



PROJECT AND CONTRACTING OFFICE / GULF REGION DIVISION OF THE U.S. ARMY CORPS OF ENGINEERS

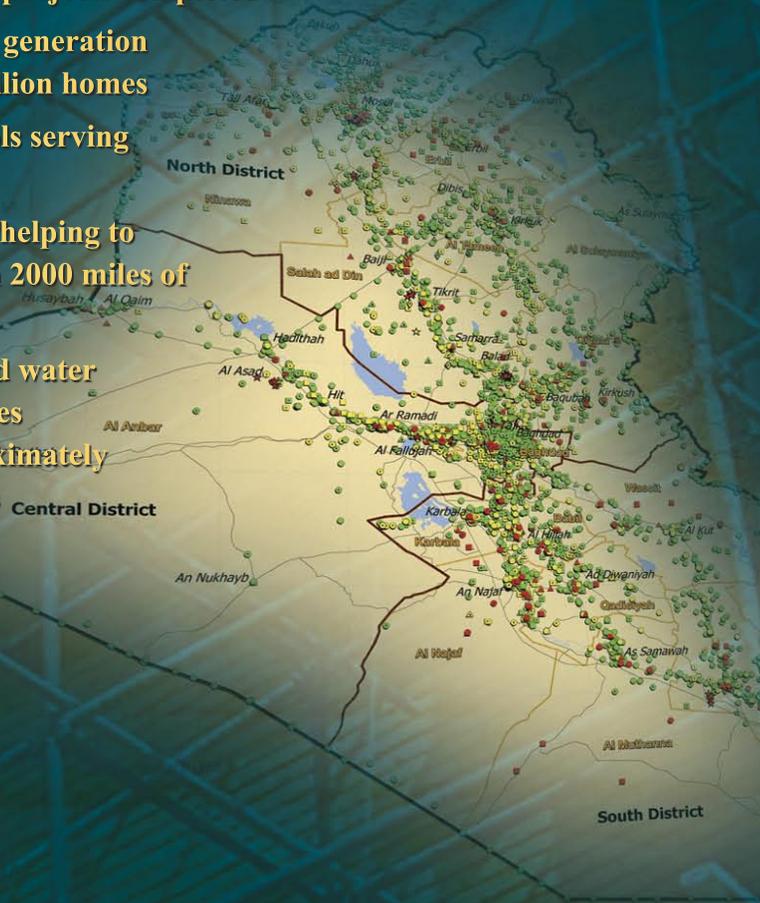
A Report on

IRAQ

RECONSTRUCTION

Accomplishments:

- More than 2,700 projects completed
- Increased power generation benefiting 1.3 million homes
- New grade schools serving 325,000 students
- 250 border forts helping to secure more than 2000 miles of Iraq's borders
- New and restored water treatment facilities benefiting approximately 1.9 million Iraqis



Assistant Secretary of the Army for
Acquisition, Logistics & Technology

January 2004 – September 2006

Rebuilding Iraq

RECONSTRUCTION IN THE AFTERMATH OF WAR—A HISTORICAL SUMMARY

Throughout history, the U.S. has interceded on behalf of people in countries affected by war or acts of aggression. From the massive reconstruction of the South after the devastation of the American Civil War to the rebuilding of Kuwait and Iraq, America has played a strong role in the reconstruction of the critical infrastructure that is necessary for economies and civil services to grow and flourish.



German citizen shovels debris under sign for Marshall Plan.

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Post World War II Reconstruction

The Second World War was the most destructive and dreadful experience in world history. Unlike the aftermath of World War I, Allied victors decided to reconstruct—instead of punish—Germany and Japan. This was the greatest and most successful reconstruction effort in history and was sustained primarily by the United States. The famous Marshall Plan was applied in Europe, but not to Japan.

Japan (1945 - 1952)

Although Japan was not invaded, its cities and military targets were heavily bombed—including the August 1945 atomic bombings. Many believed that Japan could not evolve from a militarist, feudal culture into a modern democracy. The main factor that restored Japan's economy was the business generated by the Korean War from 1950 to 1953.

The Marshall Plan (1948 – 1952)

The “Marshall Plan” or European Recovery Program of 1948, was first suggested in June 1947 by Secretary of State George C. Marshall. The relief came in two components: loans to private-sector businesses to spark economic growth; and grants to governments to assist in public works and reconstruction projects. The program provided \$13 billion (\$100 billion in 2005 dollars) to 16 nations. The Marshall Plan did not provide assistance to what became the eastern bloc countries.

Ten million Germans were homeless and millions of refugees flocked to Germany in 1945. For two years, former German soldiers and Nazi diehards conducted a limited but

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INTRODUCTION



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY
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September 29, 2006

Today, with pride and with gratitude, we mark the milestone accomplishment of having contractually obligated one-hundred percent of Iraq reconstruction project funds entrusted to the Department of Defense through the Iraq Relief and Reconstruction Fund (IRRF). I congratulate the United States Army team—from the joint theatre and Army commanders and the Gulf Region Division of U.S. Army Corps of Engineers in the field—to the various elements of the Department of the Army at the Pentagon, to our interagency partners, the United States Department of State and United State Agency for International Development, and to the Government of Iraq on this historic milestone. I also commend to you the patriots, living and deceased, military and civilian, government and non-governmental, for their steadfast dedication and commitment to the reconstruction of Iraq.

Throughout the IRRF program, this team has proved to be resourceful and resilient, while adjusting to every challenge presented by the evolving conditions in Iraq. The original post-war administrative agency, the Coalition Provisional Authority, created the Program Management Office (PMO) to begin the reconstruction planning efforts. In 2004, a presidential directive established the Project and Contracting Office (PCO) as the successor organization to whom our dedicated Army became the Executive Agent responsible for execution. As reconstruction commenced, a new joint in-theatre contracting entity was also established, the Joint Contracting Command for Iraq and Afghanistan, creating a central point to coordinate all contract actions. During the same year, the PCO merged with the U.S. Army Corps of Engineers' (USACE) newly created Gulf Region Division (GRD) to create a strong management partnership benefiting from over 200 years of USACE construction experience. As the PCO nears the end of its congressional authorization, the Corps of Engineers will manage the remaining reconstruction until all projects are completed.

This report looks back over the last two and-a-half years and captures the historic and magnificent accomplishments of the U.S. reconstruction effort in Iraq. It also looks at the effects these projects have had on Iraq's foundation for their future. We also thank the United States Congress for their generous support and congratulate the Administration for proposing this ambitious and important endeavor. It has been my distinct honor and privilege to assist this effort.

Claude M. Bolton, Jr.
Claude M. Bolton, Jr.
Assistant Secretary of the Army
(Acquisition, Logistics and Technology)

Rebuilding Iraq

AMERICA'S COMMITMENT TO RECONSTRUCTING IRAQ

We continue to make great progress on reconstruction, however, I want to emphasize that none of our achievements would be possible without the continued superb performance of our Soldiers—the centerpiece of our Army. The nation and the free people around the world sleep better tonight because of the willingness of our Soldiers and their loved ones to endure hardships so that others might have a brighter future, specifically, a free and democratic Afghanistan and Iraq.

