

**SHIQAQ HAI MUSALLA  
PRIMARY HEALTHCARE CENTER  
KIRKUK, IRAQ**

**SUSTAINMENT ASSESSMENT**

**SIGIR PA-08-157  
APRIL 13, 2009**

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE <b>13 APR 2009</b>		2. REPORT TYPE		3. DATES COVERED <b>00-00-2009 to 00-00-2009</b>	
4. TITLE AND SUBTITLE <b>Shiqaq Hai Musalla Primary Healthcare Center, Kirkuk, Iraq</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>Office of the Special Inspector General for Iraq Reconstruction, 400 Army-Navy Drive, Arlington, VA, 22202-4704</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Same as Report (SAR)</b>	18. NUMBER OF PAGES <b>35</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			



# SIGIR

Special Inspector General for Iraq Reconstruction

April 13, 2009

## Shiqaq Hai Musalla Primary Healthcare Center

### What SIGIR Found

On 15 December 2008, SIGIR performed an on-site assessment of the Shiqaq Hai Musalla Primary Healthcare Center project. Due to security concerns, the time allotted for the site visit was approximately one hour, with limited access to the roof; therefore, a complete review was not possible.

SIGIR found that the requirement to formally document all deficiencies with estimated completion dates during the pre-final inspection was not fulfilled. The project file lacked a pre-final or final inspection of the PHC. The file did contain a 19 July 2007 note stating "x-ray leaded glass and heaters will be installed later." SIGIR's site visit confirmed that these two outstanding deficiencies were not corrected by the contractor. In addition, SIGIR noticed that the x-ray room's exterior doors and darkroom door appeared to be standard wooden doors, not the lead-lined doors required by the design. The contractor had delivered and connected the x-ray equipment but did not verify that the equipment was operational. Also, the facility's staff does not have the technical capability to operate the x-ray equipment; consequently, the facility cannot offer any x-ray services to its patients. The Reverse Osmosis unit was installed, but was disconnected from the water system.

The walls above the support beams over the portico to the building had vertical cracks that aligned with the support beams below. The area engineer was aware of this issue. The solution was to use two reinforced concrete columns beneath the free ends of the support beams.

SIGIR did not observe any other noticeable signs of structural failure or distress. The primary reinforced concrete structural members that were visible did not show any indicators of failure. The floors appeared even and level, and there were no apparent signs of settlement or displacement.

During the site visit, SIGIR observed doctors attending to patients and pharmacists dispensing medication. According to the administrator, the PHC facility has been operating for 15 months and serves approximately 200 patients daily. Overall, the facility was moderately clean and well organized, and the personnel were performing minor maintenance functions, such as cleaning and repairing minor items.



### Summary of Report: PA-08-157

### Why SIGIR Did This Study

SIGIR is charged to conduct assessments of Iraq reconstruction projects funded with amounts appropriated or made available for the reconstruction of Iraq. SIGIR is assessing projects funded under the Iraq Relief and Reconstruction Fund to provide real-time relief and reconstruction information to interested parties to enable appropriate action, when warranted.

The objective of this sustainment assessment was to determine whether the project is operating at the capacity stated in the original contract. The overall objective of this \$304,540 project was to complete the partially constructed Type A Shiqaq Hai Musalla Primary Healthcare Center (PHC). This facility, when completed, was expected to serve approximately 100 patients daily. The PHC was partially completed by Parsons Delaware, Inc., prior to its termination in March 2006.

### What SIGIR Recommends

The U.S. Army Corps of Engineers (USACE) Transatlantic Center has initiated a \$16.5 million sustainment contract for designated PHC facilities. The contract will include a preventive maintenance program and repair/troubleshooting dockets for the re-commissioning of individual pieces of equipment. USACE will contract with Iraqi companies to perform the work according to a prioritization listing.

SIGIR recommends that the Commanding General, Gulf Region Division, direct that all installation of and training on the medical equipment currently at the Shiqaq Hai Musalla PHC is performed according to its prioritization listing. GRD concurred that the installation of and training on the equipment currently at the Shiqaq Hai Musalla PHC will be performed according to the prioritization listing. SIGIR modified the draft report as appropriate to include the additional information and clarifying comments provided by GRD.

For more information, contact SIGIR Public Affairs at (703) 428-1100 or [PublicAffairs@sigir.mil](mailto:PublicAffairs@sigir.mil)

Special Inspector General for Iraq Reconstruction



## **SPECIAL INSPECTOR GENERAL FOR IRAQ RECONSTRUCTION**

April 13, 2009

MEMORANDUM FOR COMMANDING GENERAL, UNITED STATES CENTRAL  
COMMAND  
COMMANDING GENERAL, MULTI-NATIONAL FORCE-  
IRAQ  
COMMANDING GENERAL, GULF REGION DIVISION,  
U.S. ARMY CORPS OF ENGINEERS  
COMMANDING GENERAL, JOINT CONTRACTING  
COMMAND-IRAQ/AFGHANISTAN  
DIRECTOR, IRAQ TRANSITION ASSISTANCE OFFICE

SUBJECT: Report on the Shiqaq Hai Musalla Primary Healthcare Center, Kirkuk, Iraq  
(SIGIR Report Number PA-08-157)

We are providing this report for your information and use. It addresses the current status of the Shiqaq Hai Musalla Primary Healthcare Center, Kirkuk, Iraq. The assessment was made to determine whether the project was operating at the capacity stated in the original contract.

We received comments on a draft of this report from the Gulf Region Division of the U.S. Army Corps of Engineers, which addressed the issues raised in the report and recommendations made. The planned actions are responsive and addressed the issues we identified. As a result, comments to this final report are not required.

We appreciate the courtesies extended to our staff. If you have any questions please contact Mr. Brian Flynn via e-mail at [brian.flynn@iraq.centcom.mil](mailto:brian.flynn@iraq.centcom.mil) or at DSN 318-239-2485. For public affairs queries concerning this report, please contact SIGIR Public Affairs at [publicaffairs@sigir.mil](mailto:publicaffairs@sigir.mil) or at 703-428-1100.

Stuart W. Bowen, Jr.  
Inspector General

# Special Inspector General for Iraq Reconstruction

SIGIR-PA-08-157

April 13, 2009

## Shiqaq Hai Musalla Primary Healthcare Center Kirkuk, Iraq

### Synopsis

**Introduction.** The Special Inspector General for Iraq Reconstruction is assessing projects funded under the Iraq Relief and Reconstruction Fund (IRRF) to provide real-time relief and reconstruction information to interested parties to enable appropriate action, when warranted.

**Project Assessment Objective.** The objective of this project assessment was to determine whether the project is operating at the capacity stated in the original contract. To accomplish the objective, the assessment team determined whether the project was at full capability or capacity when accepted by the U.S. government, when transferred to Iraqi operators, and during the site inspection on 15 December 2008. SIGIR conducted this limited scope assessment in accordance with the Quality Standards for Inspections issued by the Council of the Inspectors General on Integrity and Efficiency. The assessment team comprised an engineer/inspector and two auditors/inspectors.

**Project Objective.** The overall objective of the project was to complete the partially constructed Type A Shiqaq Hai Musalla<sup>1</sup> Primary Healthcare Center (PHC). This facility, when completed, should accommodate approximately 100 patients daily. The facility was partially completed by Parsons Delaware, Inc. (Parsons) prior to its termination in March 2006.

**Conclusions.** After the U.S. government terminated Parsons in March 2006, an IRRF-funded contract to complete the Shiqaq Hai Musalla PHC was awarded to a local contractor<sup>2</sup>.

During construction, Gulf Region North (GRN)<sup>3</sup> Kirkuk Area Office performed routine site inspections of the facility to determine the status and quality of work. GRN Kirkuk Area Office personnel documented construction progress via quality assurance reports and photographs taken during visits to the site.

