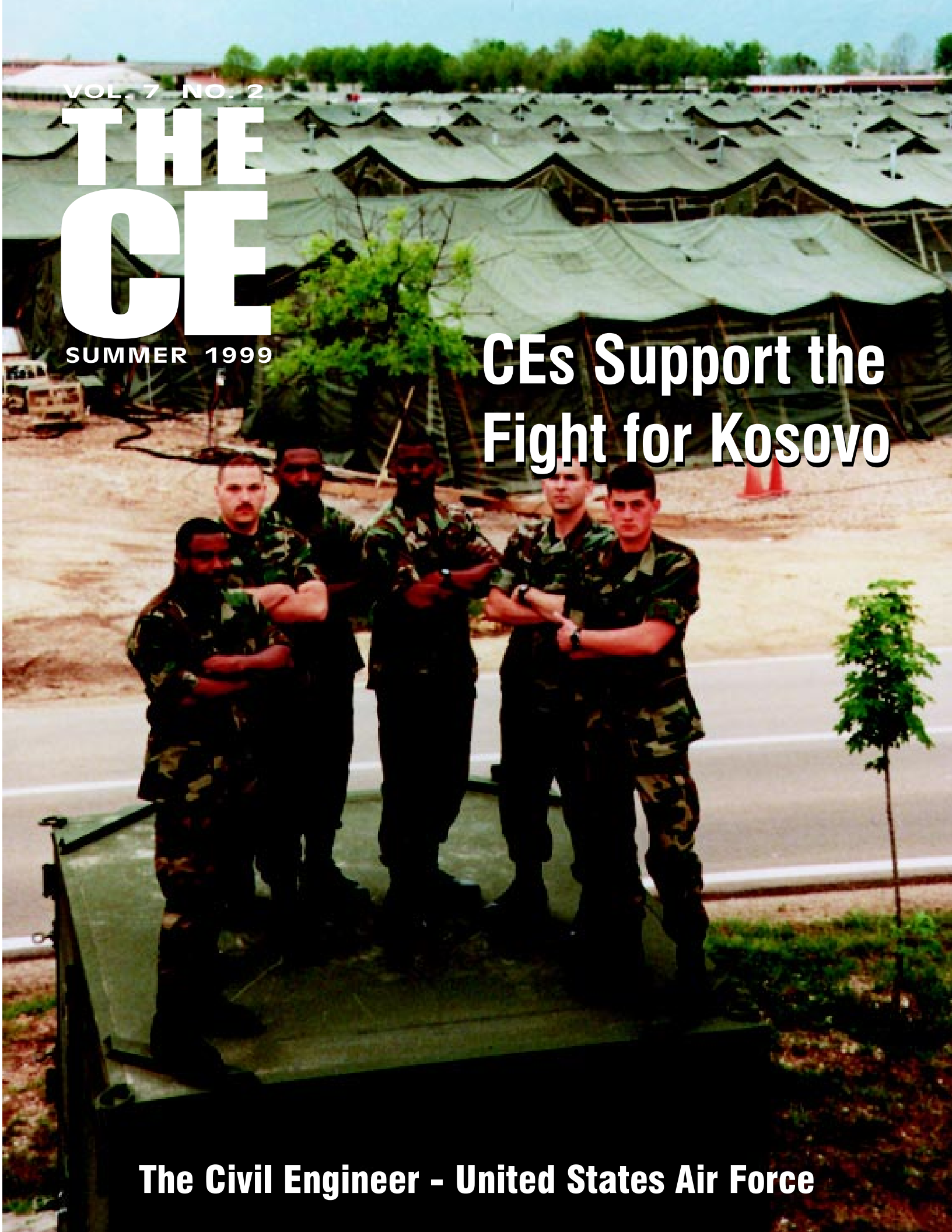

CEs Support the Fight for Kosovo

The Civil Engineer - United States Air Force

FROM THE TOP

Supporting Operation Allied Force

"Air bases are a determining factor in the success of air operations. The two-legged stool of men and planes would topple over without this equally important third leg."

— General Henry H. "Hap" Arnold

General of the Air Force Hap Arnold's words ring just as true today as they did in 1941. Civil engineers are critical to the Air Force mission, and between the current crisis in the Balkans and ongoing operations in Southwest Asia, our operations tempo is the highest it's been since Desert Storm.

We directly supported the deployment and beddown of aircraft and people at bases throughout Europe in support of NATO Operation Allied Force and Joint Task Force Shining Hope. Now, with the peacekeeping and humanitarian relief operations underway in Kosovo and Albania, Prime BEEF and RED HORSE are bedding down forces from all Services and repairing and upgrading the airfield infrastructure necessary to deliver assistance to hundreds of thousands of refugees. RED HORSE teams are designing, constructing and expanding the airfield pavements necessary to accommodate U.S. aircraft. Prime BEEF teams are building and maintaining tent cities and supplying water, sewage treatment and electricity for aircrews and support personnel. They are setting up, operating and maintaining emergency lighting and aircraft arresting barrier systems so our airplanes can safely launch and recover. Our firefighter and explosive ordnance disposal personnel are providing support critical to sustained aircraft operations. Our pavement engineers are conducting essential ramp and runway evaluations. Our people are providing a rapid, professional response.

Maj Gen Eugene A. Lupia
The Air Force Civil Engineer

True to the expeditionary concept, CE teams proved they can deploy at a moment's notice and operate effectively with minimal resources. When the Kosovo conflict began, a Prime BEEF team from the 86th Civil Engineer Group, Ramstein Air Base, Germany, deployed with less than two hours notice and joined the 31st Civil Engineer Squadron at Aviano Air Base, Italy, to assemble shelters for incoming troops. Experts said it would take 10 days to set up the tent city, but the combined team did it in four and a half. Such speed, efficiency and reliability have been the rule, not the exception, during this contingency. Whether providing personnel or systems support to the flying mission, engineers have played a crucial role in each phase of these operations and have been critical to their success.

While the crisis in the Balkans required us to cancel Readiness Challenge VII, we remain focused on readiness — a vital part of our mission. There is no doubt the teams who were training for Readiness Challenge VII will see their additional training pay off when they deploy to Kosovo, or anywhere else the Air Force needs them.

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(Left to right)* SSgt Mark Clarke, SSgt Robert Lewallen, SSgt Gregory Bradford, MSgt Dale Littles, SSgt Eric Allain and SSgt Gene Sukup from the 52nd CES, Spangdahlem, Germany, were members of the 31st Air Expeditionary Wing team that supported beddown operations at Aviano Air Base, Italy, during NATO's Operation Allied Force. *(Photo by MSgt Keith Reed)

The Civil Engineer

The U.S. Air Force Civil Engineer

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The Civil Engineer
Maj Gen Eugene A. Lupia

AFCESA Commander
Col Bruce R. Barthold

Chief, Professional Communications
Lois Walker

Editor
Letha Cozart

Graphics/Production Editor
Demetress Lovett-West

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Maj Gen Eugene A. Lupia will retire from his position as The Air Force Civil Engineer on July 23, following more than 32 years of uniformed service. During his four-year tenure as the Air Force's top civil engineer, Gen Lupia provided civil engineer support to contingency operations such as Joint Endeavor, Northern and Southern Watch and Allied Force, and tackled initiatives such as privatization, competitive sourcing and automation and training. In this parting interview, Gen Lupia discusses some of these ongoing operations and initiatives and the challenges of ...

An interview with Maj Gen Eugene A. Lupia, The Air Force Civil Engineer

The CE: **When you began your tour as The Air Force Civil Engineer, one of your goals was to emphasize team building and partnering between your office and the major commands, the Office of the Secretary of Defense, other Services and industry. What are some of the results of these partnerships?**

Maj Gen Lupia: When I went back and read *The CE* magazine article where I was interviewed when I first came to this job, it was interesting to see what we've been able to accomplish in these areas. The major command engineers, for example, are working together much more closely than we did during the seven years that I was at Strategic Air Command and Air Mobility Command. We've agreed when somebody has a problem we will get together to help solve it — even paying each other's bills at times — and that has worked out well for us.

We're doing well with the Office of the Secretary of Defense, and our relationship with the other Services is better than it's ever been. We've gone out of our way to partner with industry, especially in the areas of housing and utilities privatization. It has become very critical to us — understanding the perspective of industry as we go off into some of these new areas — and so we've worked hard at that partnership.

The CE: **You've made extra efforts to keep in touch with civil engineers at all levels by establishing different councils (the Civil Engineer Chiefs' Council, Airmen's Council and Lieutenants' Advisory Board) to help you**

keep the lines of communication open. You also brought together civil engineering's founders, our retired senior military and civilian leaders, and encouraged them to share their wisdom and experience on current issues confronting Air Force civil engineering. What have you learned from these groups?

Maj Gen Lupia: Regarding the Founders, I learned early on that we had a number of retirees who were out there sort of starving for information on what was going on around the Air Force. As it turns out, before I leave, I'm going to sign out Founder's Letter number 15. So over four years I've been able to get a letter out to them about once a quarter, and I can't tell you how many nice letters I've received expressing thanks for keeping them informed. We've got about 140 to 150 retirees on our Founders list now and, as I've learned, they are not very bashful at letting you know their thoughts on subjects that affect civil engineering. So it's been very interesting in that respect.

As far as the councils, that's also been very interesting. I find when you get the lieutenants together, the Lieutenants' Advisory Board, it doesn't take very long before they lose their inhibitions as well and are quite frank as far as what they tell you about what it's like to be a lieutenant in civil engineering today. I've presented the results of the last two or three meetings from the Lieutenants' Advisory Board to the major command engineers and many of them, I think, were very surprised to hear some of the things the lieutenants were saying as a group. The Chiefs' Council I don't have to prod very much — they really tell it like it is. They've worked a number of very difficult issues for us over the last four years in terms of our organization, some very tough training issues, and their perspective has been very valuable. Hearing from a number of people who are from all walks of life — from young airmen to lieutenants to chief master sergeants to some who've spent 30 to 35 years in the business and are now retired and working in similar jobs in civilian industry —you take all that and put it together and it provides an awful lot of information and a lot of very good feedback. It's turned out to be very meaningful for me.

The CE: **A long-standing goal of yours has been to provide the best dormitories possible for our unaccompanied personnel. What progress has been made toward this and other quality of life goals and what still needs to be accomplished?**

Maj Gen Lupia: I could actually fill up the entire magazine with my answer to this question, because this is my favorite subject. I'll do some chest beating for the civil engineering community here because I think we have done a magnificent job in this area. When we took this initiative on — getting our unaccompanied personnel into the best dormitories we possibly could — we started out with an inventory of 173 dorm buildings with gang latrines that we hoped to "buy out" by FY00. I am proud to say we beat our goal and finished in FY99. Our plan is to have every airman, E1 through E4, who lives on base living in a private room by the year 2002. I'm very happy with our progress.

Maj Gen Lupia and Brig Gen Samuel Helland, Deputy Commander, Joint Task Force Shining Hope, discuss engineering and construction issues on the ramp at Rinas AB, Tirana, Albania. ***(Photo by Capt Jonathan Webb)***

The other quality of life area we've starting working on is fitness centers. We've put five of them in this year's military construction program, and we're building a Fitness Center Master Plan that mirrors what we did for dormitories with the Dormitory Master Plan. We'll give the Air Force a good plan to sink its teeth into over the next five or 10 years, as we have more than 80 gymnasiums and athletic facilities that need work badly.

On the other side of the coin, what still needs to be accomplished is an awful lot. We still have to get together a master plan for child development centers and for recreational facilities of other kinds. A conscious decision was made to tackle dormitories first, then fitness centers, then child development centers and then other kinds of recreational facilities, so there's still a very long way to go and a very large investment to be made in this area.

The CE: **You have been successful in getting the MILCON program back on track after the lull in spending during the base realignment and closure process. What are the prospects for military family housing and other major MILCON projects today?**

Maj Gen Lupia: In family housing there's lots of good news. We've had tremendous support from the Air Force corporate structure in tackling the multi-billion dollar problem in family housing. We've spent a lot of time on this during my watch, and I'm proud to say before I walk out the door we'll have published the Air Force Family Housing Master Plan, which combines traditional military construction with our efforts in privatization and the large projects we accomplish in the O&M account. We have a commitment from the 4-stars from the last Corona, in June 1999, that we will be able to make a much larger investment in housing over the next 10 years. Our goal is to have the

110,000 houses in our inventory all in very good condition by the year 2010. This has had very strong support from Air Force leadership. When you combine taking care of our families in family housing and taking care of our unaccompanied personnel in dormitories, it's a good indication Air Force leadership is willing to focus attention on people.

Maj Gen Eugene A. Lupia and General-Major Boris Alekseev, head of the First Directorate Ecology and Special Protection Measures, Russian Federation Ministry of Defense, sign the record of a bilateral meeting held during the 1998 Third Annual Joint Service Pollution Prevention Conference and Exhibition in San Antonio, Texas. *(Photo by Gary DuPriest)*

Maj Gen Lupia and Col Alexander Katzaf, the Israeli Air Force Civil Engineer, shake hands after formalizing a long-term cooperative relationship in sharing information on civil engineering readiness, construction and environmental issues. *(Photo by Lt Col Bryan Bodner)*

The CE: **Utilities and housing privatization have become major programs during your watch. What have been the positive aspects of these programs and how have you been able to balance privatization against the need to preserve the CE readiness core?**

Maj Gen Lupia: This is an interesting question in that we really don't have an awful lot of results from our work in this area. We've spent a lot of time in the planning and study phase of the utility privatization business, but to this date we don't have a contract awarded for anybody to take over one of our utility plants. We have some plants that have been privatized for some time now, but from our most recent efforts we don't have anything that we can say is a success story yet. We do have a success story in housing privatization at Lackland Air Force Base. We are the only Service that has been able to award a contract under the 1996 legislation that allows us to do housing privatization. We'll have the first houses in October of this year and then it will take about another year before we have all 420 houses. I think Lackland will be considered a success in all respects.

You asked about the relationship between this and the readiness core. This is another area where I could fill up the whole magazine. We've been through grueling, grueling detail to determine what our requirements are in terms of the number of bluesuiters needed to be able to fight two major theater wars. We've come up with this number, which has almost become famous by now, that says we need 28,401 people in uniform — active, Guard and Reserve — to fight two major theater wars. In all our efforts with competitive sourcing and privatization, we're very conscious of that requirement — the 28,401 — and we're doing everything we can to guard against ever falling below that level. To date we've been successful. We've actually had to tell some people that they can't competitively source or privatize a function they want to because it would impact our readiness core.