Dr. Francis J. Harvey, Secretary of the Army

Iraq's reconstruction is the largest and most complex reconstruction project undertaken in a single country. The expectations of the governments of Iraq and the United States and their citizens have placed great pressures on everyone associated with the reconstruction effort to act quickly and to effectively complete the mission. The foundation for democracy in Iraq is dependent on a functioning infrastructure that provides essential services to the people of Iraq.

Most programs and projects funded by the Iraq Relief and Reconstruction Fund (IRRF) will be completed and turned over to Iraqi authorities by the end of 2006. The Project and Contracting Office (PCO) and the U.S. Army Corps of Engineers - Gulf Region Division (GRD) program managers are now engaged in a joint enterprise with Iraqi officials in planning the completion of key reconstruction initiatives. With almost 70 percent of the \$18.4 billion IRRF dollars expended for project completions, the U.S. reconstruction program in Iraq is meeting its obligations for sustainability, and transition of assets to Iraqi authorities.



One of four busts of Saddam Hussein being removed from the Presidential Palace in October 2003

U.S. senior advisors arrived in Iraq in April 2003 and were shocked by the state of disrepair of the infrastructure—not from the bombing damage during the war, but from the nearly 30 years of neglect under Saddam Hussein's rule. Power plants had not been maintained, roads and bridges were in poor condition, many schools were dilapidated, and potable water was scarce. Only six percent of the population was served by sewage treatment facilities. Saddam Hussein had clearly placed a low priority on funding maintenance of infrastructure facilities, while demanding that these systems deliver needed services to at least a portion of the population. Looting was on such a massive scale after the fighting that whole buildings

were dismantled piece by piece with all of the machinery, copper wire, and other fittings being stripped and removed.

In May 2003, the United States and Great Britain established the Coalition Provisional Authority (CPA) as a temporary governing entity to provide effective administration to the Iraqi people during the transition to a new Iraq government. The CPA established the Iraq Program Management Office (PMO) to manage an additional \$18.4 billion appropriation by the U.S. Congress (after a previous appropriation of \$2.5 billion in April 2003) for the security, relief, and reconstruction of Iraq. Along with the U.S. Agency for International Development (USAID), the U.S. Army Corps of Engineers and other organizations, the PMO began the process of overseeing efforts to restore essential services, provide security, and enable economic growth and self-governance.

The CPA went to the U.S. Army for assistance in contracting and program management. The Office of

the Assistant Secretary of the Army for Acquisition, Logistics, and Technology (ASAALT) established an approach that would draw considerably on the U.S. private sector and engage the Iraq workforce to the fullest extent possible. This huge project was staffed by blending military personnel, U.S. government civilians, and contractors. These individuals worked closely with Iraqi ministry personnel and with other U.S. government organizations, and personnel from the Iraqi ministries in Baghdad.

In October 2003, five and a half months after the establishment of the CPA, the United Nations/World Bank Joint Iraq Needs Assessment estimated that more than \$55 billion would be needed to re-establish Iraq's critical infrastructure. Oil and gas restoration costs were not included in this assessment, but were estimated by the CPA to be \$8 billion.

On June 28, 2004, the CPA transitioned governing authority to the Interim Iraqi Government. The U.S. Department of State established the U.S. Embassy in Baghdad the next day and diplomatic relations with the new Interim Government of Iraq began. The Iraq Reconstruction Management Office (IRMO), under the Chief of Mission, began working closely with the fledgling Government of Iraq and helped the new ministries find direction.

Also in June, 2004, a presidential

directive established the Project and Contracting Office as a temporary Army organization to provide acquisition and management support services for Iraq's reconstruction. In January of the next year, Secretary of the Army, Francis J. Harvey, delegated oversight of the PCO to Claude M. Bolton, Jr., the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASAALT). Contracting authority



Handover ceremony for a new Iraqi facility

was also consolidated within the Army headquarters under ASAALT. Of the \$18.4 billion supplemental budget appropriated under the IRRF, the PCO is responsible for roughly \$13.5 billion. A significant portion of those funds, \$4.2 billion, was slated for purchase of non-construction items such as materials and equipment, as well as training and procurement for Iraq's security forces.

Since the first contract was negotiated, the PCO has been responsible for managing the start-up of more than 3,400 projects under DoD's portion

of the IRRF. Once a project has started, the U.S. Army Corps of Engineers, Gulf Region Division (GRD) quality assurance and quality control inspectors step in to work with contractors to ensure that each project meets specifications. Transfer of completed projects to the Government of Iraq is completed in accordance with IRMO's Asset Recognition and Transfer process.

PCO and GRD consolidated in December 2005 with GRD taking the leadership role in reconstruction under ASAALT. PCO's authorization will terminate in May 2007 while GRD is a permanent organization under the U.S. Army Corps of Engineers.

As the GRD/PCO and ASAALT complete the mission set forth by Congress, other U.S. agencies such as USAID and U.S. Department of State will continue to strengthen Iraq's governance capabilities and its social institutions. Infrastructure, capacity development, strong institutions, security and equality are conditions that foster democracy and free markets.



LTG Strock (3rd from left) and team of engineers inspect power plant.

Rebuilding Iraq

THE EMERGENCE OF THE JOINT CONTRACTING COMMAND FOR IRAQ

It was a Saturday morning and the last stragglers were arriving after the familiar trek down the long corridors at the Pentagon. Tina Ballard, the Army's Deputy Assistant Secretary for Policy and Procurement had called this meeting to talk about how they were going to do the impossible.

Ambassador L. Paul Bremer III, Director of the Iraq Coalition Provisional Authority (CPA), which oversaw Iraq at that time, had requested that the Army develop a solicitation and make an award to the most qualified bidder to train the new Iraqi armed forces. Normally, a solicitation of that size would take anywhere from 18 to 24 months depending on the complexity and dollar value—this solicitation and award were to be completed in 25 days.

By the end of the first week the Army team developed a contract synopsis and held an industry day where potential bidders could ask questions and hone their responses. In the following weeks, the group developed a request for proposals giving bidders just seven days to respond. The team evaluated all of the proposals and made the award in just under 25 days. Five days after the award, the winning bidders had assembled their teams and began landing in Baghdad to begin work.

Concurrent with the troop training contract, the Army had just received delegation from the Deputy Secretary of Defense to serve as the executive agent. The delegation required the Army team to provide contracting services for post-war reconstruction operations under the CPA, expanding on the work already started with the troop training contracts. The team deployed to Baghdad to assess the situation on-the-ground and, upon return, several contract specialists were sent to Baghdad to begin providing contracting support to the CPA and to report on the efforts to train the new Iraqi army.

Ms. Ballard told the group assembled that they were about to boldly go where no one had gone before in contracting.

The Army pulled together planning teams in anticipation of this huge reconstruction requirement about to break like a tsunami over the engineering and construction communities. Ballard and her team looked across the U.S. Army to get the best leaders and brought everyone together at Defense Acquisition University (DAU) for a large planning session. All of the armed services were represented.

