

باللغة العربية حول عملية الاعمار
الاجلة تحتوي على مقالات

ESSAYONS

Forward

U.S. Army Corps of Engineers

Gulf Region Division (Provisional), Iraq - Volume 4, Issue 6

August 2007



**New Chief of Engineers
Visits Districts in Iraq**

www.grd.usace.army.mil



August 2007
Volume 4, Issue 6

U.S. Army Corps of Engineers—Gulf Region Division



Inside this issue:

CG/CSM Columns 3
Chief of Engineers Visit 4 - 5
Coalition's Legacy 6
Baghdad Hospital 7
Supporting 4th Iraqi Army 8
Care Packages from Home 9
Outpost Resident Office 9
Alwaiya Hospital 10 - 11
Aqra Power Lines 12 - 13
Ninewa Schools 14
Construction Rollup 15
Mosul Pump Stations 16
Camp Speicher Projects 17
ABOT project 18 - 19
Hail and Farewell 20



Photo by Lana Aziz

Then Gulf Region North district commander Col. Frederick Wolf, U.S. Army Corps of Engineers, poses for a photo with several Iraqi children in the Ninewa province. The children wrote their names on their arms in English so American Soldiers could pronounce them.

ESSAYONS FORWARD

USACE-GRD, Baghdad APO AE 09348 DESK: 540-665-5344* *CONUS area codes

ESSAYONS FORWARD is the field magazine of the Gulf Region Division, U.S. Army Corps of Engineers, in accordance with AR 360-1. It is produced for electronic distribution with limited hardcopy circulation as needed. It is produced in the Iraq theater of operations. The views and opinions expressed in this field magazine are those of the writers and are not necessarily those of the U.S. Army Corps of Engineers, or the Department of Defense.

Letters, articles, notices of events, photographs and art are welcomed, but may be edited for clarity or brevity. Publication of submissions is at the discretion of the editor; all photos must be high resolution and include caption information.

Submissions can be emailed to: CEGRD.PAO@tac01.usace.army.mil

ESSAYONS FORWARD is on-line: www.grd.usace.army.mil/news/Essayonsforward

Commanding General: Brig. Gen. Michael J. Walsh

Division/District Public Affairs staff:

- Grant Sattler (Chief PAO, GRD) * Kimberly Mielcarek (Deputy PAO, GRD) * Erich Langer (GRD)
- Travis Edwards (Editor, GRD) * Julie Cupernall (Broadcaster, GRD) * J. Anajar (GRD) * Lee PAO (GRD) * Shahrazad (GRD)
- S. Ahmed (GRD) Norris Jones (GRC) * Troy Rolan (Broadcaster, GRC) * LuAnne Fantasia (GRN) * Lana Aziz (GRN)
- Lisa Coghlan (GRS) * Mohammed Aliwi (GRS) * A. Al Bahrani (GRS)
- * Steve Wright (GRD-PA Rear, TAC)

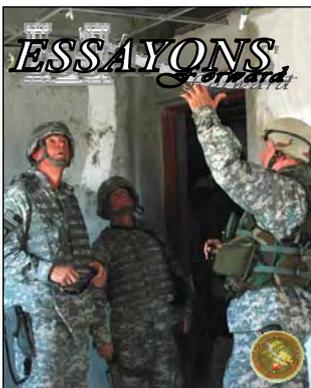


Photo by Lisa Coghlan

(Cover) Lt. Gen. Robert L. Van Antwerp, Chief of Engineers and Commanding General, U.S. Army Corps of Engineers, visits a project site near Nasiriyah, Iraq in the Gulf Region South district area of responsibility.

KEEP IT LOCKED ON...

Al Asad	107.3 FM	Kirkush	107.3 FM
Ali Base	107.3 FM	Mosul	105.1 FM
Ar Ramadi	107.3 FM	Q-West	93.3 FM
Baghdad	107.7 FM	Taji	107.3 FM
Balad	107.3 FM	Tal Afar	107.3 FM
Fallujah	105.1 FM	Taqqadum	107.3 FM
Kirkuk	107.3 FM	Tikrit	100.1 FM

Freedom Radio

Commander's Two Bits

In July we said farewell to three warrior district commanders: Colonels Debra Lewis, Frederick Wolf, and Gary Johnston.

These leaders and their staffs have conducted their missions during a time of unprecedented challenges and opportunities in Iraq.

This summer marked the first anniversary of the new Government of Iraq – a government that has the eyes of the world upon it as it develops and tests the foundation from where it must stand. Our warrior commanders have in a way helped to do just that.

During Col. Lewis' tenure at the Gulf Region Central district she and her staff executed 700 new projects valued at more than \$1.7 billion. They completed 682 projects for the Iraqi people and Coalition forces valued at more than \$1.2 billion

She made her presence felt across 55,000 square miles as she met with sheikhs, tribal leaders, provincial governors, and national ministers. She leaves not only improved facilities and infrastructure, but a legacy of leadership.

During Col. Wolf's tenure at the Gulf Region North district he and his staff helped to forged teams and build a consensus in an increasingly complex military and political environment. He dealt quickly and decisively with the continued escalation of terrorism and Anti-Iraqi Forces activities and the increased reconstruction work in his district.

He and his staff managed a program valued at more than \$1.4 billion positively affecting more than six million Iraqi citizens and thousands of Coalition service members.

During Col. Johnston's tenure at the Gulf Region South district he and his staff's active engagement with nine provincial governments - council members, governors, ministerial director generals, engineers, and Provincial Reconstruction Development Councils — helped ensure work could be accomplished in this complex region

He and his staff have continued to make significant and lasting progress delivering on the promise of the reconstruction program in Southern Iraq completing more than \$1.5 billion worth of projects across 64,000 square miles of Iraq.

All eyes are now on our new warrior commanders: Colonels Bob Vasta of GRC, Michael Pfenning of GRN, and Stephen Hill of GRS. Col. Vasta's experience working with Japan - a Coalition partner in the Global War on Terror, Col. Hill's diverse experience in the Pittsburgh district, and Col. Pfenning's experience in the reconstruction of the Gulf Coast will all help the Gulf Region Division continue with its mission of providing quality construction, fast.

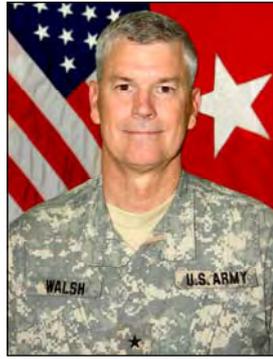
These commanders and their veteran staffs understand the importance of nurturing relationships, expanding capacity development opportunities and communicating with the Government of Iraq.

We all are serving during a challenging time when our efforts toward completion of reconstruction are increasingly important to the stability of Iraq. Success in Iraq not only influences this region, but that of the world.

We continue to move forward - let's "get 'er done."

ESSAYONS!

Brig. Gen. Michael Walsh
Gulf Region Division
Commander



Command Sgt. Major's Message

Force protection is everyone's responsibility. Here in Iraq your individual level of awareness must permanently remain high. It is every one's duty to report any suspicious and unusual activities or information. It is my duty to ensure the policies regarding force protection are

enforced.

We have many highly trained and professional force protection service members in the Gulf Region Division. I encourage you to talk to them about your concerns or suggestions.

Force protection includes the commitment to maintain your personal protection equipment such as your interceptor body armor, Kevlar or the advanced combat helmet, and if you have them, your individual weapons. It is very important you keep these items clean and functional. Keeping your uniforms, boots, gloves and ballistic goggles clean and functional is part of this commitment to force protection.

While the "Big Voice" and "C-RAM" provide a small measure of warning to certain incoming enemy fire, awareness is a key factor in safely conducting business in a combat zone. Before you go outside, stop to look around and see if others are moving around the compound. It is not uncommon for a person to walk outside during a lockdown and not realize they are breaking the rules and endangering themselves.

Every one of us must comply with the current uniform standards for different threat levels as well as checking our battle buddies' uniform posture. Do not add personal items that are not authorized to the body armor. Some people's body armor look like Christmas trees with multi-colored pouches. The only things authorized to be attached to the IBA are accessories for ammo, first aid equipment, and weapons in olive drab green, tan, or the digital Army Combat Uniform pattern camouflage.