The CE: **How has our CE force responded to military and civilian manpower reductions during your tour, and do you believe that reductions will continue in light of competitive sourcing?**

Maj Gen Lupia: I guess no matter who has this chair they'd have to answer the first part of the question about responding to reductions as something that always hurts. All of us who have been in the civil engineering business for a period of time know we don't have any extra people in our squadrons, and that our squadrons are working very, very hard. So anytime we talk about a reduction it's nothing but bad news. We have, however, weathered through it. Our squadrons still have great reputations and our squadron commanders are still doing a bang-up job. Our civil engineers are being promoted, in some cases, 20 and 30 percentage points above the line of the Air Force, which speaks for the kind of work that our people are doing in the field. So, in spite of these reductions, we are doing extremely well.

Do I think these reductions will continue in the future in light of competitive sourcing? The answer to that is absolutely yes. Four years ago in my incoming interview I predicted there would be a lot more privatization and competitive sourcing. It wasn't that I was smarter than anybody else, it was just that I had read a great deal and could sense the direction the Department of Defense was going.

Maj Gen Lupia presents Air Force Civil Engineer Round Metal Objects to A1C Thomas Keppel and SrA Gabriel Hilario of the 823rd RED HORSE Squadron. Kepple and Hilario are making improvements to the road outside Rinas Air Base, Tirana, Albania. ***(Photo by Capt Jonathan Webb)***

And, quite frankly, I sense that we are not at the end. There will be more competitive sourcing and privatization and that will cause additional reductions in manpower, both military and civilian. But again, I emphasize that we are very careful about those reductions affecting the readiness core and our ability to fight two major theater wars with bluesuiters.

The CE: **Are you satisfied that the bulk of privatization efforts will remain limited to the current areas of base housing and utilities or are there other areas that may ultimately come under study?**

Maj Gen Lupia: I am not satisfied they are the only two areas. I'm also not able to look into a crystal ball and tell you what anybody might come up with as far as what to go after next, but I think we'll find more of this as time passes.

The CE: **Readiness Challenge VII was postponed so that CE resources could support NATO operations in Europe. How does competing at Readiness Challenge prepare teams for international military operations?**

Maj Gen Lupia: One of the toughest decisions I've made during my four years in this job was to cancel Readiness Challenge. I labored over it. I procrastinated about calling Readiness Challenge off until the absolute last minute that I felt I could and still be smart about it. When the Canadian team pulled out to respond to the Balkan crisis, and then our Air Forces in Europe team from Lakenheath pulled out for the same reason, and I started to hear from some of the other functional areas that participate in the competition, for example Services, that they were being stretched pretty thin, I finally decided postponing it was the smart thing to do. I consulted with some of my colleagues and major command engineers and made what I considered to be a very tough decision and one I know wasn't really popular. I know the Air Force will recover and will pick another time for Readiness Challenge VII to take place. My guess is probably in the Spring of 2000 after everybody has had a chance to get home from the Balkans and clean up their gear and recycle a bit.

We had an all-time high of seven countries that were going to join us at Readiness Challenge VII — Canada, Israel, Italy, Japan, United Kingdom, Norway and Germany. The Readiness Challenge competition helps us to hone our skills and find innovative, creative ways to do things, and do them better and faster and, in some cases, cheaper. Doing that side by side with our colleagues from seven other countries certainly has to have tremendous benefits in seeing how they do the same things. My guess is that we'll copy some things from them and they'll copy some things from us, and it'll give us a chance to learn to work together. Operations like we're seeing in the Balkans will work better for everyone, at least in part, as a result of one or two weeks of being together at a small site in Florida practicing our war skills.

The CE: **The U.S. military is designed to fight two major theater wars almost simultaneously, but now it is confronted with several long-running contingency operations. How is CE holding up? What is being done to support our deployed personnel?**

Maj Gen Lupia: I am very, very proud of the civil engineering community at each and every one of the humanitarian efforts they're asked to support, as well as our warfighting efforts in the Balkans and Southwest Asia, and literally

Members of the 823rd RED HORSE Squadron with Maj Gen Lupia outside the 823rd RHS Command Post at Rinas Air Base. Pictured from left to right are: SSgt Jurgen McRight, TSgt Daniel Butterbaugh, SSgt Joseph Vanhoose, SSgt Christopher Martin, Maj Gen Lupia, Capt Bryan Poyant, Capt Erik Lagerquist. ***(Photo by Capt Jonathan Webb)***

anyplace else we're asked to go. Our people are willing to go anyplace, anytime, to do what's necessary. I've seen the results of their efforts at "Camp Provide Comfort" at Incirlik Air Base in Turkey, at the tent cities they've put up at Aviano Air Base in Italy, the work they've done to support Bosnia, the work they're doing right now to support the efforts at Tirana, Albania, for Operation Shining Hope, and throughout the European theater — if you could see the civil engineers in action there it would really make you feel good. I think they're working harder than they ever have before, and still they'll look you right in the eye and tell you they love what they're doing. It really gives them a chance to use the skills they've learned along the way and gives them a chance to roll up their sleeves and do some mighty hard work. I just went to Tirana and met with the RED HORSE and Prime BEEFers that were there, and morale is sky high. They don't like being away from home and away from loved ones, but they like serving their country and they like what they're doing.

In terms of supporting our people that are deployed, the major commands have backed each other up 100 percent. My biggest problem is holding off every major command that wants to go get in the fray. Everybody wants to be involved and quite frankly we've got more volunteers than we need, which just shows how much everybody wants to make a contribution. We're doing everything we can to make sure our people are very well organized, trained and equipped. I think it's very evident when you see them that they are.

The CE: **Implementation of the Expeditionary Aerospace Force will be delayed because of Kosovo-related operations. What changes can be expected when CE squadrons are realigned into combat support forces under the AEFs?**

Maj Gen Lupia: There's a little guess work on my part here in terms of what will happen as a result of our operations in the Balkans. There's no doubt we're going to continue to be an Expeditionary Aerospace Force. There'll be a little bit of tweaking as a result of what we've learned from the Balkan operations, but it's not going to change the heart of the concept — it will go on pretty much as it is. In terms of civil engineering, we're going to move some people around, we're going to structure some UTCs a little differently, but for us we're not going to see a lot of change caused by the AEF concept.

Major General Eugene A. Lupia entered the Air Force in 1967 after graduating from the U.S. Air Force Academy, Colorado Springs, Colo. One of his first assignments was as adviser to the Vietnamese base civil engineer, Tan Son Nhut Air Base, South Vietnam. He has served as base civil engineer at McConnell Air Force Base, Kansas, and as combat support wing commander at Ramstein Air Base, Germany.

He was an Industrial College of the Armed Forces mobilization fellow with the Federal Emergency Management Agency studying nuclear blast protection for critical American industries. He served as the last deputy chief of staff, engineering and services, at Headquarters Strategic Air Command, and as the first director of civil engineering at Headquarters Air Mobility Command.

The general flew aboard the Strategic Air Command airborne command post "Looking Glass" as an engineering damage assessment officer until his promotion to brigadier general in 1991, then served as the U.S. Strategic Command airborne command post mission director of the "Looking Glass."

With his promotion to major general in 1995, General Lupia joined the Air Staff as The Civil Engineer, U.S. Air Force.

Gen Lupia has received the Distinguished Service Medal, the Legion of Merit with oak leaf cluster, the Bronze Star Medal, the Defense Meritorious Service Medal, the Meritorious Service Medal with oak leaf cluster, and the Republic of Vietnam Gallantry Cross with Palm.

The CE: **Professional development is something you strongly support — you used your first "From the Top" column in *The CE* magazine to encourage your engineers to pursue it. As a past president of The Society of American Military Engineers, what benefits do you see for engineers individually and for the Air Force as a whole from this?**

Maj Gen Lupia: You're right, I do feel very strongly about professional development. I've talked to the officers and civilians on my staff quite often about it. We use our training budget to send our officers and civilians to a course in order to pass their Engineer In Training or their professional engineer's or architect's exam. I think it's important both individually and as members of the Air Force. Quite often I tell people it's a personal thing, but it's also an obligation they have to their profession. You can do your job so much better if you stay technically proficient, and if you stay well-networked with other Services and industry.

In terms of the Air Force as a whole, the more professional each and every one of us is, the more we contribute to the whole as far as our credibility and reputation. Staying proficient, staying up on technology, understanding what

methods are out there, all contribute to you being a better individual, and then the organization you are a part of becomes a better organization as well.

The CE: **What do you feel is essential to meeting future challenges in civil engineering?**

Maj Gen Lupia: I think the biggest challenge we face is guarding against doing things the way we've always done them. We have to stay up with technology, to find more innovative and creative ways to do things, and, for example, not design projects the way we always have and not solve problems the same way we've always solved them. I really believe sometimes we get so set in our ways that we get into a trap. We need to find new ways to do the engineering business. If you can't come up with better ways to do things, then sooner or later you're a dinosaur.

We must find ways to take the resources we have today and make them go further with new ideas, new creativity and new technology. This goes back to some of the things we've already talked about in the interview, partnering for example. There's a lot we can learn from industry. Industry is forced to tackle the challenges of tomorrow because if they don't they'll go bankrupt. If they don't stay abreast of technology and find better ways to do things then they're not competitive. If we spend a little more time partnering with industry, for example, it will help us take on this challenge of where we go in the future.

This month we'll publish Volume 1 of The Civil Engineer Strategic Plan. That talks to the future, to these same challenges I've mentioned, including environmental stewardship, the housing business, the engineering part of our business and the wartime part of our business. It would be nice if every civil engineer in the Air Force would take a half hour to read Volume 1 of the Strategic Plan so they could understand where it is we're trying to go in this whole process. This ties in to what we have to do to meet the challenges of the future. I think our Strategic Plan really begins to address that.

The CE: **Which contributions of civil engineering to the Air Force are you most proud of from your years as The Civil Engineer?**

Maj Gen Lupia: Well, that's the toughest question of them all, because there are so many contributions civil engineering makes to the Air Force every day. To say which I am most proud of is a difficult question. I guess I'd have to say our deployments — wartime operations as well as humanitarian relief operations — have been nothing but superb. So I'd have to come down on that as the thing I'm proudest of that civil engineers contribute to the Air Force every day. The fact is our senior Air Force leadership has told me on so many occasions during the four years I've been doing this job, "we don't want to go anyplace without our bluesuit civil engineers, we don't want to be bed down by contractors, we want to be bed down by our bluesuit civil engineers. We want our people to go with us when we go operational." I got off the airplane in Tirana, Albania, just a month ago and the vice commander from USAFE said to me as we looked across the runway from the Air Force camp to the Army camp, "this is one reason why we have to keep telling people we can never give up our bluesuit civil engineer capability — it's got to be organic to our operations." And that makes you feel very proud.

The second one is our contribution as a community, as a functional area, to the quality of life people in the Air Force enjoy on our Air Force bases. There are many other facets to the quality of life you enjoy aside from the house you live in or the neighborhood you live in or the dormitory that you live in. It's the sense of community that we have in our Air Force. It's a fact that Air Force people spend months and sometimes years on waiting lists in order to be able to live on base — not because the house is the greatest house in the world, but because being on an Air Force base provides them with a sense of community. Without civil engineers working very hard on the air bases, that quality of life wouldn't be as good as it is. And in the Air Force we're very proud of the fact that we dedicate more resources, more time and more energy to quality of life kinds of things than the other Services. The civil engineers at our bases play a very large part in making life better for people. I could go on and list another 10 or 12 things civil engineers do that I'm proud of, but I think those two are foremost.

The CE: **Is there anything else you would like to say to Air Force civil engineers?**

Maj Gen Lupia: I'd just like to express my appreciation for the tremendous amount of support I've received from everyone down to the last airman in Air Force civil engineering during the four years I've had this job. It started out as a three-year job but I was asked to stay a fourth year. I didn't have to think about it very long because I so much love what I'm doing, and I love the people I do it with. It was actually quite an easy decision to say "yes." I consider it to be a very great honor to have served as The Air Force Civil Engineer. There are 65,000 people in this large pyramid that contribute to civil engineering, and I think they're a great group of people. They're focused in the right direction. Many feel they don't have all the resources they need to do their jobs, but they sure get a heck of a lot done every day and make a great contribution to our Air Force. I have been very proud to serve in this job and to work with them. I wish I could say that to each and every one of the 65,000. I haven't gotten to shake each and every hand, but I know they're out there supporting our Air Force and our country and I'm very proud of all the things they get done every day.

HOUSING PRIVATIZATION...

Getting Through the Next Conversation

by Maj Gary Singler
Pentagon, Washington D.C.

Artist's rendering of Frank Tejeda Estates at Lackland AFB, the first Air Force and DoD housing project to be awarded under the Defense Authorization Act.

Many of us today still excuse ourselves from a conversation or at least turn down the volume in our minds as soon as we hear the "P" word, more commonly referred to as *privatization*. We still hold to preconceived ideas that privatization can't be good for the Air Force, or is too risky a venture to pursue without someone else testing the waters first. Or more likely, we just don't understand it and want to avoid embarrassment when questions are asked. Well, it is time to face the music. Privatization is a reality and talking about it doesn't need to be a negative experience. We just need to arm ourselves with information.

What's the problem?

In 1997, Defense Planning Guidance was issued directing the Services to revitalize, divest through privatization, or demolish all inadequate housing by the year 2010 and do it within currently projected resources. The Air Force has the second largest housing inventory of all the Services, yet we house the largest percentage of our military families on base. Military construction (MILCON) has been the traditional approach to revitalizing our housing, however it would take approximately 26 years to revitalize our housing to meet the 2010 goal at the currently projected fund stream. With over 61,000 of the Air Force's 110,000 housing units in need of major renovation or replacement, the task is clearly enormous. Privatization can help us meet our commitment. Air Force leadership has accepted privatization as a method of execution, but only through a measured approach together with continued MILCON.

How does privatization help us meet this requirement?

In 1996, Congress opened the door for the Services to look at housing revitalization, replacement, maintenance, management and operations in a non-traditional way. Authorities were granted in the 1996 Defense Authorization Act that allow us to provide direct loans and loan guarantees, to enter into long term leases and to invest in non-governmental entities, just to name a few. Simply stated, we have the authority to engage in privatization initiatives with industry to revitalize our housing. Privatization brings private capital to renovate, revitalize and construct our housing sooner than the traditional MILCON process can. Isn't this what we really want — improved housing for our military members and their families?

Hey, my boss's concerns run deeper than just a general understanding of privatization.

