May/June 2012

Engineering Freedom

Serving the Afghanistan Engineer District-South

Water: On the hunt for Afghanistan's most precious resource

U.S. Army Corps
of Engineers®
Afghanistan Engineer District-South

Engineering Freedom

Commander
Air Force Col. Benjamin Wham

Deputy Commander
Army Lt. Col. Corey M. Spencer

Command Sergeant Major
Command Sgt. Maj.
Lorne Quebodeaux

Chief, Public Affairs
Mark Ray
COMM: 540-667-5705
DSN: 312-265-5705

Deputy, Public Affairs
Karla K. Marshall
COMM: 540-722-6263
DSN: 312-265-6263

Public Affairs Specialist
Dave Melancon
COMM: 540-665-5064
DSN: 312-265-5064

Engineering Freedom is the field magazine of the U.S. Army Corps of Engineers Afghanistan Engineer District-South and is an unofficial publication authorized by AR 360-1. It is produced bi-monthly for distribution by the Public Affairs Office, South District. It is produced in the Afghanistan theater of operations.

Views and opinions expressed in the Engineering Freedom are not necessarily those of the Department of the Army or the U.S. Army Corps of Engineers.

Articles or photographic submissions are welcome and should arrive in PAO by the 15th of each month preceding publication. They can be mailed or e-mailed to the below address. If submitted electronically, all stories should be in Word document format. All photographs should be high resolution (at least 5x7 inches and 300 dpi), include photo caption information, and be submitted as separate .jpg or .tif image files.

All photographs appearing herein are by the South District Public Affairs Office unless otherwise accredited.

The mission of Engineering Freedom is to support the Commander's internal communication program for South District. It also serves as the Commander's primary communication tool for accurately transmitting policies, operations, technical developments and command philosophy to South District team members.

Submissions can be e-mailed to:
TAS.AES.PAO@usace.army.mil

Submissions can be mailed to:
Public Affairs Office
USACE-AES
APO AE 09355

Engineering Freedom Magazine is online at:
www.aed.usace.army.mil/AES

CONTENTS

Vol. 3, No. 3 May/June 2012 www.aed.usace.army.mil/AES

FEATURES

5 Afghans, US work together to stem power outages
Switching center key to system
8 Hydrogeologist ensures quality, abundance of precious water
9 Afghan-coalition cooperation bringing more electricity to Kandahar
10 District turns over teacher training facility to Herat University
11 Corps of Engineers looking forward to newest resident office
12 Training center's wastewater aerator upgrades complete
13 USACE turns over Camp Hero range to Afghan National Army
14 South District helping 'build' next generation of Afghanistan engineers
15 KAF ramp expanded, operational
16 Corps of Engineers turns over police district headquarters in Gozara
17 Ground broken for Herat fire stations
18 USACE Team bringing safety message to job sites in Afghanistan
20 Afghan police open district headquarters in Farah
21 Profiles in leadership: Lt. Col. Gordon "Mark" Bartley
22 Bunker-side garden serves as test bed for Afghan agriculture
24 District streamlines knowledge management
25 Austere standards approved for Afghan police headquarters
26 Father, son reunited on Kandahar Airfield
27 Uncle finds nephew on Kandahar
28 USACE employee finds vegan diet possible in Afghanistan
31 Bulldogs of the week 2011-2012

DEPARTMENTS

Commander's Message 3
Command Sergeant Major's Message 4
AES Team: Spotlight on Helmand Area Office 29
Afghanistan Safety 101 30
On the Move 36

Check us out on Flickr:
http://www.flickr.com/photos/usace-tas/

Follow us on Facebook:
http://www.facebook.com/pages/US-Army-Corps-of-Engineers-Afghanistan-Engineer-District-South/199033262376?ref=ts

On the cover ...

Workmen drill a new water well on the Afghan National Army's 9th Commando compound in Herat May 1. *See story on page 8. USACE photo by Dave Melancon, South District Public Affairs*

Commander's message ...

As the saying goes, time flies when you are having fun and, MAN, have I had fun! (!!??) It seems like just yesterday that I was writing my first article for *Engineering Freedom* and now here I am writing the final article of my tour. To say that I have thoroughly enjoyed myself in this job would be an understatement. This job has been an absolute perfect way to cap, not only my seven years of supporting operations in theater, but my 26 years of service.

First, I would like to thank my wife of 25 years, Ellen, for her support, devotion and tolerance as she again supported me on an extended deployment here in theater, my oldest daughter, Jennifer, who again received long-distance birthday wishes from and who continues the family tradition of serving our nation and making me proud, and finally, my youngest daughter Lizzie, who will graduate from high school with a top GPA and start nursing school this fall, for all their love and support. I am incredibly proud of my three girls. Sorry folks, but I have to brag a little--it is family members like these, with their grace and inner strength, who allow us to serve our nation.

I would like to thank those leaders who showed great confidence in me when I was selected for this post, Lt. Gen. Robert Van Antwerp (then Chief of Engineers) and Maj. Gen. Tim Byers (the U.S. Air Force Civil Engineer). I also truly appreciate the guidance and leadership I received from my two Transatlantic Division Commanders: Maj. Gen. Ken Cox and Maj. Gen. Mike Eyre. It has been a privilege and pleasure serving with them both. I would also like to thank key Transatlantic Division leaders including Howard Stickley, Col. John Hurley and Col. Ed Kertis for their support, guidance, mentorship and friendship.

It would take probably a hundred pages for me to thank each and every person who supported the mission of the district, so instead I'd like to simply say thanks. Thanks to all the USACE employees who answered the call of their nation and their profession; thanks to all employees from other government agencies who looked at the importance of our mission and felt that it was the right thing for them to do; thanks to all those who joined our team from all walks of life who understand that an essential mission needs good people; thanks to all those who came out of retirement to continue to serve their nation; thanks to all district military personnel who volunteered to serve their nation in support of our mission and will continue to serve with pride and honor; thanks to all our support contractors who protected, flew, drove, translated, calculated, cleaned and communicated; and finally thanks to Lt. Col. Corey Spencer, Command Sgt. Maj. Lorne Quebodeaux and Karen Anderson I could not have done this without them.

In my opinion, everyone who served in the South District embodied the Air Force Core Value of "Service Before Self," the Navy Core Value of "Commitment" and Army Core Value of "Selfless Service," as they served in austere conditions, ensured that we built capabilities for our nation and the coalition war effort, provided new capabilities our Afghan Nation Security Force partners and made Afghanistan a better place to live. They have all been essential for the execution of our mission and I want to convey my personal thanks.

When I showed up twelve months ago, I put forward my five command priorities:

1. Protect our people
2. Complete our work
3. Execute our work efficiently
4. Follow the core (Corps) processes
5. Have fun doing it.

While there have been challenges along the way, any job worth doing will have challenges. As a command, this team had embraced each and every one of those priorities and has put them into the daily operations of this district.

We continue to do a fantastic job protecting each and every person that is a part of the district team. That includes significant force protection upgrades around the entire district; operating safely around the battlefield, even with the loss of 70 percent of our military MRAP team, accomplished by successfully incorporating our Global Security Service, Ltd. teammates into our

Continued next page

Commander's message

district-wide mission, and driving a culture of safety around the district that ensures we can continue to sustain and operate in this hostile environment. Protecting people remains job #1.

We continue to complete work around the district in some of the toughest locations and our work continues to be of the highest quality, ensuring that we successfully execute our mission. Our use of Afghan National Quality Assurance Representatives has produced great dividends around the Regional Command-West and has been exported throughout the entire southern part of Afghanistan. We continue to open multiple channels of communication with customers at all levels to ensure those who should be aware, are aware and those who can support, do.

We continue to be a lean, mean operating machine with a very affordable profile and a very efficient structure. We are constantly assessing our current situation, surveying the future workload and making the course corrections required to ensure that we put no more people in harm's way than we absolutely in order to get the mission done. Our annual production per person stands at $2.1 million per employee and keeps us as the most productive district per capita in USACE.

We continue to follow the key, fundamental processes set forth in Army Regulations, USACE business practices and ISAF directives. We continue to enforce a culture that documents those key processes so that new personnel can benefit from our hard work and not have to reinvent those processes during their time here. Finally, we continue to be a benchmark for the success of the QMS process review and its ability to streamline and expedite operations.

Finally, we continue to have fun. Whether it is board games with Wounded Warriors on KAF, softball games against the Marine Expeditionary Force in Helmand or volleyball against all comers in Herat, the TAS Team is always up for some friendly competition. Almost everyone who has visited this unit as concluded their visit by remarking about how much they enjoyed their visit and how our district perpetuates a feeling of camaraderie and teamwork. Whether it is a Halloween or Christmas Party, Mardi Gras, or just Friday, it is always great to see folks enjoying themselves and supporting the good times of others.

Well, this is about it. I will have many opportunities to thank people as my time winds down, so I will not try to do it here. All I will do is say "Thank You" to each and every person in TAS for their service to our nation and this district. It has been an honor and pleasure serving with you.

Bulldog 6, out!

Command Sergeant Major's message

Greetings Bulldogs:

As I prepare to return home to Louisiana, I wanted to tell you all how impressed I have been with this district.

We've accomplished a lot of good things together. We have built quality living and training facilities that will allow the Afghan Army to protect their country. We helped protect Afghan communities throughout the district by building police stations and community fire houses. We moved books and engineer teaching equipment to Afghan colleges and universities.

We helped build badly needed infrastructure, like roads and electrical power improvements, hospitals and clinics for the Afghan people.

It hasn't been all work either. I'll always remember the MRAP Christmas sleigh, the Mardi Gras parade and the other holidays. I'll have fond memories of sweating with many of you during "Insanity" PT sessions, our "Bulldog" sports teams and community runs.

Through it all, we have worked together as a team, civilians and Soldiers—every one of you a volunteer and every one of you sacrificing for the Nation.

I would like to say a particular word of thanks to the great officers, enlisted Soldiers and NCOs of the district, to Col. Wham and to Lt. Col. Spencer.

It has been an honor to serve with you.

ESSAYONS!

Bulldog 7

Afghans, US work to stem power outages in southern Afghanistan

Story by Karla Marshall

Helmand and Kandahar province residents, businesses and industry have more consistent and reliable power now thanks to the team of U.S. Army Corps of Engineers electric experts and their Afghan counterparts from Da Afghanistan Breshna Sherkat, the state-run power utility.

Task Force Breshna Barq, a group of American Soldiers whose mission in Afghanistan is to bring electric power to the country, worked with DABS to install a new power switching center and feeder lines at an electrical substation north of Sangin, in Helmand province in March.

Chief Warrant Officer 5 Thomas Black, the former deputy commander of Task Force Breshna Barq, Staff Sgt. Scott Michael and Staff Sgt. Benjamin Talbert, all from the 249th Prime Power Battalion, assigned to the U.S. Army Corps of Engineers Afghanistan Engineer District-South, teamed with the utility company's engineers and technicians to make improvements and perform preventive maintenance at the Sangin substation.

Chief Warrant Officer 5 Thomas Black calibrates the distance between a grounding switch and contact as part of the Sangin substation upgrade project. The South District partnered with the Da Afghanistan Breshna Barq, the state-run utility to perform the upgrades in early March. (USACE Photo)

"Because the Sangin substation caused so many power outages for so much of southern Afghanistan, DABS asked the Corps of Engineers to help make relatively inexpensive and minor improvements to the substation. The improvements promised to have a huge impact on the safety, efficiency and reliability of the electric power that currently flows through the Sangin Substation," said Jim Murray, the project's manager.

"The Sangin substation has all of its original equipment," said Murray, who deployed from Detroit. "The substation was built a few decades ago so the equipment is worn out, needs to be replaced and could have been hazardous simply because of its age."

Black agreed. "The lines needed to be re-strung or elevated to reduce phase-to-phase and phase-to-ground faults that were primarily induced by weather, and the power switching center needed to be replaced so that interruptions to power distribution were minimized."

Engineer Rasoul, the Afghan project lead, estimated that up to 90 percent of the faults at the Sangin substation caused significant problems for every substation tied into the grid. (Note: Engineer is an honorific, like "doctor," in Afghanistan.)

"When a small fault happens at Sangin, the whole system — Helmand and Kandahar — is disturbed," Rasoul said. "We run the Kajaki powerhouse at maximum load capacity, which is about 32 megawatts, continually. When the power is disrupted multiple times a day, it seriously affects the industry in both provinces."

The engineers worked with Regional Command Southwest personnel from the Command's Stability Operations Office, or C9, to organize their transportation and the transportation of equipment and parts. The C9 development plans team supports civil and military organizations that perform missions to improve Afghan lives.

"With USACE, we supported the work they did with DABS to not only deliver projects but also mentor DABS electricians," said newly arrived Royal Air Force Wing Commander Mark Collins, the C9 development plans chief. "If we can unlock opportunities, smooth passage of information or proactively assist to make things happen then we are meeting our objectives."

Collins said the C9's objectives include supporting the relationship between rural farmers and their urban consumers, building the capacity of the Afghan government and supporting strategic infrastructure projects.