Force protection also includes knowing the procedures to follow in case of an unexpected light or heavy attack. You need to know what to do if you are in an open area during an attack. Drop to the ground if you cannot reach a hardened shelter or bunker within two seconds. You need to memorize locations of rally points, bunkers, and first aid kits. Also, it is important to recognize the behavior of individuals sending messages or making phone calls during the attack or right after the attack. You must report such activity immediately to your supervisor or to our G-2 or security officer or NCO.

In the case of an attack employees must know what to do as they depart their workstation, seek cover, and begin accounting for all the members of this team. This is necessary and extremely important so that we may determine the scope of the damage or lack thereof. Take care of those who need a little more help in coping with these stressful situations.

Take a moment to think about your personal force protection awareness...it could save your life.

ARMY STRONG,
ENGINEER READY!

Command Sgt. Maj. Eloy Alcivar
Gulf Region Division
Command Sergeant Major

Chief of Engineers Praises Ongoing Work To Rebuild Iraq



Photo by Norris Jones

by Norris Jones
Gulf Region Central

BAGHDAD, Iraq – The United States Army’s 52nd Chief of Engineers visited Gulf Region Division and its three districts June 22 and spoke highly of the staffs’ ongoing efforts to help rebuild Iraq.

During a Gulf Region Central district town hall meeting at Camp Victory, Baghdad, Lt. Gen. Robert L. Van Antwerp said, “When I look at your board of pictures, at who is in a Resident Office, in the Resource Management Office, or the Contracting Section, I see the work you do is of a magnitude for the size of the teams you have. That’s just phenomenal.”

He provided his insight about the word “T-E-A-M”.

The ‘T’ is for trust, “and I think we’ve got some work to do here.”

The ‘E’ is for excellence. “I think it’s so important that we deliver not just projects, and not just on time, but projects that will stand the test of time.”

The ‘A’ is for “all about people.” He noted that when newcomers arrive in Iraq and step into this environment, it can be a lonely experience. He recognized everyone

for welcoming those people to the team. “If you’re going to have a world-class organization, you have to attract world-class people. And what attracts them? You have to have a mission that has a purpose and we have that. People can get more experience with us in a short period of time than anything they could do anywhere else. We need people of character in the Corps of Engineers. In this room, one of the things that describe all of you is that you

He pointed out that when they called and asked if he would be willing to be the Chief of Engineers and go another four years – “that was an interesting question – ‘Are you willing?’”

At that time Van Antwerp had 35 years service and was already a lieutenant general.

He continued, “In a job like you are in, you have to come to grips sooner or later, with the question that makes your life worth living. My wife and I and our kids

have decided that it’s only worthwhile if we live it for someone else. If you’re just living it for yourself, being selfish and just thinking about yourself all the time - that gets old. Our motto is ‘the only life worth living is a life doing

things for others.’ And I want to tell you, you all are doing things for others on a big scale, both in your internal group and then external. I think it’s crucial.”

He noted the districts are centered in one of the most dangerous places in the world, “and I don’t have to tell you how important it is to get this right.” He said, “What happens in Iraq is a strategic corporal [a project or program that has strategic implications for the whole

“Our reputation rests with you to a great degree. So go out there and deliver.”

Lt. Gen. Robert L. Van Antwerp
Chief of Engineers, U.S. Army

are people of character.”

The ‘M’ is for motivating. He questioned “how does one keep their motivation?” He then singled out Gulf Region Central district’s Chief of Contracting Sherry Gaylor and asked her how many overseas expeditionary tours she’d done. Gaylor answered “11 tours.” He asked, “What keeps you motivated?” She responded, “the people.” Van Antwerp agreed.

organization]. What you do, and I don't want to put rocks in your rucksack, but the truth is a lot of our reputation is being built here and gained here - you are so much a part of that."

He explained his six priorities.

"The first one is to support the Global War on Terrorism and expeditionary missions" and GRC is definitely part of that.

The second priority is to enhance the quality of life of Soldiers and their Families, Civilians and their Families, "and we've added one for the Corps of Engineers ... the public."

The third priority is to complete the transformation of the Theater Engineer Commands.

The fourth priority is to enable the Gulf Coast recovery.

The fifth priority is to plan and prepare for disaster relief.

And the sixth priority is to deliver military programs, civil works, research and development.

"The verb 'deliver' is very important. To get customer satisfaction, you've got to deliver what they need. It means you're working with stakeholders," he said, "I know this is a tremendously hard environment, but a lot of our reputation is on delivery."

Along with those priorities are three tenets: communicate transparently, focus on the mission, and teaming. On that final tenet, Van Antwerp said the Corps of Engineers has about 35,000 employees, and their contractors involve another 300,000 people. "Can a project be delayed or not delivered because a contractor doesn't do what we've asked them to do? Yes. So they aren't just a partner, they can make or break us. They've got to be part of the team."

It is Lt. Gen. Van Antwerp's intention to take the U.S. Army Corps of Engineers from a good organization to a great organization and he is using those six priorities and three tenets as the foundation of that effort.

"I want to say thanks from the bottom of my heart for the heavy lifting you're doing for the Corps and the Iraqi people. You are one of the strategic corporals. Our reputation rests with you to a great degree. So go out there and deliver."

(Opposite page) Lt. Gen. Robert L. Van Antwerp, speaks to approximately 200 engineer and Corps personnel about his vision for the organization at Victory Base Complex near Baghdad, Iraq, June 22.



Photo by Lisa Coghlan

(Above) Lt. Gen. Robert L. Van Antwerp, Chief of Engineers, U.S. Army Corps of Engineers, visits a project site near Nasiriyah, Iraq, June 23 in the Gulf Region South district area of responsibility. (Below) Lt. Gen. Robert L. Van Antwerp, Chief of Engineers, U.S. Army Corps of Engineers, poses for a photo with the staff of the Gulf Region North district near Tikrit, Iraq, June 24.



Photo by LuAnne Fantasia

Will Engineering Efforts Be Coalition's Legacy In Iraq?

by Norris Jones
Gulf Region Central

BAGHDAD, Iraq – “You are the pros coming from all corners of the U.S. Army Corps of Engineers world,” said Brig. Gen. Vincent K. Brooks, speaking to the diverse group of civilians and military comprising the Gulf Region Central district.

Brooks, the deputy commanding general for Support, Multinational Division Baghdad, was a keynote speaker for a two-day senior leader conference hosted July 1-2 at the GRC headquarters on Victory Base Complex, Baghdad.

He talked about the years of decay in Iraq's infrastructure. “And so the challenge you face, in concentrating your efforts as world-class engineers to leave the situation better than you found it, is harder than you could ever imagine,” Brooks said.

“You have to be an All-Star Team because average work is simply not going to be adequate. Only above average work, superb work, excellent work, will give us even a chance to progress further than we are right now,” Brooks said. He also said that Iraqis have very high and often unrealistic expectations of the United States.

He encouraged those attending to partner with the 20 Brigade Combat Teams in Iraq, local Iraqi Neighborhood and District Councils, the Provincial Reconstruction Teams, the Amanat (City of Baghdad's government), Beladiya Director Generals, and various Iraq National Ministries in ongoing reconstruction efforts.

“This is a rich country. It has all kinds of resources. It has everything every other country in the world wishes it had. They haven't been able to tap into their own wealth because of internal politics and the decrepitude...due to their inheritance from a socialist regime,” Brooks said. “They have oil, water, arable land, an industrious people, and a history unparalleled throughout the world - it's all here.”

Brooks said the riches of Iraq had not been committed at this point and “we have to stimulate that commitment.”

His final point touched on the long-term legacy of the Coalition's investment in Iraq, having lost 3,750 lives and expended billions of dollars.