Questions continue to surface regarding moving fence lines, maintaining base security, paying rent and utility costs out-of-pocket, allowing civilians to live on base, providing housing maintenance and keeping the housing from becoming a ghetto. Although these concerns are valid, these and many more have already been addressed with measured success. Initiative identification, concept development and project execution thus far have been refined by knowledgeable professional consultants and improved through applied lessons learned. Apparently, we have not done a sufficient job of articulating this to Air Force personnel as some still have many doubts.

Perhaps the following information will help in your next "P" word conversation.

Moving Fences. It is important to understand we do not intend to fence-out our on-base housing areas the minute we close the deal and these houses become privatized. You may have heard stories to this effect, but that is not the case. We simply want to have the ability to do so, if the need were ever to arise. After all, the tenants living in those units now, our Air Force families, will still be living in them when they are privatized. We will not be evicting military families so civilians can move in, and civilians will not immediately take over the housing. These are simply exaggerations of one possibility that could result if we were unable to keep the occupancy rates up in the privatized housing because our members did not choose to live there.

To this end, we have built in a number of safeguards in our contractual documents to minimize this possibility and to exert a level of Air Force control

over civilian occupancy of privatized housing. Our members will remain in the housing and be asked to sign a lease with the new owner/developer containing provisions we believe protect the interests of our members and the Air Force. This is not significantly different than when members rent other private housing in the community.

Civilians Living On-Base. "I don't want any civilians living in housing on my base!" You've most likely heard this or something similar before. This need not be a major concern … this is one issue the installation can significantly control in a privatization deal.

Each privatization base will develop, describe and execute their own unique referral service and vacancy safeguards. There are a number of them typically written into the lease or other legally controlling document between the Air Force and the developer. To date, Air Force projects include a clause(s) that allows the developer to rent to someone other than a base-referred military member only after the entire privatized development experiences a five percent or greater vacancy rate for three consecutive months or similar period of time. We all know Air Force vacancy rates are approximately two percent and we typically have a waiting list. Further, because we are doing the referrals, we should be able to keep privatized housing rented at the same rates.

But what if we don't have the tenants to refer to the developer? This is where the priority list of other tenants that we write into the lease agreement comes into play. That list typically prioritizes other tenants as unaccompanied military members, DoD civilians, Guard and Reserve members, DoD contractors and even retired military ahead of the private citizen. When you consider this priority list, it becomes clear that it will take extraordinary circumstances before private citizens can move into on-base housing.

To take this one step further, the developer will be asking market rents for units (which are typically higher) and we will limit leases with non-Air Force family tenants to 12 months, thus ensuring we regain access to these units for military families if the need is there.

Base Security. The most frequent questions you hear regarding security are: who will protect our military members, who will patrol the housing areas and who will respond to a house fire, if one were to start?

Generally speaking, police and fire protection services are provided based on a legal jurisdiction. More often than not, jurisdiction is Federal on an Air Force installation, and therefore, the Air Force provides these services to our housing areas. Jurisdiction may, in some cases, be held jointly with a local municipality based on a memorandum of agreement or other mutual agreement. Regardless, privatization of on-base housing will not normally change the jurisdiction, particularly where we out-lease the land. Take note, however, that this may change if the land is conveyed to a private entity. That is because private lands are subject to taxation that normally pays for police and fire protection services.

The developer broke ground on the construction site in April and is in the process of constructing the "model units" for the development. Completion of the first units is anticipated this fall with all units expected to be complete before the end of the year 2000. ***(Photo courtesy 37th Training Wing Public Affairs)***

The important point to remember here is: Leasing is the preferred method of land transfer in an Air Force privatization initiative and to date most Air Force privatization initiatives involve land leases, not fee simple land conveyance. Accordingly, our Air Force security forces and fire protection services will continue to support our military members after privatization.

School Impact Aid. In the same way that we are leasing land for security reasons, we are leasing land for school reasons, so that school impact aid paid to local school districts from the Department of Education (DOE) will continue at the higher rate. The Office of the Secretary of Defense and DOE have agreed that privatized housing units located on leased federal land will be treated as if they are government housing for purposes of determining impact aid. This will help ensure good quality schools continue to operate on base, so that our families will continue to want to live on base and send their children to these schools.

Rents and Utilities. Because housing privatization results in housing that is truly private, members will begin receiving a base allowance for housing (BAH) which they will use to pay rent and utilities — yes, pay utilities. Don't panic — we are taking every step available to protect our members from out-of-pocket expenses in a privatization deal. Simply stated, BAH will be broken into two theoretical parts: utility allowance and rent. Here's how it will work:

Unit rents will be established by the developer during the solicitation phase of the process, based on BAH less a reasonable utility allowance. The utility allowance for each unit type will be based on energy savings calculations, then increased by 10 percent to ensure most of our members do not exceed the allowance. A military member referred to privatized housing will receive their entire BAH. Before they lease the unit, they will know the monthly rent for the unit and can then subtract that from their total BAH to know their utility allowance. Knowing both the rent and

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Operational Risk Management

Building the Air Force Fire Safety Deficiency Model

by Charles Byrd and MSgt Mark Ledford
Randolph AFB, Texas

Many of us are skeptical of the latest management "innovations" that are issued to us by higher headquarters. Often our reaction is something like "I wonder how long this gimmick program will last?" No doubt many — like us — viewed Operational Risk Management as one of those fad programs that would disappear over time. Well, now we're believers. It works! We used it in Air Education and Training Command to solve a long-standing problem of how to validate fire safety deficiencies (FSD). FSDs are defined as conditions that reduce fire safety below an acceptable level, including noncompliance with standards, but that on their own cannot cause fires. It worked so well for us that it's being picked up Air Force-wide. Here's how we did it.

Our problem was twofold. First, we needed to determine a facility's fire hazard risk based on objective facts instead of subjective interpretations. And second, we needed to defend our FSD determinations to corporate leadership so they would believe them and prioritize the requirements into a realistic, achievable program for repairs. The existing FSD program appeared to be a bottomless pit of requirements without objective analysis to capture the risk. Then along came ORM — it provided the answer. By partnering with the 12th Civil Engineer Squadron Fire Protection Flight, the 12th Wing Ground Safety Office, the Air Force Safety Center and the Air Force Audit Agency, we were able to apply the six-step ORM process and create a model for assessing FSD shortfalls throughout the command.

The Six-Step ORM Process

1. Assess a facility based on fire probability and loss severity.
2. Assign an FSD rating based on the final point value of the facility assessment.
3. Analyze risk control measures. This is a joint effort of fire protection, ground safety and functional user to determine FSD scope and processes conducted in the facility. Risk control options are identified, such as submitting corrective action work requests; altering the mission, process or facility; and implementing other options to minimize the FSD. Then, the effects of each risk control option on minimizing or eliminating the FSD are determined, and finally, the risk control options are prioritized.
4. Make risk control decisions. Decisions are made by fire protection, ground safety and the functional user by utilizing the priority listing of the risk control options to select measures to reduce the FSD risk factor. This coordinated effort ensures complete buy-in from all involved, thus increasing the effectiveness of the entire process.
5. Implement risk controls. Identified risk control measures are implemented immediately based on priority.
6. Supervise and review risk controls for effectiveness.

The New FSD Model

The new FSD model is partially based on objective criteria considering:

- type of construction
- size of building and number of floor levels
- occupancy hazard based on the type of operation conducted in the facility
- separation distance from other facilities
- distance from nearest fire department

Additionally, there are weighted factors for addressing the level of risk. These risk factors considered such areas as:

- type of existing fire detection/extinguishing system, if any
- FSD impact
- the monetary value of the facility and its contents
- occupancy load in terms of how many people work in the structure.

When combined, the end product of the model yields a fact-based risk assessment tool that communicates true FSD requirements to senior leaders. It shows corporate leadership where dollars are needed most based on documented risk analysis.

Col David Cannan, AETC Civil Engineer, applauded its development in his forwarding letter to the Air Force Civil Engineer Support Agency when he stated " … we are very enthusiastic about our product. We firmly believe it provides an improved methodology to assess facility FSDs by using a fact-based model to provide a more credible and realistic FSD rating."

In June 1998, we deployed the new FSD model within AETC, with the recommendation that it be added to AFI 91-301, Air Force Occupational and Environmental Safety, Fire Protection and Health Program. Initial applications within the command have yielded a higher quality list of requirements. The new FSD ORM model is on the AETC Fire Protection Web Site at http://www.aetc.randolph.af.mil/ce/index.html.

Our next target for application of the ORM process within

Air Force civil engineering is management of National Fire Protection Association Standard 1500 requirements. We hope to use the results of these analyses to better manage and allocate limited resources to ensure full compliance with the national consensus standards for fire protection.

ORM — It worked for us. It can work for you, too!

Charles Byrd is the command fire chief at Headquarters Air Education and Training Command, Randolph Air Force Base, Texas. MSgt Mark Ledford is the assistant chief of operations and readiness for the 12th Civil Engineer Squadron, Randolph AFB.

Housing Privatization

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utility allowance, tenants will be responsible for payment of each of these two commitments. Yes, there will be a percentage of families that consume more utilities than their allowance and they will have to pay that difference out-of-pocket. On the other hand, tenants that conserve energy may keep the remaining utility allowance. So, each tenant will have control over their own out-of-pocket destiny.

Housing Maintenance. In the privatization deals being pursued to date, tenants will receive the same maintenance services we currently enjoy from our housing maintenance contractors, because that is the same level of service we have requested. For a developer to propose less than this minimum requirement would exclude them from the competitive range or result in their being considered non-responsive in the evaluation phase. As such, the transition to privatized housing should be transparent where we have Air Force housing on one side of the street and privatized housing on the other.

Avoiding the Ghetto. In nearly every conversation pertaining to housing privatization, the concept of the housing areas deteriorating into ghettos arises. Naturally, we always think of the worst case first and move to the positive from there. That's exactly what we have done in developing privatization concepts.

So, what does it take to avoid a ghetto? The short answer is, you must encourage the developer to keep the housing units up to a level of maintenance and operations that entice members to live there and pay the rent. We generally believe that level of maintenance and operations is the same level that we currently provide in Air Force housing. So the question becomes, how do we ensure the developer will maintain and operate units to the same level as the Air Force? Here is the long answer. It is important to understand that private business is primarily profit driven. In a privatization project there are a number of private entities involved, including operators, maintainers, property managers, banks and lenders, investors, mortgage companies and, of course, the developer. In order to take advantage of this profit motive, we place conditions into the contract that put profit in jeopardy if maintenance and operations decline from established standards.

How do we do this? The first safeguard is the execution of a "lockbox" account. This account is similar to an escrow account for the project where all the rents are paid each month and the account trustee distributes those funds according to a priority list. Typically we would ask that the first distribution be to a "capital replacement reserve account," safeguard two. This account is established to pay for out-year capital improvements on the facilities as approved by the Air Force. The next payment may be to a "maintenance performance account," safeguard three. This account would be established to raise a specific limited amount of money to be used by the Air Force to have specific maintenance performed by an outside contractor, in case maintenance is not performed to established standards.

The next payment would be to cover the projected "operating costs" of the project. This would include taxes and insurance, routine maintenance and repair costs, management costs and other necessary costs of doing business relative to the project. These payments would be followed by payment of the principle and interest on the "first" and "second" mortgage loans. This is important because the first mortgage lender has a large investment in the project and is very interested in receiving his payment. The only way he is assured he will receive payment is if the rents continue to come in to the project. What this means to the Air Force is the first mortgage lender will be watching the project very closely to ensure his investment is being maintained and operated to the level necessary to generate the needed rents, safeguard four.

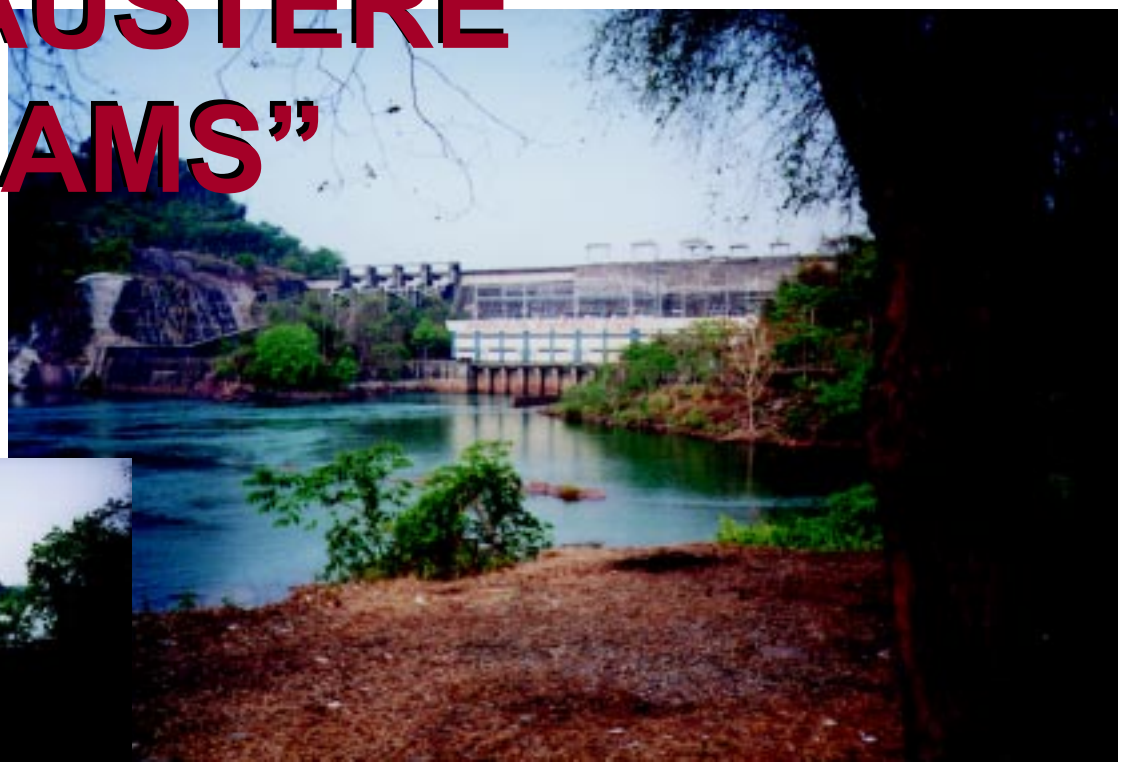
As an additional benefit, the Air Force, as the second mortgage lender, has a similar financial interest with legal documents that address the rights and requirements of the developer in relationship to the loan and the condition of the property. The next level of payment would go to principle and interest of the second mortgage lender, if one exists. Finally, after all other project debts are paid in full, the remaining funds are paid to the developer as profits. If vacancies are high, profits are reduced. This incentive provides safeguard five.

