

# ESSAYONS

*Forward*

U.S. Army Corps of Engineers

Gulf Region Division (Provisional), Iraq - Volume I, Issue 2

**350 MW added to Iraqi  
National Power Grid at Al Haditha**





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**(Left to right) Rafiq Al-Gailani, director of Finance and Administration, Barzan M. Dizayee, managing director, and Asos Dizayee, project manager, all from TAMA, join (Ret) Rear Adm. David J. Nash, director of the Program Management Office, in cutting the ribbon on the restored Diwan Facility.** (Photo by Thomas O'Hara)

**I**t was a small project in scope, but a huge accomplishment for those attending the ribbon-cutting ceremony for the renovated Diwan Facility in Baghdad, located within the Green Zone.

Program Management Office Director (Ret.) Rear Adm. David J. Nash, joined several members of the TAMA agency, an Iraqi construction firm, May 3, to dedicate the \$2.5 million restored facility.

"I have experience (in) more than 20 years in construction," said Barzan M. Dizayee, managing director for TAMA, referring to the multitude and variety of projects he has managed from throughout the Middle East. "But this project is the most special of my career as it is located in my home of Baghdad as part of the effort to build a new and free Iraq."

"Iraqis, Americans,

Kurds, Arabs, Muslims and Christians worked hand-in-hand together to complete this significant project," said Dizayee.

The facility, formerly a school, was severely looted and damaged following the liberation of Iraq. This project was the first contract advertised, awarded and executed by the Gulf Region Division.

At first the Corps considered using the restored facility as the new headquarters location for the GRD while it remained in Iraq.

After some consideration, Corps leaders opted to construct a new temporary facility at Camp Victory. The Program Management Office capitalized on this decision and decided the restored building would provide an excellent location for many of their operations.

**ESSAYONS FORWARD**  
OCPA-USACE-GRD, Engineer Villa,  
Essayons Base, Baghdad APO AE 09316

DSN: 318-542-1431

DESK: 540-542-1431\*

CELL: 011-964-790-192-5105\*

\*CONUS area codes

**ESSAYONS FORWARD** is the field magazine of the Gulf Region Division (Provisional), U.S. Army Corps of Engineers, in accordance with AR 360-1. It is produced bi-weekly for electronic dispersal. Limited hardcopy circulation as needed. Production and publication in the theater of Iraq.

Letters, articles, notices of events, photographs and art are welcome, but may be edited for clarity or brevity. Publication of any submission is at the discretion of the editor. Submissions can be emailed to:

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All photos must be high resolution and include complete caption information.

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.

**ESSAYONS FORWARD is on-line:**

[www.grd.usace.army.mil/news/Essayonsforward](http://www.grd.usace.army.mil/news/Essayonsforward)

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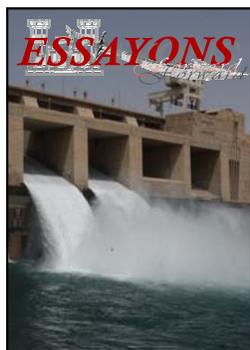
*Maria Or*

Top page photo: Castle in Kirkuk (Photo by Maria Or)

"This project is a great example of the incredible expertise available in this country and the savings that can be achieved by our government if we are willing to take the risks," said Joe Hendrix, program manager for GRD.

We are very proud of the success of this contract and to have been a part of its execution and management."

—Thomas O'Hara



**Cover: Haditha Dam in Al Haditha, Iraq.**

(Photo by Thomas O'Hara)

## Coalition celebrates transfer of power

The transfer of authority from the Coalition Provisional Authority to the new government of Iraq is not scheduled to occur until June 30. However, more than two months early, corps and CPA are already transferring new power to the Ministry of Electricity.

During a ceremony held April 21<sup>st</sup> at the Haditha Dam, located north of Al Haditha in Iraq, Maj. Gen. Ronald Johnson, Gulf Region Division commander and Dr. Aiham Alsammarae, Minister of Electricity for Iraq, celebrated the latest success in the ongoing mission to restore capability to the Iraqi power grid as an additional 350 MW was placed into the system.

“Iraqis will have a much better summer this year than they had the last,” said Dr. Alsammarae.

Last year, before comprehensive reconstruction efforts had a chance to take form, the national system was operating at less than 3300 MW – far below the demand level of a country of 25 million weathering the desert heat. The addition of 350 MW capacity at Haditha, a 10 percent increase, as well as other coalition efforts, is a milestone on the march towards a goal of more than 6000 MW by June.

While Haditha Dam had the capability to generate much of this power, the damaged 400 kV transmission lines connecting it to Baghdad and Baiji had been destroyed due to looting following the liberation of Iraq. Without a conduit to distribute the power, the dam had to generate much less than its ability. This represented a loss of opportunity, and in some cases waste, as water spilled through the dam.

The \$56.7 million project to restore that transmission line (obtained largely from the sale of Iraq’s oil) was completed in less than a year and represents the single highest addition to the renewed system capacity since the liberation of Iraq.