The contract required a pre-final inspection to develop a “punch list” of all deficiencies noted. These deficiencies were to be formally documented, along with the estimated dates of correction; the final inspection was to be completed after the punch list deficiencies were corrected. The project file lacked pre-final or final inspection

---

<sup>1</sup> The Shiqaq Hai Musalla PHC project is also referred to in various documents as the KE02 Hai Shiqaq PHC, the KE02 PHC, and the Shiqaq PHC. This SIGIR report refers to the project as the Shiqaq Hai Musalla PHC, except when the term is used in a verbatim quotation.

<sup>2</sup> According to project file documentation and discussions with GRN Kirkuk Area Office representatives, the facility's approximate percentage complete by Parsons was not known at the time of termination.

<sup>3</sup> GRN is one of three districts under the United States Army Corps of Engineers (USACE) Gulf Region Division (GRD). GRD and its three districts provide construction management services, as well as, assist the capacity of the Government of Iraq to maintain its own construction, operation, and maintenance program of essential services, and national infrastructure.

documentation of the PHC. However, the project file did contain the acceptance letter of the PHC signed on 19 July 2007 by the Iraqi Ministry of Health Director General and the U.S. government. In the “notes” to the final acceptance, the letter stated that “x-ray leaded glass and heaters will be installed later.” The acceptance document did not identify estimated dates of correction for these two items.

SIGIR’s site visit confirmed that the contractor had not corrected these two outstanding deficiencies. In addition, SIGIR noticed that the x-ray room’s exterior doors and darkroom door appeared to be standard wooden doors — not the lead lined doors required by the design. The contractor had delivered and connected the x-ray equipment; however, according to the PHC administrator, the contractor did not verify that the equipment was operational. Also, the facility’s staff does not have the capability to operate the technical x-ray equipment; consequently, the facility cannot offer any x-ray services to its patients.

SIGIR noticed that the heating, ventilation, and air conditioning (HVAC) units were installed and operational; however, the PHC administrator stated that the heat in the HVAC units did not work. The HVAC units appeared to be equipped with the ability to provide heat; however, due to time limitations on site, SIGIR could not identify the cause of the heating system failure. SIGIR observed “modifications” made to the HVAC system by PHC maintenance personnel. For example, splices made to the electrical cables for the HVAC units on the roof did not conform to the International Electric Code. In addition, when PHC personnel removed a ceiling panel, SIGIR noted that the duct appeared to have been cut into by a hand tool.

The contractor installed the U.S. government provided reverse osmosis (RO) unit and the dental chairs. SIGIR noticed that the RO unit was disconnected from the water system. The PHC administrator could not explain who disconnected the RO unit or why. The dental chairs were being used at the time of the site visit.

SIGIR did not observe any noticeable signs of structural failure or distress. The primary reinforced concrete structural members that were visible did not show any indicators of failure. The floors appeared even and level, and there were no apparent signs of settlement or displacement. With the exception of the walls tributary to the cantilever (support) beams at the front of the building, interior partition walls did not exhibit cracking typical of structural movement or settlement. The walls above the cantilever beams over the portico to the building had vertical cracks that aligned with the beam supports below. The GRN Area Office engineer was aware of this issue and explained the resulting solution — the construction of two reinforced concrete columns beneath the free ends of the cantilever beams.

During the site visit, SIGIR observed doctors attending to patients and pharmacists dispensing medication. According to the administrator, the PHC has been operating for 15 months and serves approximately 200 patients daily: 30 to 40 of those receive dental services. The staff includes three doctors, one dentist, and various support personnel. Overall, the facility was moderately clean and well-organized, and the personnel were performing minor maintenance functions, such as cleaning and repairing minor items.

**GRD’s Corrective Actions for the Sustainment of Health Projects.** The Gulf Region Division (GRD) recognized that, in many cases, the contractors awarded the contracts to complete the PHCs nationwide did not properly install the medical equipment or train the available personnel on the use of the equipment. In addition, throughout the history of the IRRF program, once the U.S. government turned over facilities to the Iraqi ministries, little preventive maintenance was performed for items such as generators. Consequently,

the facilities and equipment were failing much more quickly than would be expected if normal preventive maintenance was being performed. Considering the importance of PHCs to the local Iraqi population and the specialized equipment provided to each PHC, preventive maintenance and training are imperative for the overall operation and long-term sustainment of each PHC.

As a result, the U.S. Army Corps of Engineers Transatlantic Center initiated a \$16.5 million contract on behalf of the Iraq Transition Assistance Office for the sustainment of health care projects funded by the U.S. government. For designated PHCs, a facility assessment survey is completed, which identifies the actual physical condition of the facility and the equipment. This survey is turned into preventive maintenance works or into repair/trouble shooting dockets for the re-commissioning of individual pieces of equipment. The preventive maintenance program will then be loaded into a computerized system, which will identify the need for a contractor to perform recurring maintenance on facilities and bio-medical equipment. The repair work orders will be addressed on a case-by-case basis and prioritized according to the system criticality to the operation of each PHC.

GRD will contract with multiple Iraqi companies throughout the country to perform the preventive maintenance and training. In addition, this contract provides for coaching and mentoring Iraqi companies in operations and maintenance, which the GRD believes will slowly improve the Iraqis' ability to ultimately sustain their own facilities and equipment.

GRD representatives stated that this PHC is on the list for prioritization for future installation of and training on medical equipment.

**Recommendation.** SIGIR recommends that the Commanding General, Gulf Region Division, direct that all installation of and training on the equipment currently at the Shiqaq Hai Musalla Primary Healthcare Center be performed according to the prioritization listing.

**Management Comments.** SIGIR received comments on the draft of this report from the Commanding General, GRD, concurring with the installation of and training on the equipment currently at the Shiqaq Hai Musalla Primary Healthcare Center that will be performed according to the prioritization listing.

**Evaluation of Management Comments.** SIGIR appreciates the GRD's comments to the draft report indicating it agreed with the facts presented in the report. SIGIR concurred with the GRD actions that will be performed on the installation of and the training on the equipment at the Shiqaq Hai Musalla Primary Healthcare Center.

SIGIR modified the draft report as appropriate to include additional information and clarifying comments received from GRD.

# Table of Contents

---

<b>Synopsis</b>	i
<b>Introduction</b>	
Objective of the Project Assessment	1
Pre-Site Assessment Background	1
Contract, Costs and Payments	3
Project Objective, Pre-Construction Description	4
Statement of Work	5
Current Project Design and Specifications	6
<b>Site Progress During Construction</b>	8
<b>Condition of Shiqaq Hai Musalla at Turnover</b>	9
<b>Site Assessment</b>	9
<b>Conclusions</b>	19
<b>Recommendation</b>	21
<b>Management Comments</b>	21
<b>Appendices</b>	
A. Scope and Methodology	22
B. Acronyms	23
C. GRD Comments on the Draft Report	24
D. Report Distribution	26
E. Project Assessment Team Members	28



# 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 to enable appropriate action to be taken, when warranted. Specifically, SIGIR determined whether the project was operating at the capacity stated in the original contract. To accomplish this, SIGIR determined if the project was at full capability or capacity when accepted by the U.S. government, when it was transferred to Iraqi operators, and during the site inspection.

## Pre-Site Assessment Background

### *Primary Healthcare Centers*

Prior to 2003, Iraq's health care system was in a fragile state following over 20 years of conflict and sanctions. Specifically, the Iraqi health care system previously suffered from being systematically underfunded, which led to severe declines in the health status of the population, the most vulnerable being children.

### Contract W914NS-04-D-0006 awarded to Parsons Delaware, Inc.

In an effort to rectify the poor condition of the Iraqi health care system, the Coalition Provisional Authority awarded multiple task orders (TOs) under Contract W914NS-04-D-0006. Contract W914NS-04-D-0006, dated 25 March 2004, was a design build, cost-plus-award-fee, indefinite delivery/indefinite quantity contract funded by the U.S.-appropriated Iraq Relief and Reconstruction Fund awarded to Parsons Delaware, Inc (Parsons).

