

AL ALWAIYA MATERNITY HOSPITAL
BAGHDAD, IRAQ

SIGIR PA-06-064
JANUARY 8, 2007



SPECIAL INSPECTOR GENERAL FOR IRAQ RECONSTRUCTION

January 8, 2007

MEMORANDUM FOR DIRECTOR, IRAQ RECONSTRUCTION MANAGEMENT
OFFICE
COMMANDING GENERAL, GULF REGION DIVISION,
U.S. ARMY CORPS OF ENGINEERS

SUBJECT: Report on Project Assessment of the Al Alwaiya Maternity Hospital,
Baghdad, Iraq (Report Number SIGIR-PA-06-064)

We are providing this project assessment report for your information and use. We assessed the design and construction work being performed at the Al Alwaiya Maternity Hospital, Baghdad, Iraq to determine its status and whether intended objectives will be achieved. This assessment was made to provide you and other interested parties with real-time information on a relief and reconstruction project underway and in order to enable appropriate action to be taken, if warranted. The assessment team included an engineer/inspector and an auditor/inspector.

This report does not contain any negative findings. As a result, no recommendations for corrective action were made and further management comments are not requested.

We appreciate the courtesies extended to our staff. If you have any questions please contact Mr. Brian Flynn at brian.flynn@sigir.mil or at 914-360-0607. For public or congressional queries concerning this report, please contact SIGIR Congressional and Public Affairs at publicaffairs@sigir.mil or at (703) 428-1100.

Stuart W. Bowen, Jr.
Inspector General

Special Inspector General for Iraq Reconstruction

SIGIR PA-06-064

January 8, 2007

Al Alwaiya Maternity Hospital, Baghdad, Iraq

Synopsis

Introduction. This project assessment was initiated as part of our continuing assessments of selected sector reconstruction activities for Facilities and Transportation. The overall objectives were to determine whether selected sector reconstruction contractors were complying with the terms of their contracts or task orders and to evaluate the effectiveness of the monitoring and controls exercised by administrative quality assurance and contract officers. We conducted this project assessment in accordance with the Quality Standards for Inspections issued by the President's Council on Integrity and Efficiency. The assessment team included a professional engineer/inspector and an auditor/inspector. The Al Alwaiya Children's Hospital project was part of a Task Order to rehabilitate the maternity and pediatric hospitals located in southern Iraq. The Task Order noted that the existing hospital facilities were insufficient in fulfilling functional and cleanliness requirements and had fallen into a state of disrepair. The major focus of the contract was the completion and the installation of new updated equipment and critical facility systems including mechanical, electrical, structural, and sanitary systems.

Project Assessment Objectives. The objective of this project assessment was to provide real-time relief and reconstruction project information to interested parties in order to enable appropriate action, when warranted. Specifically, we determined whether:

1. Project components were adequately designed prior to construction or installation;
2. Construction or rehabilitation met the standards of the design;
3. The Contractor's Quality Control plan and the U.S. Government's Quality Assurance program were adequate;
4. Sustainability was addressed in the contract or task order for the project; and
5. Project results were consistent with original objectives.

Conclusions. The assessment determined that:

1. The design provided to the assessment team was sufficient to renovate the facility. The design included architectural, electrical, mechanical, and plumbing drawings. Design drawings and specifications appeared to be complete and consistent with the requirements of the contract. The design, coupled with a consistent bill of quantities, provides enough information and detail for the contractor to renovate and modernize the Al Alwaiya Maternity Hospital.
2. Based upon the review of the U.S. Army Corps of Engineers Quality Assurance reports and construction photos, and our site visits, the work observed appeared to be consistent with the standards of the contract design. The U.S. Army Corps of Engineers Deputy Resident Engineer and staff capably managed the project. As a result, the city of Baghdad should receive a renovated and modernized Maternity Hospital.

3. The contractor's Quality Control plan was sufficiently detailed to effectively guide the contractor's quality management program. The contractor submitted a Quality Control plan, which based on our review, met the standards addressed in Engineering Regulation 1180-1-6 (*Construction Quality Management*). The contractor submitted Quality Control reports on a daily basis, which were reviewed by the U.S. Army Corps of Engineers Deputy Resident Engineer. The Quality Control reports did not always include sufficiently complete daily observations of what occurred at the site, problems encountered at the site that required corrective actions, or solutions achieved to correct problems at the site. In addition, the contractor did not maintain deficiency logs to document problems noted with construction/renovation activities.