Brooks said he often hears about the British experience at the end of World War I. Many of Iraq's strongest institutions were generated at that point. Bridge construction became the legacy of the British. There is a term they use to refer to the British at that time – they call it ‘Abu Naji.’ They harken back to the excellent engineer work of Abu Naji, not Abu Naji's benevolence, not the

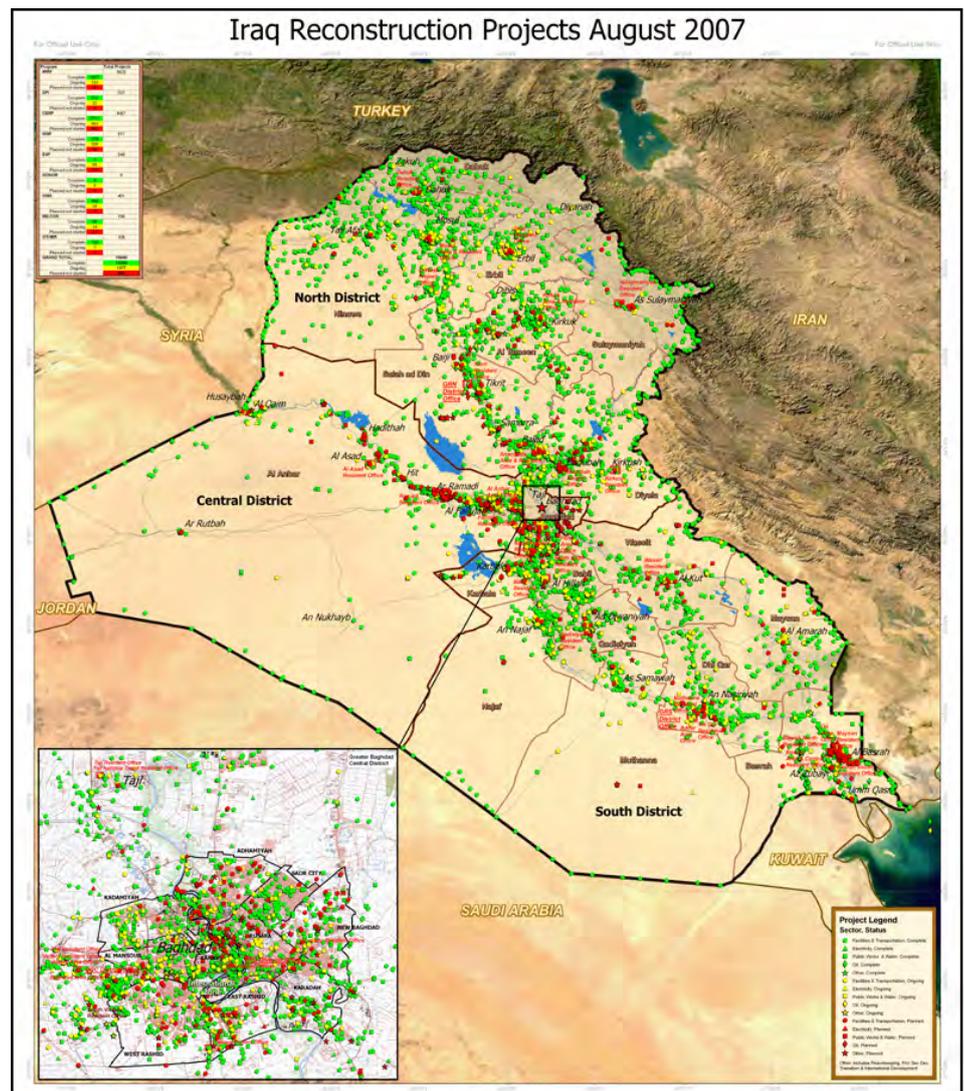
things that helped them build government, but the bridges.

“I wonder what the legacy will be when they think back to the experience of the United States, 80 years hence. If it's like Abu Naji, it's going to be what the engineers left. It will be things that are iconic of presence and commitment, especially if it's done well and it endures over time,” Brooks said.

Following his talk, Brooks opened it up to questions and spoke about the importance of providing access and context to media, especially Arabic language journalists, so those in Iraq and neighboring countries know and understand what is going on here. “It's not their responsibility to provide context, it's yours,” he charged.

Brooks, the U.S. Army's former Chief of Public Affairs, pointed out that Multinational Division Baghdad has more embedded reporters since November when they took over than the previous three years combined. “We opened the doors up ... access plus context gives the potential for accurate content.”

Colonel Lewis, GRC commander, thanked the general Brooks for making GRC part of his team. “That has made it possible for us to do so much more,” she said.





Improvements Continue At Trauma Center

by Norris Jones
Gulf Region Central

Baghdad, Iraq – It is the U.S. military’s busiest trauma center in the world.

Ibn Sina Hospital, built in 1964 and located in Baghdad’s International Zone, has been operated by the U.S. Army since October 2003. It has handled more than 13,000 emergency room visits, air evacuated over 10,000 patients, taken over 60,000 X-rays, accomplished 14,500 surgical hours, and provided 33,000 units of blood.

U.S. Army Corps of Engineers (USACE) is overseeing a \$21.3 million Operations and Maintenance contract that includes funds for the repair and improvement of the 43-year-old structure.

“Currently we are renovating its laboratory area with new floors, counters and cabinets,” said Dennis Graham, the USACE project engineer.

“To date over 165,000 lab tests have been conducted there and these improvements will enhance the turn-around time,” he said.

He also noted renovations were continuing on the wards and living units as they strive to improve the quality of life for the wounded soldiers and staff. “We constantly are trying to make things better.” The hospital is currently manned by the 28th Combat Support Hospital from Ft. Bragg, NC.

“When a fallen Aoldier

comes through the hospital doors, they have a 96 percent chance of survival,” Graham is proud to point out.

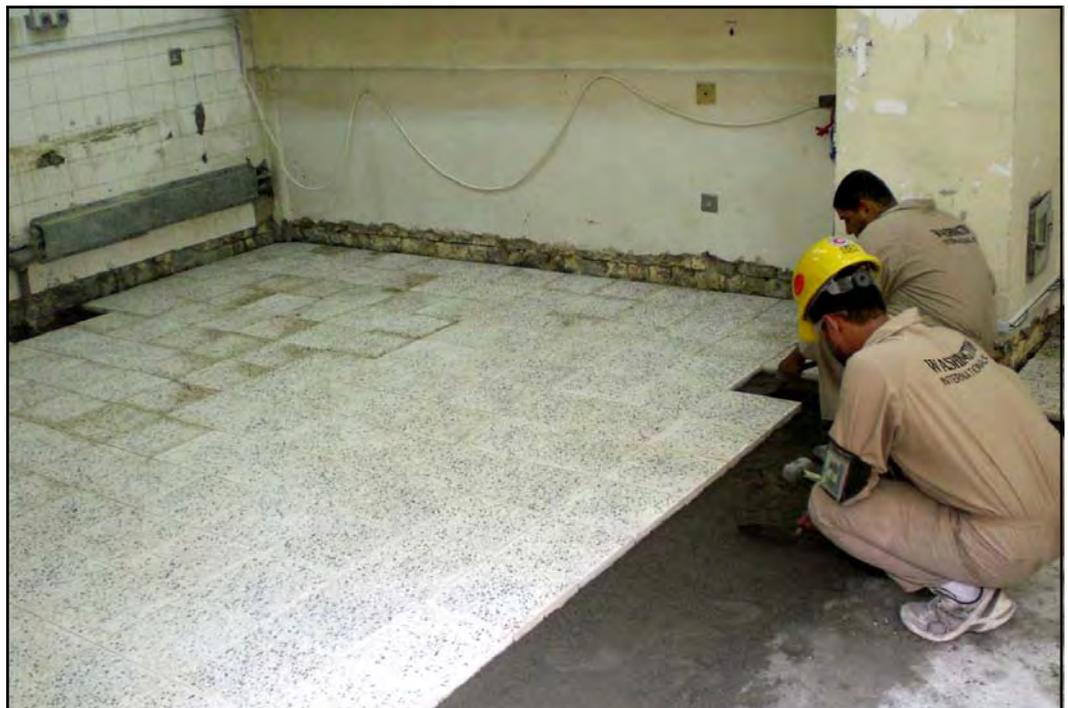
The Army obviously has some of the best doctors and nurses anywhere, he said. “This facility truly is a ‘House of Angels.’”

Graham has helped oversee a variety of renovations there since first reporting to Iraq in March 2005. Those projects include the construction of an outpatient clinic, a dental clinic, blood bank, “Return to Duty” barracks, a chapel, new central suction system, new oxygen storage building, and CT scanner placement. “It’s been an honor to be part of this effort,” he concluded.



U.S. Army photos

Ibn Sina Hospital has delivered 20 newborns over the past year of which most have come from the hundreds of Iraqi families living in Baghdad’s International Zone.



Iraqi workers install new flooring in the Ibn Sina Hospital in Baghdad’s International Zone. The hospital is currently staffed by the U.S. Army’s 28th Combat Support Hospital.