In November, 2003, the wave broke when the U.S. Congress added \$18.4 billion to the original \$2.1 billion to

begin the task of rebuilding the Iraqi infrastructure, which had deteriorated significantly after years of neglect under Saddam Hussein's regime. The Army was responsible for somewhere between \$11 and \$13 billion of the appropriation.

When the Iraq Relief and Reconstructing Fund (IRRF) appropriation became available, the contracting team launched their organizational plan they had developed at DAU that called for a blended staff of U.S. government civilians, military personnel, contractors and personnel from the Iraqi ministries. Design/build and security contracts were set aside for the Coalition partners because, as one CPA/PCO contracting official said, "...in the end, who else would have the capital to go out and hire all these people, pay their insurance, house them, feed them, and provide security?"

As the chart on the next page shows, 2004 was taken up with many required tasks before construction could start. By January 2005, just three months after the IRRF appropriation was passed, the Army team had developed requests for proposals worth more than \$5.5 billion. The design phase was completing and projects were "moving dirt."

As the number of projects increased, so did the number of contracting agencies. The number of contracting

AND AFGHANISTAN

specialists reached 40 people. The complex environment created multiple contracting teams making multiple awards, some to the same vendor, nevertheless, each award had to reflect a tight consistency with all other IRRF contracts.

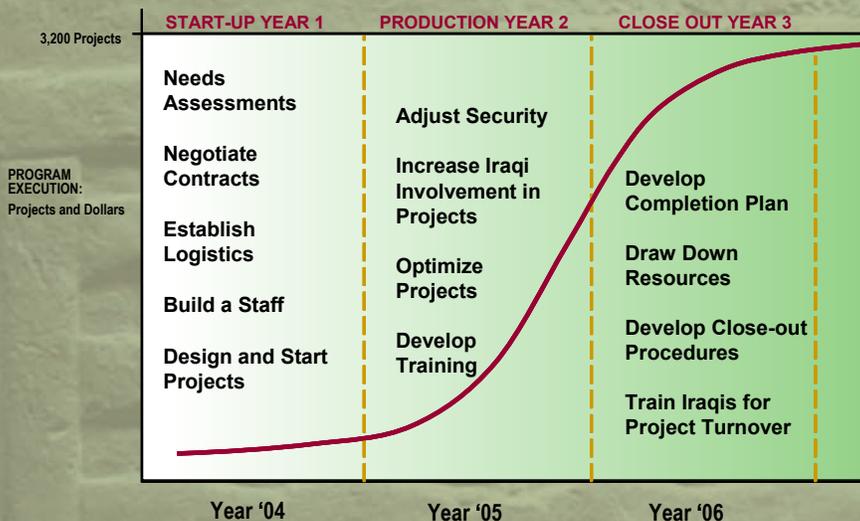
Responding to this complex environment and the need for a unified contracting structure, Brigadier General Stephen M. Seay (Ret) put in place a joint contracting mechanism called the Joint Contracting Command, Iraq/Afghanistan/(JCC-I/A). The command has grown from 3 people to 160 in two countries and enjoys the support of all the armed services.

I think if you look at the JCC I-A, that portion is a success story in that we have a coordinated DoD contracting approach.

Colonel Michael E. Bonheim Contracting Officer CPA/PCO



Electrical power generation construction project at Khor Az-Zubair Power Plant near Basrah essentially doubled power generated at this plant through engineering, installing and commissioning two turbine/generator units.



Rebuilding Iraq

CHALLENGES AND PROGRESS



After the fall of Baghdad, in April 2003, U.S. engineers were able to closely inspect Iraq's infrastructure and found the capacity for electrical power generation, oil production, water purification and sewage handling greatly diminished. Power plants were antiquated and poorly maintained while looters had stripped substations of copper cables and other valuable assets. Oil production was inefficient at best and sewage backed up into many streets. Iraqi banks were almost non-existent, the government and police protection had disappeared, commerce was moribund—and people were growing desperate for food and clean water. Iraq was "a completely failed state" according to a former U.S. deputy defense secretary who visited there in June 2003.

Training and Maintenance

The challenge of rebuilding Iraq goes beyond generating power and pumping oil. This includes rebuilding a culture of maintenance that was gradually lost during the embargo years. PCO realized that some of the more complex projects would not be sustainable after hand over. PCO advocated strongly for a holistic approach to developing the capacity necessary for the Iraqis to take over the day-to-day operations and maintenance of critical infrastructure. PCO developed a robust training program targeting Iraqis at the facility level while working with other USG organizations to identify other needs within the ministries necessary to support sustainable operations.

Security

Iraqi and foreign fighters who comprise the insurgency have reduced the progress of the reconstruction effort by an estimated 10 to 12 percent overall. When Iraqis working with the Coalition forces, and the Coalition forces themselves became targets of the insurgents, funds that were intended to support the reconstruction effort were used to keep people safe from kidnappings and attacks. Work has been curtailed in some cases and not started in others to make funds available for additional security; however, not all areas required a high level of security. In lower risk areas work progressed intensely. In areas where threat levels were high, such as truck convoys, power lines and oil pipelines, GRD/PCO project managers estimated that between 18% and 25%



of program funds were being used to protect the workers engaged in reconstruction activities.

Electricity

The CPA had the challenge of bringing existing electrical power generation facilities back on line. Key institutions and services such as hospitals, factories, ports, and oil infrastructure depend on electricity to function. The Coalition engineers and ministry officials were faced with a choice: their first option was to upgrade the existing 1980s vintage, highly degraded, inefficient, oil-fired combustion turbines that would take 18 months to complete or to build natural gas fired steam turbine plants fueled by Iraq’s abundant natural gas which would take two to three years to complete.

There was actually no choice. There are so few natural gas pipelines that Iraqi power plant operators continued to use low-grade fuel oil to power the existing combustion turbines. Without modifications and a special fuel treatment, however, the power output from these generators is half of their potential, and maintenance requirements double.

The USG developed new electricity generation, transmission, and distribution systems while expanding the capacity of existing systems throughout the country, with the objective of providing equitable access to power for all the people in Iraq. Over 2,500 megawatts of electricity will have been added at the end of the U.S. construction program. Automation and control equipment have been

added to modernize the monitoring systems and to increase efficiency.

The oil and electricity sectors are consistently surpassing pre-war levels.

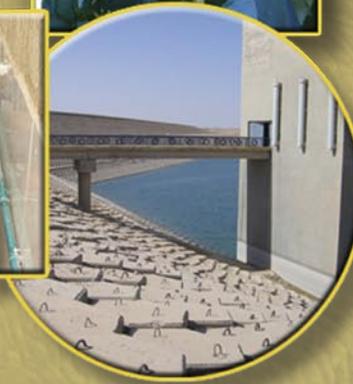
By the summer of 2006, the combined effort of GRD/PCO and USAID had pushed the level of production to consistently surpass pre-war power generation capability.