The Government Quality Assurance program was effective in monitoring the contractor's Quality Control program. The U.S. Army Corps of Engineers Quality Assurance Representative maintained daily Quality Assurance reports that documented any deficiencies noted at the site. Based on our review, we found the Quality Assurance Representative's reports to be sufficiently complete, accurate, and timely. In addition to containing project specific information to document construction progress and highlight deficiencies, the Quality Assurance Representative also supplemented them with detailed photographs that reinforced the narrative information provided in the reports. The Quality Assurance Representative did maintain a Quality Assurance deficiency log, and the Deputy Resident Engineer and the Quality Assurance Representative ensured deficiencies cited during Quality Assurance inspections were corrected.

4. Sustainability was addressed in the task order requirements. The task order required a one-year warranty for all building equipment, construction, and components and commonly offered extended warranties for equipment and machinery purchased. In addition, the Task Order required three copies of legible operation and maintenance manuals in English and Arabic for all new equipment, finishes, fixtures, and hardware.
5. The Al Alwaiya Maternity Hospital Modernization project results, to date, are consistent with the original contract objectives. As a result of the renovation/modernization, this hospital will be able to adequately provide healthcare to the local Iraqi citizens it serves. Specifically, the renovation will increase the number of beds the hospital can support and will improve the mechanical, electrical, structural, and sanitary systems within the hospital.

Recommendations and Management Comments. This report does not contain any negative findings or recommendations for corrective action. Although management comments were not required, the Commanding General, Gulf Region Division of the U.S. Army Corps of Engineers, provided comments concurring with the draft report.

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Introduction

Objective of the Project Assessment

The objective of this project assessment was to provide real-time relief and reconstruction project information to interested parties in order to enable appropriate action, when warranted. Specifically, we determined whether:

1. Project components were adequately designed prior to construction or installation;
2. Construction or rehabilitation met the standards of the design;
3. The Contractor's Quality Control (QC) plan and the U.S. Government's Quality Assurance (QA) program were adequate;
4. Sustainability was addressed in the contract or task order for the project; and
5. Project results were consistent with original objectives.

Pre-Site Assessment Background

Contract, Task Order, and Costs

The Al Alwaiya Maternity Hospital Modernization Project was originally to be completed under Contract W914NS-04-D-0006, dated 25 March 2004. Task Order (TO) 0006 of Contract W914NS-04-D-0006 was originally a design/build type contract; however, the contract was to be re-negotiated to a fixed-price contract after completion of the 65% design. The Coalition Provisional Authority (CPA) awarded the contract to Parsons Delaware, Inc. There were 12 modifications to the initial contract.

- Modification #01, issued 8 April 2005, executed a business name change for the contractor from Parsons Delaware to Parsons Global Services, Inc.
- Modification #02, issued 25 May 2004, identified that only warranted Contracting Officers within the Baghdad Contracting Office with the appropriate level of authority and dollar threshold limitation can execute contractual documents related to this contract and its associated TOs.
- Modification #03, unsigned but dated 2 June 2004, supplemented existing contract language located within Federal Acquisition Regulation (FAR) 52.216-7, "Allowable Cost and Payment (Dec 2002)" by stating invoices/vouchers shall be submitted directly to the Defense Contract Audit Agency (DCAA) offices for review and provisional approval and to the U.S. Army Corps of Engineers (USACE) Finance Center Millington.
- Modification #04, issued 4 July 2004, changed the CPA Contracting Office to the Project and Contracting Office (PCO).
- Modification #05, issued 12 October 2004, transferred administrative responsibility for TOs issued for this contract to the USACE Gulf Region Division (GRD). The contracting officer reserved the right to modify this delegation for specific TOs.
- Modification #06, issued 16 November 2004, added Contract Line Item Numbers (CLINs) 0001 through 0008 and FAR clause 52.217-9.
- Modification #07, issued 2 March 2005, clarified the invoicing process and defined what was considered a Proper Invoice for payment purposes.
- Modification #08, issued 3 March 2005, constituted a formal Notice to Proceed (NTP) for contractors to use transponders on security vehicles used

to accompany what the contractors seem to be high value cargo convoys and critical personnel moving into and throughout Iraq.

- Modification #09, issued 1 June 2005, rescinded Modification #07.
- Modification #10, issued 8 August 2005, incorporated Contract Clause DFARS 252-245.7001, “Reports of Government Property (May 1994)” into the Contract.
- Modification #11, issued 8 August 2005, transferred administrative responsibility for TOs issued for this contract to the USACE GRD directly, in accordance with the Memorandum of Understanding between the Joint Contracting Command – Iraq/Afghanistan (JCC-I/A) and GRD Business Management Director, signed 21 July 2005. The contracting officer reserved the right to modify or terminate delegation for specific TOs at any time.
- Modification #12, issued 25 August 2005, amended the Award Fee Plan.

