HADITHA PRIMARY HEALTH CARE CENTER HADITHA, IRAQ

SUSTAINMENT ASSESSMENT

SIGIR PA-08-134 JANUARY 28, 2009

Summary of Report: PA-08-134

Why SIGIR Did This Study

SIGIR is assessing projects funded under the Iraq Relief and Reconstruction Fund. SIGIR did this assessment to determine if the original deficiencies identified in the pre-final inspection, such as poorly insulated duct work and plumbing issues, were corrected.

The overall objective of the project was to complete the partially constructed Type A Haditha Primary Healthcare Center (PHC). This facility, when completed, was expected to relieve the overburdened outpatient care currently being provided by other area hospitals. The facility was partially completed by Parsons Delaware, Inc. prior to its termination in March 2006. At the time of termination, the facility was approximately 40% complete.

What SIGIR Recommends

SIGIR recommends that the Commanding General of the Gulf Region Division (GRD) perform all installation of and training on the medical equipment currently at the Haditha PHC, according to its prioritization listing.

SIGIR recommends that the Director, Iraq Transition Assistance Office (ITAO) emphasize to the Iraqi Ministry of Health the critical importance of routine and preventative operations and maintenance.

Both recommendations were originally addressed to GRD. GRD concurred with the first recommendation, but not the second noting that the Joint Campaign Plan, Annex B, Task 1.1.5 identifies the ITAO as the lead U.S. government organization to influence and work with the Government of Iraq to assume full ownership and responsibility for operation and maintenance of U.S. government funded projects. SIGIR redirected the recommendation to ITAO.

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

Haditha Primary Healthcare Center

What SIGIR Found

On 4 November 2008, SIGIR performed an on-site assessment of the Haditha Primary Healthcare Center project. The total contract cost, including modification, was \$537,780; the project was scheduled to be completed by 4 June 2007. During the site visit, SIGIR determined that many of the original deficiencies identified in the pre-final inspection, such as poorly insulated duct work and plumbing issues, were not corrected.

It was not possible to conduct a complete review of all work because security conditions did not allow for an in-depth site visit. The inspection team was limited to 45 minutes on site and access to the roof was limited. Consequently, SIGIR performed only an expedited assessment of the areas available.

SIGIR found medical equipment that was either not connected or not operating. For example, the x-ray equipment was placed in the imaging room but was not connected, and a dental chair was in place but not installed. According to the dentist, the chair requires power connection, water and drain lines, and air and vacuum lines. The piping for the dental room was missing; therefore the dental chair was not installed and utilities were not installed in the junction box or extended to the conduit. Minor construction is required to extend the utilities to the conduit, under the floor, and to the chair.

The PHC relies upon the national grid for its primary power; however, the national grid is unreliable and provides only about five hours of electricity per day. Therefore, two generators were included to provide consistent and reliable power to operate the facility when power from the national grid is down. The larger generator has an automatic transfer switch, which turns on the generator when power is lost from the national grid, but this generator was inoperable. SIGIR identified other construction deficiencies, such as damaged heating, ventilation, and air conditioning units; plumbing problems in the bathrooms and the sewer system; and low-quality door hardware.

In spite of the noted deficiencies, doctors were attending to patients and pharmacists were dispensing medication.



Special Inspector General for Iraq Reconstruction



SPECIAL INSPECTOR GENERAL FOR IRAQ RECONSTRUCTION

January 28, 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 Project Sustainment Assessment of the Haditha Primary Healthcare Center, Haditha, Iraq (SIGIR Report Number PA-08-134)

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

Comments on a draft of this report were received from the Gulf Region Division, Multi-National Force Iraq which addressed the issues raised in the report and recommendations made. The planned actions are responsive and should address 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 or at DSN 318-239-2485. For public affairs queries concerning this report, please contact SIGIR Public Affairs at publicaffairs@sigir.mil or at 703-428-1100.

Stuart W. Bowen, Jr. Inspector General

Haditha Primary Health Care Center Haditha, Iraq

Synopsis

Introduction. The Office of the Special Inspector General for Iraq Reconstruction is assessing projects funded under the Iraq Relief and Reconstruction Fund Program 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 4 November 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 two engineers/inspectors and one auditor/inspector.

Project Objective. The overall objective of the project was to complete the partially constructed Type A Haditha Primary Healthcare Center (PHC). This facility, when completed, was expected to relieve the overburdened outpatient care currently being provided by other area hospitals. The facility was partially completed by Parsons Delaware, Inc. (Parsons) prior to its termination in March 2006. At the time of termination, the facility was approximately 40% complete.

Conclusions. The contract to complete the Haditha PHC required the contractor to perform an assessment of the existing conditions of the partially built PHC to determine the necessity of additional design or re-work. The Gulf Region Central (GRC) Haditha Resident Office could not locate the contractor's assessment report; therefore, SIGIR could not determine the quality of Parsons' partially built PHC.

During construction, the GRC Al Asad Resident Office performed routine site inspections of the facility to determine the status and quality of work. Throughout these inspections, the GRC Al Asad Resident Office identified significant construction deficiencies, such as substandard electrical connections, improperly placed drains throughout the PHC, poorly insulated duct work, and plumbing issues. The GRC Al Asad Resident Office made several follow-up site visits, which found that several of the previously identified deficiencies were still outstanding, unresolved, or incomplete, and also identified additional deficiencies.

Gulf Region Division (GRD), in order to properly complete and turnover the partially constructed PHCs by Parsons nationwide, issued a standard operating procedure to "outline as clearly as possible the key items and responsible parties in delivering PHCs to the Iraqi Ministry of Health." According to the standard operating procedure, 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."