The Haditha to Baghdad line, 223 km in length consisting of 504 towers,

connects the Haditha hydroelectric dam into the national system. An additional 400 kV line to Baiji, providing stability and redundancy, is also under reconstruction.

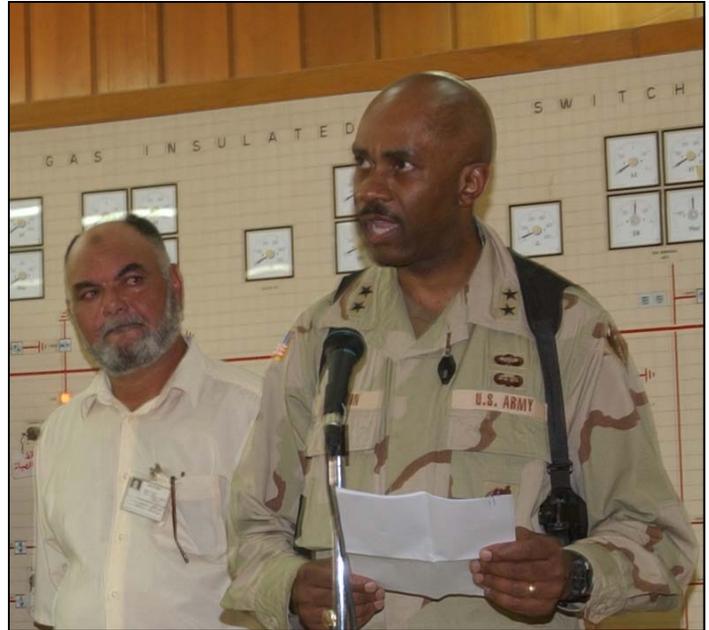
“This transmission line allows us to give this ‘island of power’ the capability to add that capacity to the national power grid,” said General Johnson.

“This is but one example of the many, literally thousands of accomplishments, made during this last year by the U.S. Army Corps of Engineers, and its partners, to help the CPA repair the neglect that occurred under the former regime,” said Johnson.

While the 400 kV success is noteworthy, the Corps isn’t done at Haditha. A sixth turbine at the dam is under rehab that, once completed, will maximize the generational capacity of the Al Haditha dam to 660 MW.

In addition to the ceremony, Haditha Dam Project manager Hassan Yahya led Dr. Alsammarae on a brief tour of the facility to showcase the efforts ongoing to restore the dam, built by Yugoslavia in 1985. Corps Quality Assurance and Control Supervisor, Roland Shumate similarly briefed Johnson on RIE progress at Haditha. Corps projects included not only the transmission line project, but also dam-wide upgrades of controls and switching as well as restoration of the sixth, and final turbine, currently ongoing.

A small contingent of western and eastern media shadowed the tour and captured the historic moment. A contrast



**Maj. Gen. Ronald Johnson, Gulf Region Division commander, speaks during a ceremony celebrating the re-energization of the 400 kV line from Al Haditha to Baghdad. To his right is Hassan Yahya, Haditha Dam project manager . Watermark: Downstream of Haditha (Photos by Thomas O’Hara)**

to the daily reports of militant attacks on coalition forces, this demonstration of progress was a welcome departure from the seemingly constant barrage of reports covering the engagements throughout Iraq.

“We are going in the right direction,” said Dr. Alsammarae as he thanked the many Iraqi engineers, Corps employees and contractors who contributed to the effort. “Despite the security situation,

**“...working to make this nation excellent again.”**

— Dr. Aiham Alsammarae

we are still working to make this nation excellent again.”

Johnson agreed.

“Despite the much reported hostilities that are dominating the headlines, there are equally important other headlines to report. These are the headlines that our Soldiers, Sailors, Airmen, Marines and civilians from at least 34 different countries, as well as Iraqis in the field, are fighting for.”

“They are the headlines that tell the story of the unprecedented advancements we have all achieved during the last year, and the commitment of more to come.”

—By Thomas O’Hara



**Above:** Roland Schumate, quality assurance and control supervisor for the Corps at Haditha, briefs Maj. David Bitner, GRD-RIE operations officer, on progress in restoring the sixth turbine at the Haditha Dam. **Below:** Haditha Dam gate structure (Photos by Thomas O’Hara)