Future articles on housing privatization can discuss other issues near and dear to our hearts. If you have specific suggestions for topics, forward them to Maj Gary Singler, HQ USAF/ILEIP, 1260 Air Force Pentagon, Washington, D.C. 20330-1260.

Maj Gary Singler is program manager, competitive sourcing and privatization division, DCS Installations and Logistics.

THE AUSTERE "S-TEAMS"

Who they are and What they do



Col Greg Cunningham, 240th CEF, had the rare opportunity to visit and inspect the Nam Ngum-1 hydroelectric plant and dam in North Laos during an S-Team mission to assist the Lao government with water resource projects. *(Photos courtesy 240th CEF)*

by Col Greg Cunningham
and Lt Col Jim West
Buckley ANGB, Colo.

Within the Air National Guard and Air Force Reserve Command, there are a few small and little-known "Specialty Teams" that have been functioning for some time with little publicity and little notice except from those special customers who are very much aware of them and who use them extensively. These are the Staff Assistance Teams, or S-Teams.

An S-Team (termed "S-6" in Air Force regulations) is a 12-person team of engineers with certain special qualifications. Commanded by a colonel, the teams include two lieutenant colonels, three majors, four captains, and two senior enlisted technicians (one E-9 and one E-7). Their special qualifications include: 1) all officers must be degreed engineers or architects, 2) all members must be able to maintain a Secret, or preferably Top Secret, clearance, 3) all members must accept a 28-hour mobility requirement and 4) all members must be fully capable of deploying anywhere, worldwide, standalone or in very small teams. In practice, the officers are almost always full-time practicing professional engineers in private life. All are seasoned Air Force engineers with many years of Prime BEEF, RED HORSE, base civil engineering, or other extensive engineering experience.

Within the ANG, there are three units with two 12-person S-Teams each: the 231st Civil Engineer Flight, Missouri ANG, St. Louis, Mo.; the 240th CEF, Colorado ANG, Aurora, Colo.; and the 235th CEF, Maryland ANG, Baltimore, Md. Within AFRC, there are also three units, but with one 12-person S-Team each: the 904th CEF, March Air Reserve Base, Calif.; the 628th CEF, Dobbins ARB, Ga.; and the 810th CEF at Naval Air Station Fort Worth, Joint Reserve Base, Texas.

The wartime tasking and mission of these teams is headquarters staff augmentation at major commands and numbered air forces or even individual bases as need be. Many assignments involve command post exercises overseas, where, due to the rapid PCS rate of our active duty partners, ANG and AFRC members participate in the same exercises over and over again, year after year, thereby gaining extensive corporate knowledge not only of the exercise but of the unique cultural and logistics characteristics of each location.

The teams also offer experience in working on Host Nation Agreements, Base Support Plans, contingency book development, collocated operating base data development and maintenance, and so on. In practice, they also provide current disciplinary expertise in support of a variety of special Air Force engineering requirements for planning, design, construction management, environmental projects and so on, though this is not in their wartime tasking. S-Team support has included providing project designs for Desert Storm, facility designs for the Republic of Korea, damage estimates for Typhoon Omar, medical aid stations in Singapore, and, as a subject of this article, humanitarian assistance to Thailand and Laos in return for those countries' assistance in locating and recovering our MIAs from the Vietnam War.

Typically, S-Team members deploy to dozens of locations each year in "mini-teams" of one, two, or whatever it takes, with their expertise matched to the specific requirements of the requesting major command. Typically, each member averages about 40 days active duty a year on two, three or more deployments worldwide. Customer

surveys are used to ensure that the unit matches or exceeds all customer requirements.

The following missions in support of U.S. Pacific Command humanitarian assistance are representative of the 240th CEF S-Team's many challenging overseas deployments.

Thailand, January 1998. Lt Col Jim West, 240th CEF, had the opportunity to lead an S-Team to the jungles of Thailand. The request came from the Armed Forces Research Institute for Medical Sciences (AFRIMS) in Bangkok, Thailand, to provide engineering support for the design of a Malaria Research Clinic in the Northwest province of Sanklaburi, near the Burmese border along the Kwai River. This area was chosen because of the high incidence of malaria and other tropical diseases and because there were strains of the disease that had not been identified or controlled. AFRIMS was renting a small building in the area but needed a permanent medical facility to treat and monitor patients.

Lt Col West's tasking was to do a site survey and develop a design for a building that could be built by U.S. and Thai military troops during the Cobra Gold 98 joint exercise taking place in April of that year. Because of the short lead time, he was to do the design using local purchase for all materials needed. Accompanying Lt Col West was MSgt Don Barbiea, an AutoCAD specialist with a civil engineering background from the 231st CEF, Missouri ANG.

The hospital facilities were very primitive. A concrete floor had just been placed three years earlier — prior to that it was dirt, or, in the rainy season, mud. The outbuildings were mostly thatched roof huts where tuberculosis patients and their families lived while under the hospital's care. There were two operating rooms, one for delivering babies and the other for everything else, each having a single table in the center of the room under a single light.

One major problem the team faced was the remoteness of the site; the only heavy equipment that could be used for construction had four legs and a huge trunk! The road leading to the hospital was so rough and winding that no truck bigger than a large four-wheel drive pickup would be able to bring in supplies and materials. Because of this limitation, they decided to abandon the idea of military construction teams building the clinic and set about designing a structure that could be built by local contract using villagers as the labor force. This would not only keep the project under budget (the average worker earns about $3 a day) but would also help the local economy and let the villagers feel more a part of the hospital and clinic.

(Above, right) **One S-Team tasking was to design renovations to existing buildings and new patient care facilities at this hospital in northern Laos, where the sole operating room was frequently infiltrated by insects, snakes and mud slides.**

With this new direction, the team went out into the local area to see what the construction methods and available materials were. Through interpreters they talked with several contractors that were building various types of structures and found that all of the "commercial" buildings were one-way, post and beam construction. The posts were either a pre-built concrete column or a cast-in-place concrete post. In either case, the process was manual with the manufactured columns built by the local mercantile owner in his backyard. Even a three-story government building was being built with cast-in-place concrete columns. The beams and roof trusses were made of a dense wood called "redwood" that was cut and hewn locally. Walls were made of brick provided again by the local supply store, manufactured in the owner's backyard. Though primitive to watch go up, the finished product was remarkably sturdy and adapted well to the harsh jungle conditions. The team used this knowledge to design the building with floor plans, elevations, structural and electrical drawings and to generate a bill of materials for AFRIMS. Approximately one year later, the malaria clinic was completed.

Laos, February 1998. The 240th CEF supported USPACOM on another humanitarian S-Team visit, this time to Laos. The objective was twofold: work with the Ministry of Health to design renovations to existing buildings and new facilities for long-term patient care at two regional hospitals, and consult with the Ministry of Agriculture to design two irrigation water diversion dams for use by farmers in the north central mountain region.

This was a joint mission by Lt Col West, members of the U.S. Naval Reserve and the U.S. Army, including a Civil Affairs Liaison Team (CALT) engineer. CALT is an Army special forces unit that assists the U.S. Ambassador and the Joint Task Force Full Accounting (JTF-FA) team with planning and coordinating humanitarian assistance projects between USPACOM and the Lao Peoples Democratic Republic (PDR). In turn, the Lao PDR is assisting the U.S. with location and recovery of MIAs from the Vietnam War. Of the currently 2,063 missing and unaccounted-for Americans from the war in Southeast Asia, 444 of them are in

Laos. Because Laos is a Communist country, the team was escorted by a military officer at all times.

Facilities and working conditions were poor at both hospitals the team visited, but especially so at the one which is the main hospital for Laos' entire northeast province. There were no windows, only openings with wood shutters, and no indoor bathrooms. Patient rooms were small concrete cubicles with two cots in each as the only furniture. Their only equipment for diagnosis was a microscope and an outdated dental x-ray machine, which they used for all their x-ray needs.

The team designed bathroom facilities for staff in the main hospital building, designed pre-op facilities for staff near the operating room, re-designed the drainage system around the hospital to improve the sanitary conditions of the septic tanks during the rainy season, and designed a new long-term care facility in the hospital compound to accommodate patients and families.

The team then traveled to the sites of three proposed irrigation diversion dams. The irrigation diversion dams were to assist mountain farmers in raising a dry season rice crop. Currently, they have a dry season practice of slash and burn on the mountainsides in the Laotian hill country to clear land for farming poppies, which provide about 40 percent of the world's supply of heroin. The government, in cooperation with the U.S., is trying to re-educate farmers and provide them with enough water to raise a dry season (second) crop of rice instead of poppies.

Laos, March 1998. Col Greg Cunningham, commander of the 240th CEF, provided humanitarian assistance to the Lao Peoples Democratic Republic by assisting them with current policies, practices and technology in the planning, design and construction of water resource projects. As with the previous deployment, this was to help the CALT, the U.S. Ambassador and JTF-FA in obtaining greater assistance from the Lao PDR in locating and recovering MIAs from the Vietnam War.

The Lao government is making available some lands for repatriated Hmong refugees who are trying to return to their homeland after the Vietnam War. These lands, however, typically have no irrigation water and consequently no way for the refugees to farm or make a living. The United Nations High Commissioner for Refugees purchases Lao farmland for these refugees and constructs irrigation systems to bring these lands into agricultural production. Col Cunning-ham reviewed several irrigation designs and drawings intended to provide irrigation for the Hmong. He was able to provide recommendations to the UNHCR for changes in irrigation practices that would double the refugees' food production and income, and for system changes that would increase the amount of land that could be irrigated.

Before departing Laos, Col Cunningham had the rare opportunity to visit a northern Lao power dam in the Nam Ngum province. This is a relatively large reinforced concrete gravity hydroelectric dam on the upper Mekong River system that produces up to 53,000 kW through a five-turbine system. It is one of three such projects owned and operated by the Lao PDR. Two additional projects are in the planning/design phases, however, all of them are single purpose projects (electrical power generation only). With modest cost increases, some of these projects could be expanded to include flood protection, irrigation water supply, and/or municipal water supply. To date, the Lao PDR has not pursued these other benefits.

Col Cunningham had another rare opportunity to meet and discuss water resource engineering and "dam" engineering with the Resident Engineer, a Lao Communist soldier who had been on site for 16 years and had never met an American, let alone a fellow American water resources engineer. Being civil engineers, they soon devel-oped a rapport and took the opportunity to engage in productive discussion on multi-purpose projects, as well as hydroelectric projects. The "seeds of thought" were planted and may someday have an influence on future projects that will benefit the citizens of Laos.

Col Greg Cunningham is commander of the 240th Civil Engineer Flight, Colorado Air National Guard, Buckley Air National Guard Base, Colo. Lt Col Jim West is chief of the Engineering and Construction Section of the 240th Civil Engineer Flight, Colorado Air National Guard.

A separate "personal note" by Lt Col Jim West

During the 1969-70 Tet Offensive, I was stationed at Udorn Air Base in central Thailand with the 41st Air Rescue and Recovery Service, an HH-53 "Super Jolly Green Giant" helicopter rescue squadron. I was a flight test engineer in Air Force Systems Command when I volunteered to field test a new infrared night recovery system. During my six-month tour, we flew orbit and recovery missions along the Ho Chi Minh Trail in Vietnam and in the Plain De Jars (PDJ) in Laos. I remember being very uneasy when crossing the Mekong River and flying to our landing site (Lima 98) on the PDJ. We wore no insignia on our flight suits, because officially we weren't there. We would fly up to Lima 98 early in the morning, well before dawn, and wait for the "air war" to begin. We would set up a perimeter defense around the aircraft to keep everything away. In our pre-flight intelligence briefing we were always told that in the area where we would be flying, whether it was to support our fighters or Air America, there were no "friendlies" around and that we should consider everyone the enemy. The entire time that I was "over the fence," I was uneasy and very wary of all the people.

Coming back this time and flying the same routes that I flew then, in a much smaller helicopter but still close to the ground where every movement could be seen, was a real emotional experience for me. The young doctor that I met in the Houapan provincial hospital was six or seven years old when the Vietnam War was going on. He could speak very little English, but we were able to talk extensively about the hospital and his family. He was so excited to see us and grateful for our help. He had grown up in that region and had been injured in a bombing raid by some of our fighters. He lost both of his parents in that raid but there was no anger nor hatred toward us; only appreciation that we would come so far to help him and his people. It was very humbling for me to be with such a forgiving and committed young doctor. Both of my trips, Thailand and Laos, helped me close a part of my life that had been difficult to reconcile. It gave me a chance to come back to be a part of the healing of the land and people that had seen so much destruction and death.

RED HORSE Builds a Really Big Barn

by Captain Erik Lagerquist
Hurlburt Field, Fla.

Twenty-four members of the 823rd RED HORSE Squadron deployed in February from Hurlburt Field to a remote range location on Eglin Air Force Base in Florida. Their job was to construct the largest timber pavilion in the 823rd's history.

RED HORSE troops place approximately 30 cubic yards of concrete for the middle of three 6-inch pads for the covered range facility. *(Photo by Capt Erik*

They completed the new 90-foot-long by 105-foot-wide facility in less than 45 days — more than a week faster than comparable facilities in the past — thanks to new construction techniques.

Range Support from Eglin AFB requested RED HORSE for the job due to its heavy equipment expertise and expedient construction capabilities. The 823rd selected this project for execution due to its immense scope and the various skills involved.

Using an existing earth containment berm as a form, the team dug three 90-foot-long by 3-foot-wide foundation trenches, into which they placed enough rebar and concrete to provide 1-foot-thick strip footings with 10 columns on each. Using this method saved approximately one week on the project compared to a similar range project last year that used a comparable number of individually formed footings.

While the initial groundwork was being accomplished, a four-person electrical crew finished 2,200 linear feet of 4-inch PVC conduit in five days. They then went on to place two load-break junctions and a 30-kilowatt step-down transformer to facilitate the use of commercial power at the finished structure.

The 12-person structural crew arrived one week into the project and began to cut timbers and make preparations for the vertical phase of the construction. They erected all 30 of the 12-foot long, 8-inch square timbers in less than two days and completed the beams and center-walls, making them ready for roof trusses, four days later.

The roof trusses arrived on site in two separate shipments, both of which were off loaded using a 10-ton crane. All 96 roof trusses were hung, secured and braced in eight project days. It took two roof trusses to span the 105-foot distance between each outside wall and each roof truss was 55-foot-long by 14-foot-tall. After the first few trusses were installed the electricians began to install the overhead light fixtures and ground-mounted receptacles. The raised control panel was fabricated on-site based on the customer's requirements and the engineer's sketches, and turned out much better than the one built for last year's project based on durability and low life cycle maintenance requirements.