In May 2006, the PCO, the successor to the CPA, novated its contract with the prime contractor, Parsons Global Services, Inc., and awarded on 11 May 2006, Contract W91GXZ-06-C-0011, a 45 day bridge contract, to the Parsons Global Services, Inc.’s subcontractor, the Rukin Al-Zawraa Company. The Al Alwaiya Maternity Hospital Modernization project is being completed under Contract W91GXZ-06-C-0011, in the amount of \$298,431.40. There is one modification for this contract.

- Modification #01, issued 24 June 2006, increased the contract cost by \$1,688,030.60, from \$298,431.40 to \$1,986,462.

Project Objective

Based on the original TO with Parsons, the objective was to rehabilitate the maternity and pediatric hospitals located throughout governorates in southern Iraq, which included the Al Alwaiya Maternity Hospital. The TO noted the existing hospital facilities were insufficient in fulfilling functional and cleanliness requirements and had fallen into a state of disrepair. Subsequent to the termination of the Parsons contract, the follow-on contract objective was to continue the current progress of reworking the hospital’s infrastructure and to complete the renovation. According to the contract scope of work (SOW), the major focus of the contract was the completion and the installation of new updated equipment and critical facility systems including mechanical, electrical, structural, and sanitary systems.

Description of the Facility (pre-construction)

The description of the facility (pre-construction) was based on information obtained from the USACE project file. The Al Alwaiya Maternity Hospital, located in central Baghdad, was constructed in 1969. Prior to the start of the renovation project, the hospital capacity was 300 beds. When the project began, the hospital’s infrastructure was in very poor condition. The USACE reported the hospital was only capable of supporting 70 beds out of the original 300. An assessment of the hospital prior to the renovation project documented significant problems with the hospital’s mechanical, electrical, structural, and sanitary systems.

Scope of Work of the Task Order and Follow-On Contract

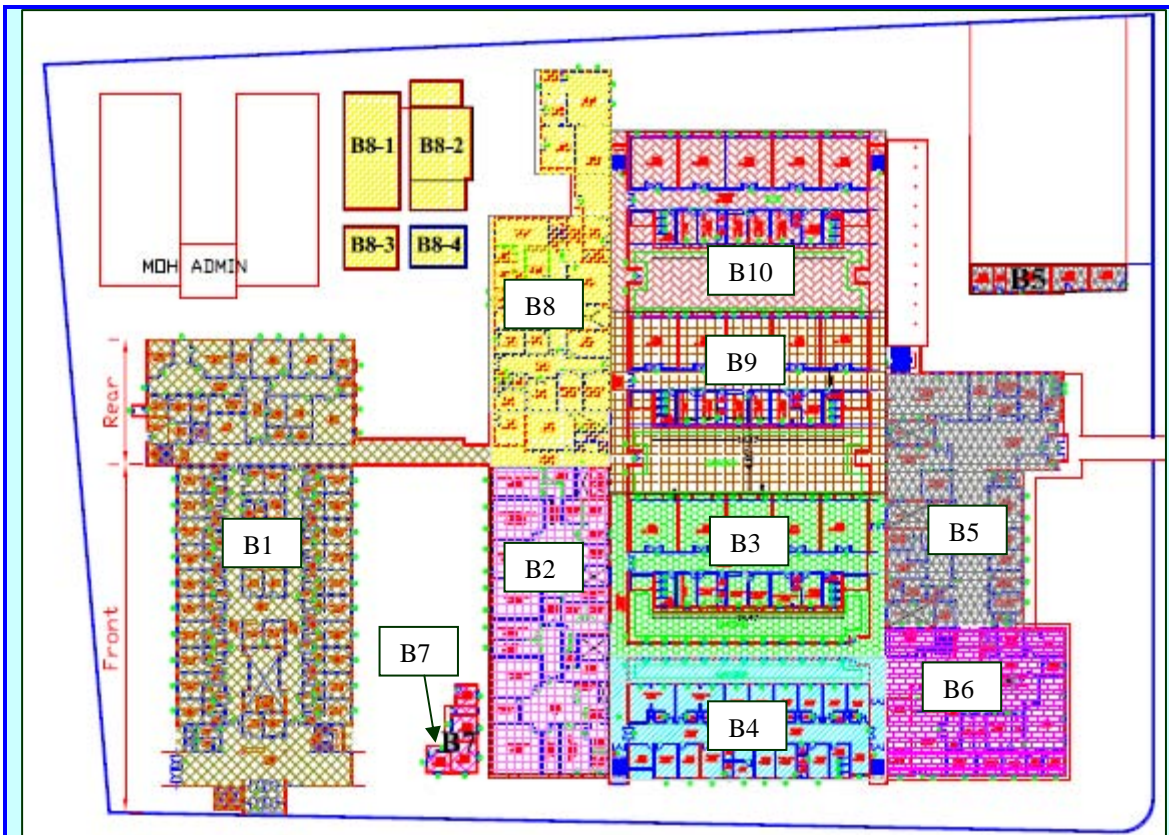
The SOW for the original Parsons TO included an investigation phase, as well as a design and construction phase. The TO Statement of Requirements and Specifications (SRS) included requirements for the following work items:

- Site work (demolition and clean up)
- Plumbing (sewer, water storage and distribution, reverse osmosis water purification unit, boilers, water heaters)
- Mechanical (heating, ventilation and air conditioning (HVAC), incinerator, elevators, medical gas system)
- Electrical (electrical service from main power source to distribution panels, lighting and outlets, communications, fire alarm system, public address system)
- Structural (repairs to structural components—beams, columns, floor system, roofing)
- Security (grilles over window and doors, fencing)
- Architectural (windows and doors, exterior and interior walls, ceilings, floors, medical treatment spaces, toilet rooms, office spaces/meeting rooms, kitchen, hallways, patient rooms)
- Cleanup

The follow-on contract SOW after Parsons' termination included essentially the same scope as above. In addition, the SOW also included:

- Punch list items remaining for completed hospital facilities
- Remaining work in the current facilities underway

Figure 1 provides a layout of the hospital site's buildings/facilities. In the legend, the buildings that had been renovated under the Parsons contract are highlighted. building B1 (women's health and laboratory) consists of a front portion and a rear section. The building's first two floors (ground and 1st) consist of treatment rooms, laboratories, patient rooms, and store rooms. The second floor serves as a residence hall for doctors while at the hospital. At the time of our assessment, the renovation of the front section of B1 was complete (except for punch list items). Renovation of the rear section was in progress on the ground floor, but the rear section first and second floors were complete.



Legend

<u>Bldg. No.</u>	<u>Description</u>	<u># of Floors</u>
B1 (Front)	Women's Health and Laboratory	3
B1 (Rear)	Women's Health and Laboratory	3
B2	Operation and Maternity Theater	2
B3	Wards	2
B4	Premature Baby and Wards	1
B5	Consultant Clinic and Emergency	1
B6	Outpatient Clinic and Administration Dept.	2
B7	Maintenance Office	1
B8	Kitchen and Laundry	1
B9	Wards	2
B81-B84	Utility Rooms	1
B10	Wards	2
	Completed renovation at time of assessment	

Figure 1. Al Alwaiya maternity hospital buildings and renovation status

Current Project Design and Specifications

The original TO SRS included a requirement for the submittal and approval of all project designs and specifications. The SOW required submission of property assessment survey/conceptual design submittal (10%), schematic design submittal (30%), design development (65%), construction documents (95%), and final design and construction documents and project manual (100%) for review and approval to the Sector Project Management Office (SPMO)¹. Requirements for all construction and rehabilitation work included the use of the applicable International Building Code, International Existing Building Code, International Electrotechnical Commission, National Fire Protection Association, Sheet Metal and Air Conditioning Contractor's National Association, International Mechanical Code, International Plumbing Code, and International Health Standards Code.

Electronic copies of the 95% design drawings and specifications were reviewed by the assessment team. The design package contained architectural, electrical, mechanical, and plumbing drawings. Architectural drawings included floor plans, exterior and interior wall section views, room details (i.e., x-ray rooms), window and door schedules, and finish schedules and details. Electrical drawings contained diagrams showing conceptual layouts for electrical outlets, ceiling fans for patient rooms, bedrooms, bathrooms and corridors, buildings B1, B2, and B4. In addition, the electrical design included panel diagrams listing the panel name and individual circuit breakers. Mechanical drawings included plan sheets and details for the hospital's HVAC systems, which consisted of packaged units, split system units, and a central chilled water system.

Design drawings and specifications appeared to be complete and consistent with the requirements of the contract.

Site Assessment

The assessment team visited the Al Alwaiya Maternity Hospital on two separate occasions, 14 June 2006 and 15 August 2006. On the initial site visit, the team was accompanied by the USACE Deputy Resident Engineer (DRE) and the Project Engineer (PE). On the subsequent visit, the USACE Quality Assurance Representative (QAR) accompanied the team. According to the USACE DRE, Parsons had completed 60% of the project requirements at the time of their termination, and the current Iraqi contractor has completed 7% since the follow-on contract was awarded on 11 May 2006.

On both site visits, the assessment team's inspections were limited because of time constraints. As a result, the team was unable to inspect every building or facility contained in the project scope. Our on-site assessment included inspections of the buildings and facilities listed below:

- Completed:
 - B1 (ground floor) Women's health and laboratory (front)
 - Reverse osmosis (RO) purification unit

¹ SPMO is the Sector Project Management Office, which preceded the establishment of PCO. After PCO was established, the functions of SPMO were shifted to the respective PCO sector, i.e., Sector Project & Contracting Office (SPOC).