## *What has approximately \$1 Billion Bought for Iraq?*

### **Accomplishments to Date:**

- 4 Mobile Generator Units at Baiji - 80 MW on grid
- 2 Gas Turbine generators at Baiji - 180MW on the grid
- Rehab of units 5, 6 at Dibis - 62MW on the grid
- 1 Gas Turbine Generator at Hilla - 18MW on the grid subject to gas pressure which will be fixed once the project is completed
- 8 Industrial sites in North Iraq - 75MW on the grid
- Rehab of unit number 4 at Kohr Zubayr - 52MW on the grid
- Rehab of unit number 2 at Najaf - 52MW on the grid
- SDMO\* generators located across Iraq - 200MW on the grid
- 400 kV lines repaired/rebuilt and energized
  - Baghdad to Haditha - 223km, replaced 246 towers of 504 total - enabled approx 350MW of power from Haditha Dam to reach the national grid
  - Baghdad West to Baiji - 230km, replaced 68 towers of 504 total
  - Baghdad South to Baghdad East - 50km, replaced 81 towers of 140 total
  - Hartha to Qut - 360km, replaced 297 towers of 750 total
  - Baghdad South to Diwaniyah - 135km, replaced 27 towers of 290 total
- SCADA\*\* system for 400/132kV substations in Baghdad
- Rehab of 3 control stations for 33/11kV substation SCADA system

- 33/11kV Substation SCADA system for 1/3 of Baghdad
- Rehab of 9 Critical 33/11kV substations
- Laid the groundwork for the Logistics Management System (Maximo) for parts and maintenance of power plants and storage yards throughout Iraq.
- Equipped and paid 1,500 EPSS\*\*\* officers for 1 year.

### **Coming soon:**

- Completion and close out of projects that are effectively complete
- Rehab of unit number 4 at Dibis - 31MW
- Qudas Power Plant 6 new units - 324MW
- Nasiriyah Power Plant 1 new unit - 28 MW
- Burzurgan Power Plant 1 new unit - 35MW
- Rehab unit 2 at Kohr Zubayr - 52MW
- Rehab 13 more low voltage substations
- 4 more mobile units at Baiji - 80MW

Gas compression system at Hilla to ensure reliability of MW on the grid

### **Summary:**

That’s 1050MW on the grid, 998km and 1223 towers of 400kV transmission line, initiation of the modernization of management and control of the Baghdad distribution network, the foundation of a national logistics system for the Ministry of Electricity and help to stand up the EPSS.

Additional funds will ensure that the remaining 550MW will reach the grid by this summer. These funds will also enable us to finish the non-essential punch-list items for the projects that are effectively complete, and close out these contracts over what is likely to be the next 2 years. (compiled by Gene Morisani, project manager, GRD-RIE)

\* Brand name \*\* Supervisory Control and Data Acquisition \*\*\* Electrical Projects Security Police

## GRD — born to run

**P**ersonnel from the Gulf Region Division did some serious pavement pounding at Camp Victory

March 28, but this was not construction work. Sixteen people from Central District and Division Headquarters participated in the Camp Victory 10K run sponsored by a battalion from the 82<sup>nd</sup> Airborne Division.

When Ron Plante spotted a race flyer at the Camp Victory DFAC, he figured there was no chance of participating. He was jogging his normal three days a week in the Green Zone, but did not expect to run in the 10K. Baghdad Area Engineer Allen Lantz was more optimistic and suggested asking Central District Commander Col C. K. Williams. Much to their delight, Col Williams put his support behind the trip.

After sending out a few e-mails, it became obvious there was a lot of interest among GRD runners. One motivator was the free t-shirt to the first 350 finishers, though few of the “more mature” forty and fifty-something civilians had expectations of beating the much younger GIs. However, the always optimistic Allen Lantz pointed out that “We run because we want to, they run because they have to.”

A group of fifteen made the trip to Camp Victory and linked up with Capt John Henderson of the Victory Area Office. While some of the group were serious runners, most planned to do their best and finish, not win.

It was sunny and comfortable at the 0700 start, and the GRD runners joined about 450 much younger soldiers for the race. Even though numerous weapons were available, the traditional starting gun was replaced by a verbal “ready-set-go.” The course looped around the well-known palace on the lake and then continued east around another lake.

Although the temperature remained relatively cool, the runners did not. By the two-mile water point, everyone was sweating. The leader of our pack was

Dan Pridal from Construction Division, a very modest 41 year old grandfather who finished in 40:42, a very impressive 29<sup>th</sup> out of 460. The other GRD runners followed Dan to the finish line and cold Gatorade.

While some may not consider running a 10K race as “fun,” runners would disagree. “Running is a stress reliever,” said Ed Morente, adding that “Going to Camp Victory and running that 10K was like R&R. It was a wonderful break from the long hours.”

As Construction Division’s Eddie Miller said, “It was a great day. I was going to run that morning anyhow, and I got to do a 10K in Iraq. I ran just to be able

to brag about running in such an event. I never considered the possibility of running fast enough to earn a shirt, but I did. It doesn’t get any better than that.”

While some of the GRD runners are back running in their home districts, other members of the team continue their running in the Green Zone. Whether it’s to relax, lose weight, or train for the next race, these guys just keep on running.