The final step was to cover and protect the almost 11,000 square foot roof area. Last year's project involved laying 7,000 square feet of shingles and took the crew seven days to complete. This year the team used 2-foot-wide continuous metal roof panels, fabricated on-site by a local vendor. The remaining crew of eight structural troops secured all 90 panels to the roof deck and finished the job in three days.

This particular range support project provided an excellent chance to hone our equipment operations and expedient construction skills, while providing a functional structure for future use.

Capt Erik Lagerquist is a project engineer at the 823rd RED HORSE Squadron, Hurlburt Field, Fla.

RED HORSE troops use a crane to lift into place one of the 96 truss sections and secure it to the horizontal beams. *(Photo by MSgt Joseph Ondo)*

Operation Allied Force

Civil Engineers Support NATO in the Fight for Kosovo

by MSgt Reginald Dawkins
31st Air Expeditionary Wing Public Affairs

Air Force civil engineers provided crucial air operations support to one of the largest Air Force combat wings in history at Aviano Air Base, Italy, and at other bases throughout Europe during NATO's Operation Allied Force. The work they performed was no less than pivotal to the success of NATO's bombing campaign against Slobodan Milosevic's military regime.

Engineers with the 31st Air Expeditionary Wing at Aviano pulled out all the stops in their endeavor to bed down more than 4,000 deployed troops in operations and lodging facilities. Even though it was the aircraft that delivered the bombs to the targets, it was the people who made this operation work, and wing leadership did their best to provide quality living arrangements for the deployed forces.

One such project was the renovation of a dilapidated Italian army dormitory in the Flightline Support Area. This "combat rehab," which was completed June 11th, provided housing for more than 600 members of the 31st AEW.

Instead of using the usual method of contracting out the complete project, civil engineers performed the vast majority of the labor, including: chipping paint, spackling walls, putting up new walls with sound insulation, installing new windows, and running

A civil engineer transports Harvest Eagle assets to the tent city at Aviano AB, Italy. Civil engineers bedded down thousands of deployed troops throughout Europe in support of Kosovo-related military operations. *(Photo by MSgt Keith Reed)*

SSgt Bruce Stocking, 31st CES, Aviano AB, Italy, works on renovating an old Italian army dormitory for personnel deployed to Aviano as part of Operation Allied Force. *(Photo by A1C Scott Nichols)*

wires, new plumbing and water lines in tandem with a contracted paint crew.

"This would normally have been a total contract project, but because it was needed so quickly we cut into our entire labor pool that maintains the rest of the base," said SMSgt Antonio Francis, 31st Civil Engineer Squadron facility maintenance superintendent.

With the workload of the major projects and the normal day-to-day commitments, Aviano's 31st CES averaged 60 hours per week per person while juggling several mission requirements at the same time during Allied Force.

Outside help came from several units. Fourteen engineers from the 823rd RED HORSE Squadron, Hurlburt Field, Fla., installed high-voltage lines for three new substations to provide electrical power to Caserma Barbarisi, Aviano's tent city, and several other projects.

Construction of Caserma Barbarisi began in February when engineers from the 86th Civil Engineer Group from Ramstein AB, Germany, joined their counterparts at the 31st CES to assemble a tent city for incoming troops.

Members of the 52nd CES from Spangdahlem Air Base, Germany, deployed to Aviano next to continue construction and help maintain Caserma Barbarisi.

SSgt Gregory Bradford *(left)* and A1C James Silcott from the 52nd CES, Spangdahlem AB, Germany, assemble a Harvest Eagle shower/waste water distribution pump for the tent city at Aviano AB, Italy. *(Photos by MSgt Keith Reed)*

"We had people from Spangdahlem here to support tent city, which in itself was a city," said Francis. "The M-80 boilers that came with the shower-shave units weren't providing sufficient hot water, creating another immediate project. Tent city needed a water and boiler plant installed. They were instrumental in making sure that the boiler plant got erected as soon as possible."

Civil engineers at Aviano helped ensure the success of NATO's efforts with a long list of accomplishments. These included: erecting the more than 200 tents that made up Caserma Barbarisi and housed almost 2,000 occupants; constructing the tent city dining facility in one week; resurfacing six F-16 parking pads in four days; and providing high-voltage power feeds from a new substation to tent city and the tent city dining facility.

Other achievements included: building a permanent boiler facility with a 1,000-gallon water heater and recirculating tank; completing four renovation projects involving office space and storage space; painting and electrical upgrade on a building near tent city used as an emergency clinic; moving an automatic teller machine and barber shop and building a troop support area in tent city.

In addition to these concerted efforts at Aviano, civil engineers in a host of Air Force specialties worked behind-the-scene to support day-to-day Allied Force air operations at air bases throughout Europe. Liquid fuels maintenance engineers maintained the systems used to fuel aircraft flying tens of thousands of sorties. Runway maintenance troops swept runways and kept them free of foreign object damage. Electricians maintained airfield lighting systems to sustain 24-hour, all-weather operations. Power production troops maintained and repaired fixed aircraft arresting barriers and mobile arresting systems (MAAS) when necessary.

Firefighters and explosive ordnance disposal specialists worked extended alert hours to support increased sortie rates and respond to emergency

SSgt Shannon Fortune, 31st CES, Aviano AB, Italy, measures metal studs for the dormitory renovation. 31st CES craftsmen performed the majority of the work on the dormitory. *(Photo by A1C Scott Nichols)*

SSgt Angel Montalvo and TSgt Mark Kruse *(below)* and SSgts Al Johnson and Gardner Jones *(right)*, from the 86th CEG at Ramstein AB, Germany, help construct the field kitchen at Aviano's tent city. *(Photos by MSgt Keith Reed)*

situations. Approximately 70 firefighters and 10 aircraft rescue firefighting vehicles were deployed to 11 locations to support Joint Task Forces Noble Anvil and Shining Hope.

The requirements varied by location. Some main operating bases needed additional personnel because of the ops tempo, other locations needed firefighters and vehicles, while some locations only needed one firefighter for egress training.

Sending one firefighter for egress training ensured the host nation fire department was trained in the proper rescue techniques for the type of aircraft deploying to their location. This training typically involved the firefighter arriving a couple of days before the fighters or tankers to give the academic portion of the class. When the aircraft arrived, orientation was given followed by actual egress exercises. When the firefighter and operations group commander were satisfied that the host nation fire department was proficient on the procedures, the deployed firefighter was then released back to his unit.

Other locations involved Air Force firefighters working side-by-side with sister service and host nation firefighters to provide fire protection.

The Air Force Civil Engineer Support Agency's Civil Engineer Maintenance Inspection and Repair Team (CEMIRT) assisted U.S. Air Forces in Europe in purchasing hydraulic power units for its inventory of MAASs. CEMIRT also arranged for production of lightweight fairlead beams for the MAASs, to prepare them for use with wide-body aircraft such as the C-5 and C-17.

AFCESA deployed six members of its Airfield Pavements Evaluation Team to Europe to assist USAFE pavements engineers and Air Mobility Command Tanker Airlift Control Elements in performing structural assessments and determining load-bearing capabilities of runway, taxiway and apron pavements at all of the bases where NATO aircraft could potentially operate.

The team also conducted condition surveys to provide baseline documentation on existing structural conditions at runways, so that the U.S. could avoid paying for damages it did not cause once operations ended. AFCESA pavements engineers performed analyses at 17 sites in 10 different countries during April and May.

Now that operational requirements are changing with the end of Operation Allied Force and the beginning of the peacekeeping mission, Operation Joint Guardian, CEs are beginning to redeploy as the region is stabilized by ground troops. Others are staying to perform their tasks in support of the expanding humanitarian and new peacekeeping missions in the region as tens of thousands of Kosovar refugees return to their homes.

The fall edition of The CE will feature additional stories related to operations in the Balkans.

SSgt William Chilcott was part of the 31st CES team that accomplished a lot of beddown in a short time at Aviano AB, Italy. Here, earth is leveled and compacted in preparation for construction of Caserma Barbarisi, the tent city home for personnel supporting Operation Allied Force. *(Photo by MSgt Raul Navas)*

From Airport to Air Base ... CEs Support Buildup at Tirana

CE Staff Report

One of the busiest spots in Europe this Spring was Rinas Airport near Tirana, Albania. Cargo planes circled the one-runway airport, which could accommodate only two airplanes at once, waiting their turn to land and unload personnel, equipment and supplies. Airmen, soldiers, sailors and Marines there supported distribution of humanitarian supplies to Kosovar refugees in Albania as part of Joint Task Force Shining Hope and bed down troops and aircraft for Joint Task Force Hawk.

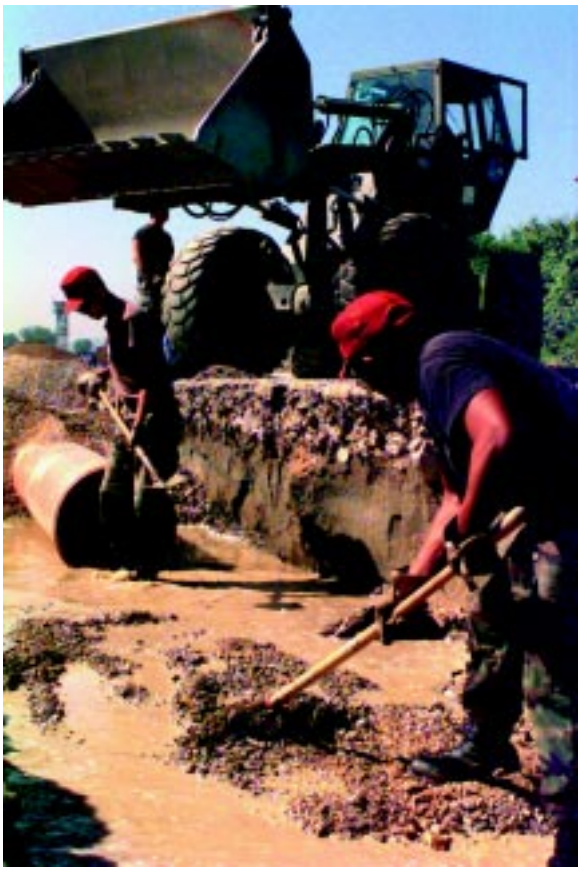
More than 100 personnel from the 86th Civil Engineer Group, Ramstein Air Base, Germany, deployed to Tirana in early April to help construct and operate a tent city for approximately 400 Air Force personnel near the airport flightline. They had their work cut out for them — overcoming equipment and supply shortages, knee-deep mud and daily rainfall to get the job done.

With relief supplies getting priority airlift space, teams sometimes waited days for convenience items and did without others. The environment in the mountains of Albania caused problems as well. Rain fell most every day in April, and the high water table there kept the rain from being absorbed quickly by the ground. The result — mud, and lots of it. Civil engineers and others spread tons of rocks as a base to provide traction and drainage and to keep tents, vehicles and airmen from sinking.

Approximately 50 personnel from the 823rd RED HORSE Squadron, Hurlburt Field, Fla., deployed to Tirana in early May. The RED HORSE members were tasked with repairing and repaving a three-mile perimeter road, repairing airfield pavements, building a cargo storage area and executing other heavy construction required at the Rinas Airport to support JTF aerial port operations.

The 820th RHS, Nellis AFB, Nev., deployed more than 100 personnel to Albania June 8, where they joined other allied engineer units already in theater executing critical road and bridge repairs to facilitate refugee movement.

Read more about CE contributions to the Kosovar refugee humanitarian relief efforts in the next issue of The CE magazine.



823rd RED HORSE Squadron personnel from Hurlburt Field, Fla., install drainage pipes along the main road leading to Rinas Airport near Tirana, Albania. *(Photo by TSgt Cesear Rodriguez)*

TSgt James Will from the 86th CEG at Ramstein AB, Germany, grades a road to make way for a dining tent at the U.S. base camp near Tirana, Albania. *(Photo by MSgt Keith Reed)*

Col Glenn Haggstrom *(left)*, the USAFE Civil Engineer, and Maj Gen Lupia surprise Capt Steven Ziadie, a HQ USAFE/CE staff officer who was deployed to Albania in support of Operation Shining Hope, with his major's leaves. *(Photo by Capt Jonathan Webb)*

When Duty Calls ...

Balkan Operations put Readiness Challenge VII on hold

CE Staff Report

As 17 elite teams trained and prepared to meet head-on at Readiness Challenge VII in April, the crisis in the Balkans continued to escalate until it became inevitable — Readiness Challenge VII had to be postponed. The Air Force's premier civil engineering, services, public affairs and chaplain services competition was put on hold as of April 14, to free up combat support forces needed to augment NATO's Operation Allied Force and Joint Task Force Shining Hope, the military and humanitarian efforts in the Balkans.

"With military operations underway in Europe, it was only prudent to free up our combat support resources in case they're needed," said Col Bruce McConnell, Contingency Support Director, Air Force Civil Engineer Support Agency. "The competitors and all involved with Readiness Challenge are now focusing their attention on real-world contingency operations."

The Canadian team from Nova Scotia had already withdrawn from the competition in March after being put on standby for deployment to peacekeeping operations in the Balkans. The United States Air Forces in Europe team was next to withdraw after President Clinton committed additional aircraft to NATO on April 10. Not long after, the word went out to the other 15 teams that there would be no RC this year.

Disbelief. Shock. Anger. Disappointment. That was the path emotions took when the Hill Air Force Base Warriors found out the international competition had been canceled. Ironically, this was the second time Hill AFB was selected to compete in Readiness Challenge and the second time the competition was canceled because of real-world events. In 1990 Desert Storm halted preparations two weeks before the competition was to begin.

"I am unbelievably disappointed," said TSgt Gary Sanzone, Hill team member who was on the 1990 team. "Just once I wanted to prove that we were the best of the best. Now we won't get that chance."

But, when duty calls, said Maj Brian Ouellette, Hill Warrior team officer in charge, the team must answer. "The needs of the country we serve come first," he said.

Even though the competition was canceled, the training has not been a waste of time. "This experience has made us much stronger as individuals and has made us more valuable to the Air Force and to our specific units." said Ouellette. "We will be able to go back and share that knowledge and training with others."