Three specific TOs required Parsons to design and construct 150 primary health care centers (PHCs) throughout Iraq<sup>4</sup>. However, the program to design and construct the 150 PHCs was riddled with poor performance, increased costs, and untimely completions. According to a previous SIGIR audit report:

*“in July 2005, U.S. government management recognized that the PHC construction program was in trouble and started a series of actions which eventually led to a reduction in the number of centers to be delivered from the 150 to 20. Unfortunately, as a result, there are 121 centers that remain partially complete.”*

Ultimately, on 3 March 2006, the U.S. government terminated the approximately \$243 million contract with Parsons for convenience<sup>5</sup>.

After terminating the Parsons PHC TOs, the U.S. government decided to use available funding to contract directly with local Iraqi contractors to complete the partially-built

---

<sup>4</sup> The three TOs were 4, 11, and 12.

<sup>5</sup> Approximately \$186 million was spent on the PHC project.

PHCs. The Shiqaq Hai Musalla PHC<sup>6</sup> was one of the 121 PHCs Parsons partially completed (prior to being terminated)<sup>7</sup>.

### Medical Equipment

In addition to the design and construction of the 150 PHCs, Parsons' three TOs also required the delivery and installation of medical and dental equipment at each PHC<sup>8</sup>. The medical equipment included x-ray equipment, hematology analyzer, exam tables, patient beds, defibrillators, electroencephalogram machines, ventilators, incubators, and other equipment; while the dental equipment included dental chairs, lights, cabinets, instruments, supplies, and other equipment.<sup>9</sup> Included in the total definitized cost for the medical equipment was the requirement to install and test the equipment, train clinic personnel on the use of the equipment, and provide a 12-month warranty on the installed equipment.

Prior to being terminated in March 2006, Parsons procured and delivered the medical equipment for the 150 PHCs, which the United States Army Corps of Engineers (USACE) Gulf Region Division (GRD)<sup>10</sup> arranged to have stored in warehouses at Abu Ghraib.

### Letter of Instruction for Delivery of Primary Health Clinics

In order to properly complete and turnover the PHCs, GRD created a standard operating procedure (SOP) entitled, "Letter of Instruction (LOI) for Delivery of Primary Health Clinics (PHC'S)." The purpose of this SOP was to "outline as clearly as possible the key items and responsible parties in delivering PHCs to the Iraqi Ministry of Health." According to the SOP, PHCs will be provided with modern medical equipment, office equipment, furniture, and three months of medical equipment and consumables. Specifically,

*"GRD will deliver quality, complete, functional Primary Health Clinics to the Ministry of Health as close to schedule and within the allotted budget. 'Complete' includes working electrical generators, installed and commissioned medical equipment, and furniture & consumables."*

### Type A PHC

There are three different types of PHCs – Types A, B, and C. Type A is a two-story, 1,155 square meter reinforced concrete and brick structure with a flat, concrete tile roof. The building is approximately rectangular in shape, with a "T" shaped second story. A

---

<sup>6</sup> The Shiqaq Hai Musalla PHC project is also referred to in various documents as the KE02 Hai Shiqaq PHC, the KE02 PHC, or the Shiqaq PHC. This SIGIR report refers to the project as the Shiqaq Hai Musalla PHC, except when the term is used in a verbatim quotation.

<sup>7</sup> According to project file documentation and discussions with GRN Kirkuk Area Office representatives, the facility's approximate percentage complete by Parsons was not known at the time of termination.

<sup>8</sup> The total definitized cost of the equipment for the 150 PHCs plus a medical training academy was approximately \$70.4 million.

<sup>9</sup> The original Parsons PHC TOs provided for the purchase and installation of medical and dental equipment for each PHC. Prior to being terminated, Parsons purchased the medical and dental equipment and delivered it to the Abu Ghraib warehouse, located in Baghdad, Iraq.

<sup>10</sup> The United States Army Corps of Engineers (USACE) Gulf Region Division (GRD) activated on 25 January 2004, in Baghdad, Iraq. GRD provides construction management services, as well as, assist the capacity of the Government of Iraq to maintain its own construction, operation and maintenance program of essential services, and national infrastructure. Organized under GRD are three district (North, South, and Central).

portico is created by a cantilever (support) section of the second floor over the front entrance. Figure 1 provides an illustration of a completed Type A facility. The Type A facility provides space for medical/dental examination and treatment as well as for x-rays, vaccinations, a testing lab, a pharmacy, and public education.



**Figure 1. Illustration of a completed Type A PHC**

### **Contract, Costs and Payments**

On 25 July 2006, Gulf Region North (GRN) awarded Contract W917BE-06-P-0092, a firm-fixed-price-contract in the amount of \$335,440, to a local contractor. The contract required the contractor to complete the Shiqaq Hai Musalla PHC within 180 calendar days from the Notice to Proceed.

The contract listed four options for the heating, ventilation, and air conditioning (HVAC) package units, with associated costs totaling \$42,000.

There were three modifications to the base contract.

Modification P0001, dated 13 February 2007, increased the total contract cost by \$6,100 to \$341,540 and required three additional items to the Statement of Work (SOW). First, the modification required the construction of two additional concrete or steel columns under the cantilever section of the PHC, and the construction of a control joint at each of the sidewalls of the cantilever section. Also, the cracks in the wall of the first floor cafeteria were to be repaired. Second, a steel screen was to be installed to secure the pharmacy storage area. Third, the contractor was to pick up and deliver the reverse osmosis (RO) system from the Abu Ghraib Warehouse to the PHC site.

Modification P00002, dated 30 April 2007, increased the total contract cost by \$4,000 to \$345,540 and required the contractor to remove the old porcelain tiles from

the front of the PHC building, which were considered a safety hazard. The contractor was required to clean the area of the old mortar, and cover the area with fresh cement stucco and paint. In addition, the contractor must groove the cement to provide the appearance of tiles, while eliminating the safety hazard of the porcelain tiles. The modification extended the period of performance until 15 May 2007 to incorporate the changes to the exterior of the PHC.

Modification P00003, dated 10 January 2008, decreased the total contract cost by \$41,000 to \$304,540 and deleted the four exercised contract options relating to the contractor supplying the HVAC package units; instead, the units were provided as government-furnished equipment. In addition, this modification directed the contractor to install and connect the waterline to the municipal water system. The contractor is required to coordinate the water connection with the local utility, so that the PHC is connected to the municipal water system.

### **Project Objective and Pre-Construction Description**

The overall objective of the project was to complete the partially constructed Type A Shiqaq Hai Musalla PHC. Specifically, the contract required the following:

*“completing construction of the Type A Primary Healthcare Center (PHC). This Building consist of a two-story facility providing space for medical/dental examination and treatment, with spaces including, medical and dental x-ray capabilities; vaccinations; testing laboratory; pharmacy; and public education. The site provides circulation space and parking for both staff and patients. Type A facility is 1,155 square meters, located on sites with an estimated minimum area of 2,000 square meters.”*

The description of the facility (pre-construction) is based on information obtained from the contract and GRN Kirkuk Area Office personnel and documentation. The PHC site is located in Kirkuk, Iraq, which is approximately 230 kilometers north of Baghdad. The city of Kirkuk, with a population estimated at 710,000, is a mixture of Kurdish, Assyrian, Turkomen, and Arab. Kirkuk oilfields dominate the region; however, the area around Kirkuk also has a rich agricultural output, such as grains and fruits.