"Each of these objectives relies on electrical power to some extent" said Collins. And, "the teamwork needed to deliver the people and parts for this project cannot be overestimated. Wing

Continued next page.

Power, continued

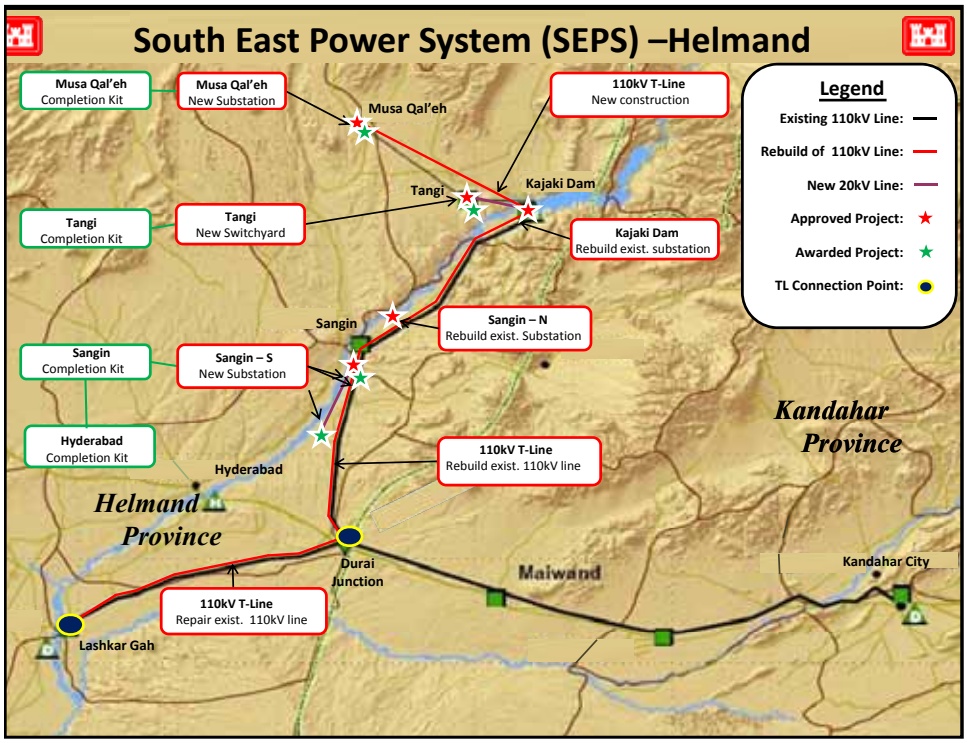
Commander Charlie Allen, my predecessor, and I worked closely with Chief Warrant Officer 5 Black, the USACE team, and DABS engineers to make this happen."

Both Collins and Allen are based out of the Headquarters Air Command, Royal Air Force, High Wycombe, England.

The USACE team arrived at the patrol base Feb. 27 and completed the project March 19.

The team met with the Patrol Base Commander 1st Lt. Josh Chambers-Snoddy, 2nd Platoon leader, Kilo Company, the 3rd Battalion, 7th Marines and platoon sergeant, Staff Sgt. Derrick Linneman who not only made their stay at the very austere patrol base very comfortable, said Black. "They were instrumental in the movement and coordination of our materials."

The next day, the task force met with their Afghan counterparts to discuss the project schedule and details.



Like most projects in Afghanistan, this improvement project had logistical and security challenges that had to be overcome, Rasoul said.

"Security in Helmand is always a concern," he said. "Our transmission lines are always at risk of being damaged, affecting power transmission. We have to repair broken components, transformers and cables and Sangin is particularly susceptible to damage."

"There is no hardware store where we could get supplies," Black added. "We had to bring everything we thought we would need. We made tools out of parts of other tools, fabricated and welded the power supply center frame using old, rusty steel pieces and repaired welding equipment before the real work could begin."

DABS engineers took a leading role in much of the work and were able to purchase some needed items in Sangin or acquire items from a DABS warehouse in Kandahar.

"Having DABS engineers with us made the project go much quicker because they could do and procure things our guys could not," said Black.

"Not only were we installing a power supply center at the substation and the associated framing, connectors, trenching and wiring, we also installed new Sangin City and Salancala feeder lines connections and infrastructure inside the substation compound," Black said. The team ensured that the new power lines met clearance requirements ensuring safe operation and with fewer nuisance faults.

The team replaced or added air switch terminals, dead break elbows, load break adaptors, corner pole transition arrays, surge arrestors and other power line components as part of the project. They also tightened or reconfigured power lines to alleviate phase to phase and ground faults and stress on the cables.

"I was thoroughly impressed with DABS throughout the whole mission," said Talbert, from Kalihi, Hawaii. "I was a little concerned in the beginning that they would not have the technical knowledge or drive to accomplish the project's scope. But, from the very beginning, they showed not only the drive to complete the mission, but also a resourceful and innovative way of attacking each individual task. The Afghans used materials on site that may have been seen by Americans as just scraps or rubbish, to fabricate frames for the switch gear and power control station."

Talbert also said teaching their Afghan team members to work according to acceptable code was a good experience. "I believe they learned a lot from us and will use this knowledge for the rest of their overhead electrical distribution."

"By the time we finished this project, we had learned a lot about being resourceful and using what is available and adapting it to our needs," said Black. "Sometimes, you just have to use what you've got because that's all you've got. Our Afghan teammates showed us how much can be accomplished with very little."

Rasoul, who has been a DABS engineer for 35 years, said that he had worked with Afghan, Russian, Tajik, German, Chinese and American electrical engineers during those years but the relationship he built with Black was special. "To me, Chief Thomas Black is my brother. I trusted him and I learned a lot from him."

Black concurred. "I think I learned more from Eng. Rasoul than I ever taught him. The time I spent with DABS engineers and technicians taught me that with flexibility, ingenuity and creativity almost anything can be done. Eng. Rasoul repeatedly impressed me by solving problems that seemingly had no solution. Afghanistan is fortunate to have engineers like him."

Switching center key to system

Afghan utility technicians and their U.S. Army counterpart, Staff Sgt. Scott Michael, assemble the air disconnect switch as part of the Sangin Substation upgrade project in early March. (USACE Photo)

Story by Karla Marshall

A critical phase of the overall South East Power System-Helmand project, a joint U.S. Agency for International Development, USACE and Da Afghanistan Breshna Sherkat electric power project, this power switching center installation is a first step in bringing more reliable and consistent electric power to the people in southern Afghanistan.

"We had to make some immediate repairs to the substation even before we award the main contract for the greater SEPS project," said Jim Murray, the South East Power System project manager. "Because the condition of the existing equipment at the Sangin substation is so poor, electrical faults and tripped power circuits leading to frequent power outages were common. The significance at this substation was more acute because when those faults occurred, the trip travelled back up the power line to the original power source, the Kajaki Dam power plant, and caused the turbines there to undergo hard shutdowns."

Hard shutdowns damage the turbines and result in extended power outages, Murray continued.

Located up-river from Sangin, the Kajaki Dam is the site of a twin-turbine power station that will be upgraded beginning in November through a USAID contract that includes the installation of a third turbine.

"Adding the third turbine will greatly increase the power available for the citizens of Helmand and Kandahar provinces, but the existing substations cannot handle the upcoming load," Murray said. "So, upgrading substations at Musa Qal'eh, Tangi and two near Sangin is critical to the overall power improvement plan."

The South District awarded the contracts for substation improvements along the Helmand River from Lashkar Gah west toward Kandahar in of April with construction beginning in May and the upgrades completed by October 2013.

Also included in the SEPS-Helmand contract award is about 130 kilometers of 110 kilovolt transmission and 20 kilovolt distribution power lines, said Murray.

"The total cost of all the district's SEPS work in Helmand province will be about $110 million," Murray said. There will be new substations, larger power conductors, switchyards, power lines and completion kits.

The completion kits include such things as meters for accurate reading of customer consumption, power poles, replacement power switch centers and other equipment necessary to operate and maintain the new stations and lines well into the future.

DABS will benefit from the installation of tamper-resistant consumption meters at residences and businesses said Murray.

"In Kandahar, DABS estimates it collected about 27 percent of the possible revenue from electric power use because the old-style analog meters are easily manipulated and there are difficulties in controlling power supply. With the upgrades USACE has already made there, they now estimate they collect about 50-60 percent. Once the new meters are installed, it will be possible for DABS to collect up to 85 percent of the possible revenue," Murray said.

"Providing electricity to the citizens of southwestern Afghanistan is one of the most important things that the Corps of Engineers is doing here," said Air Force Col. Benjamin Wham, the South District's commander.

"We build military installations and police stations which are critical to the security of Afghanistan's citizens, but projects like this, where we tangibly improve the day-to-day lives of people, are rewarding to all involved. I am proud of Task Force Breshna Barq's work and the commitment our team has to the future of Afghanistan."

Afghan and USACE engineers and electricians clean, repair and service the 110kv main disconnect switch assembly at the Sangin Substation in Helmand province. This work allowed the team to safely work on the power distribution system.(USACE Photo)

Hydrogeologist ensures quality, abundance of precious water

Story and photos by Dave Melancon

Water is a critical element for rebuilding Afghanistan's economy and security, according Afghanistan Engineer District-South's hydrogeologist, Leonard Sinfield.

"Without water, nothing can happen," said Sinfield, one of about a dozen hydrogeologists working for U.S. federal, military, or non-government agencies in Afghanistan. Sinfield assesses water resources for the Afghan National Security Forces and U.S. Forces facilities and installations.

"The Corps of Engineers looks to see if there are adequate groundwater resources because you cannot build a facility without water," he said during a site visit to wells in Herat and Qala-i-Naw May 1 and 2. "We try to predict if there is good water or not."

Leonard Sinfield, South District hydrogeologist, inspects well pipes stacked and ready for installation in a new well site on the Afghan National Army 9th Commando compound in Herat province May 1.

A U.S. Navy civilian employee from San Diego, Calif. working on an interagency detail with the South District, Sinfield has studied test results for more than 50 wells in the district and conducted hands-on site assessments and tests for 10 more.

Sinfield also supervises well drilling projects on Kandahar Airfield and is helping Kandahar City officials to develop its water resources master plan.

"We are trying to help Afghanistan develop drinking water for the city," he said. "We are reviewing all the wells, looking for good locations, doing all the things we do to assist Kandahar City officials correctly build wells and tap into good water for the city."

Sinfield said he is helping the Afghans with technical aspects of drilling several deep aquifer exploration wells in and around Kandahar City. These wells will help the city diversify the number and types of reliable water sources it has available to ensure a water supply that is not subject to droughts in the future.

"As we close bases, we want to transition responsibility for the water wells over to the Afghans," he said. "We do not want to just close them. So, we may have to retrofit the wells with hand pumps and train village residents on maintenance."

Additionally, Sinfield advises area combat commanders and civil affairs teams in Regional Command South with their long-term planning and with drafting water-related policies.

Meetings, documents and written test results provide only a partial picture of a well's capacity and quality. There is no substitute for an on-site assessment, Sinfield said.

"We talk with the Afghan drillers, making sure they are doing the right things technically," he said. "We are able to ask the right questions to obtain good information on the well site."

But the most important part of these face-to-face, well-side discussions is preparing the Afghans to take over their water operations.

"We try to get the Afghans to use the information to help them make good well drilling decisions," Sinfield said.

During site visits to several wells on Corps projects in the Herat area, Sinfield found two 500-meter deep dry holes drilled into steeply sloping bedrock which is forcing the water under the mountains on Camp Zafar, three intermittent wells on Camp Stone with some minor salinity problems and "tons of good water" on the 9th Commando compound. The three sites are adjacent to one another.

"We saw a pattern: no water, OK water, very good water," Sinfield said. "We know where the good water is."

In Qala-i-Naw, where the Corps of Engineers is building a new resident office to oversee several projects taking place in Badghis province, Sinfield found one well drilled into dry clay that should be sealed, another seasonal well that could serve as a back-up water source and the remains of an abandoned well.

The abandoned well could be restored, he reported. It needs a new well house, pump, electric system, a 500-gallon day tank and a booster pump.

During his assessments, Sinfield used a portable salinity meter to test the salt content, known as total dissolved salt or TDS, of the well water and had good news to report.

"The water coming out of those wells was as good as the water that was being delivered by truck," he said.

The delivered water has a salinity level of about 1,600 parts-per-million while the water on a nearby Spanish Army

Continued next page

Afghan-coalition cooperation bringing more electricity to Kandahar

Story by Karla Marshall

Afghanistan's power utility, Da Afghanistan Breshna Sherkat, and U.S. Army Corps of Engineers Task Force Breshna Barq teamed up again; this time to bring more electricity to the Sabiqa area of Kandahar City May 2.

At a recent meeting between the Corps of Engineers and DABS, Engineer Samadi of the Kandahar Power Department mentioned a broken transformer in Sabiqa.