—Ron Plante, GRC

**Below: Members of the GRD and GRC team gather before taking the 10K run at Camp Victory. Watermark: Runners compete in the 10 K run. (Photos provided by GRC)**



*This is the second of a multi-part series highlighting the achievements and advancements made by the U.S. Army Corps of Engineers in support of Operation Iraqi Freedom. This series will continue up to June 30, 2004, the scheduled date for the transfer of authority from the Coalition Provisional Authority to the new interim government of Iraq.*

## *One Year Later: Restore Iraqi Oil mission*

**I**raq's financial future is tied to oil. Iraq's known reserves are estimated to be 115 billion barrels and are exceeded only by those of Saudi Arabia and Canada. Yet very little of Iraq has been seismologically explored for oil, it is anticipated that the known oil reserves may double with adequate exploration.

The weak link to Iraq's future is outdated, poorly maintained oil infrastructure. The technology, in terms of available equipment, and Iraqis have been separated from the latest best technical knowledge since Saddam came to power in 1980.

Oil moves from the oil field to refineries, power plants and export terminals through pipelines. A large portion of the refined product also moves by pipeline.

The nation's network of 4300 miles of pipelines is corroded and leaking. The outdated refineries produce about half as much of the lighter more valuable products than modern refineries produce.

Oil reservoir management is also out of date. Oil recovery production from Iraq's reservoirs is about one half of that of the United States.

Fixing these problems will take capital, technical knowledge and a willing workforce. There is no question that Iraqi oil workers are exceptional at making their current out-dated and marginal system work.

Through Task Force Restore Iraqi Oil (TF-RIO) the US Army Corps of Engineers managed more than \$1 billion for new equipment and restoration, and more than \$1.2 billion in humanitarian relief imports. These were funded by 2003 and 2004 Supplemental Appropriations, and from the Development Fund for Iraq (DFI). The Corps also facilitated the planning for the use of 2004 Supplemental Appropriations, establishing \$809 million for oil reconstruction, \$323 million for equipment, \$68 million for security and have provided technical expertise by deploying hundreds of Corps volunteers to help Iraqis restore their production capability and position themselves for future success.

The road traveled by the U.S. Army Corps of Engineers to assist Iraq's oil production recovery began the crossing into Iraq in late March 2003. The organization began as TF-RIO and is now the Restore Iraqi Oil Directorate of the Gulf Region Division (GRD-RIO). This article looks at a year of

progress as the Corps met the mission entrusted to them by the Department of Defense.

### **Oil fires**

Coalition Forces expected a thousand oil well fires. The Corps had pre-placed equipment and contractors in theater prior to the invasion of Iraq to respond to this major environmental and economic catastrophe. Due to the rapid securing of the oil fields, there were just nine oil well fires instead of a 1000. Instead of months of fighting fires with an anticipated cost of \$7-13 billion, fires were extinguished in less than a month and damages limited to \$400 million.



**Unexpected Looting**

If military planners, including those working for RIO, had the right solution to preventing major damage to the oil fields, their planning did not include protecting the infrastructure from an unexpected source. Looters severely damaged the oil infrastructure causing \$1 billion in damages. As a result of these damages to the oil infrastructure, it would take a year to return Iraq to pre-war oil production levels.

Further, the looting at key production facilities such as oil refineries and Liquefied Petroleum Gas (LPG) facilities would lead to an inability to meet the domestic fuels requirement in Iraq. This need was met by a billion dollar petroleum import program initially operated by TF-RIO.

**Quick Solution—Rehiring oil workers**

An important key to returning Iraq's pre-war production capability was to rehire the Iraqi oil workers. Initially, the plan was to have job fairs at oil facilities sponsored by the Corps contractor Kellogg, Brown and Root (KBR) rehire the oil workers.

Former workers did show up for jobs, but questioned if KBR had received approval for them to go back to work from "Mr. Jabar." At this point, the Corps and KBR didn't know who Mr. Jabar was.

As a result, through intermediaries, Brig. Gen. Robert Crear, SWD commanding general and TF-RIO commanding general, arranged to meet Mr. Jabar Ali H. Al-Lueibi in Basrah.

Crear's meeting was an important turning point in the Corps' mission to restore Iraqi oil. These two leaders soon agreed that employees of the South Oil Company would return to their pre-war jobs and Crear appointed Jabar Director General of the South Oil Company.

This would be the template for the successful return of the workforce of the North Oil Company located in Kirkuk as well as all other state owned oil-related companies. There were 16 oil-related Iraqi companies prior to the Gulf War. Each survived the war intact and employees returned en masse to work and helped restore the infrastructure.

**UN oil sanctions eliminated and oil exports flow**

A roadblock to domestic production

was the United Nation sanctions on Iraq's ability to export oil. As unlikely as it sounds, producing oil for export was necessary to provide the quantity of natural gas needed to produce LPG. LPG is produced from natural gas separated from the crude oil at the Gas-Oil Separation Plants (GOSPs).



Removing the sanctions was also necessary to produce income to help rebuild Iraq. Sanctions were lifted in May 2003 and the first new oil produced in Iraq was uploaded on the two million barrel super tanker Abqaiq on June 28, 2003 at Mina Al-Basrah Terminal in the Persian Gulf. Oil exports for the remainder of 2003 totaled \$5 billion. Beginning in 2004 oil exports are at a level of 2 million barrels per day equating to a current price level of \$2 billion per month. These funds are placed in a central fund and used to help with the day-to-day operations of managing Iraq's government and for infrastructure restoration and development.