Beyond War Strategy and Weapons

USACE Supports 4th Iraqi Army

by Julie Capernall
Gulf Region North

TIKRIT, Iraq – Along with tactical training, infrastructure maintenance training is being used to ensure the success of the Iraqi Army.

Members of the U.S. Army Corps of Engineers Gulf Region North (GRN) district recently visited the 4th Iraqi Army Division headquarters at Forward Operating Base (FOB) Dagger in Tikrit. Their mission was two-fold – to continue good relations with the nearby base, and to see how the facilities there were being maintained.

In January 2006 the Corps of Engineers completed the installation of

six generators and switch gear, and a base-sustaining water treatment facility. These facilities were put in place to ensure that the basic needs of the Iraqi soldiers were being met allowing them to better keep their minds on their security and training mission.

The Corps also provided Preventative Maintenance Service and Checks (PMSC) training to members of the 4th Iraqi Army for the newly installed facilities. This training is important because often it introduces a new way of thinking to Iraqi workers. In Saddam's time, spare parts were scarce and maintenance was thought of as fixing something after it was broken. PMSC offers a new plan – maintenance to

ensure something does not break – actions like changing the oil and filters on a generator that can save thousands of dollars in spare parts and man-hours.

“It's a very impressive base. Everything we saw there was clean. We actually saw them changing the oil on one of the generators. They have consistent water. They have consistent electricity. The system is working right,” said Chris Nelsen, U.S. Army Corps of Engineers Gulf Region North, Tikrit Resident Office engineer.

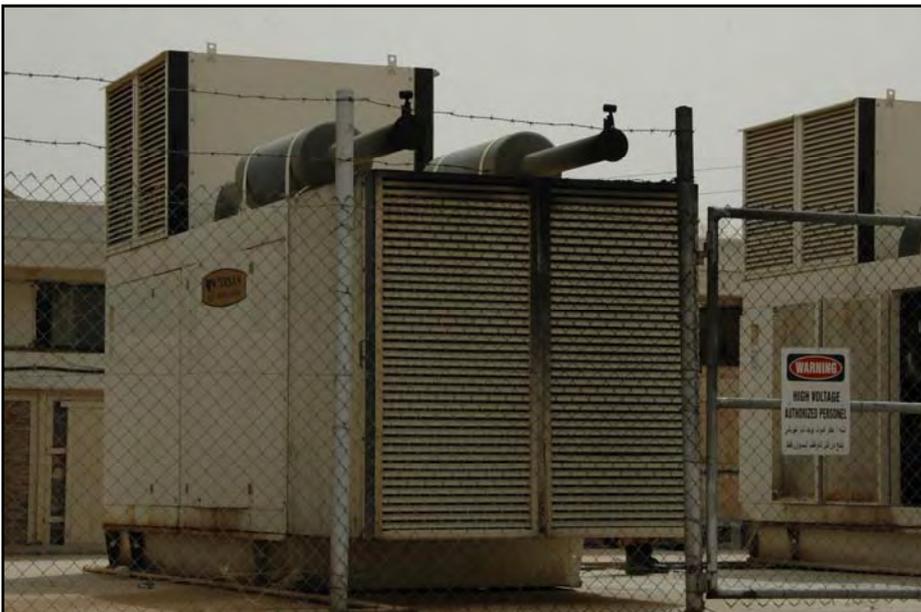
Preventative maintenance is sustaining the facilities at FOB Dagger, and the facilities are sustaining the morale of the troops there.

“We talked with the new commander of the 4th Iraqi Army and he is pleased. We sat in an office where the air conditioning was running and the electricity was on. They have water. The morale of the troops there is good because their basic needs are being met and that helps them fight the fight,” Nelsen said.

The U.S. Army Corps of Engineers Gulf Region North district was tasked with 1,500 projects in support of Operation Iraqi Freedom, at a cost of nearly 2.6 billion dollars. GRN has completed more than 1,100 of those projects.

(Left) In January 2006 Gulf Region North district completed the installation of six generators at Forward Operating Base Dagger in Tikrit. GRN also renovated three substation buildings, installed new switch gear and replaced underground electrical cabling to support the new infrastructure home of the 4th Iraqi Army Division.

(Lower left) A water treatment facility constructed by the U.S. Army Corps of Engineers on Forward Operating Base Dagger in Tikrit services the 4th Iraqi Army Division. The district also instructed members of the 4th Iraqi Army Division how to maintain the infrastructure keep the water flowing.



Photos by Lana Aziz





Photo by PAO Lee

Care Packages Motivate GRD Warriors

Service members and civilians of the Gulf Region Division work more than 65 hours a week, but there is always time to celebrate when care packages come from supporters back home. The most recent care package received in the Gulf Region Division included three case of coffee from a coffee company in the United States.

Lone USACE Soldier Runs Remote Office

by LuAnne Fantasia
Gulf Region North

SULAYMANIYAH, Iraq — It is one thing to deploy to Iraq, but the U.S. Army Corps of Engineers sent Master Sgt. Scott Horst to the edge of the northeastern most province - Sulaymaniyah.

In March, 45 Soldiers from the Bismarck-based 34th Engineer Brigade were called to active duty in support of Operation Iraqi Freedom. After being mobilized at Camp Atterbury, Ind., the unit deployed and was scattered to various positions in Iraq.

Horst, a Mandan, N.D. resident says he is doing well being the lone-Soldier at the Corps' remote office here.

Despite the intense heat, Horst said, "I like it here because the terrain reminds me of home," motioning toward the mountain range surrounding his camp.

"Thanks to excellent communications, I talk to my wife everyday, when her day is just beginning and mine is winding down," he said. And, with video camera capabilities, Horst sees his family on his computer...with no delay...to say

goodnight to them every night. "That alone makes this tour easier," he added. "If it weren't for that, this would be hard."

Horst is an Active Guard Reserve combat engineer Soldier, and a 22-year Army veteran.

In this tour, he is the noncommissioned officer in charge of this remote Corps office—which has quality control responsibilities for reconstruction projects in the province of Sulaymaniyah.

"The majority of our reconstruction projects are border forts, which are all on the border of Iraq and Iran," he explained. To date, 43 border posts and point-of-entry facilities have been completed in the Sulaymaniyah Province since Iraq's sovereignty in 2004.

Horst has a small support staff of local national engineers, and logistical and security personnel - he is the only American on the camp.

For Sulaymaniyah, Horst's area office currently has completed 83 projects; 11 are ongoing and 15 are planned to start.

These numbers reflect projects such as schools, water projects, courthouses, police stations and training facilities.



Army photo

Curing What Ails You: From

by Kim Mielcarek
Gulf Region Division

BAGHDAD, Iraq – Iraq is a country steeped in rich history, and its individual structures are no different. Each building has its own story to tell those willing to listen.

The Alwaiya Children’s Hospital, located in the busy Karadah district of Baghdad, once served as a nightclub for Baghdad Jews in the 1940s. During World War II, many of Iraq’s Jews left the country and headed to Palestine – leaving behind vacant buildings, which the Government of Iraq bought to put to other uses.

In the late 1940s, the vacant Jewish social club was turned into a government-run general clinic. Most of the hospitals and clinics were run by foreign doctors because the country only had one medical school and was not producing enough doctors to staff all of its hospitals and clinics. Due to the shortage, the hospital was turned into a specialty facility in the 1970s, focusing its care primarily on children.

What is more momentous is that in the 1970s, the hospital became one of the first in the country to be staffed by all Iraqi doctors. An adjacent building was purchased in the 1980s to serve as an outpatient clinic.

In 2004, the U.S. Army Corps of Engineers (USACE) began the first complete renovation on the facility in more than 65 years. The \$2.6 million project was done in three phases – an assessment phase, a renovation of Building One, and a renovation of Building Two. The project was laid out in this manner in order to keep the facility open and treating the more than 1 million children it serves throughout the renovations.

“Since the facility was first built, only minor renovations had been done on it,” said Anmar Abdul Kareem, the deputy program engineer for USACE’s Gulf Region Central district. “Improvements

Workings finish tiling the breezeway between the two buildings that make up the Alwaiya Children’s Hospital in Baghdad’s Karadah district.



Photo by Erich Langer

Nightclub To Hospital

like repainting hallways and doing small electrical or plumbing repairs.”

Many renovations were done incorrectly and not up to international building codes, Abdul Kareem said.