- Renovation in Progress:
 - B1 (ground floor) Women's health and laboratory (front)
 - B8 Kitchen and laundry
 - B9 Patient wards
 - Water storage and distribution system

From the list above, B1, the front part of the women's health and laboratory building (ground floor) and the reverse osmosis purification unit were completed under the Parsons contract. Renovation work on the remaining buildings and facilities was in progress. The following provides a brief summary of our observations.

Work Completed

B1 (ground floor) Women's health and laboratory (front)

The renovation scope for the front section of the ground floor of building B1 included repairing and painting walls, ceilings, doors, and window frames as well as installing new flooring, electrical wiring, lighting, HVAC, plumbing, and bathroom fixtures. The bathroom interior wall finish and flooring consisted of ceramic tiles. At the time of our inspection on 14 June 2006, the ground floor of this building was not yet occupied, but due to limited time, we concentrated our inspection on the patient rooms and corridors. No significant deficiencies were identified during the assessment. Site Photos 1-4 provide examples of the completed renovation work on the front section of the first floor of building B1.



Site Photo 1. Renovated patient room prior to occupancy



Site Photo 2. Renovated patient bathroom with western toilet



Site Photo 3. Renovated patient bathroom shower assembly



Site Photo 4. One of two main corridors in building B1.

Reverse Osmosis Purification Unit

The hospital RO unit, located on the roof of B1, is designed to provide purified water to the laboratories and operating rooms. The package system, designed to produce 6,400 gallons a day, contains a multimedia filter (sand) and a carbon filter for pretreatment of water, a water softener unit, and pressure vessels containing semi-

permeable membranes for de-mineralizing the water at high pressure. Based on the water supply design provided by Parsons, after the water is treated in the RO unit on the roof, it is fed into a 31 cubic meters (m³) water storage tank located at ground level adjacent to building B1. The specifications indicate the basis for the RO unit design is a 24 hours a day operation. Site Photo 5 shows the trailer on the roof housing the packaged RO unit.



Site Photo 5. Container housing the RO unit

During our site visit, we observed the components for the RO unit in place inside the trailer. A thick layer of dust coated the RO unit components and the unit was also not operating. The USACE DRE and PE stated that the RO unit was not functioning or being utilized by the hospital staff. The USACE DRE also believed the RO unit's semi-permeable membranes were plugged by a bio-film residue covering the membrane pores. Since the RO unit was not operating and backwashing on a continuous basis, the USACE DRE speculated that bacteria have attached to the RO membrane media and plugged the membranes. Site Photo 6 shows pressure vessels containing the semi-permeable membranes.

The USACE DRE and PE also expressed concerns with utilizing the 31 m³ RO storage tank to store purified water. They indicated the tank will reduce the demand for the RO unit to operate continuously, and could lead to recurrent problems with plugging of the membrane pores.



Site Photo 6. Pressure vessels containing RO membranes

Work in Progress

Buildings B1 (ground floor-rear), B8, and B9

The assessment team inspected the rear portion of the first floor of building B1 (women's health and laboratory), as well as the kitchen and laundry building (B8) and one of the buildings containing patient wards (B9). Each building had been gutted with only the structural concrete frame and brick walls remaining after demolition. The existing windows, doors, flooring, wall covering, electrical wiring, plumbing, and all electrical and bathroom fixtures were removed by the contractor. At the time of our assessment, the contractor was repairing concrete lintels over doorways, setting door frames, repairing brick walls, installing electrical conduit and water piping. The contractor was also fabricating and hanging HVAC ductwork, and installing rough plumbing for bathrooms. In some areas of the kitchen and laundry building (B8) and in the rear portion of building B1, the contractor was placing ceramic tile on the walls in the kitchen and bathroom areas. Also, in two of the patient wards in building B9, the contractor had plastered and painted the interior walls and ceilings. In our inspection of these three buildings, no significant discrepancies were found. Site Photos 7-10 provide examples of the renovation work in progress on the rear section of the first floor of building B1, and in buildings B2 and B9.



Site Photo 7. Existing brick walls in building B1 after demolition of interior finishes



Site Photo 8. Patient ward in building B9 after demolition



Site Photo 9. Patient ward in building B9 after plastering and painting



Site Photo 10. Ceramic tile installation in kitchen and laundry building (B2)

The assessment team also inspected some of the water storage and distribution facilities for the hospital complex. The design shows an existing cylindrical water tank (60 m³ capacity) and a new water tank (40 m³ capacity) for water storage located between buildings B1 and B2. Our inspection verified two tanks were in place, the existing tank, and the new galvanized steel tank (Site Photo 11). In addition, the design also required two pairs of water pumps. One set of pumps (flow rate of 30 m³ per hour at 20 meters [m] head) operated on the inlet side of the 40 m³ water storage tank and the other set of pumps (design flow rate of 15 m³ per hour at 40 m head) operated on the outlet side of