The GRN project file contained limited information regarding the extent of the construction or the condition of the facility when Parsons was terminated. Consequently, SIGIR relied upon project file photographs from the approximate time of contract award to determine the condition of the partially completed facility (Site Photo 1). Based upon these photographs, SIGIR determined that Parsons completed the following items:

- structural concrete columns and beams
- interior and exterior concrete block walls
- exterior tile on the front of the building
- roof tiles and mastic



**Site Photo 1. Condition of partially constructed PHC when new contract was awarded (Courtesy of GRN)**

### **Statement of Work**

The SOW for this project consisted of minimum design requirements and completion of the partially constructed Shiqaq Hai Musalla PHC. Specifically:

#### **Design Requirements**

- check all drawings furnished immediately upon receipt
- compare all drawings and verify the figures before laying out the work

#### **Site Work/Preparation**

- construct parking areas at the front of the building and access roads inside the site
- construct and install concrete sidewalks
- provide and install curbs and gutters
- provide, install, and test exterior perimeter lighting
- construct retaining walls were necessary

#### **Civil and Architectural Construction**

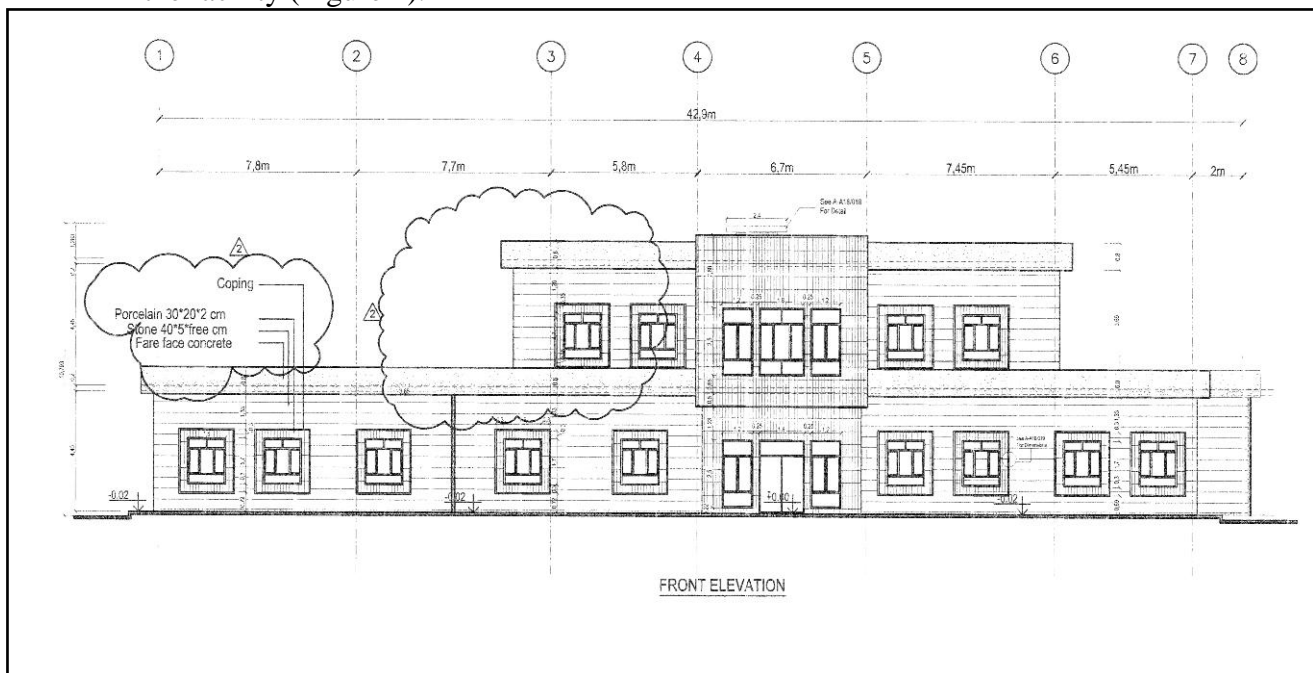
- provide materials and construct the septic tank and cesspool according to the drawings
- provide and complete the installation of the marble tiles
- supply and install the granite steps for the interior stairs
- provide utilities, including, but not limited to air conditioning, exhaust air, water, and electricity for equipment furnished and installed by others
- provide exterior and interior signage
- provide water tanks for storage
- complete and construct piping system for domestic water, sanitary sewer, storm sewer, water treatment equipment, and plumbing fixtures and fittings.

The requirements to complete this project were further outlined in a detailed Bill of Quantities, which contained 53 sub-items that provided sufficient detail for the construction of the PHC.

### **Current Project Design and Specifications**

The SOW required the contractor to update Parson's original design drawings based on changes, and deliver completed as-built drawings to GRN.

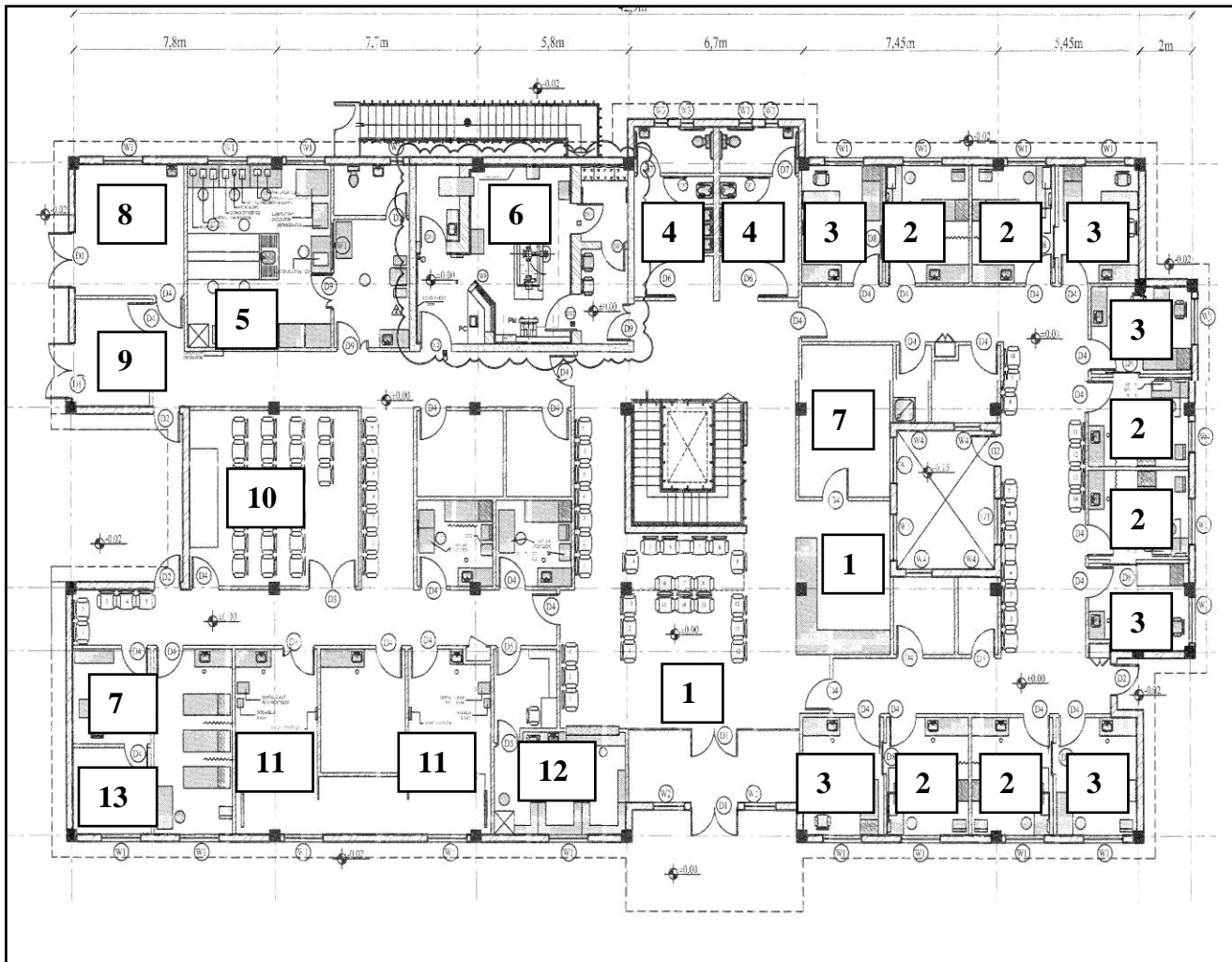
Parsons presented GRD with a consistent design for all Type A PHCs. Parsons previously submitted 30%, 65%, 95%, and 100% design drawings and specifications to GRD for review and approval. Parson's design drawings for a Type A facility included architectural, structural, mechanical, plumbing, and electrical plans. For example, the architectural design drawings included detailed views of the exterior of the facility (Figure 2).