“When the initial assessment was done, we found four different roofs layered on top of each other – which was too heavy and made the building structurally unsound,” he said. “We also found stairs layered over old sets of stairs, and sewer pipes placed atop old sewer pipes.”

Renovations began in 2004. Each building was gutted, then new walls and floors, electrical and plumbing systems, heating and ventilation systems, lighting and clean air systems were installed.

Upgrades included a communication paging system, a reverse osmosis system, an emergency lighting system, and Internet access from each patient bed.

The project, which is scheduled for completion in August 2007, will bring the Alwaiya Children’s Hospital into the forefront in medical care for children.

Baghdad currently has four hospitals that focus on children’s care, but Alwaiya is the only one that received a complete makeover by the U.S. Government, according to Ahmed Al Barak, the quality assurance project engineer for USACE’s Gulf Region Central district.

“The other (children’s) hospitals in Baghdad have received assistance from humanitarian efforts,” Al Barak said. “Renovations, such as new paint jobs or minor electrical repairs or medical consumables, have helped the other facilities, but none have received the extensive upgrades that Alwaiya has.”

Throughout the construction work, the hospital has remained open and seeing patients. When the entire project is completed, there will be 120 beds for patients – many of whose parents come from other provinces and seek out Alwaiya to receive top care for their children.



Photo by Erich Langer

(Above) A doctor administers intravenous medication to a boy while his father holds him at the Alwaiya Children’s Hospital in Baghdad’s Karadah district. (Below) A baby gets assistance breathing in an incubator at the Alwaiya Children’s Hospital in Baghdad’s Karadah district.

“We have 26 Iraqi doctors working at the hospital,” said Dr. Tarif Fazil, the director of the Alwaiya Children’s Hospital. “During peak season, very warm weather or very cold weather, we can see up to 1,000 patients a day. We

don’t admit that many, however.”

Alwaiya continues to make history. From nightclub to state-of-the-art children’s hospital, the building stands fast to continue fulfilling the needs of Iraqis.



Photo by Erich Langer

أبراج البث "تعزيز اكبر الطاقة"

بقلم: جولي كوبرنال

فيلق مهندسي قطاع الشمال

عقرة-العراق

ان فيلق مهندسي الجيش الامريكي في المنطقة الشمالية يعمل على توفير المزيد من الطاقة الكهربائية التي تغذي حوالي 30,000 نسمة من العراقيين المقيمين في مدينة عقرة الواقعة في شمال العراق. وتبعد هذه المدينة بحوالي 85 كيلومترا عن مدينة دهوك.

وفي كانون الاول / ديسمبر 2006 تم تخصيص ما يقارب 18.2 مليون دولار لمشروع خط ربط شبكة دهوك الكهربائية بالشبكة الفرعية لمدينة عقرة.

كيلومتر هو طول الخط المزدوج 132 للدائرة الذي سيكون على قمم أبراج نقل الطاقة الكهربائية التي

تتخلل الطريق الجبلي.

انه مثال رائع ان اي عمل يمكننا القيام به بالتعاون مع الحكومة العراقية لتحقيق طاقة اكثر للمنطقة " ،

القائد العقيد فريدريك وولف.

من المقرر ان ينتهي المشروع في يوليو.

وقد قام فيلق المهندسين في القطاع الشمالي بالبدء بتنفيذ 1,500 مشروع وبكلفة 2.6 مليار دولار. تم انجاز اكثر من 1,100 من تلك المشاريع.

وتم تخصيص 18,2 مليون دولار لخط النقل الذي يحتوي على 299 برج لنقل الطاقة والذي يمتد حوالي 85 كم بين دهوك وعقرة لتوفير المزيد من الطاقة التي يعتمد عليها السكان الذين يبلغ عددهم 30,000 نسمة في قضاء عقرة.



Transmission Towers Bring ‘More Reliable Power’

by Julie Cupernall
Gulf Region North

AQRA, Iraq - The U.S. Army Corps of Engineers Gulf Region North district is working to bring more reliable power to 30,000 Iraqis living in the town of Aqra in northern Iraq. Aqra is a rural city about 85 kilometers from the city of Dahuk.

In December 2006, GRN began an \$18.2 million overhead line project to connect the Dahuk electricity substation to the Aqra substation. The 132 kilovolt double circuit line will be strung atop 299 power transmission towers along the mountainous route.

Where the terrain permits the power transmission towers are being erected by crane. In other locations the assembly of the towers is done by hand with block and tackle. The towers range between 30 and 40 meters tall and typically take approximately 345 man-hours to construct.

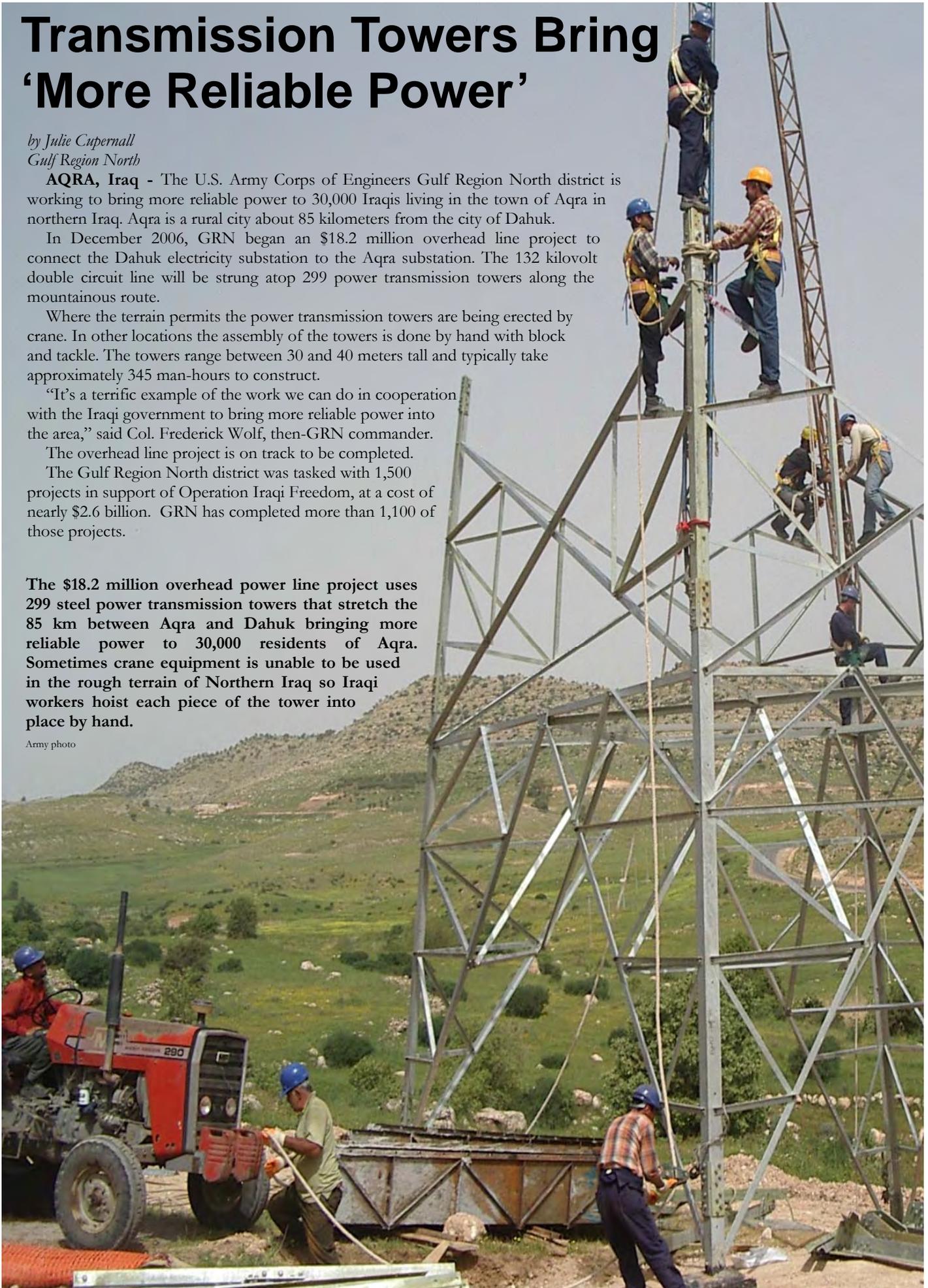
“It’s a terrific example of the work we can do in cooperation with the Iraqi government to bring more reliable power into the area,” said Col. Frederick Wolf, then-GRN commander.