According to GRC Al Asad Resident Office documentation, the PHC equipment was delivered to the site in February 2008. On 5 July 2008, the U.S. government and the Ministry of Health "acknowledged their acceptance of the implemented construction work" of the Haditha PHC. This acceptance was "based on the final inspection performed by the U.S. Army Corps of Engineers," and the "parties agree the building in its present state is functional, operational and ready for Beneficial Occupancy by the Ministry of Health." GRD's acceptance letter indicated a final inspection was conducted on 19 June 2008, which identified "no new deficiencies IAW [in accordance with] plans, specifications, SOW [Statement of Work] and USACE Quality Control Engineer."

The project file documentation lacked the final inspection report. The limited photographs taken on the day of the final inspection primarily focused on one or two interior rooms within the PHC. The final inspection photographs do not address the significant deficiencies identified in previous inspection visits. In addition, project file documentation lacked any documentation to support that the major pieces of equipment, such as generators and transformers, were tested during the final inspection. Consequently, SIGIR could not conclusively determine the status of the PHC at acceptance and turnover to the Ministry of Health. Specifically, the project file lacked documentation to verify that previously identified deficiencies were corrected.

SIGIR's site visit determined that many of the original deficiencies identified in the prefinal inspection, such as poorly insulated duct work and plumbing issues, were not corrected.

Further, the site visit showed that medical equipment delivered to the PHC was either not connected or not operating. For example, the X-ray equipment was placed in the imaging room but was not hooked up. According to a GRD representative, the "X-Ray was installed but training and electrical connection could not be completed due to an inadequate power supply cable." Until a power supply cable is provided, the X-ray machine will continue to be inoperable. In addition, the dental chair was set in place but not installed. According to the dentist, the chair requires a power connection, water and drain lines, and air and vacuum lines. The GRC Al Asad Resident Office representatives stated: "the PVC [polyvinyl chloride] and Copper pipes for the dental room were missing so the dental chair was not completely installed." SIGIR noticed what appeared to be an empty junction box and conduit intended as a utility connection to the dental chair; however, no utilities were installed in the junction box or extended to the conduit. Minor construction will be required to extend the utilities to the conduit, under the floor, and to the chair. A dental X-ray machine was installed in the clinic; however, the administrator stated that until the installation of the dental chair was complete, the X-ray machine could not be used.

Additionally, there is no reverse osmosis unit for this PHC, which is required to provide clean water to the dentist's office. In addition, the PHC relies upon the national grid for its primary power; however, the national grid is unreliable and provides approximately five hours of electricity per day. Therefore, two generators were included to provide consistent and reliable power to operate the facility when power from the national grid is down. The larger generator has an automatic transfer switch, which turns on the generator once power is lost from the national grid. Any hesitation or delay in transferring power from the national grid to the generator leaves the facility without power, which could result in harm to patients undergoing procedures requiring electrical power. According to the PHC's administrator, the larger generator's automatic transfer

switch does not work. Due to time limitations at the site, SIGIR was unable to identify the cause of the automatic transfer switch's malfunction.

SIGIR identified other construction deficiencies, such as damaged heating, ventilation, and air conditioning units; plumbing problems in the bathrooms and the sewer system; and low quality door hardware.

In spite of the noted deficiencies, during the site visit, SIGIR observed doctors attending to patients and pharmacists dispensing medication.

GRD's Corrective Actions for the Sustainment of Health Projects. 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 PHC personnel on the use of the equipment. In addition, throughout the history of the Iraq Relief and Reconstruction Fund program, once the U.S. government turned over facilities to the Iraqi ministries, little preventative maintenance was performed for items such as generators. Consequently, the facilities and equipment were failing at a rate much faster than what would be expected if normal preventative maintenance was being performed. Considering the importance of PHCs to the local Iraqi population and the specialized equipment provided to each PHC, preventative maintenance and training are imperative for the overall operation and long term sustainment of each PHC.

As a result, GRD initiated a \$16.5 million contract¹ 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. The survey is used to develop a preventative maintenance program for each PHC. The preventative 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 most critical to the operation of each PHC.

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

A GRD representative stated that this PHC is on the list for prioritization for future installation of and training on medical equipment, specifically the reverse osmosis unit, dental chair, and X-ray machine.

Recommendations. SIGIR recommends that the Commanding General of the Gulf Region Division perform all installation of, and training on, the medical equipment currently at the Haditha PHC, according to its prioritization listing.

SIGIR recommends that the Director, Iraq Transition Assistance Office (ITAO), emphasize to the Iraqi Ministry of Health the critical importance of preventative maintenance and training to the Iraqis.

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¹ Funded through the Economic Support Fund.

Management Comments. GRD stated the report largely reflected the progress and condition of the project. However, GRD felt one paragraph of the report was misleading. In addition, GRD requested that SIGIR replace all report references to the "U.S. Army Corps of Engineers" or "USACE" with "GRD."

With regards to the recommendations, GRD concurred with the first recommendation and non-concurred with the second recommendation. GRD non-concurred with the second recommendation, which was directed to GRD in the draft of this report, noting that the Joint Campaign Plan, Annex B, Task 1.1.5 identifies the ITAO as the lead U.S. government organization to influence and work with the Government of Iraq to assume full ownership and responsibility for operation and maintenance of U.S. government funded projects.

Evaluation of Management Comments. GRD's project file contained numerous references to the U.S. Army Corps of Engineers or USACE. In keeping with GRD's request, except in cases of direct quotations from project file documentation, SIGIR replaced all references to the "U.S. Army Corps of Engineers" or "USACE" with "GRD."