**Figure 2. Detailed design drawing view of PHC exterior**

The Type A design drawings included the following rooms for a fully functioning PHC (Figure 3):

- reception area and lobby (1)
- exam rooms (2)
- doctors offices (3)
- bathrooms (4)
- laboratory (5)
- x-ray room (6)
- records room (7)
- mechanical room (8)
- electrical room (9)
- classroom (10)
- dental services (11)
- pharmacy (12)
- storage rooms (13)



**Figure 3. Interior view of the PHC, including the number and location of rooms**

SIGIR previously reviewed Parson's design drawings while performing assessments of PHC work done while Parsons was still under contract<sup>11</sup>. SIGIR found Parson's design drawings and specifications to be complete and consistent with contract requirements.

The SOW required the contractor to design and construct the facility in accordance with the technical specifications and the international or Iraqi building code, as specified. Specifically, where repair and refurbishment are required, the standards of the original design are to be used. Materials and equipment to be replaced will be replaced with equipment that meets the original design intent of the facility. However, where new material or equipment has been specified in this project, or if the original material or equipment is determined to be inadequate for the proposed service, new items will be specified to Iraqi or equivalent international codes and standards.

Detailed technical specifications were provided by GRN with the contract documents. These specifications covered all items and materials that were to be

<sup>11</sup> See SIGIR report, PA-05-17, "Hai Al Iman Clinic, Hilla, Iraq," 7 March 2006, and SIGIR report, PA-06-042-046, "Primary Health Care Centers Numbered KE-01, KE-02, KE-03, KE-04, and KE-05, Kirkuk, Iraq," 25 April 2006.

incorporated into the project. In addition to the technical specifications, the SOW also required conformance to the following codes and standards for the design and construction:

- International Building Code
- International Electro-Technical Commission
- National Fire Protection Association
- Sheet Metal and Air Conditioning Designer's National Association
- International Mechanical Code
- International Plumbing Code
- International Health Codes
- Joint Commission on the Accreditation of Healthcare
- Operations Environmental Relevant International Environmental Standards

The contractor was also required to provide operations and maintenance (O&M) support for all facilities and equipment installed, constructed, or rehabilitated. The support was to be provided during the construction, startup, and commissioning phases of the project, and was to continue for 90 days after the issuance of the Letter of Project Completion.

The SOW required the contractor to provide an O&M manual, written in Arabic and English, which includes standard operating procedures for all equipment and systems, standard maintenance procedures, and recommended spare parts lists for all equipment.

The SOW also required the contractor to provide as-built drawings, including details of location of work and existing site conditions.

Based on the detailed technical specifications and the inclusion by reference of other applicable codes and standards, there was sufficient information provided to complete the construction of the facility.

## Site Progress During Construction

The contract required the contractor to submit weekly progress reports with visual pictures to verify progress and completion of work. The contractor did not provide weekly construction reports or document quality control activities performed. The GRN Kirkuk Area Office's evaluation of the contractor's performance was the following:

*"The contractor's QC manager did not perform the required three phase control program. Contractor did not perform all the required testing of mechanical, electrical and plumbing system. Contractor has failed to fix noted construction deficiencies on time."*

However, the GRN Kirkuk Area Office documented construction progress via quality assurance (QA) reports and photographs taken during site visits. SIGIR reviewed and subsequently relied on selected photographs to document examples of construction performance before the project was turned over to the Iraqi Ministry of Health Director General on 19 July 2007.

Site Photos 2 and 3 document various construction work activities at the PHC, including electrical wiring and HVAC installation.





**Site Photos 2 and 3. Installation of electrical wiring and HVAC duct work, respectively  
(Courtesy of USACE)**

## **Condition of Shiqaq Hai Musalla PHC at Turnover**

### **Final Inspection**

According to the contract, the pre-final inspection will develop a “punch list” of all deficiencies noted, and will be formally documented along with the estimated dates of correction. The final inspection will be completed after the contractor has corrected the punch list deficiencies. The final inspection would document corrected deficiencies and the overall condition of the facility.

According to project file documentation, on 19 July 2007, the Iraqi Ministry of Health Director General accepted the Shiqaq Hai Musalla PHC from the U.S. government. The documentation does not contain the final inspection punch list; however, according to the acceptance letter, the “x-ray leaded glass and heaters will be installed later” are the only notes to the final acceptance.

The QA reports did not contain a final inspection report; however, the project file contained QA photographs of the PHC from July 2007. Since these photographs occurred within several days of the acceptance letter, SIGIR relied on them to gauge the condition of the facility at turnover. According to the available photographs, GRD verified the electrical system and the generator were operational; however, the photographs do not verify the correction of any previously identified deficiencies.

The contract required project completion in 180 days; however, the acceptance letter was signed just one week before the one-year anniversary of the contract award.

## **Site Assessment**

On 15 December 2008, SIGIR performed an on-site assessment of the Shiqaq Hai Musalla PHC project. The GRN Kirkuk Area Office engineer and the PHC’s administrator accompanied SIGIR during the site visit. Due to security concerns, the time allotted for the site visit was approximately one hour and access to the roof was limited. Consequently, SIGIR performed an expedited assessment of the areas available; therefore a complete review of all work completed was not possible.

During the site visit, SIGIR observed doctors and dentists attending to patients and pharmacists dispensing medication. According to the administrator, the PHC has been operating for fifteen months and serves approximately 200 patients daily with 30 to 40 of the patients receiving dental services. This PHC is open for approximately eight hours per day and has a staff of three doctors, one dentist, and various support staff. This PHC functions as a primary care facility providing general medical and dental services with an in-house pharmacy. Due to the unavailability of qualified staff to operate the x-ray equipment, x-ray services and surgeries are not performed. According to the administrator, there are no local hospitals in the immediate area to handle the more serious cases.

The PHC administrator stated that there were multiple issues with the facility. The GRN Area Office engineer provided a list of deficiencies prepared at turnover. SIGIR found that items on the list were still unresolved.

### **Status of Medical Equipment**

#### **Generators**

The Shiqaq Hai Musalla PHC is connected to the national grid; however, the national grid is unreliable and provides approximately four hours of electricity per day. The primary source of electricity for the facility is provided from one of the two generators located on site (Site Photo 4). The larger generator, one-megawatt, is used for primary power; while the smaller generator, 500-kilovolt, is for emergency backup. During the site visit, the generators appeared to be relatively clean and in working order. SIGIR verified the generators' specifications via the faceplates.

Since the Shiqaq Hai Musalla PHC is connected to the national grid, an automatic transfer switch is critical to transfer to generator power once electricity from the national grid is lost. The PHC design incorporated the use of an automatic transfer switch. SIGIR verified the installation of the automatic transfer switch, which according to the administrator, was functioning correctly.



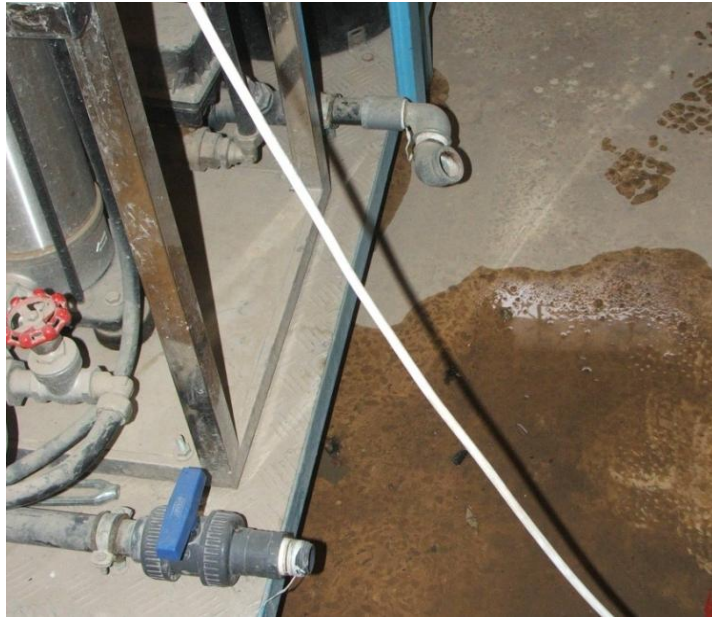
**Site Photo 4. Two generators providing primary and emergency backup power for the PHC**

SIGIR noticed no visible evidence of fuel leaks in the fuel line or inside the generator housing. The fuel line appeared to be galvanized steel pipe that was placed on the surface of the ground (Site Photo 4). Galvanized steel is susceptible to corrosion and may over a long period of time create issues with fuel leaks. Without careful monitoring, small leaks may go undetected, potentially wasting fuel, increasing the risk of fire, harming the environment, and endangering the welfare of the occupants.