The overhead line project is on track to be completed.

The Gulf Region North district was tasked with 1,500 projects in support of Operation Iraqi Freedom, at a cost of nearly \$2.6 billion. GRN has completed more than 1,100 of those projects.

The \$18.2 million overhead power line project uses 299 steel power transmission towers that stretch the 85 km between Aqra and Dahuk bringing more reliable power to 30,000 residents of Aqra. Sometimes crane equipment is unable to be used in the rough terrain of Northern Iraq so Iraqi workers hoist each piece of the tower into place by hand.

Army photo



NINEWA SCHOOLS NEAR COMPLETION



by Julie Cupernall
Gulf Region North

MOSUL, Iraq – The future of Iraq lies in the hands of its youngest citizens, and the future of those children lies in their ability to get a quality education.

The U.S. Army Corps of Engineers (USACE) recognizes this important connection and places a high priority on school building and rehabilitation in its mission to jumpstart infrastructure reconstruction in Iraq.

USACE Gulf Region Division's Gulf Region North (GRN) district is working on 12 new schools in the city of Mosul in Ninewa Province, Iraq. Once completed, each school will accommodate 150 to 300 students and teachers.

"The children are what make the school projects worthwhile. They love school. They love their books," said Lisa Lawson, USACE GRN project engineer. "This is part of the process for turning the tide for the future of Iraq."

GRN has nine additional schools planned for construction in the Ninewa Province.

The U.S. Army Corps of Engineers Gulf Region North district was tasked with 1,500 projects in support of Operation Iraqi Freedom, at a cost of nearly \$2.6 billion. GRN has completed more than 1,100 of those projects.

الانتهاء تقريبا من اعمار المدارس في الموصل

بقلم: جولي كوبيرنال

فيلق مهندسي قطاع الشمال

الموصل ، العراق- ان مستقبل العراق يكمن في يد اطفاله الذين سيحققون التقدم للبلاد بعد حصولهم على افضل مستوى للتعليم .

يعطي فيلق المهندسين الامريكي قطاع التعليم اهمية كبيرة واولوية بالغة من خلال بناء واعادة تأهيل المدارس كخطوة اولية ومهمة في اعادة بناء البنية التحتية في العراق .

(فيلق المهندسين في القطاع الشمالي) يعمل على انشاء 12 مدرسة جديدة في مدينة الموصل في محافظة نينوى ، وتستوعب كل مدرسة من 150 الى 300 طالب واستاذ .

"الاطفال هم من يجعلون لهذه الامدارس الالهية لانهم يحبون المدارس ويحرصون على الدوام فيها ويحبون كتبهم" هذا مقالته مهندسة المشروع ليزالوسن. هذا هو اهم جزء في المجتمع يسهم في تقدمه وتطورة .

ويتم التخطيط ايضا لانشاء 9 مدارس جديدة في محافظة نينوى .

ان مشاريع فيلق المهندسين الامريكي/ قطاع الوسط قد قامت بالتخطيط لانجاز 1,500 مشروعا لدعم عملية تحرير العراق ، وبكلفة 2.6 مليار دولار. وقد تم تنفيذ اكثر من 1,100 من تلك المشاريع .



Army photo

Workers apply a finish to an exterior wall of a two storey school in Mosul. The school is one of 12 currently being built by the U.S. Army Corps of Engineers Gulf Region Division's Gulf Region North district in Ninewa Province. The six and 12 classroom schools will accommodate between 150 and 300 students.

Construction Rollup: Project Starts, Completions

BAGHDAD, Iraq – The U.S. Army Corps of Engineers Gulf Region Division completed 112 construction projects between June 30 and July 27, 2007 – bringing the total number of completed projects to 3,998.

Currently, there are 576 construction projects ongoing – all funded through the Iraq Relief and Reconstruction Fund, the Development Fund for Iraq, the Commander's Emergency Response Program, the Economic Support Fund and the Iraq Security Forces Fund.

Water projects that were completed this month include three network projects in Sadr City in Baghdad Province – valued at \$1.9 million. Each potable water project included laying water pipe mains, water service connections, fire hydrants, and feeder pipes and connections, plus all associated facilities for the Baghdad Amanat. The three projects will benefit more than 60,000 Sadr City residents.

Three rural water projects also were completed in Al Anbar Province – Al Kanater, Al Thabtea and Al Sekar. Each project – costing \$180,000 each – installed rapid filter systems with a 45 gallon water capacity to each area to provide safe, potable drinking water to more than 12,000 area residents.

Two road construction projects that were completed this month include the Mosul to Baghdad paving project (\$1.7

million) in Salah ad Din Province, and the Showairrej to Tak Harb paving project (\$1.5 million) in Ninewa Province. Both projects will improve safety travel conditions for residents and contribute to better economic activity.

Other GRD reconstruction:

Due to added capacity and normal operation and maintenances of systems, electrical generation is at 4,761 megawatts, with an end goal of 6,000 MW and 1.3 million homes served. Electrical generation megawatts are dynamic, owing to interdiction of lines by insurgents and unscheduled maintenance.

Potable water is at 540,000 m3/day with 2.3 million people affected with an end goal of 3.1 million m3/day and an end goal of 5.2 million people affected.

GRD met its end goals set for crude oil production capacity - 3 million barrels per day; LPG production - 3,000 metric tons per day; natural gas production capacity – 800 million standard cubic feet per day.

Throughout Iraq, U.S. government ongoing projects contribute to the ever-improving quality of life and economic stability – helping provide the foundation for the country to build upon as it overcomes a generation of neglect.

تصعيد البناء

بدء المشروع , انجازه

بغداد ، العراق - فيلق المهندسين الامريكى/ فرقة منطقة الخليج.

اكملت الفرقة انجاز 112 من مشاريع البناء في الفترة بين 30 حزيران و 27 تموز ، 2007 وبذلك يصل اجمالي عدد المشاريع المنجزه الى 3,998.

وهناك حاليا 576 مشروعا من مشاريع الاعمار التي يجري العمل بها جميعا والتي تمول جميعها من صندوق اغاثة واعمار العراق و صندوق تنمية العراق، وبرنامج الاعانة الطارئة للقادة الميدانيين ، وصندوق الدعم الاقتصادي الذي يساهم ايضا في دعم قوات الامن العراقية .

ان المشاريع التي تم انجازها خلال هذا الشهر والتي تشمل ثلاثة مشاريع لشبكة المياه في مدينة الصدر في بغداد والبالغة تكلفتها 1.9 مليون دولار. من ضمنها مشروع مياه

الشرب الذي شمل نصب أنبوب مياه رئيسي للشبكة ، وخدمات المياه ، بالاضافة الى جميع المرافق المرتبطه بامانة بغداد. وسيستفيد من المشاريع الثلاثة اكثر من 60,000 مواطن من سكان مدينة الصدر.

تم انجاز ثلاثة مشاريع لمياه المناطق الريفية في محافظة الانبار ، ان المشاريع التي تبلغ كلفتها 180,000 دولار والتي تقوم بتركيب أنظمة الترشيح السريع ذات قدرة تصل الى 45 الف غالون من مياه الشرب النقيه الى 12,000 مواطن من سكان المنطقه .

هناك مشروعات من مشاريع الطرق التي تم الانتهاء منها هذا الشهر والمشروع الاول يشمل طريق الموصل -بغداد وبكلفة 1.71 مليون دولار في محافظة صلاح الدين ، اما المشروع الثاني وبكلفة (1.5 مليون دولار) فهو في محافظة نينوي. كلا المشروعين يساهم في تحسين النشاط الاقتصادي .

ومن الجهود الاخرى لفيلق مهندسي الجيش الامريكى هي بالاضافة الى الصيانة والتشغيل

العادي لنظم توليد الكهرباء تم اضافة 4,761 ميغاوات ، والعمل على الوصول الى 6,000 ميغاواط و الذي يخدم 1.3 مليون بيت. ان عملية التوليد هي عملية متغيرة بسبب استهداف المخربين لخطوط نقل الطاقة واعمال الصيانة المفاجئة . توفير مياه الشرب بطاقة 540 الف م3/يوميا الى 2.3 مليون شخص متضرر مع العمل على الوصول الى الهدف النهائي 3.1 مليون م3/يوميا والذي يخدم 5.2 مليون شخص متضرر. فيلق مهندسي الجيش الامريكى لمنطقة الخليج حدد الاهداف لانتاج النفط الخام - 3 مليون برميل في اليوم ؛ انتاج غاز البترول المسال - 3,000 طن متري يوميا ؛ الغاز الطبيعي بطاقة انتاجيه 800 مليون قدم مكعب قياسي يوميا. في جميع انحاء العراق ، تسهم حكومة الولايات المتحدة في المشاريع الجارية باستمرار لتحسين نوعية الحياة وتحقيق الاستقرار الاقتصادي - والمساعدة على توفير الأساس لبناء البلاد بعد ان عانت من الازمة.