With respect to GRD's comment that one paragraph of the report is misleading, GRD stated that deficiencies were corrected throughout the inspection process. SIGIR's stands by the report which states that several deficiencies identified by the Gulf Region Central Al Asad Resident Office were not corrected prior to turnover to the Ministry of Health. Specifically, the dental chair was not installed and/or connected. A GRD representative stated that the "dental chair was not completely installed." In addition, the reverse osmosis unit needed to provide clean water for medical or dental procedures was never delivered. Further, according to the PHC administrator, the heating, ventilation, and air condition (HVAC) units have not worked since the facility was turned over. Previous site inspections performed by the Gulf Region Central Al Asad Resident Office noted one of the HVAC units appeared to be damaged. However, the project file lacked any documentation to indicate whether the unit was tested prior to installation or during commissioning.

In view of the language of the Joint Campaign Plan, Annex B, Task 1.1.5, SIGIR agrees that ITAO is the lead U.S. government organization to influence and work with the Government of Iraq to assume full ownership and responsibility for operation and maintenance of U.S. government funded projects. Therefore, SIGIR redirected the recommendation to ITAO.

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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 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 Health Care 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 (CPA) 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 with U.S. appropriated Iraq Relief and Reconstruction Fund (IRRF) awarded to Parsons Delaware, Inc (Parsons).

Three specific TOs required Parsons to design and construct 150 primary healthcare centers (PHCs) throughout Iraq². However, the program to design and construct the 150 PHCs was riddled with poor performance, increased costs, and untimely completions. According to a 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 convenience³.

After terminating the Parsons PHC TOs, the U.S. government decided to use available funding and contract directly with local Iraqi contractors to complete the partially built PHCs. The Haditha PHC was one of the 121 PHCs Parsons had partially completed (prior to being terminated).

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² The three TOs were 4, 11, and 12.

³ Approximately \$186 million was spent on the PHC project.

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 PHC⁴. The medical equipment included X-Ray equipment, hematology analyzers, exam tables, patient beds, defibulators, electroencephalogram machines, ventilators, incubators, and other equipment; while the dental equipment included dental chairs, lights, cabinets, instruments, supplies, and other equipment. 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 Gulf Region Division (GRD) 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 for Delivery of Primary Health Clinics⁵ (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 portico is created by a cantilever 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 for public education.

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⁴ The total definitized cost of the equipment for the 150 PHCs plus a medical training academy was approximately \$70.4 million.
⁵ Primary Healthcare Centers are also referred to as *Primary Health Clinics*.



Figure 1. Illustration of a completed Type A PHC

Contract, Costs, and Payments

Gulf Region Central (GRC), on 16 July 2006, using IRRF funding, awarded Contract W917BG-06-C-0130, a firm-fixed-price-contract in the amount of \$528,000, to a local contractor⁶.

In addition to the work contracted for in the \$528,000 contract, the contract listed the following four options (and associated costs):

- Option 1 Medical equipment installation only. Install the government furnished equipment⁷. Installation shall be in accordance with manufacturer's recommendation so as not to void the warranty (\$25,000).
- Option 2 Make connection to primary power and back-up generator. Switch gear, generator, and transformer are government furnished equipment. Pad, wire, and other requirements to make connection usable and compliant with code are contractor's responsibility (\$38,000).
- Option 3 Pick-up generator, transformer, and switch gear at Abu Ghraib warehouse and deliver to project site (\$13,000).
- Option 4 Purchase and install furniture. All items will be of commercial grade for institutional use (\$51,000).

The total cost of the original contract and the four options was \$655,000. However, according to project file documentation, none of the options were exercised, which left the base contract at \$528,000.

The contract had one modification, P00001, which was awarded on 3 September 2007, in the amount of \$9,780. This modification required additional support columns beneath the portico in front of the building. The modification was to correct a "design error." The total contract cost, including modification, was \$537,780.

⁶ According to GRC Al Asad Resident Office representatives, the owner is currently in jail in Syria. ⁷ 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 Gharib warehouse, located in Baghdad, Iraq.

The contract required the contractor to complete the entire project within 120 calendar days from the notice to proceed. However, the contract modification P00001 extended the contract time by 90 days; the scheduled completion date was 4 June 2007.

Statement of Work

The Statement of Work (SOW) consisted of an assessment of existing conditions, minimum design, and completion of construction for the previously partially-built Haditha PHC. Specifically:

Assessment Requirements

- survey existing site conditions and update drawings
- document existing site conditions, including photographs
- identify and document any discrepancies with drawings
- review design drawings for conformance to Iraqi and international codes
- submit a complete report on findings

Design Requirements

- update drawings with changes from assessment
- complete and submit 100 % design drawings
- submit additional specifications to establish and monitor quality control
- submit a schedule of prices for each category of work

Construction & Demolition Requirements

- provide all material, labor, and equipment for the demolition of construction not compatible with approved design
- construct all civil, electrical, sanitary, mechanical, and other work in conformance with the approved design and specifications

The contractor was also required to coordinate the work with the Ministry of Health (MoH) during all phases of construction and to provide operations and maintenance training on all facilities and equipment.

Project Objective and Pre-Construction Description

The overall objective of the project was to complete the partially-constructed Type A Haditha PHC. This facility, when completed, will relieve the overburdened outpatient care workload currently being handled by other area hospitals. This PHC is expected to service approximately 150 patients daily.

From the beginning of the war through 2006, the city of Haditha was one of hottest spots in western Iraq in terms of insurgent activity. Located approximately 350 kilometers west of Baghdad, Haditha is a river-side community with an estimated population of 150,000.

The description of the facility (pre-construction) is based on information obtained from the contract, GRC Al Asad Resident Office personnel, and GRC Al Asad Resident Office documentation. According to the contract's SOW, Parsons had completed 40% of this facility.