#### Reverse Osmosis Unit

The contractor installed the U.S. government-provided RO unit. The RO unit is a filtration device used to remove contaminants in the water. Typically in a medical facility, an RO unit would be configured to remove contaminants and waterborne pathogens, rendering the filtered water sterile.

The RO unit appeared to be installed, but had been disconnected from the facility's water system (Site Photo 5). The PHC administrator did not respond to several requests by SIGIR as to who disconnected the RO and why.



**Site Photo 5. Disconnected RO unit**

SIGIR observed evidence that birds were nesting in the general vicinity of the RO unit and potable water equalization tanks, with bird feces visible on the partition wall (Site Photo 6). In addition, one of the tank lids was open, permitting contamination of the potable water supply (Site Photo 7). Contamination of the water supply with bird feces increases the risk of exposure to patients and staff of avian born diseases such as histoplasmosis, cryptococcosis, or psittacosis.



**Site Photo 6. Possible water contamination source**



**Site Photo 7. Uncovered equilization tank**



### Dental Chairs

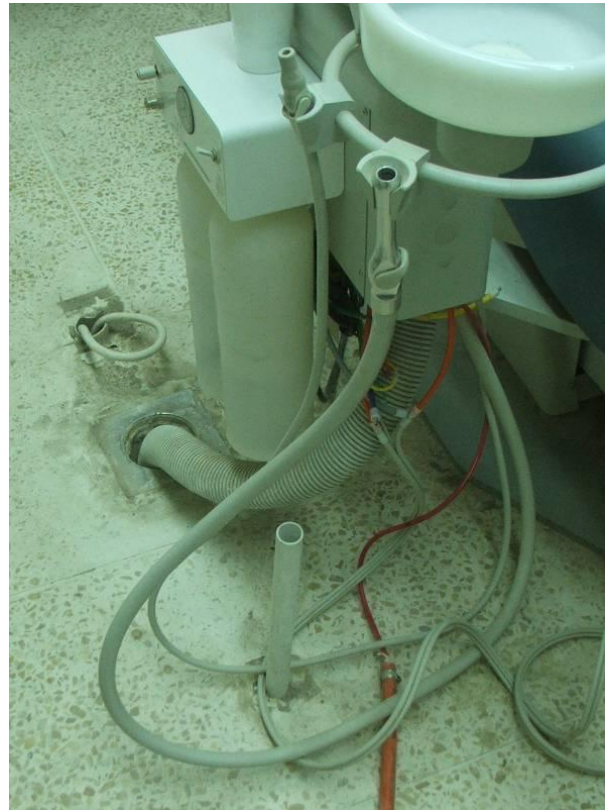
According to USACE's SOP, "Contractors will install/set up medical equipment and commission. USACE representatives shall ensure that commissioning is performed."

During the site visit, SIGIR observed that the dental chairs were installed and appeared to be in use (Site Photo 8). During the inspection, SIGIR observed a dentist treating a patient while using the dental chair.

The contractor's installation of the dental chairs, while functional, did not appear to conform to any known plumbing or electric code. The drain for the chairs was placed directly into the floor drain with a significant gap between the floor drainpipe and the chair discharge hose. The electrical connection for the chair was made using a modified extension cord (Site Photo 9).



**Site Photo 8. Dental chair and tools**



**Site Photo 9. Dental chair connections**

### X-ray Imaging System

The original design of the facility included medical imaging capabilities, specifically an x-ray room and equipment. SIGIR observed that the x-ray equipment was installed (Site Photo 10); however, according to the administrator, the contractor did not verify the equipment was operational. In addition, the administrator stated that the facility's staff did not have the capability to operate the x-ray equipment; consequently, the facility does not offer x-ray service to its patients.

Due to the x-ray equipment emitting low levels of radiation, radiation shielding is required to protect the PHC's personnel and patients. The initial design required mass concrete walls with lead lining, lead-lined doors, and a leaded-glass observation window to provide radiation shielding.

In the 19 July 2007 acceptance letter, one of the two noted deficiencies was “x-ray leaded glass,” which was to be “installed later.” SIGIR noted that the contractor had not installed the required leaded-glass observation window (Site Photo 11). In addition, SIGIR noticed that the x-ray room exterior door and darkroom doors installed by the contractor appeared to be standard wooden doors. The inspection team could not verify the presence of lead lining on the concrete walls.



**Site Photo 10. X-ray equipment**



**Site Photo 11. Missing observation window**

## **General Facility Observations**

### **Heating, Ventilation, and Air Conditioning System**

Due to security concerns, only one SIGIR team member was allowed to briefly access the roof to inspect the HVAC units. While on the roof, PHC personnel removed the side panel of one of the primary units for inspection (Site Photo 12). The administrator pointed out that one of the two compressors in the primary HVAC unit had failed, and currently, the facility was operating on reduced capacity.

SIGIR noticed several splices of the electric cables for the units. The splices did not appear to conform to the International Electric Code, and in several locations it appeared that plastic index card boxes were modified to act as junction boxes for the electric power supply to the HVAC units (Site Photo 13). Due to the risk of severe shock, SIGIR did not dismantle the makeshift covering, and, as a result, was unable to determine if there was a splice. Since the makeshift junction was located on the roof, the connection was exposed to the harsh weather elements. Due to the significant electric current required to operate the HVAC, shorting of these lines would cause a serious risk of electrical shock and fire.



**Site Photo 12. Failed HVAC compressor**



**Site Photo 13. Makeshift electrical junction**

According to the administrator, the air conditioning was not working for a majority of the first floor. PHC maintenance personnel believe the air was reaching the main duct, but the individual rooms were not receiving the cool air. The PHC maintenance personnel removed a ceiling panel, and SIGIR noticed that it appeared as if the PHC personnel had manually cut into the duct (SIGIR Photo 14). The administrator stated that air was now exiting the hole. Due to time limitation at the site, SIGIR could not identify the cause of the blockage.

The administrator also stated that the heating units were not working. Based on SIGIR's observations on the roof, it appeared that the HVAC units were equipped with the ability to provide heat; however, the cause of the heating system failure could not be determined. SIGIR noticed that the staff was using small electric heaters to provide heat at individual workstations. The use of the small electric heaters taxes the emergency generator, while being inefficient and a significant fire hazard.





**Site Photo 14. Modified HVAC duct**

### Plumbing and Water Heaters

The restrooms appeared to be relatively clean and well maintained. There were no apparent plumbing leaks in the restrooms. The administrator stated that many of the water valves in the toilet stalls had been replaced by the PHC staff because the valves the contractor initially installed were of poor quality and had broken.

SIGIR observed water damage from a faulty hot water heater, located on the first floor of the facility. The hot water heater did not appear to be leaking at the time of the inspection, but the administrator stated that the facility personnel turned off the water supply to the heater. Some of the damages sustained to the facility because of the leaky hot water heater were blistering paint and mold growth on the wall and in the sink vanity beneath the heater.

In addition, the administrator stated that the hot water heaters in the restrooms and the rest of the facility did not function. In some cases, it seemed that power was not available to the receptacles for the heaters to function, while in others it appeared that the heaters themselves had failed.

### Electrical

The administrator mentioned several issues with the PHC's electrical system. For instance, the backup generator would not provide power to the HVAC system. Also, the administrator said that in several of the rooms the outlets and/or lights did not work and that the cafeteria's lights constantly burned out.

SIGIR observed several questionable electrical connections; none of which conform to the International Electric Code (Site Photo 15). Due to time limitations on site and the fact that the PHC staff had occupied the facility for over a year, SIGIR could not determine if the original contractor performed this work or if it had been "modified" by PHC personnel.