Oil

Oil is the mainstay of the Iraqi economy. Iraq’s oil deposits are vast—the second largest crude oil deposit in the Middle East after Saudi Arabia. Over the past decade, oil production has risen and fallen on the intentions of the Iraqi government. In 1991, after Gulf War I, oil sales in Iraq were restricted by UN sanctions to

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CHALLENGES AND PROGRESS



stop Saddam from using oil revenue to rebuild his military or to obtain weapons of mass destruction. During sanctions, oil production ranged from 0.5 to 0.6 million barrels per day (mbpd). After sanctions in 1997 and 1998, Iraq's oil production ranged between 1.2 mbpd and 2.2 mbpd.

As Saddam entered into each of the three recent wars, he drove oil production to unsustainable levels to generate cash. For example, in 1979, just prior to the Iran/Iraq war, oil production spiked at 3.7 mbpd; prior to Iraq's invasion of Kuwait, oil production spiked at 3.5 mbpd; and prior to the Operation Iraqi Freedom in 2003 the level of oil production was about 2.6 mbpd.

The recent completion of the al-Fathah oil pipeline crossing of the

Tigris River (see photo on page 15), along with the expected completion of a related 40-inch pipeline, will increase Iraq's export capacity through Turkey—provided the infrastructure is protected. The off-shore oil loading terminals are being upgraded which will improve export loading capacity and capacity development programs for the oil ministry are improving maintenance practices.

An important and closely related interface is the electrical power system, which requires crude oil or natural gas to power the generating plants. A failure of one component in the system creates a related problem elsewhere in the system. For example, the electrical power grid is dependent upon fuel from the oil and gas system while the oil field production facilities require electrical power to produce the fuel.

Health Clinics and Hospitals

Iraq had approximately 240 hospitals and 1,200 clinics before the war began in 2003. The Iraq healthcare system had not been managed well for two decades. High quality medical services were limited to only certain facilities. No new hospitals had been built in 20 years while the population in Iraq has tripled. Over half of the public health centers deteriorated and closed prior to 2003.

The healthcare system in Iraq is undergoing a systematic change. Formerly, one large central hospital would serve a diverse and widespread group of communities—some quite far away. Under a new decentralized system, smaller but more accessible public health centers will serve the



Massive water treatment plant under construction in Erbil, Iraq. The plant was completed in July 2006 and has begun limited operations.

nearby communities for all but the most serious ailments. Community health centers will be focused on prevention and healthy practices. A primary healthcare system will help to improve the health of the nearby communities and will provide a sustainable delivery system.

IRRF has funded projects that include the construction of 142 clinics or primary healthcare centers (PHCs); equipping 600 clinics; and building 12 new ones. The Iraqi Ministry of Health already has received \$33.8 million in medical equipment to help upgrade the care provided in existing and new facilities throughout the country.

Water

The amount of potable water available prior to the liberation of Iraq is unknown. In April 2003, when U.S.

engineers were on the ground, it was clear that many of the country's water treatment plants were in serious disrepair and many Iraqis were receiving water that was inadequately treated or contaminated. By the end of the program, additional PCO/GRD water capacity improvements will benefit approximately 4.8 million Iraqis and when all USG agencies are considered 8.2 million Iraqis will benefit. The Coalition countries have now made potable water available for 3.7 million additional residents and 5.1 million additional persons have access to sewage treatment. These numbers will continue to grow as water treatment facilities now under construction become operational.

GRD/PCO has approximately 345 potable water projects and

22 wastewater treatment projects underway with another eight GRD projects aimed at improving the country's reservoirs, dams and irrigation systems. Total spending on water and wastewater projects is \$1.7 billion. The water sector initiative has \$110 million set aside for parts, consumables, on-site technical support and capacity development.

This program is providing Iraqis the means and abilities to carry out sustained operations at an acceptable level of service.

Transparency and Oversight

PCO has been open to external review since the beginning of the project. A number of different audit and assessment organizations have reviewed the USG's management and implementation of the reconstruction program. PCO has been a key participant in most of these assessments because of its role as the major implementation organization.

Rebuilding Iraq

CONTRACTING STRATEGIES FOR 13.5 BILLION DOLLARS

All of Department of Defense's portion of the IRRF (\$13.5 billion out of \$18.4 billion) has been obligated to projects. Over 70% has been disbursed.

Direct or Design/Build Contracts

The Iraq reconstruction effort is unprecedented for its size, complexity and risk. The Department of Defense and federal acquisition experts carefully employ federal acquisition rules while at the same time seeking to maximize contract flexibility for program support at the best value to the government. Indefinite Delivery/Indefinite/Quantity (IDIQ) contracts meet these requirements in most cases.

When the U.S. Department of State's Iraq Reconstruction Management Office (IRMO) and the appropriate Iraqi ministry identify and prioritize projects, the GRD/PCO team determines the requirements to complete the project. Program managers select a vendor from a list of firms already under contract, or

DoD Portion of Iraq Relief and Reconstruction Fund

Security & Law Enforcement	\$4,201.
Justice, Public Safety Infrastructure, and Civil Society	\$972.
Electric Sector	\$3,402.
Oil Infrastructure.....	\$1,724.
Water Resources and Sanitation.....	\$1,717.
Transportation & Telecommunications Projects	\$409.
Roads, Bridges, and Construction.....	\$311.
Health Care	\$733.
Private Sector Development	\$20.
Education, Refugees, Human Rights, Democracy, and Governance	\$27.
Total.....	\$13,521.

(000,000)

Other US government agencies engaged in the reconstruction of Iraq under the IRRF include: U.S. State Department, U.S. Agency for International Development, U.S. Institute of Peace, U.S. Treasury. Sept. 1, 2006

an Iraqi firm with the capabilities to complete the task. The 12 U.S. firms selected for prime contractor have let almost 1,000 contracts to U.S. subcontractors and over 1,600 subcontracts to Iraqi firms. Once a project has started, engineers from GRD provide quality assurance for each project and certify its completion.

By the end of August 2006, 70% of the planned projects had been completed.

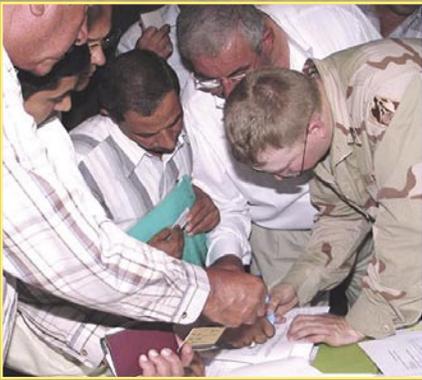
Shifting Priorities to Iraqi Firms

The PCO has sought to maximize the use of Iraqi firms wherever possible to help restore Iraq's national, political, and economic stability. We continue to shift our acquisition strategy as construction continues and Iraqi firms' technical and management capacity stabilizes.