"The transformer was overloaded and failed," said Chief Warrant Officer 3 Robert Hopkins, who deployed to Afghanistan from Joint Base Lewis-McChord, Wash. "There was a replacement available at the Shurandam Industrial Park warehouse, so I offered it up."

In the past, Task Force Breshna Barq made arrangements to procure, transport and repair many components of the Kandahar power system, said Hopkins. "So when the DABS representatives agreed to transport and fix the transformer, we were more than willing to help them requisition the transformer from one of the starter kits already in the DABS inventory."

The SIP warehouse in Kandahar has medium-voltage starter kits that include distribution equipment and parts like transformers. The kits were purchased with the Regional Command South Commander's Emergency Response Program funds to rebuild existing Kandahar power distribution components that are aging and in disrepair, Hopkins said.

Engr. Samadi arranged to pick up the transformer at the warehouse and also oversaw the repairs.

"This was the first time that the entire effort was led and accomplished by the Afghan engineers without U.S. technical assistance," said Hopkins. And they completed the task in just one day."

Staff Sgt. James Gray, deployed from Schofield Barracks, Hawaii, inspects a failed transformer at Breshna Kot in Kandahar City in April. Gray is assigned to Task Force Breshna Barq, the U.S. Army Corps of Engineers electrical power team in Afghanistan. (Courtesy photo)

Hopkins said the process went smoothly and that DABS engineers now know the process to draw equipment from the warehouse. "I have confidence that DABS will continue to take the lead in Kandahar City's electric needs," he said.

One of the future goals of Task Force Bresha Barq is to ensure that DABS employees can staff the warehouse and fill orders. According to Hopkins, "once these guys learn a process, they've got it and sooner rather than later they will be running the warehouse, too."

Resource, continued

forward operating base had TDS of approximately 1,800 ppm, he said. Water throughout the Qala-i-Naw area has salinity ranges measuring from about 1,250 to 1,800 ppm.

Workmen drill a new well on the Afghan National Army's 9th Commando compound in Herat May 1. The site has several wells which provide abundant amounts of high-quality water, said Leonard Sinfield, South District hydrogeologist.

"It is all good water," Sinfield said. "It may just taste a little salty and makes bad coffee or tea. However, it is safe and potable."

The higher salt content came as no surprise, Sinfield said, salty water is an issue throughout the region.

"You have a lot of water that is really salty, really hard," he explained. "The first aquifer that you hit is usually really salty. In some areas of the country that is all you can get, especially along the Iranian border area."

Wells drilled deeper than 300 meters can usually overcome the salt problem and have other benefits, he said. The added depth yields higher pumping capacity and higher quality water.

Without water, Afghanistan cannot grow and prosper, Sinfield said.

"You can't develop anything without water. Water drives the economy here. Electrical subsystems need water, hydroelectric systems need water, agriculture needs water," he said. "Afghanistan used to export a lot of agricultural products in the pre-war years. Hopefully we can help them get back to that point."

District turns over teacher training facility to Herat University

Story and photos by Mark Ray

A host of senior Afghan and U.S. dignitaries met at Herat University March 26 to formally open a teacher training facility, built with U.S. Agency for International Development funding by the South District.

U.S. Deputy Ambassador James Cunningham, Herat Provincial Governor Dr. Daud Saba and Acting Director of USAID in Afghanistan Dr. Jeffrey Ashley spoke at the ceremony. South District Commander Air Force Col. Benjamin Wham represented USACE.

The $900,000 facility provides 18 classrooms, four laboratories and archive and library capacity to support graduate education training and to prepare future teachers.

U.S. Deputy Ambassador James Cunningham speaks at Herat University teachers facility turnover ceremony March 26.

"This ceremony takes place at an auspicious time — the beginning of spring, and Nowruz, the Afghan New Year," Cunningham said. "It is a time of rebirth and growth."

The facility will train the teachers who will help Afghanistan in its rebirth and growth, he said. "I thank the Afghan workers who built this facility – they have created a legacy, where students will hone their skills for the renewal of Afghanistan."

Saba opened his remarks by quoting an Afghan proverb: "As goes the spring, so goes the year," he said, speaking through an interpreter. "Today is an auspicious day for the year to come — bright and sunny. More important, by opening this facility, we are opening the doors of education for future generations."

Herat Provincial Governor Dr. Daud Saba presents a certificate of appreciation to Air Force Col. Benjamin Wham, South District commander, during the Herat University teachers facility turnover ceremony March 26.

"The United States has supported education in Herat, with this building and with many other projects over the years," Saba said. "I appreciate and thank the United States for its support in this hard time – on behalf of the people of Herat, thanks to the Corps of Engineers, USAID and the U.S. Embassy. I would also like to thank the contractor, and the many Afghan workers and engineers, for their hard, high-quality work. They have done their duty for the people of Afghanistan."

"USAID and the Corps of Engineers are immensely proud of this facility," Ashley said. "It supports the long-term strategic plan to improve education in Afghanistan, essential for the country's development and full participation in the international economic community as a productive nation. This building is an example of our combined commitment to education and of the long-standing relationship between the United States and Herat University."

"This project, and education, have special significance to me, since my parents are both college professors back in the U.S," said Wham. "This facility is an investment in the future of Afghanistan."

"I would like to recognize our contractor, who dug deep to overcome challenges, and finished this project," Wham said.

"And I want to thank all the members of the Herat Area Office, for their efforts to get the construction back on track and finish the facility. Thanks in particular to Lt. Col. Mark Bartley, Herat Area officer in charge, to Scott Hughes, the U.S. project engineer, to Omid Amiri, the Afghan project engineer, and to Afghan quality assurance representative, Eraj Akbarpour. Your work will benefit generations of Afghan teachers and students."

Corps of Engineers looking forward to newest resident office

Story and photos by Dave Melancon

When the South District's newest resident office opens in October on the Spanish Army's Provincial Reconstruction Team base "Ruy González de Clavijo," near Qala-i-Naw in Baghdis province, its eight-member team will be immediately welcome, according to South District leaders who visited the installation May 2.

"They were very welcoming to their compound and accepting our mission," said Julio Arocho, deputy district engineer for programs and project management.

The South District's senior civilian leader said based on his observations and interactions with the officers and Soldiers he met during a site assessment visit, the relationship between the future Qala-I-Naw Resident Office staff and their Spanish Army hosts will be positive and productive.

The South District is standing up a new resident office in Badghis province's capital city, about 100 miles northeast of Herat, to be closer several Afghan National Police border forts and police stations currently under construction, Arocho said.

The Spanish Army installation, home to its provincial reconstruction team and smaller contingents of U.S. and Italian Forces, is the northernmost allied forward operating base in the South District's area of operations, Arocho said.

Air Force Col. Benjamin Wham, South District commander (rear), looks over Spanish Army Provincial Reconstruction Team base Ruy González de Clavijo with Spanish Army escort officers May 2.

"We have seven active projects in Badghis province," said Maj. Victor Millán, Herat Area Office officer in charge. "One of the projects, Afghan National Army brigade in Chashma-e-Dozdakhis, is the biggest and probably will be one of the most challenging projects in our area due to the topography and location of the project site."

The construction projects in the area include facilities for ANA Garrisons and Afghan National uniform and border police headquarters, he said.

Plans call for one office building and billeting facilities, Millán said. The containers will be moved to an area close to the Spanish living areas.

"Through a bilateral agreement, the Spanish FOB will provide U.S. Forces with overall security, utilities and services," Millán said.

Capt. Sean Burnett, Herat Resident Office officer in charge, completed a combined reconnaissance mission with USACE engineers, security experts and Spanish forces to assess the road conditions for the project, he said. The result of this assessment will determine what type of security assets are needed to support future operations.

The FOB boasts "easy runway access, great security, a state-of-the-art gymnasium, a mess hall with international cuisine and breathtaking views of Qala-I-Naw city," Millán said.

South District Command Sgt. Maj. Lorne Quebodeaux said the installation has several tactical advantages.

"You have line-of-sight vision into the village from the FOB," he said. "It seems the Spaniards are on very good terms with the local population. Obviously the Spaniards are very comfortable with that area; they do not feel a threat from the local population."

"The Spanish went out their way to share information and their hospitality," Arocho said. "Sometimes you move into a place where they have to let you in just because that is part of their mission. I think these guys are really going to work well with us."

"We built a great rapport with the PRT leadership from the beginning. The commander, Col. Demetrio Munoz and his staff are very professional and cooperative in everything related to our resident office construction," Millán said. "We truly feel welcome to this FOB and I foresee the development of a great relationship with our NATO partners from Spain. All of the people that I sent there for combined missions or meetings with the Spaniards all agree that this is the best FOB in Afghanistan."

Base Ruy González de Clavijo gives the South District a location that provides up-close support for the district's construction projects and comfortable working and living area for the USACE team, said Air Force Col. Benjamin Wham, South District commander.

"We are looking forward to working with the Spanish Provincial Reconstruction Team," he said. "They have a great facility, a great leadership and Soldier team and good relationship with their Afghan neighbors."

There is also a one major unofficial benefit of the move, Arocho added.

"We'll be looking forward to Sundays when they serve paella in the mess hall," he said. "I think our people will be welcomed there too."

Training center's wastewater aerator upgrades complete

Story and photo by Karla Marshall

Upgrades to the Afghan National Army's Joint Regional Training Center's wastewater facility near Kandahar were completed April 8 thanks to the U.S. Army Corps of Engineers.

"Working with the contractor, ITT Exelis, USACE replaced the aerators in each of the four waste water basins," said Penny Coulon, the South District's contracting officer representative for the JRAC facility. "The original aerators were not big enough to support the volume of wastewater that travels through the system daily and broke down frequently. For $92,000, we replaced the old aerators with larger, more robust aerators that will need less maintenance."

Aerators are a critical part of treating waste water said ITT Exelis Mission Systems regional manager David Greenlief. "In this system, the influent travels underground to a lift station. From the lift station it gets pumped into tank number one." In each of the four aeration tanks, the wastewater passes through an aerator to oxygenate the liquid. "The influent spends time in the first then second then third and fourth before ending up in the settling tank," Greenlief said. Once the wastewater gets to the settling pond, it undergoes a 45-minute treatment process before it is released into the nearby wadi (dry creek bed).

Each step of the process, from aeration, to settling, to testing is important, said Greenlief. "We treat the effluent in accordance with World Health Organization standards," he said. "The goal is to ensure that the water we release back into the environment is not hazardous, so our treatment plan includes testing dissolved oxygen levels before we release it."

Penny Coulon, Afghanistan Engineer District-South quality assurance representative, and David Greenlief, ITT Exelis regional manager inspect the new wastewater treatment facility aerators April 22.

According to Greenlief, adequate oxygenation is crucial to ensuring that the effluent does not deplete oxygen from the nearby environment and in turn, supports nearby plant growth. "By following the plan we have in place, the waste water actually supports the environment and plant life."

While the effluent is not potable, it is free of harmful micro-organisms and diseases typically attributed to untreated water said Coulon, a Harahan, La. native. "This wastewater treatment facility upgrade has been an important project for me personally," she said. "I came to Afghanistan with the goal of making it a better place when I leave than when I arrived. I can honestly say that this project contributes to the overall sanitation of the training center and the nearby area. I'm proud to have played a role in the project."

The U.S. Army Corps of Engineers oversees construction projects throughout Afghanistan that help the government of Afghanistan provide critical services and infrastructure for its citizens. The wastewater treatment facility supports hundreds of Afghan and NATO Soldiers who work and train at the Joint Regional Training Center.

Bounce test!

Air Force Col. Benjamin Wham, South District commander, informally tests a cinder block during a walk-through tour of a Camp Dwyer work site April 25. In addition to looking over job sites, the commander met with South District employees and Soldiers on Camp Dwyer and at the Delaram Resident Office. (USACE photo by Dave Melancon)

USACE turns over Camp Hero small-arms range to Afghan National Army

Story and photo by Karla Marshal

The South District turned over a small arms range and training facilities on Camp Hero near Kandahar to the Afghan National Army in a ceremony held Mar. 31.

After cutting the ceremonial ribbon and taking a walking tour of the facility, which includes pistol, rifle, and heavy machine gun ranges plus all the associated infrastructure, the ceremony's attendees sat down to refreshments of chai tea and pastries.

Construction on the $5.9 million small-arms range began in March 2011 and was completed March 15. Cesar Lopez, the Kandahar Vicinity Resident Office resident engineer, said the project progressed well and that the Afghan National Army will be able to train many soldiers at the facility.

"I am very pleased to accept this training range and classrooms from the Corps of Engineers," said Brig. Gen. Shah, the 205th Atal (Hero) Corps Chief of Staff through an interpreter. He thanked the South District Commander, Air Force Col. Benjamin Wham, Army Maj. Christine Cook, the area officer in charge and the staff of USACE.

"This facility will provide the soldiers ample training to improve their skills and bring security and peace to the Afghan people,"

To the Americans present he said, "I would love to see all of you return to Afghanistan one day with your families as tourists and show this facility to your children."