Mosul Water Pump Stations Support Iraqi Security Mission

by Julie Cupernall
Gulf Region North

MOSUL, Iraq – The U.S. Army Corps of Engineers Gulf Region North district is turning water faucets on in Mosul homes with the recent completion of five water pump station projects in that city.

Mosul is one of Iraq's largest cities with more than 1.5 million residents. Water pump stations are an important part of any city's infrastructure – they are what keep water moving between a water source, water treatment facilities and consumers.

Beyond alleviating water shortages, the newly refurbished pump stations will combat illnesses associated with drinking unclean water – a danger to the very

young and very old.

"It's a joy to see the effects on the community and the security situation in an area when the people realize that their lives will be positively impacted as a

infrastructure reconstruction such as this is the blow it delivers to the insurgency. Clean water makes life easier for the Iraqis who are connected to the refurbished water pump stations in Mosul – and when life is easier joining the insurgency is less enticing.

"In nearly every community supported by a water sector reconstruction project the security situation has improved upon completion of the project," Munro said.

The U.S. Army Corps of Engineers Gulf Region North district was tasked with 1,500

projects in support of Operation Iraqi Freedom, at a cost of nearly 2.6 billion dollars. GRN has completed more than 1,100 of those projects.

"In nearly every community supported by a water sector reconstruction project the security situation has improved upon completion of the project."

— Maj. Jennifer Munro

Gulf Region North, Mosul Area Engineer

result of one of our infrastructure reconstruction projects," said Maj. Jennifer Munro, Gulf Region North's Mosul Area Engineer.

A welcome secondary effect of

يوسيس تدعم امن الموصل بالمياه النظيفة

هذه المهمة التي تشكل
ضربة الى المتمردين
والارهاب.

ان المياه النظيفة ادت
الى جعل الحياة اسهل
بالنسبة للعراقيين الذين
ترتبط حياتهم اليومية
مع التجديد في محطات
ضخ المياه في الموصل
مما يسهل حياة المواطنين
ويكون الاغراء الى
الانضمام الى الارهاب
اقل.

الصالحة للشرب الغير
نظيفة التي تشكل خطرا
على الصغار والطاعنين في
السن.

انها فرحة ان نرى "
تأثيرها على المجتمع

"الوضع الامني في كل مجتمع تقريبا يدعم ويساهم بشكل اساسي في
اكمال مشاريع اعادة اعمار قطاع المياه"

الرائد جنيفر مونرو

فيلق المهندسين-القاطع الشمالي - مدينة الموصل

في كل مجتمع تقريبا "
قطاع المياه يدعم مشروع
اعادة الوضع الامني وتحسنه
عند اكمال المشروع"،
قال مونرو. الجيش
الامريكي فيلق المهندسين
الخليج منطقة الشمال
تقوم بانجاز 1,500 مشروع
لدعم عملية حرية العراق
، بتكلفة حوالى 2.6
مليار دولار.

وتأثيرها على الوضع الامني
في المنطقة عندما يدرك
الناس بأن حياتهم ستكون
افضل كنتيجة تحسن احد
البنى التحتية في مشاريع
اعادة الاعمار"

وقد قال الميجور جنيفر
مونرو ، مهندس منطقة
الخليج الشمالية في الموصل
لقد لاقينا ترحيب لانجاز

بقلم: جولي كوبرنال
الموصل ، العراق - الجيش
الامريكي فيلق مهندسين
منطقة الخليج منطقة
الشمال توصل مياه الشرب
النظيفة الى الخنفيات الى
البيوت في الموصل
بالانتهاء مؤخرا من
خمسة مشروعات محطات ضخ
المياه في المدينة .
الموصل هي احدى اكبر
المدن العراقية مع
سكان يصل تعدادهم الى
1.5 مليون نسمة .

محطات ضخ المياه هي جزء
هام من البنية التحتية
للمدينة وتعمل على نقل
المياه من المصادر الى
مرافق معالجة المياه ثم الى
المستهلكين.

بعد تخفيف نقص المياه ،
وتجديده وضخ محطات مكافحة
الامراض المرتبطة بالمياه

USACE Building For Troops At Camp Speicher

by Julie Cupernall
Gulf Region North

TIKRIT, Iraq – A hot meal in a safe environment can be an important morale booster for troops.

Often recognized for its mission to jumpstart infrastructure reconstruction in Iraq, the Corps also supports coalition troops with its building expertise. The U.S. Army Corps of Engineers Gulf Region North district is on track to complete construction on a new DFAC, or dining facility, at Camp Speicher.

“It will be a full service dining facility when it’s done and it’s the only one in this general area so there is a great need for it,” said Jeff Sedgwick, GRN project engineer for the site.

The approximately \$8.5 million project is in the beginning phases of construction on the exterior walls. The cinder blocks being used are local; they come from a factory in the nearby city of Irbil. Thousands of cinder blocks will be needed in the coming months in order to finish on schedule, meaning building here provides immediate support to the local economy, and the long term benefit of support to coalition forces.

“We anticipate that the new DFAC will be completed by early August. These types of projects directly benefit the



Photos by Lana Aziz

troops here on base. It will be used by everybody here. It will serve three meals a day. Construction like this directly impacts the lives of all the troops here,” Sedgwick said.

The U.S. Army Corps of Engineers Gulf Region North district was tasked with 1,500 projects in support of Operation Iraqi Freedom, at a cost of nearly \$2.6 billion. GRN has completed more than 1,100 projects.

(Above) Iraqi workers prepare a section of the foundation where a kitchen will eventually be constructed in new dining facility.

(Below) The \$8.5 million U.S. Army Corps of Engineers Gulf Region North district dining facility project at Camp Speicher is slated to be complete this month.



Al Basrah Oil Terminal

by Grant Sattler
Gulf Region Division

The Gulf Region Division's oil sector neared the finish line at the end of July with the final certification of work on the Al Basrah Oil Terminal. The terminal, known as ABOT, is Iraq's primary avenue for crude oil export.

The U.S. Army Corps of Engineers invested \$67.5 million to rehabilitate the export facility 50 km offshore in the Arabian Gulf. Currently, one and a half million barrels of crude oil a day leave Iraq via tankers on-loading at ABOT. That volume is roughly half of the terminal loading capacity of 3 million barrels per day achieved with the upgrade.

Iraq's economy is dominated by crude oil export accounting for 97 percent of the government's revenue. The GRD has been working to improve the country's ability to get its crude oil to world markets through renovation of key components of the oil infrastructure. The \$1.7 billion effort has been funded by the Iraq Relief and Reconstruction Fund, but is only a fraction of the \$8 billion needed, according to a Coalition Provisional Authority estimate.

Prior to renovation ABOT illustrated the condition of the entire Iraqi oil infrastructure. Designed and commissioned by Brown and Root in 1974, the 30-year-old technology was

in serious disrepair from decades of under funding, lack of preventive maintenance, and war damage from the 1980-88 Iran-Iraq War and the Gulf War.

U.S. Navy Capt. Thomas Brovarone, GRD Oil & Water Sectors director, said the most important improvement at ABOT is the installation of 24 custody transfer meters and associated flow provers that measure how much crude oil is exported from the terminal.

Supplied by a 48" undersea pipeline from the southernmost tip of the Al Faw Peninsula, the terminal has four berths capable of handling very large carrier type vessels and offloading 300,000-400,000 barrels per day on each berth. The terminal was identified in July 2003 as a key facility for immediate repairs by the Ministry of Oil and the Corp's Task Force-Restore Iraqi Oil. Parsons Iraq Joint Venture was awarded a contract for the work in January 2004.