In the first year of the reconstruction program, the contracting approach was to use large design/build contractors. As the program accelerated, the number of direct contracting opportunities to local firms increased as they became more

capable. By the third year, more than 70 percent of all IRRF contracts go to local firms. These subcontracts strengthen Iraqi firms on many fronts by being engaged in this monumental effort while U.S. design-build firms receive awards for successfully subcontracting to Iraqi firms and supporting a capacity development program.

By the end of August, 2006 more than 33,000 Iraqis were working on projects. Considering all USG projects, more than 116,000 Iraqis are employed.



Iraqi vendors meet with USG representative during bidders meeting.

CONTRACTING MECHANISMS THAT BOOST IRAQI EMPLOYMENT

Several, short-term contracting methods have been adopted: the Commanders Humanitarian Relief and Reconstruction Program (CHRRP), the Commander's Emergency Response Program (CERP), the Rapid Contracting Initiative program (RCI), and the Accelerated Iraq Reconstruction Program (AIRP).

Commander's Humanitarian Relief and Reconstruction Project (CHRRP)

CHRRP is a \$172 million effort under the Iraq Relief and Reconstruction Fund designed to provide funds that improve the lives of individual Iraqis by quickly rebuilding essential water, sewage and other services using local resources and labor. The funds come from the Iraqi and U.S. governments. The program stresses small-scale economic development projects managed by the PCO. Unlike CERP and RCI these projects are focused in Baghdad,

where a number of essential water and sewage services are inadequate. Sadr City, a combat-weary area of Baghdad, directly benefited from this program that allows local U.S. commanders to determine how much money should be spent on specific reconstruction efforts.

Commander's Emergency Response Program (CERP)

Under CERP, commanders on-the-ground are allocated up to \$500,000 to quickly solve immediate humanitarian problems such as repairing electrical lines or getting clean-water services established quickly. Initially CERP funds were drawn from Iraqi-seized assets, but the program has proved to be so successful that the U.S. Congress appropriated additional funds to continue it. Millions of dollars was spent on a thousand water and sewer projects to prevent the spread of dysentery, cholera and other diseases and to provide clean water to Iraqi citizens. Bridges, roads, and school construction are also completed under CERP funding.

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Rapid Contracting Initiative (RCI)

In May 2004, two Iraq reconstruction engineers developed a contracting strategy using local people who are familiar with the neighborhoods to complete small electrical projects such as running overhead wires. GRD engineers oversee these projects to help insure the work is done correctly. The initiative has grown in size and more than 250 engineers have worked with RCI teams and with the Ministry of Electricity to identify Iraqi contractors with good track records. RCI provides hands-on training of Iraqi engineers by GRD and PCO.

Accelerated Iraq Reconstruction Program (AIRP)

Under AIRP, contract teams were deployed to 10 key cities to define high economic impact projects in the areas of potable water, solid-waste disposal, health and transportation. On-site assistance by these teams greatly accelerated the funding process. The intent of

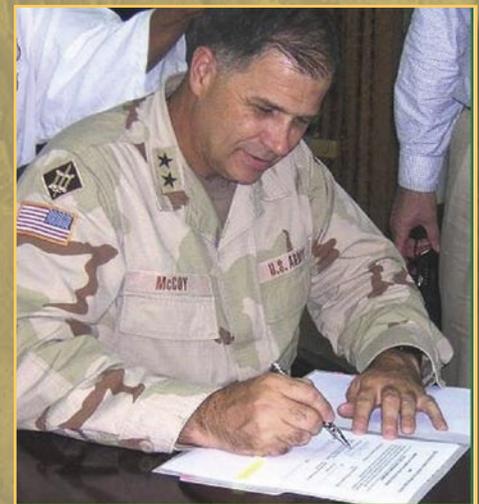
this fund is to quickly implement construction and reconstruction projects that will immediately improve the daily lives of Iraqis, create jobs and provide additional security. Most of the projects were completed in the spring of 2005

Project Partnership Agreements

The Gulf Region Division and the Project and Contracting Office in Iraq have successfully implemented another type of contracting mechanism where the appropriate Iraqi ministry agrees to finance, plan, solicit (through open bidding), select, build and operate various aspects of the infrastructure. The PCO reimburses the ministry when agreed upon benchmarks are achieved. Unlike AIRP and the other contracting strategies that rely heavily on U.S. involvement, these partnership agreements depend on ministry staff to bring out indigenous resources to implement the program. For example, five bridges and key connecting roads are being built by the Ministry of Construction and Housing partnership agreements to finance construction. No U.S. contractors, managers, or engineers are on-site,

other than the U.S. Army Corps of Engineers to inspect the quality of the construction, thus reducing life-support requirements to house and feed U.S. workers and minimizing the opportunity for terrorist's attacks—Iraqi workers have proved to be less of a target than Coalition contractors.

Grant agreements being successfully executed include four bridges and three major roadways. These partnerships boost the local economies; provide valuable experience for Iraqi construction firms and save the American taxpayer millions of dollars.



MG William H. McCoy Jr., Commanding General, Gulf Region Division and Director, Program and Contracting Office signing an agreement in Baghdad.



Progress Over Pre-War Levels

The table below describes the level of accomplishment over pre-war levels in each of the vital services.

Infrastructure Sector	What We Found Immediately After the War	Current Progress
Electricity	<p>3,300MW being produced</p> <p>7,000MW potential</p> <p>Entire distribution system failing.</p> <p>No investments, no maintenance</p>	<p>1,420 MW capacity added</p> <p>Increased power generation benefiting 1.3 million homes</p> <p>Improved Electricity Distribution to approximately 340K Homes</p> <p>Hours of Power: 11 nationwide, 6.3 Baghdad (Aug Average)</p>
Oil	<p>In 2002 – 2.0 Million Barrels Per Day (MBPD) production.</p> <p>No maintenance</p> <p>Facilities aging and inoperative wells</p>	<p>2.5 Million Barrels Per Day (MBPD) production capacity (2.2 MBPD current actual production)</p> <p>Liquefied Petroleum Gas (LPG) production capacity of 1,200 Tons per Day</p>
Water & Sewer	<p>Capacity unknown at that time</p> <p>Entire system under maintained or inoperative</p> <p>In Baghdad, no working sewer system – raw sewage dumped in Tigris River</p>	<p>Added 407,000 cubic meters per day of water treatment capacity (benefits an estimated 1.9 million Iraqis)</p> <p>Basrah City sewage treatment project nearing completion.</p>
Health	<p>No new hospitals build in 20 years while population tripled</p> <p>Over half of public health centers were closed for poor maintenance</p>	<p>Six IRRF funded Primary Healthcare Centers (PHC) completed (three of these are open). 66 PHCs are under construction</p> <p><i>All the PHCs have now been re-awarded</i></p> <p>11 hospitals renovated, serving approx. 5,500 patients/day</p>
Education	<p>Approximately 13,000 schools</p> <p>10, 400 in disrepair</p>	<p>834 schools providing classrooms for 325,000 grade school students</p>
Security & Justice	<p>Police force marginalized by leadership</p> <p>Facilities in disrepair</p> <p>Open borders – no operational border forts</p>	<p>342 police facilities completed</p> <p>248 new border forts completed, helping to secure some 2000 miles of Iraq's borders</p>
Transportation & Communications	<p>34,586km of paved roads</p> <p>6103km of village roads</p> <p>No emergency response system</p>	<p>217 km of village roads added</p> <p>Provided emergency response dispatch system (9-1-1 service) covering 12 million Iraqis in 15 cities</p>

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THE GULF REGION DIVISION'S HERITAGE OF EXPERIENCE



Oil pipelines being extended across the Al Fathah river.