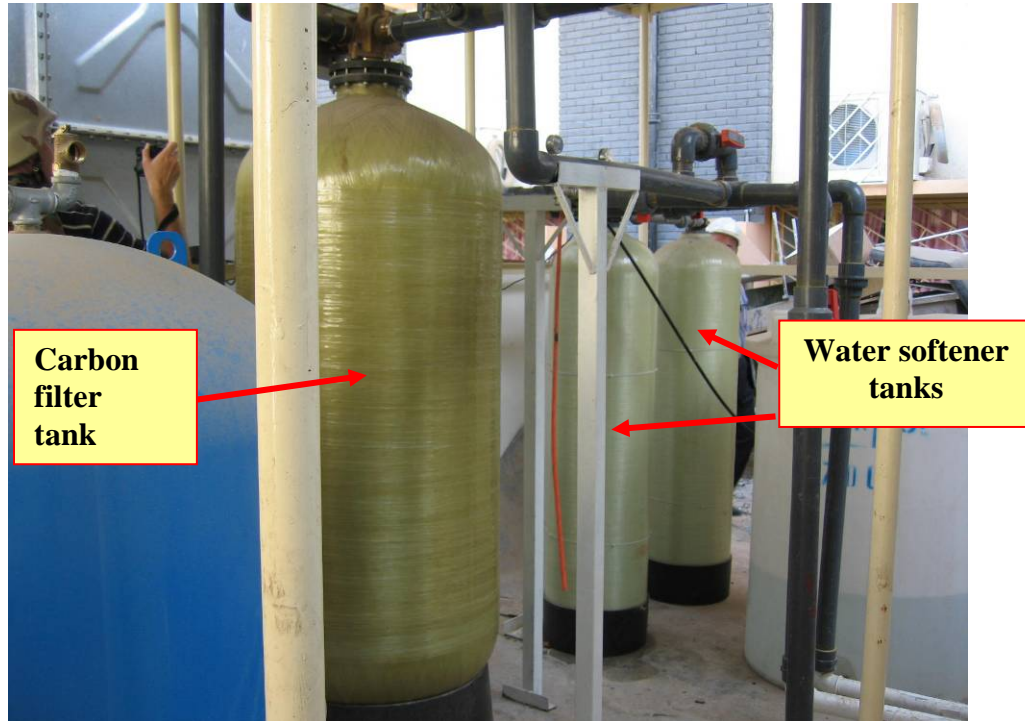
the storage tank. The design also required a sand filtration unit on the inlet side of the storage tanks and a carbon filter unit and water softener on the outlet side of the 40 m³ storage tank. We verified two sets of pumps were located as shown on the design. Site Photo 12 shows one set of pumps located on the inlet side of the water tank. Inspection of factory plate data revealed the pumps' flow rate of 36 m³ at 18.8m of head. We also verified the installation of the sand filtration unit on the inlet side of the tank and the carbon filters and water softener on the outlet side of the tank (Site Photo 13). During our inspection, we observed a leaking solenoid valve on one of the water lines, as shown in Site Photo 14. We discussed the leak later with the USACE DRE and he informed the team the contractor had corrected the leak the day after our visit.



Site Photo 11. 40 m³ galvanized steel water tank



Site Photo 12. Circulation pumps



Site Photo 13. Water softener units and carbon filter unit



Site Photo 14. Leak at a solenoid valve

Project Quality Management

Contractor's Quality Control Program

The Al Alwaiya Maternity Hospital contract specified a requirement for a contractor Quality Control (QC) plan. The QC plan was to be adhered to throughout the duration of the design, construction, installation, testing, and commissioning phases. Parsons developed a Quality Management plan, which included QC requirements for its subcontractors. Parsons provided a basic QC plan to its subcontractors. Parsons' subcontractors' QC plans failed to meet the requirements stated in the PCO Standard Operating Procedure (SOP) CN-103 - Contractor Construction Quality Control plan. The QC plans were generic plans that lacked any site or task specific details, test plans, did not contain a subcontractor organizational chart, and lacked subcontractors' job qualifications. Parsons did require the use of a three-phase checklist by its subcontractors and daily QC reports.

The subcontractor provided daily QC reports that presented a brief background on the number of workers, the work activities completed, any tests or inspections performed, and a two-week look ahead, which were accessible through Parsons' website. The QC Representatives monitored field activities and completed daily QC reports. The QC reports did not always include sufficiently complete daily observations of what occurred at the site, problems encountered at the site that required corrective actions, or solutions achieved to correct problems at the site. In addition, the QC Representatives did not complete and submit QC deficiency logs; consequently, there is no assurance that potential construction deficiencies were detected, evaluated, and properly corrected in a timely manner.