The Air National Guard team and the United Kingdom team were training at Fort Indiantown Gap, Pa., when they heard the news. They were as anxious as the other teams to

(Photos above, right by TSgt Mike Ward)

(Photo by MSgt Jerry Stroud)

The United Kingdom team, 34 Field Squadron (Air Support) from Waterbeach, Cambridge, England, trained with the Det. 1, 823rd RED HORSE cadre at Silver Flag Exercise Site, Tyndall Air Force Base, Fla.

prove they were the "Best of the Best," and as disappointed when the competition was canceled, but they came away from the experience with their wartime skills honed thanks to their red-hatted cadre, the 201st RED HORSE Flight. The U.K. team elected to travel on to the Silver Flag Exercise Site at Tyndall AFB, the home of Readiness Challenge and Det. 1, 823rd RED HORSE, for more of the same.

"With our flights still booked for the end of Readiness Challenge it was agreed that we would still fly to Florida to continue our training at the Silver Flag site," said Capt Charles Storey, U.K. team spokesman. "The Silver Flag team did an excellent job and the exchange of ideas went both ways. It was useful for us all to learn how different countries tackle essentially the same problems."

While at Silver Flag, the U.K. team and RED HORSE held a "mini-RC" where they went head to head on several RC-style events including the obstacle course, pallet build-up, ventilation and fire rescue, CCD (camouflage, concealment and deception) and TEMPER Tent construction.

"We think the experience gained through international training is exceptional," said Storey. "When Readiness Challenge VII runs there will almost certainly be many willing volunteers from within the 39 Engineer Regiment."

Information for this article was compiled from reports by MSgt Jerry Stroud, Readiness Challenge Media Center; 1st Lt Victoria Keegan, 75 ABW/PA; Lt Col Mike Waters, 174 FW/PA; and Capt Charles Storey, 34 Field Squadron (Air Support), Royal Engineers.

MSgt Michael Nolan, 107 ARW, and SMSgt Paul Olszewski, 174 FW, review instructions on hardback tent frame construction during training at Fort Indiantown Gap, Pa. *(Photo by Lt Col Mike Waters)*

(Left)* The Air Force Materiel Command team from Hill AFB, Utah, runs the obstacle course in training for the RC-VII competition. *(Photo by 1st Lt Victoria Keegan)

The Hill AFB team from Air Force Materiel Command *(above, left)* hone their skills in preparation for the international Readiness Challenge competition. *(Photo by 1st Lt Victoria Keegan)*

Air National Guard team members construct a TEMPER Tent during head-to-head competition with the U.K. team at Ft. Indiantown Gap, Pa. *(Photo by Lt Col Mike Waters)*

National Guard training benefits the Congaree Swamp

by SSgt Shannon Scherer
South Carolina National Guard Public Affairs

For many people the word swamp conjures up images of dark, muddy and unsafe terrain, but for members of the 169th Civil Engineer Squadron, South Carolina Air National Guard, the swamp means training for a real-world mission while enhancing the state they call home.

The Congaree Swamp National Monument is unlike the Hollywood version of a swamp. While the dragonflies may seem larger than life in the summer and dangerous reptiles resembling swamp things do hang from trees and live under rotting wood, this swamp offers visitors a unique chance to see some of the oldest living trees known to the United States. The South Carolina Army and Air National Guard along with the 113th CES from Washington D.C.; the 180th CES from Toledo, Ohio; the 124th CES from Boise, Idaho; the 117th CES from Birmingham, Ala.; the 200th RED HORSE Squadron from Port Clinton, Ohio; and the 201st RED HORSE Flight from Ft. Indiantown Gap, Pa., have joined together to hone their wartime skills, while at the same time enhancing and preserving both the beauty and wildlife of this natural habitat.

169th CES members lay vapor barrier before pouring concrete for the new 10,000 square foot education, administration and welcome center at Congaree Swamp National Monument, South Carolina. *(Photos by SSgt Shannon Scherer)*

What started as a project to raise money through the U.S. Department of the Interior to build a road and welcome center in the Congaree Swamp soon turned into an exciting annual training opportunity for the National Guard.

Martha Bogle, Congaree Swamp superintendent, knew when she came to South Carolina in 1995 that the privately owned dirt road leading into the park was not sufficient for the number of visitors the park received yearly.

"We turned away schools because our dirt roads could not handle the bus traffic," Bogle said.

In 1997, Bogle felt she had exhausted every possible resource to obtain funding for the road and welcome center when one of her staff, Army Guard member Sgt 1st Class Lewis Prettyman, suggested she ask the South Carolina National Guard for help.

Prettyman explained that the Guard tries to support projects for local, state and federal agencies that also help the units meet their wartime training requirements. Before Bogle knew it, a partnership between the South Carolina National Guard, the River Alliance (a community-based awareness group), Richland County and the National Park Service was created to begin work on this extensive project. The 122nd Engineer Battalion offered to clear the area and begin the gravel road and the 169th CES offered to pave the road and agreed to host the project.

CMSgt Mike Stroble, 169th CES facility manager, explained that the project soon caught the attention of the National Guard Bureau and became a sponsored training project for other Air National Guard units throughout the country. "It started out small and blossomed into the project it is now," he said.

With Richland County and the

National Park Service supplying the materials, the National Guard began work in August 1998. The 200th and 201st RHS worked with the Palmetto State's Army and Air Guard to clear nearly 1.3 miles of forest, build road elevation and pave a two-lane road that winds through the scenic Congaree Swamp.

In April 1999, the 169th CES started the laborious task of constructing a 10,000 square foot education, administration and welcome center. Working 12-14 hour days, 30 169th Prime BEEF members found this to be some of the most rewarding annual training they had ever experienced.

"This has been a great annual training for people who don't do this for a living," said Doug Truax, electrical shop supervisor.

Capt Tim Dotson, 169th CES project officer, added "This project is a lot more real world for us. Here in the swamp we're not just fixing things, we're building them from the ground up."

As the 169th CES ended their first two-week rotation they realized they had accomplished more than expected despite various adverse weather delays. They raised and compacted the soil and poured a solid foundation. They also ran electrical circuits for the building's computers and telephones. With a great sense of pride the 169th CES turned the project over to the 113th CES, to begin framing the building.

Bogle took an active part in the construction from day one and was glad for the Guard's assistance.

"Successful parks need successful partners," she said. "The National Guard is a great partner."

The Idaho, Ohio and Alabama units joined in the construction efforts this summer. The 169th continues to work on the building, which is about 50 percent complete. More teams are needed to work this fiscal year and next. The new road and welcome center will greet nearly 100,000 visitors each year. A few National Guard members from Ohio and South Carolina have already returned to see the progress.

Stroble expressed that he thought members were especially fond of this annual training versus others in the past because of the connection with home. "The best project is one where Guard members don't have to leave their own state or nation to take their families and enjoy the results of their work," he said.

TSgt Bruce Thompson, 169th CES, saws joints in the concrete floor of the new education center at Congaree Swamp. The project was part of his annual training.

The Congaree Swamp became a national monument in 1976, but if you visit do not expect to see any statues gracing the entrance to the park. A national monument is a landmark, structure or other object of historic or scientific interest designated by the President or Congress. The Congaree Swamp is both historic and of scientific interest because it is the only place in the nation that has 11,000 acres of old-growth floodplain forest. The park was designated as an International Biosphere Reserve in 1986. Visitors can enjoy canoeing, bird watching, rustic camping and hiking on more than 37 miles of park trails.

Y2K Update

by MSgt Jerry Stroud
910th Airlift Wing Public Affairs

Keesler serves as Y2K test base

For civil engineers on Air Force bases worldwide the Y2K problem is coming to a head — it's time now to test how effective our compliance programs have been so far and make adjustments accordingly.

"A good example of the Air Force getting prepared is at Keesler Air Force Base, Miss. They were the first to do a base-wide Y2K test," said Kenneth Williams, Y2K-civil engineering coordinator for the Air Force Civil Engineer Support Agency, Tyndall AFB, Fla.

On May 11-12, Keesler rolled their clocks forward to simulate May 11-12, 2000. The 81st Training Wing assessed more than 30 systems critical to military installations, including automated medical, security and civil engineering systems, and the base network control center, the 911 emergency system, traffic lights, elevators, fire and security alarms and heating and air conditioning systems.

The results confirmed that the Air Force is doing an excellent job in preparing for the millennium date change. Initial analysis of the systems revealed no Y2K-related failures except for a security system's graphics display, which failed to allow visual display of the facility's floor plan. Keesler is working with the manufacturer and the AFCESA Y2K Help Desk to resolve the problem.

"Since they went first, they're the ones we'll use as a prototype. We'll take their lessons learned and send the information out to everyone else in the Air Force," said Williams. "Also, we've hired Georgia Tech Research Institute, a division of Georgia Institute of Technology's Civil Engineering College, to look at the parameters of success and the milestones of Y2K civil engineering testing. Both reports should be sent to the field by the second week in May," he said.

Have You Heard About the New Environmental Guide for Contingency Operations?

by Lt Col Ray Knight
Pentagon, Washington D.C.

What kinds of environmental issues will you need to tackle during contingency operations? An Air Force environmental guide, published in August 1997, provides solutions to a myriad of potential environmental challenges likely to surface during deployments, field exercises and Military Operations Other Than War (MOOTW).

"We have come light years in understanding how to properly deal with environmental concerns during peace and wartime situations," said Teresa R. Pohlman, chief, Environmental Division, Office of The Civil Engineer, Washington, D.C. Pohlman has been surprised to find there are still civil engineer personnel who are not aware of the environmental guide.

"We have an excellent environmental guide for contingency operations to help resolve the environmental challenges of today and tomorrow," she said.

Air Force Handbook 10-222, Volume 4, titled "Environmental Guide for Contingency Operations," addresses a wide range of environmental issues that can emerge during contingency operations, and outlines the actions and responsibilities of engineer forces. It covers environmental issues which may arise during pre-deployment, beddown, sustainment and re-deployment of military forces.

Environmental compliance plays a key role in protecting vital resources during contingency operations. Resources such as personnel, food and water supply, equipment, natural resources and mission critical supplies must be protected and managed wisely for the mission to be successful. The goals of the Air Force environmental quality program are to minimize risks to human health and the environment while maintaining readiness and accomplishing the mission during contingency operations. The goals are divided into four areas:

Compliance: Meeting all environmental standards applicable to present operations.

Conservation: Planning future operations to minimize environmental impacts, and managing responsibly the irreplaceable natural and cultural resources held in public trust.

Pollution Prevention: Eliminating pollution from deployment activities wherever possible through recycling and reuse, material substitution and process change.

Restoration: Cleaning up environmental damage caused by contingency operations.

To achieve these Air Force goals, environmental stewardship must be integrated into every contingency, training and mission operation. Otherwise, past and present practices can lead to natural resource damage, environmental degradation, and risks to the deploying force's personnel and resources. Civil engineer personnel must receive sufficient training and learn what resources are available to them, so that they are knowledgeable and have a clear understanding of the environmental requirements affecting their operations.

The Air Force Handbook series consists of several volumes on different topics, from establishing a bare base to emergency management planning to surviving and operating in a nuclear, biological and chemical environment. Written for the benefit of civil engineers in the field, the handbooks are easy-to-read and portable — designed to be carried in fatigue pockets during contingency operations or exercises.

The handbook illustrates methods of integrating environmentally responsible practices into contingency operations. Maximum compliance will minimize adverse impacts on human health and the environment and reduce or eliminate negative impacts on mission accomplishment. It outlines strategies for exercises, deployments, MOOTW, and armed conflict within the U.S., at overseas Department of Defense (DoD) installations, and at overseas non-DoD installations, though it does not address contingencies in response to natural or man-made disasters.

The handbook also provides guidance on unit self-assessment of environmental practices using environmental risk matrices. After analyzing impacts on the surrounding area, the unit can implement practices to better protect the health of its troops and the surrounding resources.

"Utilizing the risk assessment matrices, communicating with personnel and understanding the applicable environmental requirements will reduce the risks to human health and the environment," said Pohlman. "It is paramount for all personnel to employ these lessons into their contingency activities."

"The next time I ask a CE or EM person, 'have you heard of our environmental guide?' I expect to hear a resounding, 'yes!'," said Pohlman.

Other handbooks in the AF 10-222 series include "Guide to Establishing a Bare Base," "Guide to Bare Base Assets" and "Bare Base Power Plant Installation." Copies of these and other Air Force Handbook series can be acquired through base Publication Distribution Offices. They can also be found on the Air Force Departmental Publishing web page at http://afpubs.hq.af.mil.

Lt Col Ray Knight is chief, Environmental Restoration Branch, Office of the Civil Engineer, Pentagon, Washington D.C.

Colonel-Selects

The following individuals were recently selected for promotion to the rank of colonel. Congratulations to these civil engineer officers on their leadership and achievement.

James D. Baughman
Scott K. Borges
*Timothy A. Byers
Clifford C. Fetter
William R. Floyd
John D. Fouser
Richard C. Howell
Neil K. Kanno
James D. Lyon
Brian L. Miller
Cardell K. Richardson
Sebastian V. Romano
Duncan H. Showers
Randall J. Thady
Jon D. Verlinde

*Below-the-Promotion Zone

Senior Master Sergeant-Selects

Congratulations to the following Air Force civil engineers on being selected for promotion to Senior Master Sergeant.

Patrick D. Abbott
Richard A. Aldridge
Pat M. Allbritton
Andrew C. Babich
Terry D. Baker
Stacy G. Ballew
Daniel I. Beck
Bradley H. Bell
Benjamin E. Brooks
Arthur G. Brown
Bobby L. Burns II
Claudis E. Byers
William J. Casey Jr.
Harley M. Connors
Cevin R. Cox
Marilyn Cunningham
Michael L. Curry
Gregory P. Dameron
Robert M. Dandridge
Arnold R. Davis
William E. Ferenc
Thomas J. Fleck
Richard A. Forbrich
Carl D. Freeney
Anthony Fullard
Thomas A. Goodrich
Kenneth Helgerson
John R. Henry
Sandy Hernandez
Kevin R. Hofer
Eric L. Hogan
William D. Huls
Lawrence B. January
Forest Johnson
Claude M. Jones
Steven G. Karsten
Mitchell Kendrick
Patton K. Kern
Joseph P. Kerrigan
Ronald W. Kruse
Jack E. Kutz
Walter J. Lipscomb
John E. Little
James A. Martin
Robert E. McCune
Dirk O. McDowell
Milo Millovitch II
Eric W. Mortensen
Eric L. Murdock
Donald H. Nelson
Todd W. Nielsen
John D. Olive
Mark S. Palm
Timothy F. Parker
Suzanne E. Phillips
Timothy S. Prentice
Dan Red Cloud
Edward J. Rosemeier
Richard K. Safonovs
Jon D. Saiers
Frazier S. J. Speaks
Timothy C. Sprague
Jeffrey A. Strazzinski
Andy E. Suan
Franklin C. Tallman
Gary J. Thomas
Joseph R. Thompson
Russell Thornbury
Brian S. Trainque
Sotero Trevino Jr.
Charles P. Valdivia
Linda J. Vance
Randy L. Warnke
Curtis J. Watkins
Paul R. Willard
David W. Williamson
Richard T. Windover
Pamela V. Wood
Aurelio Zamarron

Tinker CEs respond to killer tornado

by Andy Stephens
Oklahoma City Air Logistics Center Public Affairs

Chuck Littlejim, 72nd CEG, removes part of the fencing that used to surround the horse stables on Tinker AFB. The stable area was severely damaged by the May 3 tornado. *(Photo by Margo Wright)*

A1C Charles Chase and Carey Hill, both of the 72nd CES, isolate an electric pole that was blown down by the tornado at Tinker AFB, Okla. *(Photo by Dave Faytinger)*

Tinker Air Force Base civil engineers were actively involved in clean-up and repair operations after the largest tornado in living memory hit Oklahoma in May.