Even prior to the fall of Saddam Hussein in 2003, civilian and Army engineers were on the ground in Kuwait and later in Iraq to take on the engineering challenges these two post-conflict environments posed. Various U.S. Army Corps of Engineer division and district employees in the United States formed task forces that dealt with oil production and electricity generation while forward engineering teams were operating throughout the theater assessing projects, developing courses of action, and initiating contracts during the early days of reconstruction.

On January 25, 2004, these individual engineering efforts were brought under one command with the formation of the Gulf Region

Division. GRD was designed to be the construction management component of the Program Management Office under the Coalition Provisional Authority.

The GRD, Making a Difference

The US Army Corps of Engineers' experience in Kuwait during the Gulf War (January through March 1991) provided valuable lesson learned according to Major General Ronald L. Johnson, Deputy Chief of Engineers and Deputy Commanding General of the U.S. Army Corps of Engineers. The number one lesson according to Gen. Johnson was to withstand the temptation to think that the Corps could manage the operations from afar, maybe in a safe haven. This was not the best way to go about

setting up a new division that covered the entire Persian Gulf Region according to him. Gen. Johnson said he wanted to have capabilities to respond where we needed to make a difference, and for him, Iraq was the place to do that.

The new Gulf Region Division is the product of the evolution from the Kuwait Reconstruction Office, the Coalition Provisional Authority, and the Iraq Project and Contracting Office.

Each of these organizations had been tasked with fitting together the various sectors of reconstruction and integrating program management, project controls, quality assurance and quality controls.



Subcontracting by Prime Contractors

U.S. companies receiving subcontracts:.....	954	value.....	\$241,130,657
Subcontracts to US women-owned businesses:.....	81	value.....	\$154,843,701
Iraqi companies receiving subcontracts:	1641	value.....	\$190,850,532
Iraqi women-owned businesses:	51	value.....	\$13,990
Coalition companies receiving subcontracts:.....	1039	value.....	\$63,800,283

Training by Prime Contractors (Management, Technical and Unskilled)

Number of Iraqi men trained:	503,000	number of hours:	1,000,000
Number of Iraqi women trained:	6,000	number of hours:	110,000

Hiring by Prime Contractors onto Staff Positions

Iraqi Men:	5,041
Iraqi Women:	12,041
Expatriates:	904

Subcontracting and Hiring Database

Report from PCO - developed subcontracting and training database. Report shows U.S. contractors' success in hiring Iraqi and Coalition firms and recording the number of Iraqi men and women trained.

A Huge Effort, A Huge Success

The Army Corps of Engineers' staff joined other DOD teams plus the U.S. Agency for International Development and contractors such as the Pentagon Renovation Program (PenRen) in an all out effort to identify priority projects in Iraq. Despite the high-dollar value and the speed required to put contractors in Iraq quickly, there was only one protest in hundreds of bids for those first contracts awarded.

The First Plan

The first plan called for more than 6,000 projects, but was later reduced to 2,311 projects when the President signed the \$18.6 supplemental bill for Iraq reconstruction on November 6,

2003. This plan called for the DoD to spend about \$12.3 billion in construction and another \$6.1 billion for training, equipment and other non-construction items. The spending plan was specific down to which schools would be renovated and in what order. The total 2,311 projects on the list increased somewhat over time. Once the plan was approved by the Office of Management and Budget, the team conducted an intense effort to develop an integrated Program Managing Plan to optimize the various contracts about to be awarded. After a long delay, the Program Management Office advertised the work and received hundreds of proposals under a full and open competition worth more than \$5 billion in the first few months.

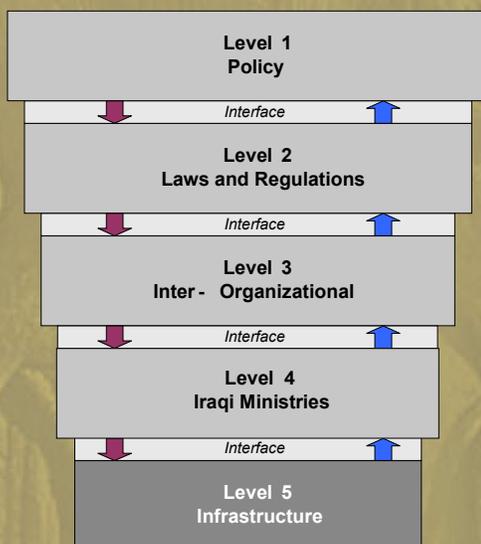
PCO contractors are responsible for subcontracting to Iraqi, Coalition and women-owned firms. A database developed by PCO records the information shown above on a monthly basis. The chart shows their progress through July 2006.

Rebuilding Iraq

CAPACITY DEVELOPMENT: GROWING STRONG FROM WITHIN

Capacity Development: Building a Foundation for a Sustainable Future

Capacity Development (CD) strengthens the human and institutional capabilities to support a society in its development of a more secure and sustainable economy, government, and infrastructure. This process was a critical component of the overall infrastructure reconstruction mission and therefore, CD requirements were passed down from the PCO to its various contractors for implementation. The CD process was defined by five distinct levels laid out in the



LEGEND



Iraq Capacity Development PCO Management and Interface Plan (CD Plan), as shown in the figure below.

These levels ranged from the top tier of government structure to training individuals at plants on how to maintain and operate new pieces of equipment. CD had to occur at all five levels concurrently in the case of Iraq reconstruction for the entire effort to be successful. This required a great deal of coordination between all involved USG organizations, contractors, and the Iraqi ministries.

The CD Plan also described the interfaces between PCO and other organizations and defined the specific roles and responsibilities for PCO and its contractors. The PCO's primary CD role was at Level 5, facilitating conditions for the successful and sustainable handover of completed, facilities, systems, and equipment to the Iraqis. The simple objective was to make sure the Iraqis were trained and able to operate and maintain these systems over the long-term. The PCO and its contractors

successfully completed their role at Level 5 through a number of activities including:

- Formal classroom training sessions and daily on-the-job training sessions, with specialized training sessions held in locations outside Iraq, when appropriate;
- Regular meetings with facility and ministry staff concerning ongoing work and planning;
- Provision of a number of deliverables such as operations and maintenance manuals, preventive maintenance manuals, spare parts lists, and illustrated parts guides translated into Arabic; and
- Operational testing and commissioning.