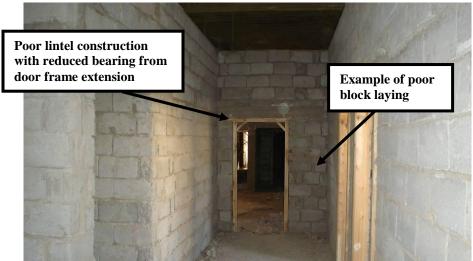
According to project file documentation, GRD did not know the condition of the facility when Parsons was terminated. Consequently, the new contract required the contractor to perform an assessment of the partially-constructed facility to determine the status and quality of the facility. The project file lacked the contractor's assessment of current conditions of the partially-completed Haditha PHC. Therefore, SIGIR reviewed project file photographs taken on 11 March 2006, which illustrate the condition of the partially-completed facility (as of the termination of Parsons). The March 2006 photographs confirm the partially constructed facility was approximately 40% complete. From the photographs, SIGIR determined the reinforced concrete structure and a small portion of the interior utilities had been constructed; while the concrete masonry unit (CMU) infill walls were constructed, but not finished. In addition, the contractor was constructing the sewer and water piping, electrical wiring, and duct work.

Site Photos 1-3 document the condition of the Haditha PHC when Parsons was terminated in March 2006.





Site Photos 1 and 2. Interior and exterior views of the state of construction in March 2006 (Courtesy of GRC)



Site Photo 3. View of interior work performed by Parsons (Courtesy of GRC)

Current Project Design and Specifications

The contract's SOW required the contractor to update Parson's original design drawings based upon changes identified in the assessment phase. In addition, the contractor was responsible for completing and submitting the 100% design drawings.

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)

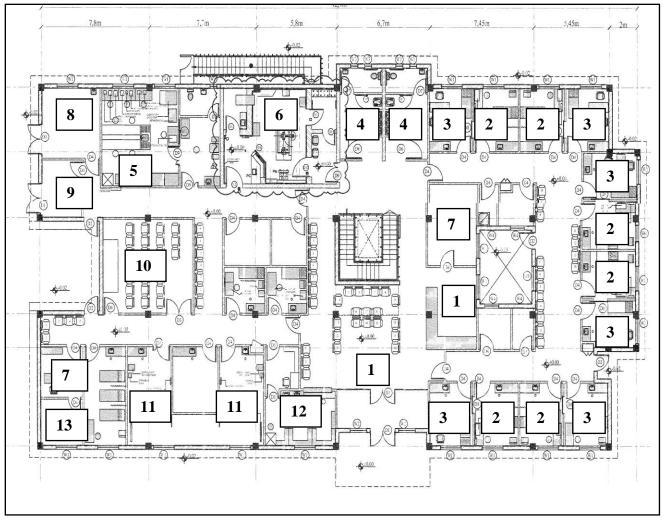


Figure 3. Interior view of the PHC, including the number and location of rooms

SIGIR previously reviewed Parson's design drawings while performing assessments of PHC work done while Parsons was still under contract⁸. SIGIR found Parson's design drawings and specifications to be complete and consistent with the contract's requirements.

The new contractor, prior to construction, submitted a site design to the GRC Al Asad Resident Office, which lacked specific details on types of materials, drainage, utilities, and security lighting (Figure 4).

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⁸ See SIGIR assessment report, PA-05-17, "Hai Al Iman Clinic, Hilla, Iraq," 7 March 2006, and SIGIR assessment 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.

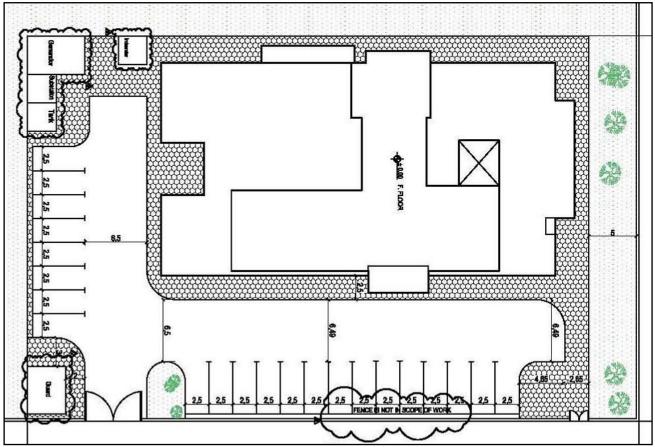


Figure 4. Site design drawing

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.

Further, the SOW required the contractor provide an operations and maintenance (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 contractor was also required to conduct O&M training appropriate to the facilities and equipment that were constructed or rehabilitated in the scope of this project. The contractor is required to arrange the training, which includes appropriate technicians from the city. A record of training is required to be submitted after completion.

In addition, the contractor must provide O&M support for all facilities and equipment installed, constructed, or rehabilitated. The O&M support must be provided during the construction, startup, and commissioning phases of the project, and continue for a period of 90 days following the issuance of the Letter of Project Completion.

The SOW required the contractor to provide detailed design and as-built drawings using Computer Aided Design (AutoCAD) software and in Portable Document Format (PDF). The as-built drawings were required to include details of location of work and existing site conditions. The contract is not complete until the as-built drawings are accepted by GRD.

The SOW also identified "General Requirements" that the contractor was responsible to follow. For example, under "Standards" the contractor's work must "meet the standards specified herein and shall be accomplished in conformance with approved and accepted standards of the industry; equipment manufacturers; all applicable installation local standards; and all applicable building and safety codes."

Site Progress During Construction

Throughout the construction project, the contractor provided a weekly construction log, which documented quality control (QC), including photographs and work activities performed. In addition, the GRC Al Asad Resident 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 MoH on 5 July 2008.

Site Photos 4-7 document various construction work activities at the PHC, including the laying of tile flooring, interior HVAC duct work, and electrical wiring (both adequate and inadequate).