SIGIR noticed that several of the electric manholes had standing water in them (Site Photo 16). Also, there was debris in the manholes, but it was unclear if the debris was left from the original construction, or if it had been deposited recently.





**Site Photo 15. Poor electrical connection**



**Site Photo 16. Debris and water in electric manhole**

Further, SIGIR noted the water supply pump was not anchored to a solid support and the wiring for the pump was not in conduit.

#### *Fire Protection*

During the site visit, the GRN Kirkuk Area Office engineer pointed out to the administrator that the dust caps were still present on several of the ground floor smoke detectors. The contractor used blue caps during construction to keep small particle debris out; however, until the blue caps are removed, the fire detection system will remain inoperable.

The contractor installed smoke alarms, manual pull boxes, and fire extinguishers throughout the facility. According to the administrator, the fire detection system was functioning. SIGIR could not verify if the fire extinguishers functioned or if a routine system was in place to have the extinguishers tested and recharged as required.

#### *Structural*

During the site visit, SIGIR did not notice any obvious signs of structural failure or distress. The primary reinforced concrete structural members that were visible did not show any indication of failure. The floors appeared even and level, and there were no apparent signs of settlement or displacement.

The walls above the cantilever beams over the portico to the building had vertical cracks that aligned with the beam supports below. The cracking was divergent away from the support indicating excessive deflection of the cantilever beams. The GRN Kirkuk Area Office engineer was aware of this issue and explained the problem and the resulting solution. During construction, the QA inspector saw cracks in the concrete masonry unit partition walls. Upon further inspection, the QA inspector noted that the reinforced concrete beams had failed (i.e. cracked completely through). The GRN Kirkuk Area Engineer stated that an analysis was performed and it was determined that the original designer of the beams had neglected to incorporate the weight of the concrete masonry unit partition walls into the design. The beams were specified with 20 millimeter reinforcing steel, instead of the required 32 millimeter reinforcing steel. This inadequacy was determined to exist in all Type A PHCs built from the original Parsons' design.

GRD identified a solution for this problem, which consisted of the construction of two reinforced concrete columns beneath the free ends of the cantilever beams. A contract modification added two support columns beneath the cantilever beams over the entrance to the building. The columns were constructed and finished to match the exterior of the building. According to GRN, the full bearing between the columns and the existing beams was obtained by the placement of non-shrink grout between the top of the concrete columns and the bottom of the existing beam.

With the exception of the walls tributary to the cantilever beams at the front of the building, interior partition walls did not exhibit cracking typical of structural movement or settlement.

### Roof

According to the administrator, the mastic between the concrete roof tiles (steigers) was poorly placed and substandard. SIGIR observed that the mastic did not appear inadequate, and the placement of the mastic was typical of other new construction seen at other project sites (Site Photo 17). Poor roof construction would generally lead to interior leaks within the PHC; however, SIGIR did not observe any leaks nor did the administrator mention any interior leaks. The administrator stated that the upper level roof was in worse condition than the lower roof; however, due to security concerns, SIGIR was not allowed access to the upper level roof. Therefore, SIGIR could neither confirm nor deny the administrator's allegation.



**Site Photo 17. Quality of roof construction**

During the inspection of the roof, it appeared as though the reinforced concrete columns were projecting through the finished roof. It is unclear if this was work performed by the current contractor or was part of Parsons' original work. The SIGIR inspection team was unable to determine if the column extensions were due to a construction error. Although the column extensions are not affecting the performance of the facility, the facility administrator should be made aware that the original design did not intend for additional load to be placed on the structure, and no additional construction should be performed without a complete analysis of the as-built structure and any required reinforcing.

### General Maintenance Observations

It appeared as though the PHC personnel were taking some initiative to maintain the facility. The PHC was generally clean and well organized, and the staff was performing some of the minor maintenance functions, such as cleaning and repairing minor items.

The PHC maintenance personnel also performed landscaping of the grounds and were trying to grow flowers and decorative plantings.

Based upon the review of several Type A PHCs, the quality of the fixtures and cabinetry was better than those in previous PHCs visited. The contractor's workmanship was also above average for this PHC.

## Conclusions

After the U.S. government terminated Parsons in March 2006, an IRRF-funded contract to complete the Shiqaq Hai Musalla PHC was awarded to a local contractor.

During construction, Gulf Region North (GRN) Kirkuk Area Office performed routine site inspections of the facility to determine the status and quality of work. GRN Kirkuk Area Office personnel documented construction progress via quality assurance reports and photographs taken during visits to the site.

The contract required a pre-final inspection to develop a "punch list" of all deficiencies noted. These deficiencies were to be formally documented, along with the estimated dates of correction; the final inspection was to be completed after the punch list deficiencies were corrected. The project file lacked pre-final or final inspection documentation of the PHC. However, the project file did contain the acceptance letter of the PHC signed on 19 July 2007 by the Iraqi Ministry of Health Director General and the U.S. government. In the "notes" to the final acceptance, the letter stated that "x-ray leaded glass and heaters will be installed later." The acceptance document did not identify estimated dates of correction for these two items.

SIGIR's site visit confirmed that the contractor had not corrected these two outstanding deficiencies. In addition, SIGIR noticed that the x-ray room's exterior doors and darkroom door appeared to be standard wooden doors — not the lead lined doors required by the design. The contractor had delivered and connected the x-ray equipment; however, according to the PHC administrator, the contractor did not verify that the equipment was operational. Also, the facility's staff does not have the capability to operate the technical x-ray equipment; consequently, the facility cannot offer any x-ray services to its patients.

SIGIR noticed that the heating, ventilation, and air conditioning (HVAC) units were installed and operational; however, the PHC administrator stated that the heat in the HVAC units did not work. The HVAC units appeared to be equipped with the ability to provide heat; however, due to time limitations on site, SIGIR could not identify the cause of the heating system failure. SIGIR observed "modifications" made to the HVAC system by PHC maintenance personnel. For example, splices made to the electrical cables for the HVAC units on the roof did not conform to the International Electric Code. In addition, when PHC personnel removed a ceiling panel, SIGIR noted that the duct appeared to have been cut into by a hand tool.

The contractor installed the U.S. government provided reverse osmosis (RO) unit and the dental chairs. SIGIR noticed that the RO unit was disconnected from the water system. The PHC administrator could not explain who disconnected the RO unit or why. The dental chairs were being used at the time of the site visit.

SIGIR did not observe any noticeable signs of structural failure or distress. The primary reinforced concrete structural members that were visible did not show any indicators of

failure. The floors appeared even and level, and there were no apparent signs of settlement or displacement. With the exception of the walls tributary to the cantilever (support) beams at the front of the building, interior partition walls did not exhibit cracking typical of structural movement or settlement. The walls above the cantilever beams over the portico to the building had vertical cracks that aligned with the beam supports below. The GRN Area Office engineer was aware of this issue and explained the resulting solution — the construction of two reinforced concrete columns beneath the free ends of the cantilever beams.

During the site visit, SIGIR observed doctors attending to patients and pharmacists dispensing medication. According to the administrator, the PHC has been operating for 15 months and serves approximately 200 patients daily: 30 to 40 of those receive dental services. The staff includes three doctors, one dentist, and various support personnel. Overall, the facility was moderately clean and well-organized, and the personnel were performing minor maintenance functions, such as cleaning and repairing minor items.

**GRD's Corrective Actions for the Sustainment of Health Projects.** The Gulf Region Division (GRD) recognized that, in many cases, the contractors awarded the contracts to complete the PHCs nationwide did not properly install the medical equipment or train the available personnel on the use of the equipment. In addition, throughout the history of the IRRF program, once the U.S. government turned over facilities to the Iraqi ministries, little preventive maintenance was performed for items such as generators. Consequently, the facilities and equipment were failing much more quickly than would be expected if normal preventive maintenance was being performed. Considering the importance of PHCs to the local Iraqi population and the specialized equipment provided to each PHC, preventive maintenance and training are imperative for the overall operation and long-term sustainment of each PHC.