Afghan National Army Brig. Gen. Shah, the 205th Atal Corps Chief of Staff, cuts the ceremonial ribbon signifying the official turnover of a small arms range March 31. Col. Benjamin Wham, South District commander (center rear) and ANA Regional Military Training Center Commander, Col. Haroon look on.

"ECCI-C METAG Joint Venture, the contractor, was a pleasure to work with," said Lopez who is deployed from the USACE Philadelphia District. "Their performance on the project was excellent."

Work on Kandahar nursing and midwifery institute nears completion

Air Force Master Sgt. Brandon Mitchell, assigned to the U.S. Army Corps of Engineers Afghanistan Engineer District-South, inspects an electrical panel at the Kandahar nursing and midwifery institute Apr. 21, that will receive power from the Kandahar City power grid. (Courtesy photo)

Obtaining adequate health care in Kandahar can be a challenge, but the completion of a $2.7 million nursing and midwifery institute in Kandahar City will make more heath care provider training possible.

After a final inspection on Apr. 21, conducted by U.S. Navy Seabees from the Kandahar Provincial Reconstruction Team and Air Force Master Sgt. Brandon Mitchell, assigned to the U.S. Army Corps of Engineers Afghanistan Engineer District-South, about 200 students can soon reside and train in the facility.

"This is the first complete nursing and midwifery educational center in Kandahar," said Mitchell. "There are separate dormitories for men and women, a dining facility, classrooms, administrative offices, a mosque and recreation field."

The institute will serve expectant mothers from Kandahar City which has a population of about 1.5 million, Mitchell said.

The Regional Command South Commander's Emergency Response Program funded the project which began in August 2010.

South District helping 'build' next generation of Afghanistan engineers

By Dave Melancon

In a departure from its usual brick and mortar building projects, the South District helped build the next generation of Afghanistan's engineers with the delivery of teaching equipment and supplies April 12.

A flat-bed truck carrying nine wooden shipping crates and three pallets of drafting and computer equipment was delivered to the Herat University Information Technology Center.

The load included about 6,000 pounds of engineering laboratory equipment and "workbench" systems. These systems demonstrate engineering concepts and give the engineers-in-training hands-on experience with fluid dynamics, turbines, electric systems, concrete testing, hydraulics, sand and sediment tanks, pump systems, air flow studies and particle flows. In addition to the hardware, the delivery included transformers, pulleys, sensors, computer connections and expendable supplies such as dyes, sealants, fittings and O rings.

The equipment and supplies will help build a stronger Afghanistan by building strong engineers, said Air Force Col. Benjamin Wham, South District commander.

"We are building Afghanistan's next generation of engineers," he said. "Instead of learning just from textbooks, these new designers and builders will learn through hands-on experimentation, which reinforces engineering concepts. They can then use that knowledge to rebuild their county, keep buildings operating and maintained and help their communities grow."

Earlier deliveries to the university consisted of textbooks, surveying hardware and GPS units, classroom and office furniture and equipment.

"We are providing the state-of-the-art lab equipment, books, drafting tables, desks and those things that support engineer training," explained Karen Rippey, project manager at the South District.

The equipment and supplies will help Afghan students and their country use modern techniques, said Rippey.

Herat University engineering students and faculty watch a crate filled with engineering equipment being lifted from a flatbed truck for delivery to the school's Information Technology Center April 12. The U.S. Army Corps of Engineers-provided equipment and supplies will be used to teach the next generation of Afghan engineers. (USACE photo)

"The new Afghan engineers will have the skills and knowledge to maintain the buildings, roads, bridges and electric systems provided by USACE, the U.S. and other governments and non-governmental agencies, thereby safeguarding those investments. Additionally, the locally trained engineers will help to rebuild Afghanistan's war devastated infrastructure."

The current generation of Afghan engineers received their training at other countries' universities, Rippey said. Some are now the professors at Herat University.

"This [latest shipment] was the biggest shipment by far," said Christine Weisenberger, a district project data control specialist deployed from the USACE Detroit District. "The other shipments consisted of things like rulers, text books, drafting equipment, plotters and printers, paper and supplies."

Weisenberger and a team of other USACE employees went to the university and the Herat Area Office April 9 to map out a delivery plan for the supplies.

Masoud Fayeq, an eight-year Afghan USACE employee working in the Herat Area Office, deserves much of the credit for the successful delivery, said Weisenberger. His knowledge of the university and local authorities ensured that the delivery got through.

Following his meeting with Weisenberger, Fayeq called the university to ensure the equipment could be off loaded and securely stored. He then called a shipping company to arrange a time and location for the delivery, arranged for a crane to lift the pallets, contacted the delivery truck driver to give him directions to the university and engineering school and navigated the cultural differ-

Continued next page

Next generation continued

ences between the U.S. and Afghan ways of doing business.

"He's the guy who made the calls to the university engineering school. He's the guy who made the coordination to get the crane," Weisenberger said. "Masoud is the reason why this happened. He gets the credit for taking it, rolling with it and problem solving."

Fayeq said he visited the university twice before the delivery and made several phone calls to find a convenient and safe offloading site, arrange security for the equipment within the university building and track down a crane to lift the pallets and crates from the flatbed truck.

"I am very glad that I had a small part in the mission of delivering new lab equipment to Herat University," he said. "As an Afghan who is a part of this community, I really appreciate the effort of coordinating and donating this high tech lab equipment which certainly increases our future engineers' knowledge of international standards and testing."

Rippey said there are still more shipments awaiting delivery to the engineering school. Although not as massive as April's load, these final shipments will include additional equipment, school supplies and classroom furnishings.

The deliveries should be completed by the end of May, she said.

The $1.06 million project, which kicked off in 2009, uses Commander's Emergency Response Program funds, explained Rippey.

The Commander's Emergency Response Program is a cornerstone of the International Security Assistance Force counter-insurgency strategy. It allows commanders to respond to urgent humanitarian relief and reconstruction requirements with projects that immediately benefit the local population.

Herat University engineering students push a crate filled with engineering equipment into a storeroom in the school's Information Technology Center building April 12. (Courtesy photo)

KAF ramp expanded, operational

Story and photo by Karla Marshall

The 451st Air Expeditionary Wing received 38 acres of strategic and tactical ramp space with the completion of a U.S. Army Corps of Engineers construction project here April 10.

The $31.9 million expansion project includes 1,000 square meters of concrete ramp that will enable the Air Force to conduct additional cargo and personnel flights into and out of Kandahar Airfield.

"The completion of this ramp represents a great deal of opportunity," said Air Force Col. Sam Grable, 451st Air Expeditionary Mission Support Group commander at the turnover ceremony. "It presents opportunity today as we prosecute the fight during this critical point in the campaign and it presents opportunity in the near future as we work to retrograde combat forces."

In addition to the added space, the project, which was awarded to Contrack Inc. and begun in October 2010, included edge lighting, pavement marking, high mast apron lighting and utilities.

"This ramp also provides a strategic and enduring asset for Afghans and our allies for years to come," said Grable. "It is an enormous achievement and on behalf of the 451st Air Expeditionary Wing Commander, Brig. Gen. Scott Dennis, thank you for your effort."

Air Force Col. Benjamin Wham, South District commander said the project was completed 10 days early and within budget.

"Today I stand on the fourth phase of construction project that I and others envisioned in 2009. To see this high-quality, finished project done on time, and during my command, is personally and professionally rewarding."

Capt. Derek Bowen, former Kandahar Airfield Area Office officer in charge, addresses the audience at a turnover ceremony April 10 on Kandahar Airfield. USACE oversaw the placement of more than 100,000 square meters of concrete that will enable air operations at the airfield to be more efficient.

Corps of Engineers turns over police district headquarters in Gozara

Story and photo by Mark Ray

The South District turned over a district headquarters to the Afghan Uniform Police in Gozara, on the outskirts of Herat City, March 26.

"The contractor had to overcome the challenges of building on an installation that was in use, and taking a facility that had been partially completed and finishing it. They had to identify deficient work already in place and repair it. They met the challenges and produced a first-class, high quality facility, on schedule," said project engineer Scott Hughes, deployed from the Portland District.

The $1.7-million project includes a headquarters building to support 120 Afghan police with a dining area and kitchen, male and female barracks, conference rooms, weapons storage and offices. It also includes water and wastewater systems, electrical power generation, guard towers and a guard house.

"The quality of this facility testifies to the hard work of the Corps of Engineers, and of the Afghan engineers and workers who built it," said Herat Provincial Governor Daud Saba, speaking through an interpreter. "We need to develop more capacity in Herat, to produce materials and provide workers for these kinds of projects."

"The contractor took over a partially completed, stalled project, worked with our Herat office, managed their schedule aggressively and finished the project on time," said Air Force Col. Benjamin Wham, South District commander.

"I salute them for their excellent work. I also salute the members of the USACE team who worked on this project —particularly Robert Snyder, the Area Office engineer, Scott Hughes, the project engineer, Jawid Ahadi, the Afghan project engineer, and Tawab Taeab, the Afghan quality assurance representative", he continued.

Herat Provincial Governor Dr. Daud Saba speaks at March 26 the turn-over ceremony.

"We have more projects underway of this type, and I hope to see local materials and workers used on them as much as possible," said Wham. "It is great to turn over another district police headquarters, which will help the Afghan Uniform Police provide security and protect the people of this district."

On the march

A company of Afghan National Army recruits shows some spirit during an early afternoon foot march through Camp Bastion April 12. The South District is supervising several building projects in the area including a power station, several battalion-level headquarters complexes, barracks, motor pools and maintenance facilities. (USACE photo by Dave Melancon)

Ground broken for Herat fire stations

Story and photo by Mark Ray

Herat City will be a safer community when two new Afghan National Uniform Police fire stations are completed later this year.

Provincial governor Daud Saba and South District Herat Area Office officer in charge Army Lt. Col. Gordon "Mark" Bartley marked the official start of the project April 1 during a ground-breaking ceremony.

"Breaking ground on a project is always a highlight," Bartley said. "It symbolizes the beginning of actual construction, a beginning that leads to the end we all work for: a competed project that benefits the people of Afghanistan."

"On behalf of the people of Herat province and Herat City, I thank the U.S. Army Corps of Engineers for the many projects they have constructed for us," said Saba, speaking through an interpreter. "These stations will provide critical service, reducing the loss of life and property to fires in Herat."

The $7.4-million project includes two two-story firehouses, each with five bays for fire trucks. There will also be a three-story training tower and maintenance bays, said project engineer Jeff Cravens. The stations are scheduled to be completed by the end of this year.

"The firehouses will have living areas, kitchens and dining facilities," Cravens continued. "The complexes will be self-sustaing with perimeter walls, guard towers, electrical generators and distributions, wells and water distribution systems, and sewer and wastewater treatment facilities."

"This project will provide more than facilities," Bartley said. "It will also provide employment, both directly for the workers on the site, and indirectly, for local suppliers of material."

Bartley said the contractor working on the project is "ready and willing to tackle and overcome challenges. We look forward to working with them to deliver a high-quality product on schedule."

Bartley also praised the USACE and Afghan team supervising the project.

"I am confident that project manager Frances Hinkley, project engineer Jeff Cravens, Afghan project engineer Tariq Taheri and Aghan quality assurance representative Eraj Akbarpour will deliver this project, with all of its benefits, to the people of Herat," he said.

Lt. Col. Gordon "Mark" Bartley places a cornerstone during a ground-breaking ceremony for two fire stations in Herat April 1.

"The sun is beginning to paint our morning" taken by Tony Carter, Afghan National Army projects program manager working on Kandahar Airfield March 13.

Sharing a culture of safety

USACE Team bringing safety message to job sites in Afghanistan

Jeffrey Ice, South District safety and occupational health specialist, points out problems with a improvised ladder to a contractor's safety specialist during a site visit to building projects on the Afghanistan National Army's Shorabak compound in Helmand province May 9.

Story and photos by Dave Melancon

Scaffolds and cinderblock stacks can topple; exposed table saw blades can cut; over-burdened electrical systems can short out; personal safety equipment can wear out; barrels of solvents can leak; lax safety standards can endanger workers.

Jeffrey Ice, U.S. Army Corps of Engineers Afghanistan District-South safety and occupational health specialist, was not even conducting a formal safety inspection as he found these and other safety deficiencies during a walk-through tour of projects at Camp Shorabak May 8.

"I think we saved a couple of welders' eyesight and hands today," said Ice after shutting down one welder working without a mask and demanding that others immediately be issued new heavy-duty gloves without holes and tears.

Ice will be spending about two weeks working with the resident office's engineers and program mangers inspecting work sites. However, most of his monthlong stay on the Helmand province installation will be teaching safety fundamentals to contractors' safety specialists, he said.

Later that afternoon and the following morning, Ice pulled extension cords from overloaded electrical junction boxes, demonstrated the safe method of stacking cinder blocks, took contractors' safety representatives under wobbly scaffolding, photographed damaged excavators and exposed table saw blades, reset loose generator ground wires and moved over-heating fire extinguishers out of the direct sunlight into the shade.