The PCO also conducted some activities at Level 4, training ministry staff in new business and administration systems necessary for plant operations. For example, through the Capacity Development Initiative, the PCO and its



A Letter from a Young Iraqi Women

Greetings,

The most important event happened when a new light shined down on our beloved country when the last regime fell. I am Petro, born in Baghdad 1960. My first graduation was in 1981, School Of Technical Education. I started my work life as a teacher, In 1989, I started a new book store. I use to import goods so I had to go abroad attending many fairs. My second graduation was in 1999, Baghdad University/ English Department. After graduation in 1999, I opened an institute for teaching languages and computers.

Recently, I established a company for general trading construction. I have started this company but couldn't get any contracts for many reasons; one of them is we as women are use to facing a very big problem - competition with men. Our opportunities for doing business were very little.

One day, my best friend informed me about the PCO and their Women's Issues Coordinator who will help us. I can say that our work has flourished. Her woman's conferences made me acquainted with many women and companies. The first conference we were only 10 or 12 women. In that conference I got two benefits: first I was acquainted with one of the members of the Corps of Engineers who help me to learn many things about their website and how to submit my offer to them and how to win the bids. Second I got to know a very nice and good lady who is the boss of The Professional Women Association. She invited me to participate with her association. This field was very new for me but I got a lot of knowledge from it.

Through the woman's conferences, we learned how to deal with the bids and the way we can contact the companies, also our company's data was published for all American companies.

Petro
General Manager

contractor provided more than 7,000 instructional hours to over 300 Iraqi Ministry personnel in the areas of operation and maintenance planning and budgeting, finance and administration, project management, water quality, baseline assessment and mini-master planning, and communications and public awareness. Other U.S. organizations, such as the State Department, IRMO and

USAID, had the primary role for implementing CD activities at Levels 1, 2, 3, and 4. PCO and its contractors worked hard to integrate Iraqi women and women-owned businesses into the reconstruction process. The PCO and its contractors held a series of conferences to assist Iraqi

women-owned businesses better understand the bidding process and to network with other women-owned businesses. In one sector alone, these conferences served as forums to train 250 Iraqi women-owned businesses that led to more than 100 contracts being awarded for substantial construction-related work. (see table on pg. 16)

Rebuilding Iraq

HOW PCO'S LOGISTICS TEAM OVERCAME THREE WARS AND 30 YEARS OF NEGLECT

After the fall of Baghdad in April 2003, U.S. engineers were able to examine Iraq's only deep water ports at Umm Qasr and Khor Al Zubayr. They found the channel partially blocked by 19 ships submerged or partially submerged from previous wars; the docks littered with 30-year old cranes and broken equipment, and the warehouses unsecured and decrepit. The ports had no electrical service.

GRD, PCO, and USAID were tasked with preparing the ports to receive oceangoing freighters and tankers; reconnect the port to the power grid; provide secure warehouses and logistics facilities at Basra and Baghdad airports; establish a central warehouse at Abu Ghraib; and coordinate a customs clearance process for exempt goods entering the country—all while terrorist attacks increased.

Through an ongoing and coordinated effort with U.S.



Al Basrah Oil Terminal (ABOT)



Unloading at Al Basrah port

Agency for International Development, PCO, and the United Nations Development Program, Iraqi funds were used to dredge the port, remove the partially sunken ships, and refurbish the cargo handling facilities.

When the rapid establishment of Iraqi security forces became the highest priority, PCO's logistics team was asked by the Multinational Security Transition Command-Iraq (MNSTC-I) to assist them by receiving and transporting police cars, trucks, protective hardware, and other items required. PCO quickly expanded its facilities to accommodate the added cargo.

MNSTC-I now receives more than 75% of the goods they order through the PCO's logistics facility for delivery to police and military forces across Iraq.

From the warehouse complexes at the airports and other storage locations, cargo that includes everything but construction material and military hardware is transported by truck convoys and trains manned by contractors and protected by non-military, mostly Iraqi, security forces. About eight



The Umm Qasr port facility in Iraq has been rebuilt by Coalition partners. Last year it handled the importation of more than 20,000 vehicles.

convoys a day, averaging eight trucks move across Iraq. Convoys are monitored by tracking devices attached to the trucks. Through real-time transponders, signals are simultaneously monitored by U.S. military and the PCO's Logistics Movement Coordination Center (LMCC). When a convoy is attacked, its location is immediately known and quick reaction forces can respond while medical evacuation units are notified if there are injuries.

In 2005, the cargo volume handled by PCO's port contractors exceeded \$3.2 billion worth of goods and

is expected to increase by \$300 million in 2006. In addition to reconstructing various warehouses, PCO developed movement accountability databases for millions of tons of cargo.

More than 8,400 convoys have left the port of Umm Qasr, and the main warehouse near Baghdad. Over 500 convoys have been attacked by anti-Iraqi forces.

Since the chaos at the end of the war and despite the neglected infrastructure, PCO has been

able to establish a consistent flow of non-construction goods, security hardware, and life-support commodities; provide accountability for the various budget funds; track goods entering Iraq; employ, train and mentor Iraqis in all functions of running a national logistics operation. All of this is being accomplished with a staff of eight to 14 people.



A truck convoy

Rebuilding Iraq

BUILDING A FOUNDATION FOR FREEDOM

This map represents over 11,000 Iraq construction and renewal projects from various DoD civilian and military programs; completed projects are represented in green, ongoing in yellow and planned in red. The programs represented include the Iraq Relief and Reconstruction Fund, Marine Corps' Construction Program, Operation and Maintenance Account, Commanders' Emergency Response Program, and the Accelerated Iraq Relief Program. The map indicates projects in the Facilities and Transportation sectors, Electricity and Oil sectors and Public Works. The map is current through July 9, 2006.



Not all projects represented

RECONSTRUCTION IN THE AFTERMATH OF WAR—A HISTORICAL SUMMARY

cont'd from pg. 1

deadly terrorism campaign against aid workers, German collaborators, and occupation troops.

South Korea 1951-1955

During this three-year war, Korea witnessed devastation on a massive scale as armies advanced and fought across the same area several times. A million Koreans died in the war. A third of Korea's homes, schools, buildings, roads, and much of the infrastructure were severely damaged. The U.S. Army was the lead agency for the reconstruction programs. Once reconstruction began, South Korea experienced widespread recovery in a short period of time.

Kuwait 1991-1993

Fleeing Iraq forces destroyed oil wells or set them ablaze—turning Kuwait into an environmental catastrophe. The desperate troops destroyed all buildings, roads, and structures; they set booby traps and left mines unmarked. America provided contracting and engineering expertise to the Kuwait reconstruction effort and quickly procured and oversaw



U.S. forces prepare a floating bridge across the Hahn River in South Korea after the conflict there.

contracting and project management work. All costs, including U.S. government time and participation, were paid by the Kuwait government.



Oil fire in Kuwait following retreat of Iraq forces at the conclusion of Gulf War I.