Site Photo 4. Tile placement (Courtesy of GRC)



Site Photo 5. Interior HVAC ductwork (Courtesy of GRC)



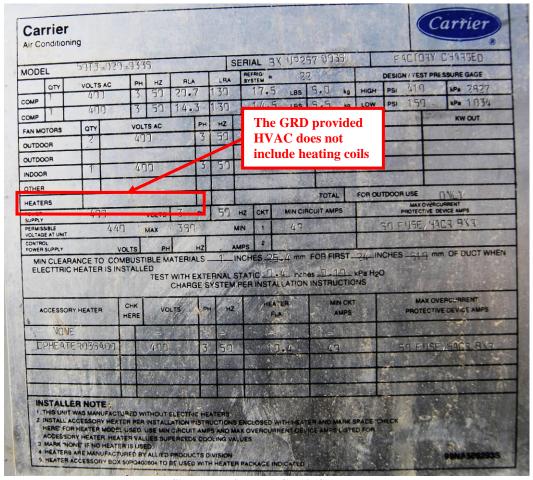


Site Photo 6. Example of poor electrical work (Courtesy of GRC)

Site Photo 7. Main distribution panel (adequate electrical work) (Courtesy of GRC)

As part of the QA process, GRC Al Asad Resident Office representatives randomly visited the project site to perform inspections. The multiple inspections identified significant construction deficiencies. For example, in January 2008, after the project was almost seven months past due, the deficiency list included the following:

- illegal electrical connections
- improperly placed drains throughout the PHC
- water line improperly buried
- building energized by illegal and unsafe hook up method to the local power grid before doing the proper tests on conductors
- generator fuel tank piping poorly welded, the system lacks a course fuel filter, and the tank has been fitted with a fill pipe in the wrong location
- HVAC units shipped without proper packing (no plastic covers), which resulted in damage before installation
- fiberglass duct installation wrapped by steel wire instead of being taped (resulting in an ineffective insulation seal)
- roof package HVAC units, supplied by GRD, lacked heating coils and thermostats (Site Photo 8)



Site Photo 8. HVAC unit faceplate

A follow-up inspection on 12 February 2008 documented a majority of the deficiencies identified in previous inspections were not corrected. In addition, this inspection focused on the facility's HVAC units, which identified the following deficiencies:

- rooftop units are improperly mounted
- duct work is either not installed or installed incorrectly
- broken or low quality louvers used
- missing or low quality exhaust fans
- missing dampers
- insulation not installed

Additional deficiencies found were sinks not plumbed correctly and the water system pump installed incorrectly.

Condition of Haditha PHC at Turnover

Final Inspection

According to GRD's PHC SOP, the final inspection will be conducted after all punch list items generated during the pre-final inspection are corrected and the medical equipment and furnishings are installed. This is to be done before or on the date the facility is to be turned over.

According to GRC documentation, on 5 July 2008, the U.S. government and MoH "acknowledged their acceptance of the implemented construction work" of the Haditha PHC. This acceptance was "based on the final inspection performed by the U.S. Army Corps of Engineers," and the "parties agree the building in its present state is functional, operational and ready for Beneficial Occupancy by the Ministry of Health." GRD acceptance letter indicated a final inspection was conducted on 19 June 2008, which identified "no new deficiencies IAW [in accordance with] plans, specifications, SOW and USACE Quality Control Engineer."

Project file documentation lacked the final inspection report. Limited photographs were taken on the day of the final inspection, which primarily focused on one or two interior rooms within the PHC. The final inspection photographs did not address the significant deficiencies identified in previous inspection visits. In addition, project file documentation lacked any documentation to support that the major pieces of equipment, such as generators and transformers, were tested during the final inspection. Consequently, SIGIR could not conclusively determine the status of the PHC at acceptance and turnover to the MoH. Specifically, the project file lacked documentation to verify that previously identified deficiencies were corrected.

The medical equipment was delivered to the PHC. One piece of the medical equipment was the reverse osmosis (RO) unit, which provides clean water to be fed directly to the new dental chair. According to GRC documentation, due to a shortage of RO units, GRD was unable to provide one. GRC Al Asad Resident Office inspections conducted subsequent to the delivery of the medical equipment did not address the condition of the medical equipment, which sat in a warehouse at Abu Ghraib for almost two years prior to being delivered to the Haditha PHC in February 2008.

The final inspection occurred almost two years after the award of this contract (19 June 2008), which was originally required to be completed in 180 days (4 June 2007).

Site Assessment

On 4 November 2008, SIGIR performed an on-site assessment of the Haditha PHC project. A GRC Al Asad Resident Office representative and the PHC's administrator (who was also a doctor) accompanied SIGIR during the site visit. Due to security concerns, the time allotted for the site visit was approximately 45 minutes. In addition, 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 attending to patients and pharmacists dispensing medication. According to the administrator, this PHC has been operating since July 2008 and serves approximately 150-200 patients daily. Currently, the PHC

employs three doctors, one dentist, and 16 assistants. This PHC acts as a primary care facility, with an in-house pharmacy, but does not provide surgery, X-ray, or dental services. The more serious cases (i.e. surgeries) are referred to a nearby local hospital. X-ray and dental services are not currently being provided because all required equipment is not installed.

Status of Medical Equipment

According to GRD's PHC SOP, "Generators and Reverse Osmosis (RO) water purification units need to be running for commissioning of the medical equipment."