He also climbed ladders to check their stability, examined the labels on barrels of chemicals, and ordered a ditch-digging crew to stop working because they were in a trench several feet over their heads without retention walls or escape ladders. On his way out, he stopped and scrutinized job site safety notice bulletin boards.

"I find that most problems occur either at the start of a project because people don't know what they are doing or toward the finish when they are rushing to get done," Ice said.

Ice and the other South District safety team members have been going out to job sites since 2009 to observe safety practices, said Ron McDonald, deputy safety manager.

McDonald confirmed that the problems Ice found are not unusual for a job site in Afghanistan.

"We find many workers not wearing the appropriate personal protective equipment, working at heights without fall protection, working in deep trenches with inadequate means of getting out or improper means to prevent cave-ins or slope failure and the list goes on," he said.

Part of the job is imparting the USACE safety culture to contractors and safety mangers from different countries, each with its own construction methods and safety standards, he said.

"We have many construction companies from many nations that are in varying stages of developing a safety culture of their own, so it should be no great surprise that reaching satisfactory safety compliance in Afghanistan will not be easily achieved for any project USACE manages," he said. "It took the United States centuries to develop its safety culture. We should not expect the safety culture in Afghanistan to develop overnight."

Most of the safety training takes place between the safety officer and the contractors' site safety and health officer, known

Continued next page

Safety continued

as SSHOs, McDonald said. The safety officer shows his counterpart the problem and the solution. The safety representative then passes on what he learns to the workers and craftsmen.

"Working one-on-one with the contractor's safety representative is extremely productive," he said. "Mentoring the contractor's SSHO can be time consuming and difficult but results can be very impressive. We try to place ourselves in the customer's shoes to better understand why they may be struggling with a particular safety compliance issue."

Ice and his colleagues try to translate complex safety requirements and standards into terms easily understood by the SSHOs, who generally are not native English speakers. A heavily illustrated USACE safety manual written in Afghanistan's primary languages, Pashto or Dari, helps them in this effort.

Job site face-to-face meetings allow the safety technician a chance to point out deficiencies to the safety representative and easily demonstrate ways to eliminate the defect and prevent problems from occurring later.

Project engineers and quality assurance representatives help set the safety standards from the job's start and for the project's duration, McDonald said, they establish and maintain the safety culture for a project during pre-construction meetings, reviews of the accident prevention plan, activity hazard analysis, preparatory meetings and daily work inspections.

Overall, the practice is working well, he said.

"The interaction between the contractor and the safety staff has varied from a welcome handshake to lengthy discussions that do not produce changes," McDonald said. "The good thing is that most contractors appreciate our guidance and advice and are eager to improve their skills."

Jeffrey Ice, South District safety and occupational health specialist, discusses improvised ladders with a contractor's safety specialist.

The safety team's efforts are paying off, McDonald said. "Formal investigations have been reduced by 50 percent from fiscal year 2011."

A strong safety program and culture is also a good indication of a contractors' ability to get the done job on time, within budget and safely, McDonald said.

"You never find safety at the top and quality and production at the bottom; if you have good safety the other two are at the same level," McDonald said. "Our goal is to continue to teach the 'why' safety is important and to assist Afghanistan in building a safety culture they can be proud of."

USACE employee wins Emergency Preparedness, Employee Safety Award

Jeffrey Ice, a South District - safety specialist, reviews the safety board at a USACE construction site in Helmand province May 8. (USACE Photo by Dave Melancon)

Story by Karla Marshall

Keeping people safe is South District Commander, Air Force Col. Benjamin Wham's number one priority. So when new employee, Jeffrey Ice earned the New York Federal Executive Board Emergency Preparedness and Employee Safety Award, May 11, it was cause for celebration.

"Every time my safety specialists visit project sites, they teach USACE safety standards to contractors," said Wham. "Jeff is one of those guys who inspects construction sites, meets with the site safety managers and reinforces those precautions that make construction safer."

One of four safety specialists, Ice, who deployed from USACE New York District in April, won the Federal Executive Board award for his work while assigned to his home district.

"Last year, the New York district was tasked to build critical public facilities in Joplin, Mo., following the tornado devastation there," he said. "I spent 63 days in Joplin helping with the construction of two temporary fire houses and eight temporary schools. Because of the work we did, school opened on time which helped the children return to a somewhat normal schedule."

Ice was the only New York Federal Executive Board award recipient for the 2011 Emergency Preparedness and Employee Safety Award.

"He also won the New York District's Safety Employee of the Year award for 2011," said Bruce Barrett, his supervisor in Afghanistan.

"I worked with Jeff during the Joplin recovery effort and was extremely impressed with his performance, so I encouraged him to volunteer for work in Afghanistan," said Barrett. "He's the first employee I've ever had in a safety office who won a Federal Executive Board award. It reflects his knowledge and performance each day as a safety professional."

Afghan police open district headquarters in Farah

Story and photos by Mark Ray

The Afghan Uniform Police opened a new district headquarters in Farah May 10.

The U.S. Army Corps of Engineers South District contracted for and oversaw construction of the headquarters. The facility was the sixth Afghan Uniform Police district headquarters that the South District has completed in 2012.

Farah Provincial Governor, Mohammad Akyam Akhpul Wak, presided over the opening ceremony, thanking the international coalition for their efforts to increase security in Farah province, and charging the Afghan police with responsibility to protect the local people.

Col. Ghoos Mohammad Malyar of the Afghan Uniform Police said the new facility reinforces the presence and professionalism of the police in the minds of the populace.

"It is great to turn over another headquarters to the Afghan police," said Air Force Col. Ben Wham, South District commander. "These facilities enable the Afghan authorities to provide security at the local level, and better protect the people of this district."

The $2.1 million headquarters supports 60 Afghan police officers and was constructed on a large police compound that remained in use during construction. The facility includes barracks, offices, a kitchen and dining area, armory and jail cells, as well as a self-contained well, water distribution system and power generators.

A highlight of the project was the ability of the District's Farah Resident Office, the Combined Security Transition Command-Afghanistan, which funded the project, the Afghan Uniform Police and their mentors to work together to ensure the final product met police requirements, Wham said.

Noting that the district modified the project at the request of the local police authorities to add a second entry control point to the facility, Wham praised the Farah Resident Office, the Afghan project engineer and quality assurance representatives for producing a "very high quality facility."

Italian Army Col. Francesco Paolo D'iani, commander of coalition forces in Farah province (left) and Italian Capt. Lucca (center, first name unknown), mentor to the Afghan National Police in Farah, speak with South District Commander Col. Benjamin Wham and USACE Transatlantic Division commander Maj. Gen. Michael Eyre before the opening ceremony of the Farah Afghan Uniform Police District Headquarters.

Farah Provincial Governor Mohammad Wak speaks at the turn-over ceremony.

Profiles in leadership:
Lt. Col. Gordon "Mark" Bartley

Lt. Col. Gordon "Mark" Bartley greets Herat Provincial Governor Daud Saba before a ground-breaking ceremony April 1. (USACE photos by Mark Ray)

Lt. Col. Gordon "Mark" Bartley served as the officer in charge of the Herat area office from May 2011 through April 2012. Before he left Afghanistan, he gave a short interview about things he felt helped make his tour and his office a success.

EF: First, give us some background — how long have you been the OIC here in Herat?

MB: It will be exactly 11 months boots on the ground. This isn't my first Corps of Engineers assignment. I served as resident office officer in charge in Okinawa, Japan for two years.

EF: Was this your first deployment? If you've been deployed before, who were the earlier deployments with, and what did you do on those deployments?

MB: I was deployed in Iraq the latter part of '04 and most of '05. I was with the 35th Design Management Section, 35th Engineer Brigade (Fort Leonard Wood, Mo.), attached to the 20th Engineer Brigade (Fort Bragg, N.C.) Our 17-man section designed bridges, detainee facilities and compounds to include incinerators with waste water treatment plants. For about half my tour I was attached to the Task Force-134 Detainee Ops as the 05 Staff Engineer.

EF: What are some of the things that you feel made the Herat Area Office work well during your time here? In particular, what do you think are some of the things that you, as area OIC, did that helped the office to work well?

MB: We have a lot of talent here and they know what they're doing — I did my best to let them do their jobs. For most of them, this isn't their first rodeo and they accepted the hardships associated with being deployed.

My key focus was constantly improving the morale. I had three rules:

1) Respect for the Individual; yup, the "golden rule."

2) The "10-foot Rule;" Smile when you get within 10 feet of someone and greet them with a positive demeanor, always, even if you're having a bad day. They may also be having a bad day but one's extended positive nature just maybe enough to brighten their day.

3) The "Sundown Rule;" respond before close of business to every email, voicemail message, and in person request. If you can't give someone the answer they are looking for, at least acknowledge that you've received and working on their request.

These three things are all conducive to a positive command climate that all enjoy being a part of.

EF: What are your lessons learned — things you might have done differently, or that could have helped make the office work even better?

MB: Probably the most frustrating thing is the constant personnel turn over. Turnover is an issue not only with the USACE personnel but the security teams and also with other ISAF components. Most Air Force personnel are only here six months, for example. It was a challenge to manage, but there is not much can be done about it, it is just the way it is.

Bottom line, what would I have done differently? Not a thing.

EF: What would you like to add or what haven't we talked about that you think would be useful to other OICs or area engineers?

MB: There are published "Roles and Responsibilities" for the area and resident office OIC and area and resident Engineers. The OIC is responsible for the health, safety and well-being of the people in his or her office, along with liaison with military stakeholders — battle space owners, Afghan army and police leadership. The office engineer is responsible for making sure that the projects get built. When the OIC and the office engineer work together, they act as combat multipliers to each other. If they don't click, it makes it hard for the area office and its resident offices to accomplish the mission. Bottom line: Learn your lane, do your job, support those that rely on you.

Lt. Col. Gordon "Mark" Bartley shows off a commemorative plaque he was presented at Herat teachers facility turn-over ceremony March 26.

Bunker-side garden serves as test bed

Story by Dave Melancon

It is not the biggest farm in Afghanistan but it is one of the newest and, perhaps, one of the more experimental.

Tucked away next to a shaded break area and concrete bunker on the east side of the South District compound on Kandahar Airfield, half of a 300-gallon plastic water tank sits on a shipping pallet. Mounted on another pallet, about a foot above the tank is the other half filled with golf ball-sized gravel. The lower tank is about 80 percent filled with water; and a system of recycled garden hoses and household plumbing keeps the water flowing from the lower tank onto the rocks in the upper.

Sticking through the stones are plants - lettuce, peppers, broccoli and rebar-staked tomato seedlings. A couple dozen tadpoles and young frogs graze on the algae growing in the lower tank's sides and bottom.

Penny Coulon, a district contracting officer representative, combined hydroponics and aquaculture to create the South District's first-ever aquaponics garden.

Coulon, who deployed to Afghanistan from the USACE Sacramento District, said she stumbled upon the idea for an aquaponics garden in Afghanistan while researching different gardening systems for her home garden. Aquaponics seemed ideal because of its simplicity, chemical-free fertilization, fewer weeds

(Top) The South District's first-ever aquaponics garden units sit next to a break area and bunker on the east side of the headquarters compound on Kandahar Airfield. Parts for the self-contained system came for a company that specializes in aquaponics, a construction contractor working on KAF and a home gardening store. The rear unit will remain on the USACE compound; the second will be moved to the Afghan bazaar school on KAF. (Right) Penny Coulon, a district contracting officer representative, places a pepper plant seedling next to some lettuce into the rocks. (Courtesy photo)

for small-scale Afghan agriculture

and insects and no bending requirement, she said.

"I figured I could kill two birds with one stone," she said. "I can have the fish and I could have vegetables as well. Then, I thought, this could work here."

Aquaponics is an entire food production system combing aquaculture – raising of aquatic animals such as snails, frogs, fish, crayfish or prawns in tanks – with hydroponics, a water-based plant cultivation method. The animals – in this case native Afghan tadpoles – live in the water, food plants grow in the rock.

"The fish produce waste. You then pump that water to the plants," Coulon said. "The plants clean the water because they use the fish waste as their fertilizer. The clean water is then returned to the fish."

The system also conserves water which is especially vital in Afghanistan, she added.

"It's a closed-loop system so once you fill the tank you are truly not using any water except for evaporation because it keeps circulating through," she said.

The fish will come from a nearby lake later this spring. Until they arrive, Coulon is using tadpoles and vitamin B-12 as a plant fertilizer as a stop-gap measure. She said she will feed the fish with duckweed.

"The fish will make a whole system," she said, adding "wouldn't a nice fish dinner be good?"

The fish, depending upon the species, will be ready to eat in about six months, so it may be a bit premature to start bringing out the recipes and spices, she warned.

The garden has been going for only a few days but the plants are looking strong with little evidence of wilting, Coulon said.

"So far it's looking pretty good. I think the plants are taking. If they weren't they would begin to wilt," she said. "I'm feeling pretty positive that it will take off."