The 72nd Civil Engineer Group, as well as medical, support and security personnel, were recalled within minutes of the tornado's passing to assist in damage assessment and search and recovery efforts.

"Because of the magnitude of the situation, it took time to clean up, but the effort was impressive," said Col. Michael Cuddihee, former 72nd CEG commander.

Recovery efforts began immediately after the F5 tornado, one of the most powerful on record, sideswiped the base and destroyed nearby residential neighborhoods on May 3.

The mile-wide tornado was headed straight for Tinker then swerved at the last minute, damaging the western edge of the base. The 250 mph winds destroyed two Navy barracks, an entry gate and perimeter fencing. Three buildings at Tinker's stables and one running track bathroom were destroyed and more than 20 buildings on base were damaged by winds and flying debris.

Reports from on-scene authorities estimate that the damage to the neighboring community included more than 500 residences. Incredibly, a margin of 100 feet separated the destruction of the civilian community from the damage inflicted on Tinker AFB.

"We had such an outpouring of people to help," said Kenneth Prewett, chief of facility maintenance for Tinker's 72nd CEG. "There were a great number of people who volunteered and we appreciated the help."

Chief Jerry Bower, Del City Fire Chief, was incident commander for the devastated community of Del City next to the base. Tinker fire crews and security forces assisted his team and other civil authorities in the first days of the recovery effort.

"We were looking at a rough estimate of 500 uninhabitable homes in the immediate area," he said. "We had gas flowing freely and power lines that were down and we took care of those right away."

Search and rescue teams were composed of Tinker civil engineers, firefighters and medical specialists working under the guidance of a mobile command post on base. Firefighters were staged throughout the most devastated areas to provide medical aid and communication, which was otherwise unavailable.

In spite of the tornado's impact on Tinker civilian employees and their families, the Oklahoma City Air Logistics Center continued to surge aircraft, engines and parts to support deployed warfighters. More than 80 percent of Tinker personnel were at work the morning after the storm.

"That tells us a lot about our civilian work force," said Tinker installation commander Maj Gen Michael E. Zettler. "This was truly a test for Team Tinker, and we met the challenge. I am enormously proud of Team Tinker's efforts to assist our neighbors. For many years, the community has supported Tinker in many ways. Now we've had an opportunity to return a small measure of their support."

RED HORSE supports Southern Watch

by Lt Col Michael McCarthy
Virginia Air National Guard

Civil engineers continue to pull long tours in Southwest Asia as the Air Force maintains its containment of Iraq under Operations Northern and Southern Watch.

Members of the 203rd RED HORSE Flight recently deployed to Al Jaber Air Base in support of Operation Southern Watch. The 203rd is one-half of an Air National Guard RED HORSE Squadron headquartered at Camp Blanding, Fla.

An advance team from the 203rd deployed in February to help clear a backlog of projects on the books at Al Jaber. They were followed by two deployments of 39 personnel each. Most personnel deployed for 17 days, while some stayed for both deploy-ments.

Led by Maj Paul Julian, construction by the first group began quickly — an Air Force rescue helicopter unit had redeployed from Camp Doha nearby and needed a home immediately.

The RED HORSE team was given nine days to complete the construction of two general purpose shelters (GPS), interior partitions and an adjacent parking area. Led by Lt Jennifer Glasgow and TSgt Darryl Riddle, the first GPS was constructed to customer specification in record time and helicopter operations personnel were able to move in at the end of the second day. The base support services commander said simply, "Amazing!"

During the deployments, hostilities escalated with Iraq. Aircraft from the base flew several missions in support of the no-fly zone against Iraq. As a result, base security was extremely high. As Capt Rick Watkins said, "This is as close to the front lines as we've ever been." Watkins was on the first deployment. His team constructed a life support facility for an F-16 squadron and another Operations Center for the helicopter unit.

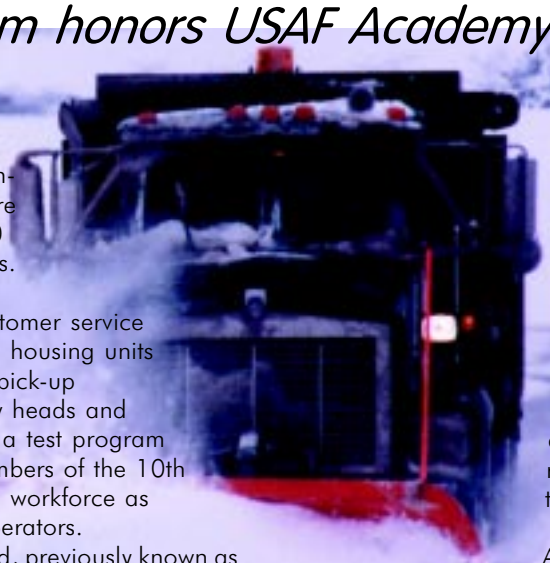
Several personnel worked with the base civil engineering unit, conducting base maintenance and covering shortfalls of overworked sections.

The second deployment picked up where the first deployment left off. They constructed another GPS for the fighter pilots. This one involved an addition onto an existing facility and included traditional drywall, drop ceiling and carpeting in the con-struction. They built a facility for the security police and completed numerous health and welfare projects, including a fence around the softball field. One of the more important projects involved upgrading roads around the base.

Very few unit members were allowed to venture off the base due to the threat level, but life on base wasn't bad for the Guard members. Work kept the boredom away. SSgt Louis Dafoe said, "It was great. We felt like we made a difference. We had a real mission and made a positive impact on the lives of the active duty people at the base."

Lt Col Michael McCarthy is operations officer for the 203rd RED HORSE Flight, Virginia Air National Guard, Virginia Beach, Va.

International Snow Symposium honors USAF Academy CE team



Organizers of the International Aviation Snow Symposium presented the Col Bernt Balchen/Wilfred M. Post Award to the 10th Civil Engineer Group, U.S. Air Force Academy, Colo., during the symposium's workshops and exhibits show April 28 in Buffalo, N.Y.

The award recognizes outstanding achievement in base and airfield snow and ice control. The 5th Civil Engineer Squadron, Minot Air Force Base, N.D., was runner-up.

The Balchen/Post award, spon-sored by the Northeast Chapter of the American Association of Airport Executives, is presented to the out-standing snow removal team in four commercial airport categories and one military airport category.

Although snowfall is but one of many criteria, the Academy received over 67 inches of snowfall (60 per-cent more than average) in 1998, including 20 inches of snow in 40 knot winds during a 24-hour period. Their out-standing performance ensured the airfield never closed, accom-modating more than 100,000 training sorties. They also expanded customer service to over 1,200 housing units by procuring pick-up mounted plow heads and implementing a test program that used members of the 10th CEG's civilian workforce as augmentee operators.

This award, previously known as the Balchen Award, was named for Arctic aviation pioneer Col Bernt Balchen. In 1928, Balchen piloted a relief plane to Greenly Island, Labrador, in the first of many arctic rescues. He was also a founder and honorary chairman of the International Aviation Snow Symposium.

The award now additionally honors Wilfred "Wiley" Post, one of the founders of the International Aviation Snow Symposium, where he served as general chairman for 20 years. From 1938 to 1983, Post has long been associated with efforts to recognize airport personnel demonstrating expertise in the removal of snow and ice from runways and taxiways.

Representing the Academy to accept the award were Col Suzanne Waylett, USAFA Civil Engineer and 10th CEG commander; Capt Phil Moessner, Heavy Repair Flight commander; Fred Barela, Horizontal chief; TSgt Craig Krauss, Horizontal NCOIC; and Larry Wells, heavy equipment operator.

(Photo courtesy 10th CEG)

TRAINING

UTM Workshops Offer Maximum Training Support

by SMSgt Randall Skinner
HQ AFCESA, Tyndall AFB

Like other divisions at the Air Force Civil Engineer Support Agency, the Training Division is called to, "provide the best tools, practices and professional support to maximize Air Force civil engineer capabilities in base and contingency operations." In keeping true to this mission, the division launched an initiative in 1996 to support CE unit training managers (UTMs) worldwide with UTM workshops.

Each year, a two-man team travels to several regional locations that host these workshops. On average, each workshop seats between 20 and 40 participants. The location of these UTM workshops varies, but traditionally, all Pacific Air Forces bases meet at Hickam Air Force Base, Hawaii and U.S. Air Forces in Europe bases meet in Germany and/or England. Other units assemble within their major command at select locations. Some of the largest audiences have come from Air National Guard and Air Force Reserve groups. Since the inception of the UTM workshops, we can proudly state, "over 1000 UTMs served!"

The topics covered each year reflect the most current changes, methods and products relative to on-the-job training. The 1997 workshops were instrumental in easing the transition from the 1995 Career Field Education and Training Plan (CFETP) to the 1997 CFETP. The 1998 workshops educated participants on two new training tools, Air Force Qualification Training Packages (AFQTPs) and the Certification and Testing (CerTest) program, CE's single platform for evaluation and testing. With the advent of electronic (CD ROM) AFQTPs, it became necessary to develop QTP tests. CerTest was selected as the most favorable vehicle to deliver these tests. A special addition to the 1998 workshops was a CerTest demonstration. Many UTMs brought laptop computers and received hands-on training on main CerTest functions.

The 1999 UTM workshops, which are being held May through October, will also feature CerTest along with an introduction to COVER Train (contingency, operations and vocational engineer review training), a complete CD ROM disk set that covers all subject and task knowledge and other pertinent training instruments.

These workshops provide a great opportunity to present future ideas and concepts for review. Over the past three years, many multimedia products, training improvement instruments and distance learning initiatives were first revealed to these audiences. Their immediate feedback, opinions and recommendations were collected and used to enhance each development initiative.

A key centerpiece of the workshops is the Procedural Guide for Civil Engineer Training. Each year, months prior to the workshops, a small group of training managers are invited to assist with authoring and updating the guide. Since the 1997 edition, the guide has been offered in both a print version and on the Web. The 1999 edition was released in May, and will also be offered in print or on the Web.

Why doesn't AFCESA provide the UTM workshops via VTC or satellite? The main reason is that the workshops are usually tightly packed into three days, and VTC or satellite link scheduling is limited to short time periods. Also, many sites don't have compatible communication systems, and the span of control would limit interaction — reducing effective communication. Based on the critiques of former attendees, the most valuable aspect of in-resident workshops is the synergy of UTM discussions to solve problems. The face-to-face interactions are also critical to assess the "true" effectiveness of training products and services.

So far the UTM workshops have been highly successful in maximizing CE training capabilities, and they will continue to prove beneficial as the Air Force moves forward into the 21st Century.

For the dates, times and locations of the 1999 UTM workshops, contact your major command training manager.

CerTest Hits the Airwaves

by MSgt Ron Brown
HQ AFCESA, Tyndall AFB

Civil engineer training reached another major plateau with the delivery of training for the Certification and Testing (CerTest) program via satellite. Unit training managers, CerTest managers and other CerTest users from approximately 50 CONUS and overseas sites tuned in to the live, hour-long broadcast on the Air National Guard Warrior Network March 18.

Viewers received technical guidance and information from CMSgt Jim Podolske, Air Force Civil Engineer Support Agency career field manager for fire protection. As senior co-administrator and architect of CerTest, Chief Podolske presented key points to assist users and managers of the program. After a step-by-step demonstration, the viewing audience at each site had the opportunity to call in for direct responses to questions.

Feedback was swift, favorable and candid. Many viewers expressed their appreciation for the broadcast and offered comments on how future broadcasts could be even better. One such suggestion was to "reduce the multiple topics covered to just one or two per session." Another suggestion was to "develop and advertise a set schedule for broadcasts."

Our intent is to adopt both of these approaches. We'll attempt to present only one or two subjects per broadcast then take questions from the viewing audience. We'll inform all units of upcoming presentations by posting the information on AFCESA's Web page and/or using e-mail. It should be noted that scheduled broadcast times could be changed with little notice, if broadcasts of a higher priority "bump" us from our time slot on the satellite.

A re-broadcast of March's live program aired on April 8 and 23. Individual sites were encouraged to record the broadcast and maintain a copy of the video in their unit for future use and reference.

Stay tuned for more information on these televised training sessions.

EOD pair awarded Airman's Medal

by MSgt William Walton III
Patrick AFB, Fla.

Editor's Note: In May, two members of the Explosive Ordnance Disposal career field were awarded the Airman's Medal for their selfless rescue of 71 people trapped in a blockhouse after a rocket exploded at Cape Canaveral Air Station, Fla. TSgt Joseph May, a member of the 45th Civil Engineer Squadron at Patrick Air Force Base, and SSgt Noel Murphy, now assigned to the 36th CES at Andersen Air Force Base, Guam, were members of Patrick's launch disaster control group at the time of the explosion. The Airman's Medal is the Air Force's highest peacetime award.

As a Delta II rocket rose off its pad Jan. 17, 1997, no one realized that in a few seconds a spectacular launch would give way to an even more spectacular explosion. The rocket, which had begun to malfunction shortly after liftoff, was destroyed by the launch control team 23 seconds into the flight, and less than 1,600 feet above its launch pad.

Flaming debris spread out in all directions, eventually plummeting back to earth, destroying cars, trailers and property and threatening lives. It was a worst-case scenario that all members of the launch disaster control team had practiced for, and dreaded … for when a rocket explodes, it becomes a witch's brew of fire, explosive devices and toxic fumes.