Generators

The Haditha PHC receives power from the national grid; however, the national grid is unreliable and provides approximately five hours of electricity per day. The remaining hours of operation are supplemented using one of the two generators located on site (Site Photo 9). In addition, a fuel storage tank was provided for the two generators (Site Photo 10). The larger generator (one megawatt) is used for primary power; while the smaller generator (500 kilovolt) is for emergency backup. Since the Haditha PHC is connected to national grid power, an automatic transfer switch is critical to instantly transfer to generator power once electricity from the national grid is lost. Any hesitation or delay in transferring power from the national grid to a generator means the facility will not have power, which could result in harm to patients undergoing procedures requiring power.





Site Photo 9. Backup generators

Site Photo 10. Fuel tank

During the site visit, power from the national grid was unavailable and the facility was operating via the primary generator. However, according to the administrator, the generator's automatic transfer switch did not work, which required PHC staff to manually start the generator. Due to time limitations on site, SIGIR could not identify the cause of the automatic transfer switch's malfunction. The end result is now when power is lost from the national grid, a PHC representative has to manually switch on the generator.

In addition, the administrator stated the generators were not functioning properly. According to the administrator, the primary generator was not adequately charging its startup batteries. The batteries would last approximately 10 days before they were completely discharged and would not start the generator. Due to time limitations on site, SIGIR could not determine if the problem was the batteries or the charging system.

Reverse Osmosis Unit

As mentioned earlier in this report, a RO unit was never delivered to the Haditha PHC. Consequently, the PHC does not have clean water to use for medical or dental procedures.

Dental Equipment

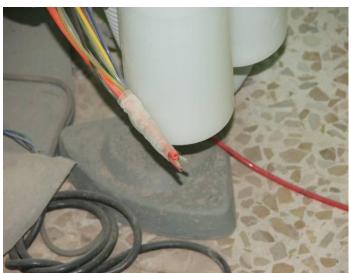
According to GRD's SOP, "Contractors will install/set up medical equipment and commission. USACE representatives shall ensure that commissioning is performed."

During the site visit, SIGIR observed that the dental equipment, specifically the dental chair, was not installed and/or connected (Site Photo 11). According to the dentist, the chair requires connection to power, water and drain lines, and air and vacuum lines (Site Photo 12). A GRD representative stated the "PVC and Copper pipes for the dental room were missing so the dental chair was not completely installed." SIGIR noticed what appeared to be an empty junction box and conduit intended as a utility connection to the dental chair; however, it appeared that no utilities were installed in the junction box or extended to the conduit (Site Photo 13). Minor construction will be required to extend the utilities to the conduit, under the floor, and to the chair. A dental X-ray machine was installed in the clinic (Site Photo 14); however, the administrator stated that until the installation of the dental chair was complete, the X-ray machine could not be used.

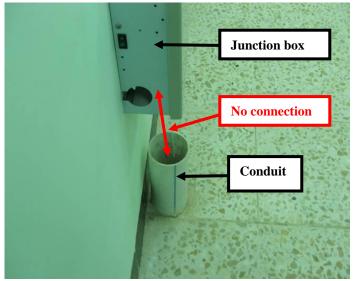
The administrator stated the facility has a full time dentist; however, without the dental chair being installed and connected to purified water and drainage, there is little benefit the dentist can provide outside of very minor routine dental care.



Site Photo 11. Uninstalled dental chair



Site Photo 12. Disconnected utilities





Site Photo 13. Missing utility connection

Site Photo 14. Dental X-ray machine

X-Ray Imaging System

During the site visit, SIGIR observed the X-ray equipment was placed in the imaging room but was not connected. According to GRD representatives, the X-ray machine was installed but training could not be completed due to an inadequate power supply cable. Until a power supply cable is provided, the X-ray machine will continue to be inoperable.

In addition, the administrator stated the darkroom still needed to be finished with dark/low reflectivity paint. The designs indicate that the X-ray room walls, common darkroom and wall, and observation area wall were to be lined with lead sheeting. According to the administrator, the darkroom wall was not lined.





Site Photo 15 and 16. Due to inadequate power supply cable, the x-ray equipment is not used

Laboratory

The medical laboratory appeared to be functioning. The laboratory was clean and appeared well maintained. During the site visit, SIGIR observed testing being performed (Site Photo 17). The equipment not in use was covered and appeared well organized (Site Photo 18).





Site Photo 17. Performing lab tests

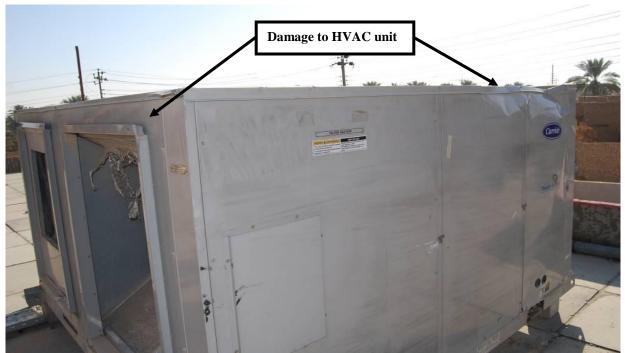
Site Photo 18. Laboratory equipment

General Observations

HVAC Units

According to the administrator, the HVAC units do not work. In fact, the HVAC units have not worked since the facility was turned over to the MoH. Due to the cooler ambient temperatures at the time of the site visit, and the limited time on site, SIGIR was unable to verify that the HVAC units were not working. One of the HVAC units appeared to be severely damaged (Site Photo 19). This damage was previously identified in a GRC Al Asad Resident Office site inspection; however, the project file lacked any documentation to indicate whether the unit was tested prior to installation. SIGIR also noted the remaining units had some minor damage. SIGIR observed an automatic damper was installed in the rooftop duct work with no shielding (Site Photo 20) and poorly installed duct insulation (Site Photo 21).

