

BAB SHAMS POLICE STATION  
MOSUL, IRAQ

SUSTAINMENT ASSESSMENT



**SIGIR PA-06-091**  
**APRIL 25, 2007**



## SPECIAL INSPECTOR GENERAL FOR IRAQ RECONSTRUCTION

April 25, 2007

MEMORANDUM FOR DIRECTOR, IRAQ RECONSTRUCTION MANAGEMENT  
OFFICE  
COMMANDING GENERAL, MULTI-NATIONAL  
SECURITY TRANSITION COMMAND-IRAQ  
COMMANDING GENERAL, GULF REGION DIVISION,  
U.S. ARMY CORPS OF ENGINEERS

SUBJECT: Report on Bab Shams Police Station Sustainment, Mosul, Iraq  
(Report Number SIGIR PA-06-091)

The Office of the Special Inspector General for Iraq Reconstruction is conducting a series of assessments to assess the current condition of completed projects subsequent to their transition to the Government of Iraq to determine whether the projects are likely to remain operational.

We are providing this report for your information and use. It addresses construction work performed on the Bab Shams Police Station in Mosul, Iraq, to determine if the project is likely to remain operational after its transition to the Government of Iraq. This assessment was made to provide you and other interested parties with real-time information on relief and reconstruction projects in order to enable appropriate action to be taken, if warranted.

The comments received from the Commanding General, Multi-National Security Transition Command-Iraq in response to a draft of this report addressed the recommendations, and the actions taken and planned should address the issues we identified. The comments received from the Commanding General, United States Army Corps of Engineers in response to a draft of this report did not concur with our recommendations and we will work with the Gulf Region Division to reach a mutually satisfactory solution.

We want to express our thanks to United States Army Corps of Engineers officials for their help with billeting and local travel while at Mosul. With their assistance, we were able to secure U.S. Army assets to provide transportation and security while on site.

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

Stuart W. Bowen, Jr.  
Inspector General

# Special Inspector General for Iraq Reconstruction

SIGIR-PA-06-091

April 25, 2007

## Bab Shams Police Station Renovation Mosul, Iraq

### Synopsis

**Introduction.** This project assessment was initiated as part of our continuing assessments of selected Multi-National Security Transition Command - Iraq reconstruction activities. The overall objective was to determine whether projects are operating at the capacity stated in the original contract or task order objective. To accomplish this, we determined if the project was at full capability or capacity when it was accepted by the United States Government, when it was transferred to Iraqi operators, and when observed by Special Inspector General for Iraq Reconstruction inspectors. We conducted this limited scope assessment in accordance with the Quality Standards for Inspections issued by the President's Council on Integrity and Efficiency. The assessment team included an engineer/inspector and an auditor/inspector.

**Project Objective.** According to the contract, the objective of the renovation project was to repair and reconstruct the Bab Shams' Police Station Facility located in Mosul, Iraq. The contract's Statement of Work included specific requirements and stated that work should adhere to International or Iraqi Code as specified.

**Project Assessment Objective.** The objective of this project assessment was to provide real-time relief and reconstruction project information to interested parties to enable appropriate action, when warranted. Specifically, we determined whether the project was operating at the capacity stated in the original contract. To accomplish the objective, we determined if the project was at full capability or capacity when accepted by the United States Government, when transferred to Iraqi operators, and when observed by Special Inspector General for Iraq Reconstruction inspectors on 28 January 2007. In addition, we determined whether sustainability for full capacity operations was adequately planned and likely to continue.

### Conclusions.

1. Most key construction observed appeared to meet Statement of Work requirements and the facility appeared to be able to operate at full capacity when observed by Special Inspector General for Iraq Reconstruction inspectors on 28 January 2007. However, some work performed by the contractor did not meet Statement of Work requirements. Specifically:
  - The contract specifications were not met regarding the waste water culvert/pipeline. The contract required 36-inch concrete pipe, or an approved alternative method, to convey waste water from outside the police station around the perimeter of the station, rather than through the station's boundaries, was not constructed. Instead, a crude cap or cover made of poor quality concrete was constructed over a portion of the existing open culvert used to convey waste water through the station's boundaries. The concrete was not uniformly mixed, was cast too thin, and was cast without rebar or wire to improve tensile strength. In addition, the concrete was cast in such a manner that there was no concrete on concrete contact between the new concrete cap and the existing concrete side wall of the open culvert.

- Razor wire around the perimeter was not properly secured to the top of the station's new perimeter security wall. Rather, it was held in place with unevenly spaced sand bags. When the bags fell off the wall, the razor wire, which is necessary for force protection, fell off as well. Additionally, the razor wire was placed in such a manner that it did not always have contact with the top of the wall.

These conditions occurred because quality control and quality assurance activities and design submittal and approval processes were not as effective as they should have been during construction and before the final payment was made. As a result, renovation improvements linked to force protection (safety and health) likely were not as effective as they could have been.

2. If the equipment and facility are not properly used and maintained, operability and sustainability of some of the improvements to the facility will not be realized over the long term. For example, a generator installation that appeared to meet Statement of Work requirements was not operational at the time of the site visit. Local Iraqi Police personnel stated that various electrical control components "*did not work*" and no one knew how to operate or fix the generator. At the time of the Special Inspector General for Iraq Reconstruction site visit the automatic transfer switch and control panel door of the generator system was wide open and there was evidence of tampering. In addition, Special Inspector General for Iraq Reconstruction inspectors observed that the generator's oil level was low and that the oil was dirty and gritty to the touch and that the fuel line had been removed between the fuel tank and engine. For all practical purposes, the generator system appeared abandoned.