Once debris stopped raining down and the all-clear sign was given, Sergeants May and Murphy were assigned to the lead vehicle in a reconnaissance convoy. Their mission was to safely lead emergency rescue personnel to the launch pad, if possible, and check on the condition of a blockhouse that contained 71 people.

May and Murphy traveled down Lighthouse Road followed by firefighters and environmental health personnel. When the convoy reached the parking lot of the Horizontal Processing Facility (HPF), used to prepare rockets for launch, they found large amounts of burning debris. Vehicles in the adjacent parking lot were burning and ruptured gas tanks were causing other vehicles to burst into flame. In addition, the HPF, which contained high explosives, was on fire. That made evacuation through the normal entrance to the pad too dangerous. They decided they would have to take an alternate route to the blockhouse.

During the two-mile drive to the blockhouse, the EOD team was forced to stop several times to clear hazardous explosive items blocking their way. At one point, the smoke became so thick the team had to don self-contained breathing apparatus and had to drive past a chemical storage area ablaze with drums that were later determined to contain hydrochloric acid. This, combined with downed power lines and brush fires burning on both sides of the road made the trip even more hazardous.

At the blockhouse, they discovered that one of the Delta's graphite epoxy motors had impacted next to the facility and was burning intensely, producing smoke and fumes that were beginning to seep into the blockhouse.

Knowing the people inside had only a limited supply of air, May and Murphy disregarded their own safety and accelerated their explosives clearing efforts. Going against EOD procedure, they manually handled and removed several very hazardous explosive items whose conditions were unknown and could have detonated at any time. They cleared the area and led the 71 very relieved people out of immediate danger.

But there was still work to be done. May and Murphy led firefighters to the HPF through the still-burning parking lot, disregarding exploding automobile gas tanks and intensely burning rocket propellant. Saving the HPF not only meant saving the building, but the multi-million dollar, explosives-laden launch vehicle inside.

That January morning may have started out normally for many people, including May and Murphy, but it changed in a hurry. Their training and personal courage paid off — and at least 71 people are glad it did.

MSgt William T. Walton III is chief, Explosive Ordnance Disposal Flight, Patrick Air Force Base, Fla.

PEOPLE

Robbins new Air Force Civil Engineer

Brig Gen Earnest O. Robbins II, currently The Civil Engineer, Headquarters Air Combat Command, Langley Air Force Base, Va., will assume the Air Force's top civil engineering position as The Civil Engineer, Deputy Chief of Staff, Installations and Logistics, Headquarters U.S. Air Force, when he replaces retiring Maj Gen Eugene A. Lupia on July 23.

General Robbins entered the Air Force in 1969 through the University of Kentucky Reserve Officer Training Corps program. His assignments have included base civil engineer and commander of the 52nd Civil Engineering Squadron, Spangdahlem Air Base, Germany; director, plans and programs, Office of The Civil Engineer, Headquarters U.S. Air Force, Washington, D.C.; and command civil engineer, Headquarters Air Force Space Command, Peterson AFB, Colo.

The general has been awarded the Legion of Merit, the Meritorious Service Medal with six oak leaf clusters, and the Air Force Commendation Medal with oak leaf cluster. He is a recipient of the 1994 Society of American Military Engineers' Newman Medal for outstanding contributions to Air Force civil engineering. General Robbins was recently selected for promotion to the rank of major general.

Stewart receives second star

Brig Gen Todd I. Stewart was promoted to the rank of major general on March 4.

General Stewart is The Civil Engineer, Headquarters Air Force Materiel Command, Wright-Patterson Air Force Base, Ohio. He has served in a variety of Air Force civil engineer positions at wing, intermediate command, major command and Air Staff levels, including commander of the 36th Civil Engineering Squadron, Bitburg Air Base, West Germany. He has also served as associate professor of management, Graduate School of Systems and Logistics, Air Force Institute of Technology, Wright-Patterson AFB, Ohio, and as command civil engineer, Headquarters Air Education and Training Command, Randolph AFB, Texas.

Among General Stewart's awards and decorations are the Legion of Merit, the Meritorious Service Medal with three oak leaf clusters, the Air Force Commendation Medal, the Air Force Outstanding Unit Award with two oak leaf clusters, and the Air Force Organizational Excellence Award with oak leaf cluster. General Stewart was awarded the 1993 Society of American Military Engineers' Newman Medal for outstanding contributions to Air Force civil engineering.

Changes in command

Col Frank J. Destadio, former Pacific Air Forces command civil engineer, Hickam Air Force Base, Hawaii, is now The Civil Engineer, Headquarters Air Combat Command, Langley AFB, Va., replacing Brig Gen Earnest O. Robbins II in July.

Col Patrick A. Burns, former Pacific Air Forces deputy command civil engineer, Hickam AFB, Hawaii, replaced Col Frank J. Destadio in July as The Civil Engineer, Headquarters Pacific Air Forces.

Col John W. Mogge Jr., former commander of the 78th Civil Engineer Group at Robins AFB, Ga., moved across the base to become The Civil Engineer for Headquarters Air Force Reserve Command, June 30. He replaced Col Donald J. Meister, who retired the same date.

Col Michael F. Hrapla, former assistant command civil engineer, Headquarters Air Combat Command, Langley AFB, Va., is now The Civil Engineer, Headquarters Air Force Special Operations Command, Hurlburt Field, Fla. He replaced Col John H. Estes, who retired March 25.

Col Bruce R. Barthold, former chief, Programs Division, Headquarters Pacific Air Forces, Hickam AFB, Hawaii, is now commander of the Air Force Civil Engineer Support Agency, Tyndall AFB, Fla. He replaced Col H. Dean Bartel, who retired June 18.

CE officer graduates Army School of the Americas

Maj Efren V. M. Garcia was one of two U.S. Air Force officers chosen to attend the 1998 Command and General

Staff Officers Course at the U.S. Army's School of the Americas (USARSA), Fort Benning, Ga.

Major Garcia, who is currently assigned at Air Staff in the Environmental Division of the Office of The Civil Engineer, received the 1998 General Matthew B. Ridgway Leadership Award for the course and ranked runner-up for the Physical Fitness Award while earning the U.S. Army Physical Fitness Test Patch.

The 48-week course is the premier course offered by USARSA and is equivalent to the same Intermediate Service School course offered by the U.S. Army Command and General Staff College at Fort Leavenworth, Kan. Normally Air Force officers attend Air Command and Staff College, but the USARSA course provides a career-broadening experience that exposes officers to Latin American international affairs. CE officers are able to share experiences with civil engineers from these countries.

This year, 51 officers graduated from the course. In addition to the two USAF officers, there were 21 U.S. Army (active, Guard and Reserve) officers and 28 international students representing 10 Latin American countries.

Those who wish to be considered for attendance should be proficient in Spanish and pass the Defense Language Proficiency Test. Everything in the one-year course is taught in Spanish.

Reserve firefighter completes top national program

by SSgt Joel Langton
45th Space Wing Public Affairs

A Patrick Air Force Base, Fla., reservist was one of the first Air Force members to complete the nation's top executive fire fighting program.

TSgt Dominick Landolfi, a local firefighter attached to Patrick and assigned to Moody AFB, Ga., completed the four-year Executive Fire Officer Program (EFOP).

"The intensive EFOP is designed to provide senior fire officers with a broad perspective on various facets of fire administration," said Federal Emergency Management Agency Director James Lee Witt. "The program provides fire service officers with the expertise they need to succeed in today's challenging environment."

The course is four years in length with the student attending a yearly two-week session. Students must submit an applied research project within six months of the session in order to progress to the next year.

Landolfi said the knowledge he picked up wasn't necessarily how to put out a fire better, but how to build a better team to put out fires. "The knowledge gained pertained to leadership, management, team building, communication, planning, change management and executive development, to name a few," he said.

Air Force captures DoD environment awards

by TSgt Michael Spaits
Air Force Print News

The Air Force can claim a decisive victory in the environmental field. Installations and people representing the service won seven out of 17 awards, or 41 percent, from the Secretary of Defense Environmental Security Awards competition.

The competition was designed to recognize the best programs in the Department of Defense. Nearly every aspect of the environmental field, from restoration of contaminated sites to managing natural resources, was reviewed. All four services nominated their best programs for judging.

"We are pleased and proud of the installations and individuals named the best in DoD for their areas of specialty," said Teresa Pohlman, chief of the Air Force Environmental Division. "This really reflects the Air Force's commitment to the environment. We're dedicated to using the best environmental methods and science available to ensure we remain good stewards of the land and make good business decisions."

Winners of the 1998 DoD awards:

- Vandenberg AFB, Calif., cultural resources management (installation)
- Luke AFB, Ariz., environmental quality (nonindustrial installation)
- Robins AFB, Ga., pollution prevention (industrial installation)
- Hill AFB, Utah, recycling (industrial installation)
- Janet E. Ferguson, Wright-Patterson AFB, Ohio, cultural resources management (individual)
- Capt Theodore B. Bloomer, Andersen AFB, Guam, environmental quality (individual)
- Donald K. Gronstal, McClellan AFB, Calif., pollution prevention (individual)

DoD officials presented the awards during a ceremony April 27 at the Pentagon.

Guard CEs promoted to colonel

Three Air National Guard civil engineer officers recently received federal recognition to the rank of colonel. Congratulations to Col David C. Moreau, Col Edmund H. Stern and Col Raymond H. Willcocks on their leadership and achievement.

A Tradition of Excellence

A brief look at Air Force civil engineering awards and the individuals for whom these prestigious awards are named.

by Lois Walker
HQ AFCESA Historian, Tyndall AFB

The annual Air Force Civil Engineer Awards program recognizes civil engineer organizations and individuals for outstanding achievements and contributions to the Air Force mission. This is the first in a three-part series of articles on the civil engineers whose contributions we remember as we honor others in their name each year.

Air Force Outstanding Civil Engineer Unit Awards

The Air Force Outstanding Civil Engineer Unit Award is presented to two units each year, one representing the best large organization (400 or more military and civilian authorizations) and one representing the best smaller unit (fewer than 400 military and civilian authorizations). This highly competitive award recognizes achievements and exemplary performance in readiness, resource management, environmental and resource conservation, community relations and Quality Air Force initiatives and assessment.

Curtin Award

Winners of the Air Force Outstanding Civil Engineer Unit Award actually receive two awards. They are simultaneously presented with The Society of American Military Engineers' Curtin Award, named for former Director of U.S. Air Force Civil Engineering, Maj Gen Robert H. Curtin.

General Curtin graduated from the U.S. Military Academy at West Point and began his career with the U.S. Army Corps of Engineers in the Panama Canal Zone in 1939. During and immediately following World War II, he served at the 30th Engineer Aviation Unit Training Center at MacDill Field, Fla., and in several assignments in Europe, where he performed duties related to tactical and other airfield construction.

Following the war he completed a master's degree in civil engineering at Harvard University and worked at Headquarters U.S. Air Force in Washington D.C. for the remainder of his career, except for a three-year tour as the Assistant Chief of Staff for Installations at Third Air Force in England. He served as the Director of Civil Engineering from July 1963 until his retirement in May 1968. It was under General Curtin's leadership that the Prime BEEF and RED HORSE programs were implemented to meet the civil engineering demands of the Vietnam War.

Maj Gen Robert H. Curtin

The Society of American Military Engineers (SAME) also presents two distinguished awards, the Newman and Goddard medals, to Air Force nominees each year.

Newman Medal

The Newman Medal is named in memory of Maj Gen James B. Newman, Jr., former Director of Installations, U.S. Air Force, from 1949-1950 and past president of SAME. The Newman Medal recognizes the year's most outstanding officer or civilian contribution to military engineering through achievement in design, construction, administration, research, or development. The nominee may be in current service or retired.

Maj Gen James B. Newman, Jr.

General Newman had a colorful career spanning more than 30 years. He graduated from the U.S. Military Academy at West Point in 1918, and received a bachelor's degree in civil engineering from the Massachusetts Institute of Technology in 1921. During the 1930s he participated in the Florida Canal project, was involved with construction of the Washington D.C. National Airport, accompanied Brig Gen George Brett on a round-the-world engineer survey and was a member of the Third Engineers in Hawaii from 1937-1939, where he supervised the building of military roads and trails on the island of Oahu.

As District Engineer at Wright Field in 1940 he supervised the early wartime build-up of Wright and Patterson Fields in Ohio. He had a hand in the expansion of flying facilities for the Civil Aeronautics Authority, supervising construction of more than 200 airfields for the CAA flying training program. During World War II he served at Headquarters U.S. Army Air Forces in Washington D.C. and then with Eighth Air Force and Ninth Air Force in Europe.

He ultimately served as commander of Ninth Engineer Command, the first civil engineer organization to be integrated as an organic part of a tactical air force. Ninth Engineer Command was responsible for the planning and construction of nearly 250 airfields across the European continent as part of the Normandy invasion and the liberation of Europe. At the peak of the construction, engineers put an airfield into service every 36 hours.

Following World War II, General Newman retired in the rank of colonel in 1946. He returned to active duty to head the Air Force civil engineer organization from March 1949 to May 1950. He retired again in 1950 and passed away in 1959.

Goddard Medal

The Goddard Medal is named for former Director of Civil Engineering and past president of SAME Maj Gen Guy H.Goddard. General Goddard graduated from the U.S. Military Academy at West Point in 1941 and served with the U.S. Army Corps of Engineers from 1941 to 1944. In 1944 he assumed command of his first Air Force-associated unit, the 842nd Aviation Engineer Battalion in Europe, and subsequently commanded the 836th Aviation Engineer Battalion.

Following the war he worked in the Office of the Chief of Engineers, U.S. Army, in Washington, and in September 1948 transferred to the U.S. Air Force. His first assignment was as civil engineer for Caribbean Air Command in Panama.

Maj Gen Guy H.Goddard

Subsequent assignments included Seventeenth Air Force in North Africa, Air Force Logistics Command in Ohio, and Headquarters U.S. Air Force in Washington D.C. He became the Director of Civil Engineering in May 1968 and retired from service in January 1972.

Three Goddard Medals are awarded each year, one each to active duty, Reserve and Guard individuals selected for their outstanding contributions to military engineering, including military troop construction, base maintenance and contingency engineering.

For the latest information on Hot Topics in Air Force Civil Engineering visit AFCESA's web site at www.afcesa.af.mil

A bird's-eye view of Caserma Barbarisi, the tent city at Aviano Air Base, Italy, which was home to approximately 2,000 deployed troops during NATO Operation Allied Force. Caserma Barbarisi was named for an Italian captain killed in action during World War I. *(Photo by MSgt Keith Reed)*