Government Quality Assurance

The USACE Engineering Regulation (ER) 1110-1-12 and PCO SOP CN-100 specified requirements for a Government QA program. The USACE QA program was adequate. The USACE QARs were on site during rehabilitation and construction events. The USACE QARs monitored field activities and completed daily QA reports, which were sufficiently complete, accurate, and timely. Furthermore, the QA reports included project specific or detailed photographs that reinforced the information provided in reports.

The PCO CN-102 requirement states that the QAR will maintain a QA deficiency log for all the deficiencies noted during the QA inspections, which will include digital photographs of any deficiencies noted. The USACE QAR did maintain a QA deficiency log, and the USACE DRE and the QAR ensured deficiencies cited during the QA inspections were corrected.

Project Sustainability

The original contract with Parsons stated that the contractor shall prepare a preventive maintenance plan that shall identify the manufacturer's information and recommendations for preventive maintenance on all installed equipment in coordination with the Ministry of Health. In addition, the contractor is responsible for providing appropriate training for all operators and technicians to allow the hospital to conduct long-term routine and preventive maintenance. The contractor shall provide a comprehensive training manual, and the equipment manufacturer's representatives or technical experts shall conduct training.

When the original contract with Parsons was terminated, the bridge contract with the Rukin Al-Zawraa Company stated that the contractor shall provide and certify manufacture warranty(s) for all equipment, which includes any mechanical, electrical, and/or electronic devices for a period of 12 months after the hospital has been commissioned; provide all other commonly offered extended warranties for equipment and machinery purchased; provide a 12-month contractor-certified construction warranty for all building equipment, construction and components; and provide and certify warranties in the name of the appropriate Ministry.

For operation and maintenance, the contractor shall provide three copies of legible operation and maintenance manuals for all new equipment, finishes, fixtures, and hardware bound and catalogued in CSI format in both English and Arabic language to the USACE/PCO.

Conclusions

Based upon the results of our site visit, we reached the following conclusions for assessment objectives 1, 2, 3, 4, and 5. Appendix A provides details pertaining to Scope and Methodology.

1. Determine whether project components were adequately designed prior to construction or installation.

The design provided to the assessment team was sufficient to renovate the facility. The design included architectural, electrical, mechanical, and plumbing drawings. Design drawings and specifications appeared to be complete and consistent with the requirements of the contract. The design, coupled with a consistent bill of quantities, provides enough information and detail for the contractor to renovate and modernize the Al Alwaiya Maternity Hospital.

2. Determine whether construction met the standards of the design.

Based upon the review of the USACE QA reports and construction photos, and our site visits, the work observed appeared to be consistent with the standards of the contract design. The USACE DRE and staff capably managed the project. As a result, the city of Baghdad, Iraq, should receive a renovated and modernized Maternity Hospital.

3. Determine whether the Contractor's Quality Control plan and the Government Quality Assurance program were adequate.

The contractor's QC plan was sufficiently detailed to effectively guide the contractor's quality management program. The contractor submitted a QC plan, which based on our review, met the standards addressed in ER 1180-1-6 (*Construction Quality Management*). The contractor submitted Quality Control reports on a daily basis, which were reviewed by the USACE DRE. The QC reports did not always include sufficiently complete daily observations of what occurred at the site, problems encountered at the site that required corrective actions, or solutions achieved to correct problems at the site. In addition, the contractor did not maintain deficiency logs to document problems noted with construction/renovation activities.

The Government QA program was effective in monitoring the contractor's QC program. The USACE QAR maintained daily QA reports that documented any deficiencies noted at the site. Based on our review, we found the QAR's reports to be

sufficiently complete, accurate, and timely. In addition to containing project specific information to document construction progress and highlight deficiencies, the QAR also supplemented them with detailed photographs that reinforced the narrative information provided in the reports. The QAR did maintain a QA deficiency log, and the USACE DRE and the QAR ensured deficiencies cited during QA inspections were corrected.

4. Determine if project sustainability was addressed.

Sustainability was addressed in the TO requirements. The TO required a one-year warranty for all building equipment, construction, and components and commonly offered extended warranties for equipment and machinery purchased. In addition, the task order required three copies of legible operation and maintenance manuals in English and Arabic for all new equipment, finishes, fixtures, and hardware.

5. Determine whether project results were consistent with original objectives.

The Al Alwaiya Maternity Hospital Modernization project results, to date, are consistent with the original contract objectives. As a result of the renovation/modernization, this hospital will be able to adequately provide healthcare to the local Iraqi citizens it serves. Specifically, the renovation of the patient rooms will increase the number of beds the hospital can support.