**Domestic Fuel Crisis leads to Imports**

Damaged oil refineries and LPG plant production facilities precipitated a domestic crisis. LPG, used by Iraqis to cook food, boil water and heat homes and gasoline was needed to return people to normalcy. Department of Defense (DOD) assigned TF-RIO to respond to this urgent problem.

One of RIO's planners, Stan Reese from the Huntsville Center, commented on the unexpected task of supplying Iraqis

with petroleum products.

"It's been interesting to me that before the war we looked at protecting Iraq's export capability and didn't think about the domestic requirements. Suddenly, domestic requirements became one of our most important responsibilities," Reese said.

**Refining issues contribute to domestic shortage**

In the best of times, Iraq's ability to refine oil for domestic production was challenged. The nation's three largest refineries are located at Basrah in southern Iraq, and Baiji in the north and Doura near Baghdad. These refineries, built during the 1970s by the Russians with 1950s technology, were poorly maintained and in some cases damaged during the 1980s Iran-Iraq War.

As soon as crude oil was produced in the oil fields and refined there was a market for the refined products. However, half the crude oil input into the Iraqi refineries produces a lower grade heavy residual that did not have a market immediately after the invasion. What was needed was storage for the residuals, but none existed. Most of Iraq's needed storage capacity lost during the Iran-Iraq War had never been replaced.

With no immediate ability to dispose of residuals there was an immediate limiting problem as refineries returned to production. Today, several power generation plants have been converted from using diesel fuel to residual fuel. Also, residuals are injected into the export pipelines in small quantities and exported by truck.

Another major oil refinery problem was stable electric power. Refineries did not have backup power generation and were at the mercy of Iraq's power generation plants and transmission lines from power plants to refineries. Interruption in power from the power generation plants resulted in stopping the refineries from operating. Once power was lost even for only a few hours, it would take several days to bring the refinery back to production.

**Oil production ties to reliable power**

One of the fixes to provide reliable electrical power to refineries was to install backup power generation. Lori Thomas, an engineer from Galveston District worked for TF-RIO to provide a backup generation system for the Basrah Refinery.

## *What a difference a year makes...*



“We installed two generators to provide reliable power to the Basrah Refinery, which had been running on power provided from two old, run-down generators the Iraqis managed to keep going. The new generators belonged to the Iraqis, and had been purchased off the Oil for Food program five years ago, but never installed,” Thomas said.

According to Thomas, electrical power was critical to other areas of the oil production process as well.

“Without power, it was impossible to produce, de-gas and pump oil. Most of the 18-megawatt generators were for water injection, which is the future of oil production. Without injecting water into the oilfields, they would be ruined,” Thomas said.

### **Water used to produce oil**

The water need to inject in the Ramaylah Oil Field should have been provided by Qarmet Ali Water Plant located near Basrah. However, this plant was almost totally destroyed by looters. After almost a full year Qarmet Ali is close to being returned to the South Oil Company. Today, water from the Basrah River is treated at Qarmet Ali and piped to the oil fields to be injected under pressure provided by a system of pump stations power by 18-megawatt generators to a depth of two miles under ground.

This water replaces oil removed from the reservoir and helps to maintain oil reservoir pressure. Pressure is an important element of main-

taining the oil reservoirs in Iraq, which have natural geostatic pressure that forces oil to the surface through the drilled wells. As oil is removed, pressure, drops unless replaced with a fluid.

Water from the Qarmet Ali Plant is also used to remove salt from the crude oil in an oil washing process, which is necessary prior to exporting. Salt in the oil would cause major corrosion problems for the export infrastructure unless removed in the oil fields.

### **Oil injection in northern fields**

Water is injected in the Ramaylah Fields, but in the Kirkuk Oil Fields in northern Iraq, crude oil is injected back into the oil reservoir. This is done for two reasons, according to Col. Emmett H. Du Bose, Jr., director of GRD-RIO.

“The oil is produced to separate out the natural gases needed to produce LPG. Under normal circumstances all of the crude oil would either be exported through the Iraq to Turkey Pipeline (IT), be refined at the Doura and Baiji Refineries, or used in power production plants,” Du Bose said. “However, we need to fix pipelines in several areas, including a major river crossing to allow northern oil to

reach normal production levels and eliminate the injection of excess produced oil not being used for domestic production by power plants or refineries.”

### **Sabotage**

The expected mass of oil well fires never happened. Nine fires that were set were extinguished by mid-April 2003. The destruction of the oil infrastructure may have been another element of Saddam Hussein’s plan to not allow the Coalition forces to benefit from Iraq’s oil. At facilities such as at the Qarmet Ali Water Plant, refineries and LPG plants, it appears that the wanton destruction was purposeful. Unfortunately, the results have harmed the Iraqi people.