Store-bought aquaponic systems can range in price from about $200 for a complete starter kit to several thousand dollars for larger, more elaborate systems, she said.

Many parts for Coulon's two systems were donated by Backyard Aquaponics, Inc. of Australia, she said. The Yenigun Construction Co., a Turkish building contractor with several USACE projects underway on KAF, provided the rock and the tanks. Coulon brought the old the garden hose and PVC pipes and hardware from home.

John Caudill, of Watkinsville, Ga., Operations and Maintenance Section office engineer, helped build the systems, Coulon said. He will ensure the pumps keep running and the plants and tadpoles are thriving while she is on off-site assignments and leave.

If successful, one unit will remain on the USACE compound and a second will be taken to the Afghan bazaar school on KAF, Coulon said.

"Hopefully we can teach some kids about aquaponics and for science classes," she said.

"I'm excited about it. I hope it produces nice organic vegetables and will be easy to maintain," she said. "I'm hoping the Afghans can take this idea and run with it."

Penny Coulon, a South District contracting officer representative, checks for wilting leaves on a recently sown patch of lettuce. She combined hydroponic gardening and aquaculture - raising of aquatic animals - to create the South District's first-ever aquaponics garden. (USACE photo by Dave Melancon.)

District streamlines knowledge management

Story and photo by Karla Marshall

Businesses, regardless of their location, benefit from well-organized and accessible information. The South District tackled knowledge and file sharing processes in April by reorganizing their shared electronic files and doing major "spring cleaning."

One of South District Commander Air Force Col. Benjamin Wham's command priorities is to work efficiently. For this project he was an avid supporter. "The South District has a lot of work on its plate. Our team needs streamlined processes so any steps we take to reduce overhead tasks help everyone."

Chris Brooks, South District, chief of information services, checks the "S" drive's data transfer rate .

"From a continuity perspective, the way our electronic file system was organized made it difficult for new employees to find information," said Kelly Gilhooly, the district's former process improvement manager who returned to Rock Island, Ill. in April. "We had to create a system that improved the transition of materials and documents from outgoing personnel to incoming and reduce the amount of redundant information."

Because many of the district's files include voluminous engineering design documents and project photographs, Gilhooly, along with the chief of information management, Chris Brooks, and Gil Kim, the acting deputy district engineer for project management during the project's planning phase, envisioned a consistent archival system for each of the district's divisions, branches and offices.

"By organizing the filing structure the same way the district was organized and standardizing the higher-level folders, we made it easier and faster for employees to find the information they need to do their jobs," Gilhooly explained.

The number of files and their size became a logistical problem.

"The South District consumed more than 6.27 terabytes of hard drive storage space," said Brooks. "And the majority of that data was only two or three years old. Backing it up became expensive and very time consuming."

Once the files were sorted, the relevant and necessary files migrated to a new drive on the server, and the remainder will be sent to an archive server in Winchester, Va.

"Each section of the district was responsible for ensuring that the remaining data in their files were still mission critical," said Brooks. "We relied on individuals and supervisors to use the standardized filing system and purge their files. The whole process took about two weeks and now, and we estimate three terabytes of data was purged from the backup system which contributes to greater backup efficiency and better disaster preparedness."

Projects complete

Col. Benjamin Wham, South District commander and Ron Maj, former chief engineering and construction, load file boxes filled with project information and official records into a van for delivery to the U.S. Post office on Kandahar Airfield April 30. The documents were shipped to the U.S. Army Corps of Engineers Middle East District headquarters in Winchester, Va., for permanent storage and archiving. (Photo by Karla Marshall)

‘Austere standards’ approved for Afghan police Headquarters

Story and photo by Karla Marshall

Learning from the past and doing the right things in the right way for Afghanistan are the center of a joint NATO Training Mission-Afghanistan, Combined Security Transition Command-Afghanistan and U.S. Army Corps of Engineers decision to implement more austere construction standards in Afghanistan.

After several months of evaluation and planning, CSTC-A and the Corps of Engineers formally agreed to change the construction standards for two upcoming Afghan Uniform Police headquarters projects.

The South District contracting branch anticipates awarding contracts for the upcoming construction in August.

The engineering branch is developing requests for proposals for the two projects with the austere standards incorporated.

Afghan Uniform Police stations, like this one recently completed by the U.S. Army Corps of Engineers in Kohsan, will be constructed with more austere features as a result of the new plan agreed to by the NATO Training Mission-Afghanistan, Combined Security Transition Command-Afghanistan and the U.S. Army Corps of Engineers in early May.

“The letters of direction USACE received from CSTC-A allow us to move ahead with changes that address three components: energy management, water and wastewater management, and miscellaneous cost-saving measures.” said Steve Osborn, the district’s facilities engineering section chief.

The changes were the result of feedback from Afghans and observations by Corps of Engineers project managers, engineers and field offices personnel.

“The new austere construction standards are more appropriate for current conditions in certain provincial territories in Afghanistan,” said Fred Schelby, the South District’s Afghan National Police program manager and austere standards team lead. “The new standards not only provide a quality build, but increase the ability for the Afghans to maintain their facility without assistance from the coalition or international organizations.”

Eight Afghan National Police projects with similar requirements are under review by CSTC-A for austere standard construction said D’Lorah Small, the district’s Afghan National Police civil engineer.

Other potential projects identified for austere construction are an Afghan Ministry of Interior supply point, border police facilities and district police headquarters in Daykundi, Helmand, Zabul and Farah provinces, she said.

“The standards will maximize the use of locally available materials, simplify construction, and result in buildings that will be easier to maintain,” said Small who deployed from the USACE Savannah District, Fort Bragg, N.C. office.

“Although each project is independently analyzed, austere changes include such mandates as reducing power generation by 20 percent, reducing required lighting in occupied spaces by 50 percent, providing alternatives to interior plumbing, and reducing the space between buildings,” said Small. “By reducing the energy requirement, the facilities remain efficient, the purpose for the facility is met, and maintenance becomes less cumbersome for Afghans, which improves sustainability.”

Water treatment is simplified because the new standard reduces the number of buildings with indoor plumbing and changes traditional bathroom toilets to composting outhouses that produce no ‘black water,’ Schelby said. Black water is raw sewage that requires treatment before it can be re-introduced into the environment. With composting outhouses and exterior-only water outlets, less water is needed. The simple composting system with no interior plumbing is also easier to maintain and more economical, he said.

“Again, we save money and time because of the new water management plan,” said Schelby. “Outdoor spigots and dining facility sinks that drain to composting pits eliminate the need for costly indoor plumbing and reduce future operations and maintenance requirements.”

The final austere plan components include replacing interior door hardware with simple hinges and latches and other easy to alter plans, said Small. “For one project, we won’t be adding gutters and downspouts, except over entrances, and we’ll use French drains which divert water away from buildings instead of underground sewer systems.”

The austere standard designs are based on four criteria: location, accessibility, security, and affordability, said Schelby. “The entire team has worked diligently to bring innovative ideas to fruition throughout all of Afghanistan.”

“Our engineers, project managers and partners at CSTC-A have really been committed to implementing the new standards across the board,” said Air Force Col. Benjamin Wham, district commander. “Our intent all along has been to speed construction of easily sustainable facilities and realize considerable cost-savings throughout the buildings’ life cycle.”

Father, son reunited on KAF

Story and photo by Karla Marshall

Afghanistan may not be thought of as an idyllic location when Americans consider where to spend quality time with family members, but for Julio and Francisco Arocho, no place could be better.

Julio, the deputy district engineer for programs and project management at the South District and his son, Francisco a U.S. Army first lieutenant, reunited April 15 at Kandahar Airfield to catch up.

Francisco deployed with the 980th Engineering Battalion, from Orangeburg, N.Y. in mid-December 2011 and Julio arrived in Afghanistan April 1. "Over the past couple of years our family has been really busy and we have not had many opportunities to be together," said Julio. "Cisco married Laura in Norfolk, Va. in September and the whole family got together at Thanksgiving. Outside of those major events, we didn't really get to see each other."

Although this time together is brief, for the Arochos, it is an experience they get to share. "Both dad and I have deployed before to Iraq and Afghanistan. But this is the first time that we are in the same place at the same time," said Francisco, who served in Iraq as an Army National Guard enlisted Soldier prior to obtaining his bachelor's degree in economics from George Mason University in 2010. "We get to see firsthand what each other is doing."

Francisco is stationed at Forward Operating Base Walton and inspects his battalion's construction of persistent ground surveillance system facilities on other FOBs around the country. "My battalion makes it possible for coalition forces to deploy and use the surveillance system, which helps keep soldiers safe."

Julio is the senior civilian at the South District, which oversees construction of Afghan National Security Forces facilities, U.S. military construction, and water and infrastructure projects that benefit Afghan citizens.

Julio (left) and Francisco (right) Arocho, reunite at Kandahar Airfield, Afghanistan April 15. Both are currently deployed to Afghanistan: Julio with the U.S. Army Corps of Engineers and Francisco with the 980th Engineering Battalion, Orangeburg, N.Y.

"We have a really important mission in Afghanistan," Julio said. "The Corps of Engineers directly supports the government of Afghanistan in providing safety and security for its people. I am lucky that I get to share that with my son."

Julio and his wife of 32 years, Olga, live in San Francisco, Cisco and his new bride, Laura, live in West Point, N. Y. and Julio's daughter, Alexandra lives in Japan. "Alex has a master's degree in education and works as an English instructor in Akita. My wife and I miss her but the experience she is gaining makes the separation worth it."

In fact, Julio and his wife are considering a trip to Japan to visit Alex during his next scheduled leave, he said.

Toby Keith and his band perform for a crowd of several hundred spectators on the Kandahar Airfield boardwalk April 27 during a show sponsored by the USO. (USACE Photo by Tony Delgado)

Uncle finds nephew on Kandahar

JL Summerlin (right), former South District construction control representative, played a "cat and mouse game" on Kandahar Airfield trying to track down his nephew, Pfc. Leyton Summerlin.

Story and photo by Dave Melancon

JL Summerlin called his fleetingly brief family reunion with his nephew at the Kandahar Airfield April 20, "something out of the movies."

Summerlin, formerly a South District construction control representative assigned to Forward Operating Base Smart as a provincial reconstruction team member working in Zabul province, was able to find and meet with his 19-year-old nephew, Pfc. Leyton M. Summerlin, at the airbase's USO.

They share the same name, JL explained. "His first name is Leyton, my middle name was Leyton. Everything changed when I changed to JL, but everybody [at home] still knows me as Leyton."

"Two generations of Summerlins who happen to share the same name meet in the same war zone at the same time. That is pretty amazing," JL said. "You see in the movies all the time stories about a father and a son or two brothers reuniting, but I've never heard of one about an uncle and a nephew."

After a yearlong assignment, the elder Summerlin returned to the U.S. Army Corps of Engineers St. Paul District in St. Paul, Minn. in April. The younger Summerlin, an infantryman assigned to Joint Base Lewis-McChord's 5th Battalion, 20th Infantry Regiment, 3rd Stryker Brigade Combat Team, 2nd Infantry Division arrived in Afghanistan April 5 and moved with his unit to Zabul province the day after the reunion.

"After a cat-and-mouse game of finding one another," the Summerlins "hung out at the USO, made a video for our family and had dinner on the Boardwalk," Leyton said.

"Of all places to be taking him dinner, Uncle Leyton is taking nephew Leyton to dinner on the Boardwalk on Kadahar Airfield in Kandahar, Afghanistan," JL said. "It's a pretty unique opportunity to take a family member to dinner. Not too many people can say that. "

JL supervised several construction projects within Zabul province including Highway 1 repairs, bridge construction and maintenance, road, hospital and school construction projects. The work was mostly funded by the regional commander's emergency response program, he said.

Leyton's platoon will support the "Arrowhead" Brigade key leadership engagement program. While senior Army leaders work with their Afghan counterparts, he and his team will surround the meeting area to protect the participants, he explained.

"I'm pretty ecstatic. I knew JL was in country but for us to be going to the same area is what is really cool," the Soldier said. "We were not really sure would be able to see each other because I did not know where I was going to be."

Before parting ways in opposite directions, the older Summerlin said he offered some advice which will serve his nephew well in Zabul province. Some of these tips included relying on his training, listening to his more experienced noncommissioned officers and officers and "remembering why we are here: to help the people of Afghanistan to improve their lives in every way that we can including with kindness."

USACE employee finds vegan diet possible in Afghanistan

Cornelius Cheatham (blue shirt) demonstrates how to make a veggie burger during a cooking class on the USACE compound at Kandahar Airfield May 6.

Story and photo by Karla Marshall

Maintaining a healthy lifestyle is important regardless of where you live, and for Cornelius Cheatham, a South District engineer, eating well is not negotiable but wholly possible, even in Afghanistan.

A vegan for more than 11 years, Cheatham said that his diet was the result of an experiment. "I decided to detoxify my body for one week by not eating any meat, just vegetables," he said. "After the week was up, I had unbelievable energy and my mood was even better."