Further, GRD provided HVAC units that were installed by the contractor did not have heating coils and thermostats; consequently, the unit will not be able to provide heat during the winter months. Even though the site visit occurred in early November, SIGIR noticed cold temperatures throughout the PHC.



Ste Photo 19. Damaged HVAC unit



Site Photo 20. Unshielded damper



Site Photo 21. Duct insulation

Bathrooms

During the site visit, SIGIR inspected a bathroom and found the lavatory was leaking (Site Photo 22). In addition, one side of the building's sewer system appeared to be blocked. The blocked sewer system made several bathrooms unusable (Site Photo 23). According to the administrator, plumbing issues were present at the time the facility was turned over to the MoH.





Site Photo 22. Leaking lavatory

Site Photo 23. Leaking toilet

Door Hardware

SIGIR noticed the quality of the window and door hardware was poor. Several of the window latches did not work and were not adequate to prevent unauthorized entry. For example, the administrator pointed out one specific door that could not be adequately secured (Site Photo 24).



Site Photo 24. Low quality door latch

Observations of the PHC Administrator

During the site visit, the administrator stated that the PHC was a good facility, and if properly staffed and equipped, the facility could serve up to 300 patients daily. However, the administrator stated that additional doctors, nurses, and dentists needed to maximize the facility's potential could not be hired until the medical equipment is installed and operational.

The administrator also pointed out several positive issues related to the operation of the facility, such as the MoH providing the fuel for the generator and the medicines for the pharmacy.

Conclusions

The contract to complete the Haditha PHC required the contractor to perform an assessment of the existing conditions of the partially built PHC to determine the necessity of additional design or re-work. The GRC Al Asad Resident Office could not locate the contractor's assessment report; therefore, SIGIR could not determine the quality of Parsons' partially built PHC.

During construction, the GRC Al Asad Resident Office performed routine site inspections of the facility to determine the status and quality of work. Throughout these inspections, the GRC Al Asad Resident Office identified significant construction deficiencies, such as substandard electrical connections, improperly placed drains throughout the PHC, poorly insulated duct work, and plumbing issues. The GRC Al Asad Resident Office made several follow-up site visits, which found that several of the previously identified deficiencies were still outstanding, unresolved, or incomplete, and also identified additional deficiencies.

GRD, in order to properly complete and turnover the partially constructed PHCs by Parsons nationwide issued a standard operating procedure to "outline as clearly as possible the key items and responsible parties in delivering PHCs to the Iraqi Ministry of Health." According to the standard operating procedure, PHCs will be provided with modern medical equipment, office equipment, furniture, and three months of medical equipment and consumables. Specifically,

"GRD [Gulf Region Division] 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."

According to GRC Al Asad Resident Office documentation, the PHC equipment was delivered to the site in February 2008. On 5 July 2008, the U.S. government and the Ministry of Health "acknowledged their acceptance of the implemented construction work" of the Haditha PHC. This acceptance was "based on the final inspection performed by the U.S. Army Corps of Engineers," and the "parties agree the building in its present state is functional, operational and ready for Beneficial Occupancy by the Ministry of Health." GRD's acceptance letter indicated a final inspection was conducted on 19 June 2008, which identified "no new deficiencies IAW [in accordance with] plans, specifications, SOW [Statement of Work] and USACE Quality Control Engineer."

The project file documentation lacked the final inspection report. The limited photographs taken on the day of the final inspection primarily focused on one or two interior rooms within the PHC. The final inspection photographs do not address the significant deficiencies identified in previous inspection visits. In addition, project file documentation lacked any documentation to support that the major pieces of equipment, such as generators and transformers, were tested during the final inspection. Consequently, SIGIR could not conclusively determine the status of the PHC at acceptance and turnover to the Ministry of Health. Specifically, the project file lacked documentation to verify that previously identified deficiencies were corrected.

SIGIR's site visit determined that many of the original deficiencies identified in the prefinal inspection, such as poorly insulated duct work and plumbing issues, were not corrected.

Further, the site visit showed that medical equipment delivered to the PHC was either not connected or not operating. For example, the X-ray equipment was placed in the imaging room but was not connected. According to a GRD representative the "X-Ray was installed but training and electrical connection could not be completed due to an inadequate power supply cable." Until a power supply cable is provided, the X-ray machine will continue to be inoperable. In addition, the dental chair was set in place but not installed. According to the dentist, the chair requires a power connection, water and drain lines, and air and vacuum lines. GRC Al Asad Resident Office representatives stated: "the PVC [polyvinyl chloride] and Copper pipes for the dental room were missing so the dental chair was not completely installed." SIGIR noticed what appeared to be an empty junction box and conduit intended as a utility connection to the dental chair; however, no utilities were installed in the junction box or extended to the conduit. Minor construction will be required to extend the utilities to the conduit, under the floor, and to the chair. A dental X-ray machine was installed in the clinic; however, the administrator stated that until the installation of the dental chair was complete, the X-ray machine could not be used.

Additionally, there is no reverse osmosis unit for this PHC, which is required to provide clean water to the dentist's office. In addition, the PHC relies upon the national grid for its primary power; however, the national grid is unreliable and provides approximately five hours of electricity per day. Therefore, two generators were included to provide consistent and reliable power to operate the facility when power from the national grid is down. The larger generator has an automatic transfer switch, which turns on the generator once power is lost from the national grid. Any hesitation or delay in transferring power from the national grid to the generator leaves the facility without power, which could result in harm to patients undergoing procedures requiring electrical power. According to the PHC's administrator, the larger generator's automatic transfer switch does not work. Due to time limitations at the site, SIGIR was unable to identify the cause of the automatic transfer switch's malfunction.

SIGIR identified other construction deficiencies, such as damaged heating, ventilation, and air conditioning units; plumbing problems in the bathrooms and the sewer system; and low quality door hardware.