Sabotage that may have occurred immediately after the war continues to occur. Iraq has 4,350 miles of pipeline, most of which is above ground, and attacks against the pipelines continue.

A potentially serious attack very recently against the oil infrastructure occurred at the Mina Al-Basrah Terminal in the Persian Gulf. Three explosive laden suicide boats attacked the platform and although they exploded, there was little damage to terminal.

### **Production**

Current oil production is averaging 2.5 million barrels per day. Two million barrels are being produced in the south



while the northern fields are producing 500,000 barrels per day. Iraq's Ministry of Oil announced their goal for Jan. 1, 2005 is three million barrels.

The key to reaching this production goal is to double northern production to one million barrels per day. The primary obstacle to the Kirkuk Oil Fields reaching this level of production is in the pipeline delivery system. Current pipeline projects at the Al-Fatah Crossing and a section of pipeline will make the Iraq-to-Turkey Pipeline operational. The IT pipeline terminus at the Turkish Port of Ceyhan provides Iraq the ability to export oil from the Mediterranean in the north. In the south the Al Faw Peninsula pipeline transports crude oil from the Ramaylah Oil Field past Basrah and down to the tip of the peninsula and then under the Persian Gulf nine miles to the Mina Al-Basrah Terminal where supertankers are up-loaded for destinations worldwide. Approximately 80% of Iraq's oil enters the export market through the Al-Faw Pipeline.

**U.S. Army Corps of Engineers Civilian Volunteers**

The Civilian volunteers put themselves in harms way to accomplish the mission. In doing so they proved to their military colleagues that they can and will meet many of the elements of the Soldier's Creed.

They were team members; they served the people of the United States and lived Army Values. They placed their mission first, they did not accept defeat, they never quit, they were expert and professional and stood ready to deploy. They were guardians of freedom and the American way of life.

Never in the 228 year history of the Corps have civilians been asked to stand as tall and risk as much in a combat zone. They did this shoulder to shoulder with their Soldier colleagues. They wore the Army uniform and willingly shouldered their load to accomplish a mission essential to American foreign policy.

In doing so they found a greater respect for Soldiers. In doing so Soldiers found greater respect for Army Civilian volunteers.

**Mission to be passed on**

The Corps can be proud of its contributions to the Iraqi people though our technical and financial support of the oil sector. Our willingness to take on the emergency humanitarian acquisition and transportation of gasoline and LPG forestalled an immediate domestic crisis.

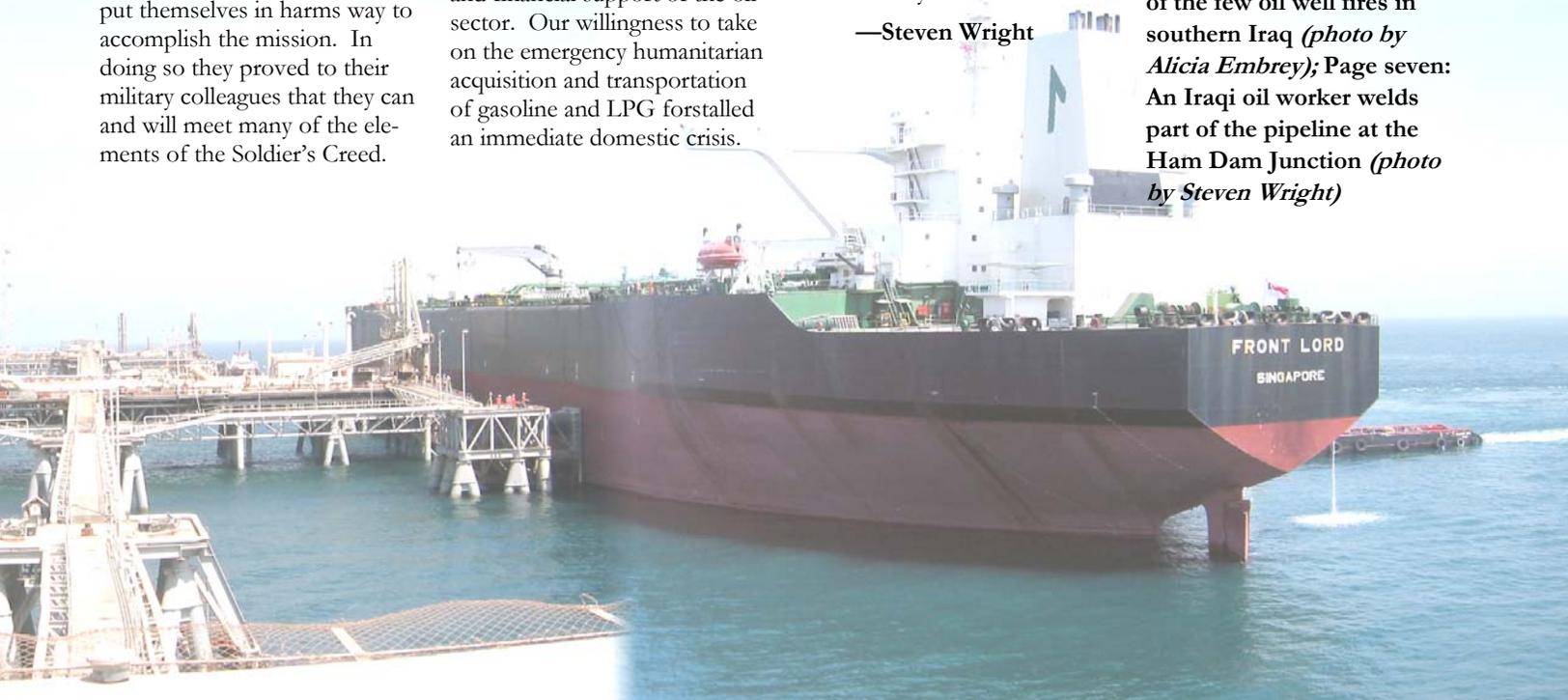
We partnered with the leadership and workers of Iraq's oil industry and leveraged the capabilities of the private sector contractors KBR and Parsons to find solutions to the needs of Iraq's infrastructure.