As a result, the U.S. Army Corps of Engineers Transatlantic Center initiated a \$16.5 million contract on behalf of the Iraq Transition Assistance Office for the sustainment of health care projects funded by the U.S. government. For designated PHCs, a facility assessment survey is completed, which identifies the actual physical condition of the facility and the equipment. This survey is turned into preventive maintenance works or into repair/trouble shooting dockets for the re-commissioning of individual pieces of equipment. The preventive maintenance program will then be loaded into a computerized system, which will identify the need for a contractor to perform recurring maintenance on facilities and bio-medical equipment. The repair work orders will be addressed on a case-by-case basis and prioritized according to the system criticality to the operation of each PHC.

GRD will contract with multiple Iraqi companies throughout the country to perform the preventive maintenance and training. In addition, this contract provides for coaching and mentoring Iraqi companies in operations and maintenance, which the GRD believes will slowly improve the Iraqis' ability to ultimately sustain their own facilities and equipment.

GRD representatives stated that this PHC is on the list for prioritization for future installation of and training on medical equipment.

## **Recommendation**

SIGIR recommends that the Commanding General, Gulf Region Division, direct that all installation of and training on the equipment currently at the Shiqaq Hai Musalla Primary Healthcare Center be performed according to the prioritization listing.

## **Management Comments**

SIGIR received comments on the draft of this report from the Commanding General, GRD, concurring with the installation of and training on the equipment currently at the Shiqaq Hai Musalla Primary Healthcare Center that will be performed according to the prioritization listing.

## **Evaluation of Management Comments**

SIGIR appreciates the GRD's comments to the draft report indicating it agreed with the facts presented in the report. SIGIR concurred with the GRD actions that will be performed on the installation of and the training on the equipment at the Shiqaq Hai Musalla Primary Healthcare Center.

SIGIR modified the draft report as appropriate to include additional information and clarifying comments received from GRD.

## Appendix A. Scope and Methodology

---

SIGIR performed this project assessment from November 2008 through March 2009 in accordance with the Quality Standards for Inspections issued by the Council of the Inspectors General on Integrity and Efficiency. The assessment team comprised an engineer/inspector and two auditors/inspectors.

In performing this Project Assessment SIGIR:

- Reviewed contract documentation to include items such as: Contract W917BE-06-P-0092, bill of quantities, modifications P0001, P0002, P0003, quality assurance reports, and project closeout documentation;
- Reviewed the design package (plans) and photographs documenting construction progress;
- Interviewed Gulf Region North Kirkuk Area Office personnel; and
- Conducted an on-site assessment on 15 December 2008 and documented results at the KE02 Shiqaq Hai Musalla Primary Healthcare Center project, in Tameem, Iraq.

**Scope Limitation.** Due to security concerns, SIGIR performed an expedited assessment. The time allotted for the primary healthcare center was approximately 60 minutes; therefore, a complete review of all work completed was not possible.

## **Appendix B. Acronyms**

---

GRD	Gulf Region Division
GRN	Gulf Region North
HVAC	Heating, Ventilation, and Air Conditioning
PHC	Primary Healthcare Center
QA	Quality Assurance
QC	Quality Control
RO	Reverse Osmosis
SIGIR	Special Inspector General for Iraq Reconstruction
SOP	Standard Operating Procedure
SOW	Statement of Work
TO	Task Order
USACE	United States Army Corps of Engineers

## Appendix C. GRD Comments on Draft Report



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS  
GULF REGION DIVISION  
BAGHDAD, IRAQ  
APO AE 09348

CEGRD-CG

4 April 2009

MEMORANDUM FOR Special Inspector General for Iraq Reconstruction, US Embassy Annex II, Room 1013, APO AE 09316

SUBJECT: SIGIR Draft Project Assessment Report – Shiqaq Hai Musalla Primary Health Care Center, Kirkuk, Iraq (PA-08-157)

1. The Gulf Region Division reviewed the subject draft report and concurs with the recommendation. GRD provides its comments for clarity and accuracy in the enclosure.
2. Thank you for the opportunity to review the draft report and provide our written comments for incorporation in the final report.
3. If you have any questions, please contact Mr. Robert Donner at (540) 665-5022 or via email [Robert.L.Donner@usace.army.mil](mailto:Robert.L.Donner@usace.army.mil).

Encl  
as

*Michael R. Eyre*  
MICHAEL R. EYRE  
Major General, USA  
Commanding



**COMMAND REPLY**  
**to**  
**SIGIR Draft Project Assessment Report –**  
**Shiqaq Hai Musalla Primary Health Care Center**  
**Kirkuk, Iraq**  
**SIGIR Report Number PA-08-157**  
**(SIGIR Project PA-08-157)**

**Recommendations:**

SIGIR recommends that the Commanding General, Gulf Region Division, direct that all installation of and training on the equipment currently at the Shiqaq Hai Musalla Primary Healthcare Center be performed according to the prioritization listing.

**Concur.** Installation of and training on the equipment currently at the Shiqaq Hai Musalla Primary Healthcare Center will be performed according to the prioritization listing.

**Additional Comments:**

**Draft Report, page iii, second paragraph.** As a result, GRD initiated a \$16.5 million contract for the sustainment of health projects funded by the U.S. government. For each PHC, a facility assessment survey is completed, which identifies the actual physical condition of the facility and the equipment. This survey is turned into preventive maintenance works or repair/trouble-shooting dockets for the re-commissioning of individual pieces of equipment. The preventive maintenance program will then be loaded into a computerized system, which will identify the need for a contractor to perform recurring maintenance on facilities and bio-medical equipment. The repair work orders will be addressed on a case-by-case basis and prioritized according to the system criticality of each PHC.

**Command Comment.** The USACE Transatlantic Center (TAC) awarded a \$16.5 million task order on behalf of the Iraq Transition Assistance Office (ITAO) for the sustainment of health projects funded by the U.S. government. For designated PHCs, a facility assessment survey is completed, which identifies the actual physical condition of the facility and the equipment.

Enclosure

## **Appendix D. Report Distribution**

---

### **Department of State**

Secretary of State

Senior Advisor to the Secretary and Coordinator for Iraq

Director of U.S. Foreign Assistance/Administrator, U.S. Agency for  
International Development

Director, Office of Iraq Reconstruction

Assistant Secretary for Resource Management/Chief Financial Officer,  
Bureau of Resource Management

U.S. Ambassador to Iraq

Director, Iraq Transition Assistance Office

Mission Director-Iraq, U.S. Agency for International Development

Inspector General, Department of State

### **Department of Defense**

Secretary of Defense

Deputy Secretary of Defense

Under Secretary of Defense (Comptroller)/Chief Financial Officer

Deputy Chief Financial Officer

Deputy Comptroller (Program/Budget)

Deputy Assistant Secretary of Defense-Middle East, Office of Policy/International  
Security Affairs

Inspector General, Department of Defense

Director, Defense Contract Audit Agency

Director, Defense Finance and Accounting Service

Director, Defense Contract Management Agency

### **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)

Commanding General, Joint Contracting Command-Iraq/Afghanistan

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

Chief Financial Officer, U.S. Army Corps of Engineers

Auditor General of the Army

### **U.S. Central Command**

Commanding General, Multi-National Force-Iraq

Commanding General, Multi-National Corps-Iraq

Commanding General, Multi-National Security Transition Command-Iraq

Commander, Joint Area Support Group-Central

## **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, Department of Health and Human Services  
Inspector General, U.S. Agency for International Development  
President, Overseas Private Investment Corporation  
President, U.S. Institute for Peace

## **Congressional Committees and Subcommittees, Chairman and Ranking Minority Member**

### **U.S. Senate**

Senate Committee on Appropriations  
Senate Committee on Armed Services  
Senate Committee on Foreign Relations  
Senate Committee on Homeland Security and Governmental Affairs

### **U.S. House of Representatives**

House Committee on Appropriations  
House Committee on Armed Services  
House Committee on Oversight and Government Reform  
House Committee on Foreign Affairs

## **Appendix E. 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:

Angelina Johnston

Kevin O'Connor

Shawn Sassaman, P.E.