Cheatham continued the meatless diet with the intent of seeing how long the good feeling would last. "Needless to say, I haven't stopped yet. As time progressed, I really started to study nutrition and the effects that food has on the body. What I found reassured me to continue my diet."

Fresh fruit and vegetables from dining facilities on Kandahar Airfield supplement the mostly organic food Cheatham orders from the States. "It is sometimes a challenge to get the fresh ingredients I want, but usually I can make do with what is available," he said.

Other South District employees noticed that Cheatham made his dinner almost daily and began asking questions.

"I saw Cornelius cooking dinner frequently and one evening I asked him if I could join him," said Ed Starnes, the chief of the claims, terminations and disputes section at the district. "I discovered that he was cooking many of the things that I eat at home."

After talking with Cheatham, Starnes decided to test a vegan diet for himself. "I was already on a weight loss regimen and I thought I could take it to the next level with Cornelius' diet."

Cheatham provides several employees with the information and techniques that help them make better food choices, said Starnes who deployed from USACE Savannah District. "In the class, he presents healthier and flavorful options that don't take a lot more effort than cooking normally."

"I don't preach to the people in my class," said Cheatham who deployed from USACE Baltimore District. "I show them that there are alternatives and there are other ways of looking at food. I didn't advertise my diet or the class; interest spread by word of mouth."

Qiana Davis, the district's previous counsel, deployed from the Louisville District also attended Cheatham's cooking class. "What Cornelius does is actually quite simple and making dinner with him has changed the way I eat," she said. "He is all about educating people on how to 'eat to live' and when I, and a few others, asked him what he would recommend to help us lose about 15 pounds, he stepped right up."

Cheatham told them that if they committed to his diet for 30 days, he would help them reach their weight loss goals.

"Since I changed my diet, I have felt better and lost weight. It is easier to eat healthy now because we act as a support group as well," said Davis.

Not everyone who takes Cheatham's cooking class has converted to veganism, but all agree that eating more plant-based foods has helped them feel better.

"I still eat meat," said Starnes, "I just don't eat it every day. I've lost 53 pounds since I deployed to Afghanistan and eating the 'Cornelius diet' has helped me continue to lose weight and still be healthy."

Davis agreed. "Cornelius uses his most valuable resource, his time, because he really wants people to live a fulfilled, healthy life. Now I have all the tools necessary to succeed and eat to live."

AES Team

Helmand Area Office

Helmand Area Office employees and Soldiers (front row): Lt. Col. Marshall Anderson, Norman Rasmussen, Rick Sturdivant, Steve Prudence, Anne Crenshaw, Sgt. 1st Class Joshua Robinette, Ted Falcon, Sgt. Ryan Applegate, Spec. Kyle Johnson and Staff Sgt. Jeff Hofstetter (back row) Emily Jowett, Dimael Lopez and Russ Tolle. (Courtesy photo)

Diversity. Whenever this word is spoken, thoughts immediately turn to the world of human resources and equal opportunity.

However, in the case of the Helmand Area Office, this term is also applicable to the broad spectrum of services and programs managed by the office and its resident offices: Dwyer and Tombstone.

The Helmand Area Office is staffed to provide a full spectrum of services and oversees a multitude of programs within the Helmand and Nimroz provinces. This area coincides with the area under the jurisdiction of the International Security Assistance Force Regional Command Southwest, with headquarters located on Camp Leatherneck.

"In addition to traditional Area Office staffing, the Helmand Area Office also includes an operations specialist, a real estate specialist, an operations and maintenance coordinator and military and civilian contractor MRAP Teams," said Russ Tolle, the Helmand Area Engineer, deployed from the Jacksonville District.

Located on the Afghanistan National Army's Camp Shorabak in Helmand province, the facilities for the current Helmand Area Office were first erected in October 2005 when the office was designated as a resident office. Since then, the workload and the staffing levels have increased dramatically.

"Our current workload of 23 projects exceeds $350 million and includes projects for the Afghan National Security Forces Program with both Afghan National Army and Afghan National Police projects, U.S. Forces military construction, known as MILCON, and the Afghanistan Sustainable Development Program (Water and Infrastructure)."

With the MILCON program winding down, the office's primary focus is now the ANA program, which currently includes ten projects valued at more than $275 million.

"These projects will provide critical infrastructure needs such as complete garrisons, training ranges, offices and housing for the ANA in support of the integrated Afghan National Security/Coalition Forces' counterinsurgency operations. This will enable them to successfully execute their assigned missions and promote the future stability of Afghanistan," Tolle said.

The other programs administered by the area office are also very important to the future of Afghanistan and its citizens. New ANP Uniformed Police District Headquarters are being constructed within the Helmand and Nimroz provinces and they will provide new facilities for the Afghan Police Forces.

Additionally, new road construction projects are underway near Lashkar Gah and Garmsir. These new paved roads will replace the current gravel roads that are nearly impassible during periods of inclement weather.

Finally, the office will be administering the forthcoming Kajaki Dam and South East Power System-Helmand (SEPS) projects which will result in additional electrical power to citizens of southern Afghanistan.

"With the full spectrum of projects being administered by the Area Office, the assignment as Area Engineer has certainly been a challenging, but fulfilling assignment," stated Tolle. "However, each project contributes to the overall TAS mission of promoting the future stability of Afghanistan."

Afghanistan Safety 101

By James Ediger, South District Safety Office

The hot days of summer are here. Throughout Afghanistan, hundreds of South District and employees and service members working outdoors face potential dangers from overexposure to heat. Factors such as working in direct sunlight, high temperatures and humidity, physical exertion and lack of sufficient water can lead to heat injuries.

Exposure to heat can cause heat cramps and rashes. The most serious heat-related disorders are heat stroke and heat exhaustion.

Drinking cool water, reducing physical exertion, wearing appropriate clothing, and regular rest periods in a cool recovery area can lessen the effects of working in summer heat.

Heat Stroke is the most serious heat-related health problem. It occurs when the body's temperature regulating system fails and body temperature rises to critical levels greater than 104 degrees F.

This is a medical emergency that may result in death!

The signs of heat stroke are: confusion, loss of consciousness and seizures. Workers experiencing heat stroke have a very high body temperature and may stop sweating. If a worker shows signs of possible heat stroke, get medical help immediately.

It might be difficult in some of our remote areas to have close by medical facilities. Be pro-active and have the locations and contact numbers available *BEFORE* you need them. Supervisors can also provide them on their morning safety briefings. On Kandahar Airfield, dial DSN 7-318-841-2004 to dispatch an ambulance and the fire department.

Until medical help arrives, move the worker to shady, cool area and remove as much clothing as possible. Wet the worker with cool water and circulate the air to speed cooling. Place cold wet cloths, wet towels or ice all over the body or soak the worker's clothing with cold water.

Heat Exhaustion is the next most serious heat-related health problem. The signs and symptoms of heat exhaustion are headache, nausea, dizziness, weakness, irritability, confusion, thirst, heavy sweating and a body temperature greater than 100.4 degrees F. Workers with heat exhaustion should be removed from the hot area and given liquids to drink. Remove unnecessary clothing including shoes and socks.

The U.S. Army Center for Health Promotion and Preventive Medicine Health Information Operations Division or CHPPM, has developed a Work/Rest and Water Consumption table. Everyone should become familiar with this chart.

In Afghanistan, we all work in Heat Category 5 (which is any temperature above 90 degrees F) for most of the year. We should all be on a work/rest cycle of 50 minutes working with a 10 minute break every hour. During this 60-minute cycle you should also be drinking one quart of water. This cycle is just for "easy work." The cycle changes as you work harder. This chart should be readily available to you and posted on your section "safety board" at your job site or work area.

Work/Rest and Water Consumption Table

Applies to average sized, heat-acclimated soldier wearing BDU, hot weather. (See TB MED 507 for further guidance.)

Easy Work	Moderate Work	Hard Work
• Weapon Maintenance • Walking Hard Surface at 2.5 mph, < 30 lb Load • Marksmanship Training • Drill and Ceremony • Manual of Arms	• Walking Loose Sand at 2.5 mph, No Load • Walking Hard Surface at 3.5 mph, < 40 lb Load • Calisthenics • Patrolling • Individual Movement Techniques, i.e., Low Crawl or High Crawl • Defensive Position Construction	• Walking Hard Surface at 3.5 mph, ≤ 40 lb Load • Walking Loose Sand at 2.5 mph with Load • Field Assaults

Heat Category	WBGT Index, F°	Easy Work		Moderate Work		Hard Work	
		Work/Rest (min)	Water Intake (qt/hr)	Work/Rest (min)	Water Intake (qt/hr)	Work/Rest (min)	Water Intake (qt/hr)
1	78° - 81.9°	NL	½	NL	½	40/20 min	½
2 (YELLOW)	82° - 84.9°	NL	½	50/10 min	½	30/30 min	1
3 (YELLOW)	85° - 87.9°	NL	½	40/20 min	½	30/30 min	1
4 (RED)	88° - 89.9°	NL	½	30/30 min	½	20/40 min	1
5 (BLACK)	> 90°	50/10 min	1	20/40 min	1	10/50 min	1

- The work/rest times and fluid replacement volumes will sustain performance and hydration for at least 4 hrs of work in the specified heat category. Fluid needs can vary based on individual differences (± ¼ qt/hr) and exposure to full sun or full shade (± ½ qt/hr).
- **NL** = no limit to work time per hr.
- **Rest** = minimal physical activity (sitting or standing) accomplished in shade if possible.
- ***CAUTION: Hourly fluid intake should not exceed 1½ qts.***

  Daily fluid intake should not exceed 12 qts.
- If wearing body armor, add **5°F** to WBGT index in humid climates.
- If doing Easy Work and wearing NBC (MOPP 4) clothing, add **10°F** to WBGT index.
- If doing Moderate or Hard Work and wearing NBC (MOPP 4) clothing, add **20°F** to WBGT index.

For additional copies, contact: U.S. Army Center for Health Promotion and Preventive Medicine Health Information Operations Division at (800) 222-9698 or CHPPM - Health Information Operations@apg.amedd.army.mil
For electronic versions, see http://chppm-www.apgea.army.mil/heat. Local reproduction is authorized.
June 2004

CP-005-0404

A few ways for us to protect ourselves and to block out ultraviolet rays are:

- Cover up. Wear tightly-woven clothing that blocks out light. Try this test: Place your hand between a single layer of the clothing and a light source. If you can see your hand through the fabric, the garment offers little protection.
- Use sunscreen. A sun protection factor (SPF) of at least 15 blocks 93 percent of UV rays. You want to block UVA and UVB rays to guard against skin cancer. Be sure to follow application directions on the bottle.
- Wear a hat. A wide-brim hat is ideal because it protects the neck, ears, eyes, forehead, nose, and scalp.
- Wear UV-absorbent sunglasses. They don't have to be expensive, but they should block 99 to 100 percent of UVA and UVB radiation.
- Limit exposure. UV rays are most intense between 10 a.m. and 4 p.m. If you're unsure about the sun's intensity, take the shadow test: If your shadow is shorter than you, the sun's rays are the day's strongest.

Note: Wet Bulb Globe Temperature is a composite temperature used to estimate the effect of temperature, humidity, wind speed (wind chill) and solar radiation on humans. It is used by industrial hygienists, athletes and the military to reduce heat stress injuries and to determine appropriate exposure levels to high temperatures.

Bulldogs of the week 2011-2012

Recognizing employees for excellent work and contributions to the mission is the reason Col. Benjamin Wham, South District commander, instituted the "Bulldog of the Week" program in August 2011. (For a list of last year's Bulldogs, see the November/December 2011 edition of ***Engineering Freedom.***)

"Selecting a mascot to represent Afghanistan Engineer District-South meant identifying the attributes of our team members that make our district a great place to work," Wham said. "The bulldog naturally comes to mind as it is loyal, friendly, determined, and resilient. The bulldog has been a symbol of courage and strength for many years and the AED-South team is comprised of many such men and women." Each week a South District department or section selected one of its team members who exemplified the bulldog nature.

Dec. 5-11 Senior Master Sgt. Gary Szekely, Kandahar Area Office noncommissioned officer in charge, wore many hats. His primary job was to support the Kandahar provincial reconstruction teams, but he also coordinated and facilitated the approval of construction projects by the Kandahar Airfield Commander's office. He coordinated maintenance for facilities on Kandahar Airfield.

Dec. 12-18 Paul Apodaca, Kandahar Vicinity Resident Office resident engineer, tackled the workload of two engineers since he arrived in Afghanistan. He managed more than 30 projects worth about $500 million, more than half the office's total. In addition to taking on every project that came his way during his tenure, Apodaca successfully closed 15 projects.

Dec. 19-25 Darrell Gay, master electrician assigned to the South District's Quality Assurance Branch at Forward Operating Base Lindsey, wore many hats and accomplished all his duties and more every day. He reviewed electrical design submittals, provided electrical field support to International Security Assistance Force and district projects,

and perhaps most importantly, he taught contractors USACE standards and processes.