This mission is now passing to the Program Management Office. The future role of the Corps of Engineers in the future is not yet fully clear, but its contributions to date will have an important place in the US Army Corps of Engineers history.

—Steven Wright



Top left page: The destroyed Al-Fatah Bridge as it crosses the Tigris river north of Baghdad (photo by Nola Conway); Above: A corps employee inspects a damaged oil valve at Ham Dan Junction near Basrah (photo by Steven Wright); Bottom: spread: Mini Al-Basrah export terminal located in the Persian Gulf (DoD photo); Page six bottom: Boots & Coots contractor fights one of the few oil well fires in southern Iraq (photo by Alicia Embrey); Page seven: An Iraqi oil worker welds part of the pipeline at the Ham Dam Junction (photo by Steven Wright)



## *Corps Oil Mission's early days: Civilians under fire to perform*

**M**ilitary planners expected a Hades-like Iraqi version of scorched earth with many hundreds, if not several thousand, of oil well fires turning the sky black and the day into night. However, lightning quick strikes by Coalition Ground Forces secured Iraq's major oil fields quickly and prevented the expected disaster.

The capture of the oil fields set the stage for the US Army Corps of Engineers mission of restoring Iraq to its pre-war oil production levels. This task was assigned by the Defense Department to the Corps and by the Corps to its Southwest Division (SWD) headquartered in Dallas.

**"would produce an explosion the size of the atomic bomb at Hiroshima," — Stan Reese**

Upon receiving this classified assignment, SWD put together its own version of the "A" team composed of military and Army civilian planners all with a high level of oil industry expertise.

One of RIO's (Restore Iraqi Oil) planning team members was Stan Reese from the Huntsville Center in Alabama. Reese was the first member of Team RIO to set foot in theater. He arrived at Camp Doha, Kuwait, in January 2003 to attend a conference with the critical assignment of explaining to the Coalition's military leadership how Iraq's oil infrastructure could be safely closed down.

"In the beginning, they [the Coalition] had a nonchalant attitude toward the oil facilities," said Reese. "I made real progress on the third day of the conference when I explained that a barrel of oil had the energy equal to .77 tons of TNT. Then I showed that the number of barrels of oil coming into a GOSP (Gas Oil Separation Plant) in 22 minutes would produce an explosion the size of the atomic bomb at Hiroshima, Japan in World War II."

Once I had their attention and they knew we were dealing with hazardous facilities, everything got better very quickly. We were able to avert danger and save the lives of Soldiers because of successfully communicating this important point."

"After the conference, RIO assisted in developing a training plan for Soldiers to take over the oil facilities. We were able to use oil facilities in west Texas and Kuwait for this training. I think the result was a fantastic accomplishment. The coalition was able to take the oil facilities without damage to them or endangering the Soldiers responsible for securing them," Reese said.

Additionally, the Coalition Forces prepared leaflets instructing oil workers to properly shut down their oil facilities and advised them that they would be held responsible for sabotage of the oil infrastructure.

"The combination of things worked. We planned for hundreds of oil fires based on what the Iraqis did to the Kuwait oil fields where they set 750 oil well fires. This

didn't happen. Our Soldiers, assisted by TF-RIO civilians, were in the field to shut down the captured facilities. In some cases, we found that the Iraqis had responded to the messages we sent by leaflets and they properly closed their plants down," Reese said.

When the ground offensive began March 19, 2003, members of the advance team of TF-RIO were in place and ready in Doha under the leadership of Lt. Col. Michael Flynn, an activated Army Reserve officer and Security Manager in the Galveston District.

Immediately after the war began, RIO team members along with Soldiers and civilians were reacting to rocket attack alerts. Each time the siren sounded everyone donned chemical suits, gas masks and sought shelter. Twenty five alerts in several days took a strong physical and mental toll on the team according to Flynn.