David Anderson, the Corp's Quality Assurance Representative on the 1.6 kilometer long terminal said, "Before the Corps came on site, Southern Oil Company was using accounting procedures on the tankers and that has a tendency to be less accurate than turbo meters. The turbo metering system is accurate within one hundredths of a percent."

Accurate metering is a requirement for confidence necessary in the world community if Iraq is to seek International Monetary Fund loans for remaining oil infrastructure improvements. The metering



Final Years Completion

was installed in Phase 2 of the project.

Anderson said, "The Corps came out with [construction contractor] AFI and [Parsons Iraq Joint Venture] on Phase 1 to do a refurbishment of the loading arms and the rigging. The functional part of the arms weren't in real good shape." In fact, an April 2003 assessment found the loading arms to be operating at only a quarter of their design rate and leaking excessively.

As they reworked the loading arms for oil transfer, the Corps, PIJV and AFI also turned toward correcting major safety deficiencies on the terminal. Improvements include fusible loop fire detection, gas detection, emergency shut down systems, nitrogen generation and installation of life rafts, Anderson said.

"Another problem that was discovered on coming to the terminal was that fire fighting capacity was nonexistent. What this project has done is refurbish all the foam systems and recondition the towers... fire fighting capacity will be 120 percent of what it was previously when new," Anderson said.

Workers also repaired four hydraulic transfer bridges, built control rooms meeting international standards for both platforms, and installed new power generation and electrical cabling throughout the terminal.



Photo by Erich Langer

Repair and replacement of oil transfer metering systems on ABOT platforms A and B were a key part of Phase 2.



Photo by Lisa Coghlan

An AFI subcontractor completes an installation before certification of the custody transfer meters.

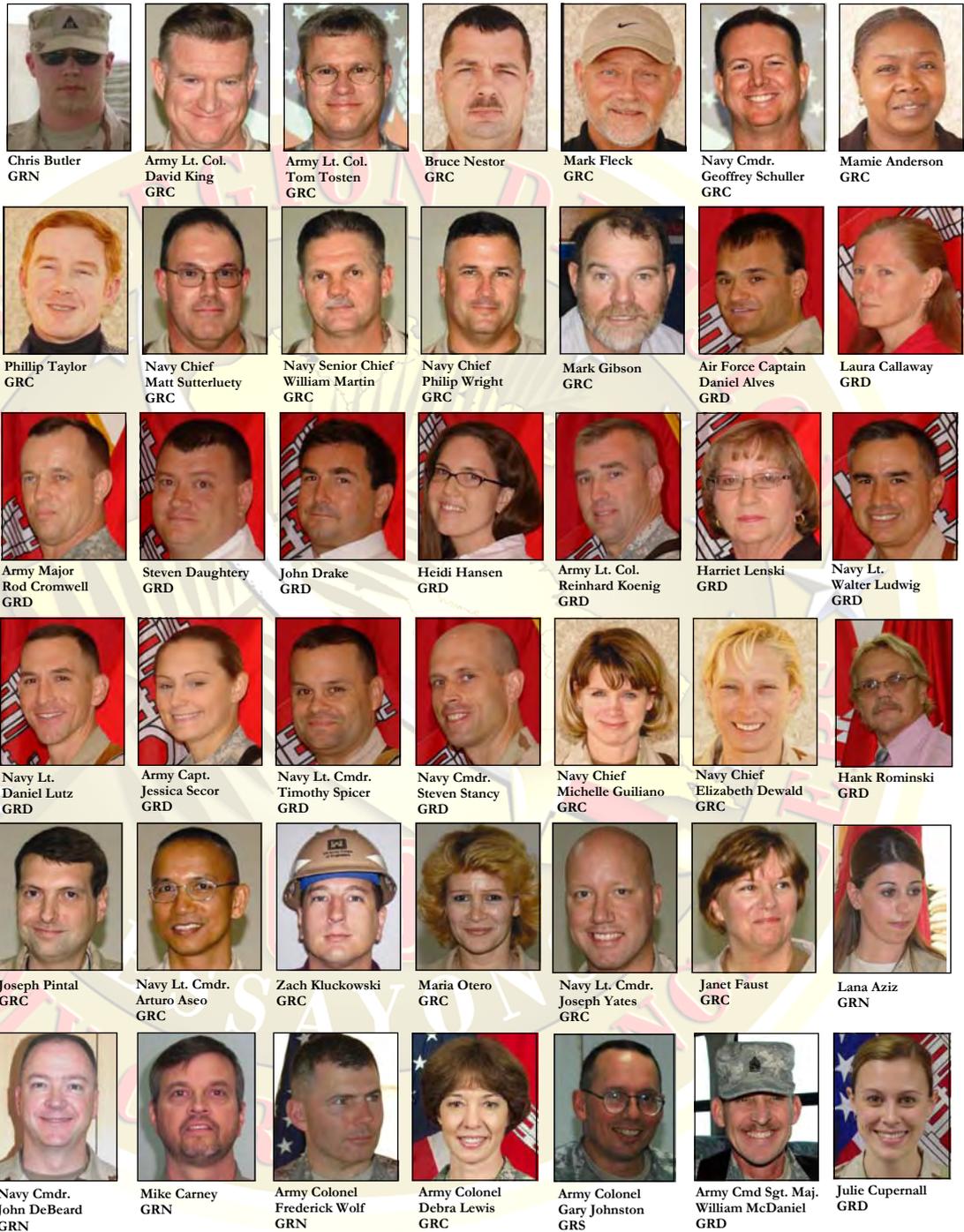


Hail and Farewell

Hailing:

Chris McGinty, GRC
 Stephen Blease, GRC
 Gene Embrey, GRC
 Patrick Addison, GRC
 Robert Snyder, GRC
 Daniel Erbach, GRC
 Doug Hamilton, GRC
 Tim Hedglin, GRC
 Eden Olguin, GRC
 Hunter Logan, GRC
 Clifton Geter, GRC
 Harry Van Doren, GRC
 Scott Demuth, GRC
 Kimberly Pugh, GRC
 Dean Rudisill, GRC
 Michael Baum, GRC
 Maj. David Noble, GRC
 Penny Coulon, GRC
 Lt. Cmdr Jeffrey McCoy, GRC
 Lt. Col. Laurence Farrell, GRN
 Chief Petty Officer Henry Home, GRN
 Barbara Bass, GRN
 Troy Stüfler, GRN
 Saber Qader, GRN
 Aaron Bradley, GRN
 Ali Hamoudi, GRN
 Gee Barzani, GRN
 Kevin Reed, GRN
 Rizgar Jan, GRN
 Kalmarie Black, GRN
 James McCoy, GRN
 Sami Adam, GRN
 Kraig Berberich, GRN
 Todd Hughes, GRN
 Everitt Scott, GRN
 Lisa Peterson, GRN
 Lt. Col. Darren Gibbs, GRN
 Joshua Adekanbi, GRN
 Curtis Heckelman, GRN
 Cheryl Hodge-Snead, GRS
 LTC Gregory McMahan, GRS
 CDR Gerald Rinehart, GRS
 CDR Michael Lang, GRS
 MSG Basil Berchekas, GRS
 John Overfield, GRS
 LTC Gregory Raimondo, GRS
 Tonya Myrick, GRS
 Joyce O'Shea, GRS
 Fitsum Kebede, GRS
 John Bryant, GRS
 Lt. Col. Christopher Duffy, GRD
 Maria-Elena Pineiro, GRD
 Tamara Silva, GRD
 Lt. Cmdr. Eric Haun, GRD
 Capt. Tina Nguyen, GRD
 Tech Sgt. Devon Blackwell, GRD
 Lt. Col. Marc Pincince, GRD
 Master Sgt. Jeffrey Wardlaw, GRD
 Capt. Tera Denial, GRD
 James Proctor, GRD
 Lt. Col. Darren Gibbs, GRD
 Lt. Joseph Wignarajah, GRD
 Lt. Col. Steven Roemhildt, GRD
 Stephen Rivera, GRD
 Col. Anthony Foti, GRD
 Maj. Eddie White, GRD

Farewelling:



Get more information on the reconstruction progress in Iraq on the Gulf Region Division Web Site. Updated print, photo and video content is added regularly. Get the news you are not otherwise hearing about the real progress on the ground by the men and women of our U.S. and Coalition effort in Iraq. You can also sign up for automatic e-mail alerts to notify you when new information is added. Help get the true word out on the ground in Iraq.

WWW.GRD.USACE.ARMY.MIL