Dec. 26-31 Ruth Townley, was selected as Afghanistan Engineer District-South's final Bulldog recipient for 2011.

Townley helped the South District achieve 105 percent placement for December through diligent work and long hours. Her strong dedication to the mission helped make December the district's most productive month of the year.

Dec. 26-31 Carolyn Imhof-Hoffelder, put long hours after work caring for her "home" and "family" at the South District. In the weeks leading up to the district's holiday celebrations, she spent almost every evening in the kitchen at the Kandahar Airfield compound, baking cookies and other goodies for the people of the district and for the Wounded Warriors recovering on Kandahar Airfield.

Jan. 01-07 Paul Cruz, a contract network technician in the Information Technology Division, was invaluable in shoring up gaps. During logistical shortages, he single-handedly facilitated all aspects of shipping and receiving computer equipment. His ability to support critical equipment movement was essential to technical support throughout the district.

Bulldogs of the week 2011-2012

Jan. 8-14 Joseph Lacanlale demonstrated determination every day, as a project manager for 27 military construction projects totaling more than $240 million. Meeting challenges head on and seeing them through to resolution. Lacanlale was known for providing excellent leadership and outstanding technical assistance on his projects.

Jan. 22-28 Bethany P. Baker, a logistics management specialist, assumed oversight of equipping the district with six MRAP vehicles and equipment totaling $4.6 million. She also worked ensure accountability of the district's weapons. Her efforts have established a foundation for the security, logistics and transportation needed to ensure the district's success.

Feb. 5-11 Robin Parks, a project manager, was responsible for closing out project files and completing the final project archiving.

Parks was instrumental in closing out the backlog of project files and ensuring that each completed project has the documentation and records required for archiving. Since her arrival at the South District in August 2011, she closed out 64 projects.

Jan. 15-21 Army Sgt. Ryan C. Applegate stepped up to serve as the noncommissioned officer in charge when the holidays left a skeleton-crew MRAP team at the Helmand Area Office. He delayed his return to college so there were no manning shortages. He ensured that the area was in good repair and set-up to receive 19 incoming Global Security personnel.

He coordinated with neighboring units for the crew's training and acquired necessary equipment to better protect them during their missions.

Jan. 29-Feb. 4 Hugh Coleman assumed and carried the responsibility of meeting with Afghan citizens in the Kandahar area to resolve real estate claims against the U.S. government.

Coleman, who works in the district real estate office, established weekly face-to-face meetings with Afghans who believe U.S. Forces have encroached on their land.

The meetings require him to travel to a gate at Kandahar Airfield where he can safely meet with the Afghans.

Feb. 12-18 Charles "Chuck" Gordon, lead architect in the South District's Engineering Branch, was the primary technical expert that developed Afghan National Police projects. He mentored other architects and maintained a passionate, positive, energetic attitude toward his work.

Bulldogs of the week 2011-2012

Feb. 19-26 Diedrienne Fauser was the paralegal assigned to the South District's office of counsel and implemented a tracking system that significantly improved the turn-around time for legal actions and reviews. The tracker is also used to create status reports that the district can use to make project-related decisions.

Feb. 27- March 3 Mathew Walden was selected as the South District's Bulldog of the Week because he took on the highly responsible position of acting resident engineer after being at Shindand Air Base for only three weeks.Additionally, he was the contracting officer's representative for 11 projects worth more than $150 million. He supervised five project engineers and construction representatives and 11 Afghan quality assurance representatives.

March 5-11 Air Force Master Sgt. Brandon Mitchell demonstrated a bulldog-like tenacity when he helped resolve a fuel shortage that could have derailed a major construction project.

"Mitchell aggressively worked with the 645th Regional Support Group to resolve the fuel shortage that halted operations on the "Strat-Tac" Ramp and North Airfield Road projects, both of which are high priority for the 451st Air Expeditionary Wing. Without his efforts, the contractor would have demobilized and returned to Turkey.

March 12-18 Debra Scribner, administrative support assistant, Kandahar Vicinity Area Office, demonstrated a "no-quit" attitude while working solo in her specialty.

Debra has worked tirelessly as the sole administrative assistant for the resident office on Camp Lindsey.

She was been instrumental in coordinating communication with all the resident offices to facilitate the transition of a new area engineer and establishment of new operating procedures."

March 19-25 Roger Kohls' observations as the quality assurance representative and civil engineering technician for the Dwyer Resident Office ensured that safety and quality standards were met on several key projects.

Kohls was very attentive to quality and safety aspects and has been recognized by the Safety Office for his outstanding efforts.

He did an outstanding job of thoroughly reviewing the contract requirements and has found several features of work that were included in the request for proposal, but were omitted in the final design.

March 26-April 1 Van Pinion, the South District's contracting office post-award construction branch chief, earned the esteem of his colleagues for dedication and know-how.

"His expertise and highly proficient skill sets made him the perfect choice to lead the post-award construction branch," said Bonnie B. Perry, district contracting office chief. "His integrity and personal courage are to be commended."

Bulldogs of the week 2011-2012

March 2-8 Air Force Master Sgt. Harvey Philson, Jr., the South District personnel section's senior noncommissioned officer, epitomes all the traits that make a professional NCO.

Philson ensures that every one of the more than 400 people serving on the South District team is accounted for "with perfection" every day, said Navy Cmdr. Hallock Mohler, personnel section officer in charge.

"Master Sgt. Philson is a steady, intelligent and confident individual who is the textbook example of a stalwart noncommissioned officer," Mohler said. "No task is too hard for him."

April 4-15 Michael Chang, program manager for the South District Afghan Nation Police facilities team, carried a big load when he accepted the lead role in several Afghan National Police building projects.

"Mike has willingly and ably stepped up numerous times to lead the ANP team as the program manager when needed," said Laurel Stevens, assistant deputy district program manager. "As project manager, Mike and his team were responsible for awarding 17 projects totaling about $215 million dollars in Afghanistan National Police facilities."

April 15-23 Army Master Sgt. Kevin Hughes executed several key duties in the South District's Operations Section (J3), earning him Bulldog honors.

Hughes is the section's senior non-commissioned officer, overseeing its day-to-day operations. He deals with issues such as mission planning and execution, force protection, biometrics enrollments, operations reporting, passenger pickup and questions involving air and ground movements, said Lt. Col. Thomas Mays, former South District operations officer.

"Master Sgt. Hughes has been a critical part of the J3 Shop and has provided much needed continuity during periods of reduced staffing," Mays said. "Master Sgt. Hughes is the epitome of the professional Army NCO."

April 23-29 Robert M. Greco used his power of organization and leadership as an Afghanistan Engineer District-South project manager to improve working relationships with key project stakeholders and to contribute to the betterment of Afghanistan.

According to his supervisor, Linda Murphy, the district's Water and Infrastructure Project Management branch chief, Greco

led the section's efforts with the Kandahar University Law Library and Kandahar Airfield Juliet Ramp projects.

April 30 - May 5 Marlon Cockerham was nominated by the Herat Area Office for his dependability. "Dependable and resourceful, these are two of the words that best describe Mr. Cockerham," said Maj. Victor Millan, area office officer in charge.

"He is a multi-skilled professional. Marlon not only performs his duties as our operations specialist superbly but also assists in our day to day mission planning, communications and our logistics."

May 7-14 Michael Phan's claim to Bulldog fame was for his work providing quarters for service members.

Phan, a military construction project manager in the Program and Project Management Division, oversaw the completion of four military construction projects on Shindand Airfield and four re-locatable housing projects, said Glen Matsuymama, the district's military construction chief.

Bulldogs of the week 2011-2012

May 14-19 Jennifer Zimmerman, a project manager working in the district's ANA office, was selected as Bulldog of the Week for her commitment to Afghan National Army programs and for her leadership.

"Jennifer has demonstrated exceptional dedication to mission execution as a project manager with the Afghan National Army program," said Julio Arocho, deputy district engineer for programs and project management. "She exhibited outstanding technical and leadership skills. Through her leadership and actions, the team has been able to develop effective and efficient management practices to keep the construction moving forward."

May 21-26 Ronnie "Shawn" Huebner, a construction representative with the Kandahar Airfield resident office, was chosen for his tenacity in ensuring early completion of the washracks at the Theater Vehicle Maintenance Complex on Kandahar Airfield.

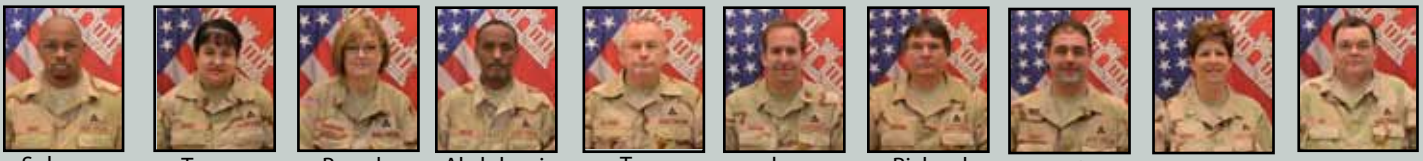
"Shawn volunteered to take on the Wash Rack "Czar" position for the Theater Vehicle Maintenance Complex. He has worked tirelessly with the contractor, the wash rack designer, pressure washer manufacturer and others to ensure the wash rack units remain operational, proper maintenance is performed and improvements are identified and implemented," said Dan L. Johnson, Kandahar Airfield area engineer.

May 28 - June 2, Douglas Jamieson, Project Manager, Operations, Maintenance, and Services Division, was recommended for his ability to navigate through the bureaucracy surrounding the Kandahar Airfield electric grid.

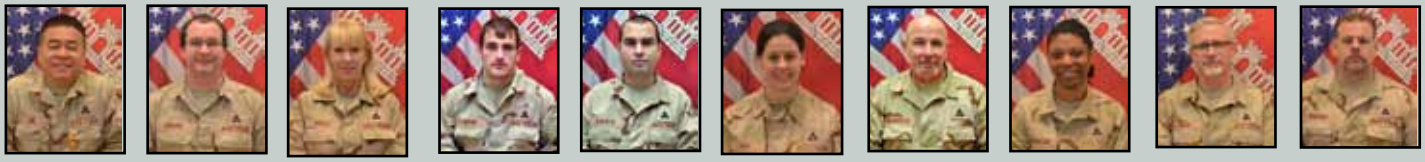
"Mr. Jamieson successfully navigated the 'Connect to Prime Power' project through several KAF review boards to garner approval that will allow our compound to connect to the base prime power," said Larry Petrosino, his supervisor. "He took what could have been a long bureaucratic process and worked it so that all of the pieces are coming together to have an award by the end of June and an early fall hook up to installation Prime Power. We will no longer have to depend on our own generators as the primary source of power on the compound."

Moving in

Julio Arocho, Margaret Benningfield, Timothy Bishop, Jean Brockner, Terrance Brown, Charise Byers, Warren Cheek, Michelle Clark, Michelle Conway, Sandra Cumbea



Solomon Curry, Tracey Daggy, Brenda Dunwoody, Abdulnasir Farah, Terry Gleason, Joe Godwin, Richard Hanson, Nick Harvey, Caryl Hickel, Jeffrey Ice



Jeffrey Ide, William Johnson, Emily Jowett, Adam Justice, Nicholas Kaechler, Angela May, Patrick Mclaughlan, Charlene McMillan, John Mills, Christopher Miranda

Viet Nguyen, Franklin Orego, Jack Ratliff, Jeff Regh, Charles Riley, Monica Robbins, John Rowland, Richard Rupert, Richard Sallans, Anton Santiago-Rios

Miow-Yu Siow, James Slomer, Shirley Smith, Robert Teller, Reginald Terry, Elizabeth Troeder, Steven Wagner, Kenith Ward, Clif Warren, Terry White

Moving on

Charles Anthony, Jose Apodaca, Ronald Bahr, Bethany Baker, Johan Barrios, Som Bhattacharyya, Mamie Brouwer, James Bodron, Lt. Col. Dwight Carr, Nettie Carter, Michael Chang, Geoffrey Chatfield, Michael Conner, Harry Dozier, Lt. Col. Derek Draper, Daniel Dykstra, Gloria Dyson, James Ediger, Diedrienne Fauser, Mark Foster, Phyllis Giles, Marco Goodman, Lawrence Grant, Arnie Guillermo, Jonathan Jones, Terrance Knowlton, Sgt. Timothy Letson, Erik Lombard, Tom Luzano, Ronald Maj, Lt. Col. Thomas Mays, Denise Mason, Hans Miller, John Mitzel, Staff Sgt. Robert Moss, Beth Nash, Maria Partee, Phillip Payne, Michael Phan, Philip Schmitt, Christopher Schreiber, Lou Simonetti, Louis Snead, Robert Snyder, Mary Spencer, Betty Jo Spiering, Raymond Urena, Eric Valentine, Michael Vantzelfden, Joel Vaughn, Matthew Walden, Dolph Watts, Charles Williams, Jeremy Wilson, John Wise, Breanna Witt