Rebuilding Iraq

SIGNIFICANT RECONSTRUCTION EVENTS

2003



2004



May 6, & 9 2003	Nov 6 2003	Jan 6, 2004	Mar 26, 2004	May 11, 2004
<p>President Bush appointed L. Paul Bremer III to be the new top civilian administrator of reconstruction in Iraq. Bremer was ambassador at-large for counterterrorism during the Reagan Administration</p> <p>Coalition Provisional Authority established under Ambassador Bremer's signature. (CPA regulation #1).</p>	<p>Congress passed PL 108-106, which was an emergency supplemental appropriations act for the Department of Defense and for the Reconstruction of Iraq and Afghanistan. This law provided \$18.4 billion and was entitled the Relief and Reconstruction Fund (also known as IRRF2, because of the earlier appropriation in 2003.)</p>	<p>PMO issued thousands of Request(s) for Proposal (RFP) for contracts.</p>	<p>PMO's Program Management Plan approved and distributed.</p>	<p>President Bush orders the establishment of the Project and Contracting Office (PCO) with National Security Presidential Directive #36. It also directs the termination of Coalition Provisional Authority on June 30, 2004. This directive also created the Iraq Reconstruction Management Office (IRMO) a temporary organization in the State Department and under the Chief of Mission's authority.</p>

2005



June 28, 2004	Jan 7, 2005	Mar 25, 2005	Sep 1, 2005	Oct 16, 2005	Nov 30, 2005
<p>The Coalition Provisional Authority disbanded and sovereignty was transferred to a new Iraqi government. Project Management Office (PMO) dissolved; Project and Contracting Office (PCO) established with same function and staff.</p>	<p>Secretary of the Army, Francis J. Harvey, delegated oversight and authority of the PCO to Mr. Claude M. Bolton Jr. serving as Assistant Secretary of the Army (Acquisition, Logistics and Technology).</p>	<p>Maj. Gen. Daniel Long Jr. assumed duties of Director of PCO from Mr. Charles Hess. Gen. Long had been serving as deputy director.</p>	<p>The first rail service since the end of the Hussein regime began today with a train from Basra to Baghdad and stops along the way.</p>	<p>Nationwide referendum on the Iraq Constitution is held with huge voter turn out.</p>	<p>PCO announced reaching a milestone of 3,000 project starts, and 2,000 completions during the week of 24-30 November 2005</p>



2006



Dec 4, 2005	Dec 15, 2005	Mar 31, 2006	Sep 30, 2006
<p>The PCO and the US Army Corps of Engineers' Gulf Region Division (GRD) combined into one office or organization, now under GRD's leadership.</p>	<p>The Iraq government held its first permanent elections for parliament</p>	<p>GRD/PCO Logistics' convoys reached a milestone of more than 500 convoys in March. Monthly averages had been increasing. Attacks on convoys remain a serious issue, averaging appx. 5% each month.</p>	<p>Obligated 100% of reconstruction project funds from Iraq Relief and Reconstruction Fund</p>



Workers laying oil pipelines

Rebuilding Iraq

WE HAVE MET THE MANY CHALLENGES AND REACHED OUR MILESTONES

Three years ago, the PCO and the Army team were asked to complete the major portion of contracting, construction and non-construction projects under the Iraq reconstruction funds made available by the U.S. Congress.

In fulfilling that mission, we have encountered numerous challenges and learned valuable lessons during this process requiring agile adjustments to the reconstruction approach in a very dynamic environment.

A great deal of work remains to be done and responsibility for that work now falls to the Iraqis and to other bi-lateral and multi-lateral donors. Many basic services and systems have been restored and a solid platform exists on which these services and systems can be expanded to levels beyond which the Iraqi people have ever experienced.



IRAQ RECONSTRUCTION DIRECTORS AND ORGANIZATIONS

Directors of the Project and Contracting Office-Iraq

2003-2004 RADM David J. Nash, P.E. (Ret)
2004-2005 Charles M. Hess, P.E., SES
2005-2005 MG Daniel E. Long, Jr.
2005-2005 Hugh M. Exton, Jr., P.E., SES
2005-2006 MG William H. McCoy, Jr. ⁽¹⁾

Principal Deputy, Assistant Secretary of the Army (Acquisition, Logistics & Technology)

Director of Iraq Reconstruction & Program Management

2004-2007 Dean G. Popps

Director of the Project and Contracting Office-Washington

2004-2007 James M. Crum, P.E., SES

Assistant Deputy Assistant Secretary of the Army (Policy and Procurement) - Iraq/Afganistan

2004-2004 Johnny L. Garrett
2005-Present Lee Thompson

International Groups

Multinational Forces – Iraq (MNF-I) www.mnf-iraq.com

Multinational Security Transitional Command – Iraq (MNSTC-I) www.mnstci.iraq.centcom.mil/

UK Department for International Development (DFID) www.dfid.gov.uk/

Japan International Cooperation Agency (JICA) www.jica.go.jp/english/

Other United States Government Departments & Agencies

U.S. Department of Defense www.defendamerica.mil/

Defense Reconstruction Support Office (DRSO)

U.S. Department of the Army www.army.mil/

United States Army Corps of Engineers (USACE) www.usace.army.mil/

Gulf Region Division (GRD) www.grd.usace.army.mil/

U.S. Department of State www.state.gov/p/nea/ci/c3212.htm

Iraq Reconstruction Management Office (IRMO)

U.S. Department of Treasury www.ustreas.gov/

U.S. Department of Commerce www.export.gov/iraq

U.S. Department of Justice www.usdoj.gov/

Project and Contracting Office (PCO) www.rebuilding-iraq.net

Joint Contracting Command – Iraq (JCC-I) <http://aca.saalt.army.mil/>

Defense Contract Management Agency (DCMA) www.dema.mil/

Air Force Center for Environmental Excellence (AFCEE) www.afcee.brooks.af.mil/

United States Agency for International Development (USAID) www.usaid.gov/iraq/

U.S. Audit Agencies

Government Accountability Office (GAO) www.gao.gov/

Defense Contracting Audit Agency (DCAA) www.dcaa.mil/

Coalition Provisional Authority Inspector General

Department of Defense Inspector General (DoD IG) <http://www.hqda.army.mil/aaaweb/>

U.S. Army Audit Agency (AAA) <http://www.hqda.army.mil/aaaweb/>

Special Inspector General for Iraq Reconstruction (SIGIR) <http://www.sigir.mil/>

Commanding General, Gulf Region Division

U.S. Army Corps of Enngineers

2003-2004 MG Ronald L. Johnson ⁽²⁾

2004 -2005 MG Thomas P. Bostick, P.E.

2005-2006 MG William H. McCoy, Jr. ⁽¹⁾

(1) Dual-hatted as CG, Gulf Region Division and Director PCO-Iraq

(2) Dual-hatted as Deputy PCO-Iraq

Commanders of the Joint Contracting Command-Iraq/Afganistan

2005 -2006 MG John M.Urias (Ret)

2006 -Present MG Darryl A. Scott



www.rebuilding-iraq.net

Department of the Army

Assistant Secretary of the Army for Acquisition, Logistics & Technology

Project and Contracting Office/Gulf Region Division of the U.S. Army Corps of Engineers

Arlington, Virginia