Recommendations and Management Comments

This report does not contain any negative findings or recommendations for corrective action. Although management comments were not required, the Commander, Gulf Region Division of the U.S. Army Corps of Engineers provided comments concurring with the draft report.

Appendix A. Scope and Methodology

We performed this project assessment from May through October 2006 in accordance with the Quality Standards for Inspections issued by the President's Council on Integrity and Efficiency. The assessment team included a professional engineer and an auditor.

In performing this Project Assessment we:

- Reviewed contract documentation to include the following: Task Order, Task Order Modifications, contract documentation, and Scope of Work;
- Reviewed the design package (drawings and specifications), Quality Control Plan, Contractor's Quality Control Reports, USACE Quality Assurance Reports, Construction Progress Photos, Punch Lists, and Turnover Letters;
- Interviewed the U.S. Army Corps of Engineers Deputy Resident Engineer and Project Engineer; and
- Conducted two on-site assessments and documented results at the Al Alwaiya Maternity Hospital Project in Baghdad, Iraq.

Appendix B. Acronyms

CLIN	Contract Line Item Number
CPA	Coalition Provisional Authority
DCAA	Defense Contract Audit Agency
DRE	Deputy Resident Engineer
FAR	Federal Acquisition Regulation
GRD	Gulf Region Division
HVAC	Heating, Ventilation and Air Conditioning
JCC-I/A	Joint Contracting Command – Iraq/Afghanistan
m	meters
m ³	cubic meters
NTP	Notice to Proceed
PCO	Project and Contracting Office
PE	Project Engineer
QA	Quality Assurance
QAR	Quality Assurance Representative
QC	Quality Control
RO	Reverse Osmosis
SOW	Scope of Work
SPCOC	Sector Project & Contracting Office
SPMO	Sector Project Management Office
SRS	Statement of Requirements and Specifications
RE	Resident Engineer
SOW	Scope of Work
USACE	U.S. Army Corps of Engineers
TO	Task Order

Appendix C. Report Distribution

Department of State

Secretary of State

Senior Advisor to the Secretary and Coordinator for Iraq

U.S. Ambassador to Iraq

Director, Iraq Reconstruction Management Office

Inspector General, Department of State

Department of Defense

Secretary of Defense

Deputy Secretary of Defense

Director, Defense Reconstruction Support Office

Under Secretary of Defense (Comptroller)/Chief Financial Officer

Deputy Chief Financial Officer

Deputy Comptroller (Program/Budget)

Inspector General, Department of Defense

Department of the Army

Assistant Secretary of the Army for Acquisition, Logistics, and Technology

Principal Deputy to the Assistant Secretary of the Army for Acquisition,

Logistics, and Technology

Deputy Assistant Secretary of the Army (Policy and Procurement)

Assistant Secretary of the Army for Financial Management and Comptroller

Chief of Engineers and Commander, U.S. Army Corps of Engineers

Commanding General, Gulf Region Division

Auditor General of the Army

U.S. Central Command

Commanding General, Multi-National Force - Iraq

Commanding General, Joint Contracting Command – Iraq/Afghanistan

Commanding General, Multi-National Corps – Iraq

Commanding General, Multi-National Security Transition Command – Iraq

Commander, Joint Area Support Group – Central

Other Defense Organizations

Director, Defense Contract Audit Agency

Other Federal Government Organizations

Director, Office of Management and Budget
Comptroller General of the United States
Inspector General, Department of the Treasury
Inspector General, Department of Commerce
Inspector General, Health and Human Services
Inspector General, U.S. Agency for International Development
Mission Director – Iraq, U.S. Agency for International Development

Congressional Committees and Subcommittees, Chairman and Ranking Minority Member

U.S. Senate

Senate Committee on Appropriations
 Subcommittee on Defense
 Subcommittee on State, Foreign Operations and Related Programs
Senate Committee on Armed Services
Senate Committee on Foreign Relations
 Subcommittee on International Operations and Terrorism
 Subcommittee on Near Eastern and South Asian Affairs
Senate Committee on Homeland Security and Governmental Affairs
 Subcommittee on Federal Financial Management, Government Information and International Security
 Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia

U.S. House of Representatives

House Committee on Appropriations
 Subcommittee on Defense
 Subcommittee on Foreign Operations, Export Financing and Related Programs
 Subcommittee on Science, State, Justice and Commerce and Related Agencies
House Committee on Armed Services
House Committee on Government Reform
 Subcommittee on Management, Finance and Accountability
 Subcommittee on National Security, Emerging Threats and International Relations
House Committee on International Relations
 Subcommittee on Middle East and Central Asia

Appendix D. Project Assessment Team Members

The Office of the Assistant Inspector General for Inspections, Office of the Special Inspector General for Iraq Reconstruction, prepared this report. The principal staff members who contributed to the report were:

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Kevin O'Connor, Audit Manager