"Our team was really close and when we looked around at each other, we just knew that some of us weren't going to make it," Flynn said.

Fortunately, none of the missiles hit Doha, which was home to Coalition Ground Force Commander's headquarters.

Henry Schuster, a CNN embedded reporter with the Patriot Missile Battery located at the edge of the Doha installation posted a story that appeared May 29, 2003. He reported that the Iraqi military came within seconds of wiping out the headquarters of the coalition ground forces. They were with the battery that launched Patriot missiles and intercepted an Iraqi al-Samoud missile March 27.

At the time of the attack, information was embargoed due to an agreement with embedded reporters. But there was no doubt that the missile would have hit Doha on or near the building that contained the Coalition Forces War Room. The Corps' advance team, located within the same secure compound as the Coalition headquarters, would have been lost without the intervention of the Patriot.

—Steven Wright



**TF RIO members wait out 18 hours of scud alerts and threat of chemical attacks, March 19, 2003, as part of the initial element of the Corps Restore Iraqi Oil team. (photo by Alicia Embrey)**

## *Profile of Selfless Service: Frank Trent*

**L**ike a fire station dog that hears the alarm, Frank Trent didn't want to be left behind when volunteers for Iraq were needed.

The difference was that Trent had already retired after nearly forty years of government service with 28 years working for the US Army Corps of Engineers in the Safety Office. Volunteering to come back as a rehired annuitant, he was eligible only to draw the difference between his retirement pay and full salary. For Trent, he would have been working full time for about 25% more pay. "Money wasn't an issue," said Trent. "I just wanted to help out."

Timing was on Trent's side. The Defense Department came out with a new program designed to allow retirees with certain needed skills to return to work and receive both a full paycheck and full retirement benefit.

Sheila Dent helped process the request for Trent to return to work under the retired annuitant program.

"Frank was a good fit for this new program. He had a needed skill and exceptional experience. I think we did a good job in putting his package together and he was the first to return under the program," Dent said. "It helped him fill a very important job in Iraq."

Trent is the Gulf Region Division Safety Officer and happy to be deployed again. "During my career I volunteered for every deployment, I didn't always get picked, but I always volunteered," Trent said.

During his career Trent has spent 13 years in the Middle East and has an appreciation for the people and their culture.

"I like being here and enjoy the people. I enjoy helping people, but also expect them to help themselves and that's what we're trying to do here. We are helping them to help themselves," Trent said.

Trent's enjoyment of working for the Corps is obvious.

"You know I get great pride out of telling people who I work for. Although we get bad press from time to time like on the Upper Miss, in the end our professionalism always shines through," he said. "I like working for the military. You get a chance to see people come and go and I guess you get a chance to compare them. But, most of all I like working with young company grade officers, we have a chance to affect them and make a difference on how they see things and they are really something special," Trent said.

Something special is also a category Trent assigns to park rangers and construction representatives. "They are the ones out in the field, the ones that are working directly with people or the contractor. They are the ones that have to enforce the rules or make the contractor meet the specs and standards. They are the face of the Corps of Engineers. Anytime they call me or need me, I really try to be responsive to their needs," Trent said.

Trent said that he comes by his wanting to travel naturally growing up on a tobacco farm working tobacco.

"Every time I was out in the hot sun in the tobacco field and saw a plane fly over I'd look up and pray for them to take me away," Trent said.

Trent's 40 years of government service started as an ammunition storage intern in 1964. After 10 years of working in this dangerous field Trent got the chance to move to the Corps and help establish a diving safety program.

"I was a certified diver and had experience and the Corps was experiencing fatalities and needed to set up a program. It is something I started in 1974 and was part of until I retired in 2002. The year I retired we lost a diver in Louisville and it broke my heart," Trent said.

Deployed again has the right feel to this retiree annuitant. He was in his element on the sunny afternoon talking about his career. The interview was punctuated by the sound of small arms fire across the Tigris River and helicopters flying fast and low overhead. Soon after there was the call to prayer from the loudspeakers from the mosques. Trent just smiled

—Steven Wright



# Hail and Farewell

(April 20—May 3, 2004)



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**Marty L. Seger**  
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**Lt. Dave Swaintek**  
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91st Eng. BN, 1st CAV



**Dean Hall**  
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**Don Hendrix**  
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Mobile District



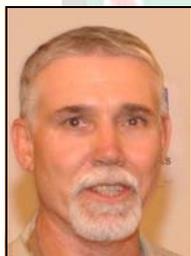
**Jim Langan**  
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**Peg Holder**  
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Returning to:  
Omaha District



**Kyle Curtis**  
Chief, IMO IPC/GRD  
Returning to:  
Alaska District



**Chuck Ogle**  
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Returning to:  
Nashville District



**David Bequeaith**  
Chief, Cost Eng. GRD  
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Rock Island District



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Wilmington District



**Jerry Anderson**  
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**Tom Rollins**  
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