In spite of the noted deficiencies, during the site visit, SIGIR observed doctors attending to patients and pharmacists dispensing medication.

GRD's Corrective Actions for the Sustainment of Health Projects

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 PHC personnel on the use of the equipment. In addition, throughout the history of the Iraq Relief and Reconstruction Fund program, once the U.S. government turned over facilities to the Iraqi ministries, little preventative maintenance was performed for items such as generators. Consequently, the facilities and equipment were failing at a rate much faster than what would be expected if normal preventative maintenance was being performed. Considering the importance of PHCs to the local Iraqi population and the specialized equipment provided to each PHC, preventative maintenance and training are imperative for the overall operation and long term sustainment of each PHC.

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 preventative maintenance or into repair/trouble shooting dockets for the re-commissioning of individual pieces of equipment. The preventative 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 most critical to the operation of each PHC.

GRD will contract with multiple Iraqi companies throughout the country to perform the preventative maintenance and training. In addition, the contract provides for coaching and mentoring Iraqi companies in the area of operations and maintenance, which 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, specifically the reverse osmosis unit, dental chair, and X-ray machine.

Recommendations

SIGIR recommends that the Commanding General of the Gulf Region Division (GRD) perform all installation of, and training on, the medical equipment currently at the Haditha PHC, according to its prioritization listing.

SIGIR recommends that the Director, Iraq Transition Assistance Office (ITAO), emphasize to the Iraqi Ministry of Health the critical importance of preventative maintenance and training to the Iraqis.

Management Comments

GRD stated the report largely reflected the progress and condition of the project. However, GRD felt one paragraph of the report was misleading. In addition, GRD requested that SIGIR replace all report references to the "U.S. Army Corps of Engineers" or "USACE" with "GRD."

With regards to the recommendations, GRD concurred with the first recommendation and non-concurred with the second recommendation. GRD non-concurred with the second recommendation, noting that the Joint Campaign Plan, Annex B, Task 1.1.5 identifies the ITAO as the lead U.S. government organization to influence and work with the Government of Iraq to assume full ownership and responsibility for operation and maintenance of U.S. government funded projects.

Evaluation of Management Comments

GRD's project file contained numerous references to the U.S. Army Corps of Engineers or USACE. In keeping with GRD's request, except in cases of direct quotations from project file documentation, SIGIR replaced all references to the "U.S. Army Corps of Engineers" or "USACE" with "GRD."

With respect to GRD's comment that one paragraph of the report is misleading, GRD stated that deficiencies were corrected throughout the inspection process. SIGIR's stands by the report which states that several deficiencies identified by the Gulf Region Central Al Asad Resident Office were not corrected prior to turnover to the Ministry of Health. Specifically, the dental chair was not installed and/or connected. A GRD representative stated that the "dental chair was not completely installed." In addition, the reverse osmosis unit needed to provide clean water for medical or dental procedures was never delivered. Further, according to the PHC administrator, the heating, ventilation, and air condition (HVAC) units have not worked since the facility was turned over. Previous site inspections performed by the Gulf Region Central Al Asad Resident Office noted one of the HVAC units appeared to be damaged. However, the project file lacked any documentation to indicate whether the unit was tested prior to installation or during commissioning.

In view of the language of the Joint Campaign Plan, Annex B, Task 1.1.5, SIGIR agrees that ITAO is the lead U.S. government organization to influence and work with the Government of Iraq to assume full ownership and responsibility for operation and maintenance of U.S. government funded projects. Therefore, SIGIR redirected the recommendation to ITAO.

Appendix A. Scope and Methodology

SIGIR performed this project assessment from March through December 2008 in accordance with the Quality Standards for Inspections issued by the Council of the Inspectors General on Integrity and Efficiency. The assessment team comprised two engineers/inspectors and one auditor/inspector.

In performing this Project Assessment SIGIR:

- Reviewed contract documentation to include items such as: contract, bill of
 quantities, scope of work, modifications, quality control and quality assurance
 reports, and project closeout documentation;
- Reviewed the design package (plans) and photographs documenting construction progress;
- Interviewed the U.S. Army Corps of Engineers Gulf Region Central personnel; and
- Conducted an on-site assessment and documented results at the Haditha Primary Healthcare Center project, in Haditha, Iraq.

Scope Limitation. Due to security concerns, SIGIR performed an expedited assessment. The time allotted for the primary healthcare center was approximately 45 minutes; therefore, a complete review of all work completed was not possible.

Appendix B. Acronyms

CPA Coalition Provisional Authority
GRC Gulf Region Central District

GRD Gulf Region Division

HVAC Heating, Ventilation, and Air Conditioning

IRRF Iraq Relief and Reconstruction Fund

MoH Ministry of Health

O&M Operations and Maintenance PHC Primary Healthcare Center

PVC Polyvinyl Chloride QA Quality Assurance RO Reverse Osmosis

SIGIR Special Inspector General for Iraq Reconstruction

SOW Statement of Work

SOP Standard Operating Procedure

TO Task Order

USACE United States Army Corps of Engineers

Appendix C. GRD Comments on the Draft Report



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

CEGRD-CG 8 January 2008

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

SUBJECT: Draft SIGIR Audit Report - SIGIR Draft Report PA-08-134 Haditha Primary Health Care Center, (SIGIR PA-08-134)

- 1. The Gulf Region Division reviewed the subject draft report. The report largely reflects the progress and condition of the project; however, some portions of the teport are misleading. GRD provides additional comments on the report recommendations and content 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.

Encl as Michael R. Eyre MICHAEL R. BYRE Major General, USA Commanding

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

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:

Kevin O'Connor

Shawn A. Sassaman, P.E.

Todd Criswell, P.E.