The inspectors also observed numerous instances of tampering with the electrical system and components throughout the facility. Switches, plug-ins, and exterior lighting were removed, "jury-rigged" wiring was tapped into several existing circuits, and there were numerous instances of exposed wiring and energized electrical system components.

These conditions most likely occurred because Bab Shams' Police Station managers did not effectively implement policies and procedures to stand-up a proper operations and maintenance program to take care of equipment and the facilities over the long term. In addition, managers did not effectively implement procedures to ensure that the electrical system and components were not tampered with or removed.

As a result, the new generator system, which cost \$79,000, is not being used and the repaired and upgraded electrical system and components have been degraded.

**Recommendations.** The United States Army Corps of Engineers/Iraq Reconstruction Management Office should survey the site's current condition to develop cost effective plans to (1) route waste water around the perimeter of the police station and (2) securely attach wire to the security perimeter wall.

The Multi-National Security Transition Command - Iraq /Iraq Reconstruction Management Office should coordinate with the appropriate Iraqi Ministry officials and develop plans to:

- Make the generator operational.
- Reinstall lighting, switches, and other electrical components that have been removed or damaged.
- Implement an effective equipment and facility operations and maintenance program staffed with trained personnel.

- Implement supervisory procedures to ensure that equipment and facilities are not misused and electrical components are not tampered with or removed.

**Management Comments.** Special Inspector General for Iraq Reconstruction requested and received management comments from the Commanding General, Multi National Forces Security Transition Command–Iraq and the Commanding General, United States Army Corps of Engineers–Gulf Region Division.

The Commanding General, Multi-National Forces Security Transition Command–Iraq generally concurred with our recommendations noting that they are tracking the construction, turnover of responsibility, warranty, and assumption of operations and maintenance responsibility by the two security Ministries. They are liaising with the Provincial Directorates of Police and the Minister of Interior regarding maintenance procedures and stewardship of their facilities. Within the past six months, they convinced both the Minister of Defense and the Minister of Interior to appoint Directors of Infrastructure Management in each ministry. They will engage these directors to form an Iraqi project to repair the generator referenced in this report and to correct the damaged electrical components.

The Commanding General, United States Army Corps of Engineers–Gulf Region Division did not concur with Special Inspector General for Iraq Reconstruction’s recommendation to survey the site’s current condition and develop cost effective plans to route waste water around the perimeter of the police station and securely attach razor wire to the perimeter wall. The General noted that the Chief of Police signed the final acceptance agreeing that work was in accordance with contract requirements, renovations were complete, and no other work was to be performed unless noted. He added that additional funds and a new contract will be required for any changes to the police station. However, if additional funds were made available then the Gulf Region Division would take one or more of five proposed actions to remedy the problems. The full text of the United States Army Corps of Engineers’ comments is included as Appendix E of this report.

**SIGIR’s Evaluation of Management Comments.** The comments from the Commanding General, Multi National Forces Security Transition Command–Iraq are fully responsive to Special Inspector General for Iraq Reconstruction’s recommendations and demonstrate a responsible effort to support an Iraqi managed program to sustain transitioned projects.

The United States Army Corps of Engineers was assigned and compensated for performing quality assurance on the site construction. They were responsible for insuring the contractor met the design and quality standards specified in the contract. The United States Army Corps of Engineers did not adequately discharge their responsibility when they approved sewage renovation work that did not meet design requirements specified in the contract and when they accepted inferior workmanship associated with installing razor wire on the perimeter walls. Without corrective action, the facility will suffer exposure to health hazards and security breaches. Unfortunately, there is no apparent recourse available to the United States Government other than funding additional work to repair these deficiencies.

# Table of Contents

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<b>Synopsis</b>	i
<b>Introduction</b>	
Objective of the Project Assessment	1
Pre-Site Assessment Background	1
Contract, Costs, and Payments	1
Project Objective and Pre-Construction Description of the Facility	1
Statement of Work and Requirements	7
<b>During Construction Progress</b>	8
<b>Site Assessment</b>	
General Observations	17
Sewer Water Conveyance System	18
Full Perimeter Security Wall	24
Inoperable Generator	25
Post Renovation Tampering	27
<b>Conclusions</b>	31
<b>Recommendations</b>	32
<b>Management Comments</b>	32
<b>Evaluation of Management Comments</b>	33
<b>Appendixes</b>	
A. Scope and Methodology	34
B. Acronyms	35
C. Report Distribution	36
D. Project Assessment Team Members	38
E. Management Comments USACE-GRD	39

# **Introduction**

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## **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, when warranted. Specifically, we determined if the completed project was operating at the capacity stated in the original contract or task order objective. To accomplish this, we determined if the project was at full capability or capacity when accepted by the U.S. Government, when transferred to Iraqi operators, and when observed by Special Inspector General for Iraq Reconstruction (SIGIR) inspectors on 28 January 2007. In addition, we determined if sustainability for full capacity operations was adequately planned and likely to continue.

## **Pre-Site Assessment Background**

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

Contract W917BE-05-P-0030, effective 18 May 2005, was awarded to an Iraqi contractor to perform work in accordance with the Statement of Work (SOW) addressed later in this report. The contract was a Firm Fixed Price (FFP) contract awarded in response to the contractor's 16 April 2005 bid amount of \$294,900. However, Contract Modification P00001, dated 24 June 2005, increased the contract's price by \$58,500. As a result, the contract's total price was increased to \$353,400. Accordingly, the contractor was paid in full via a final payment authorized 1 November 2005. The contract and modification were issued and administrated by the USACE Gulf Region Division-Northern District (GRN). Based on information provided by the USACE, the project started on 22 May 2005 and was completed on 31 October 2005. By reference, Federal Acquisition Regulations (FAR) 52.246-21, a Warranty of Construction clause was incorporated into the contract and the standard one year from date of acceptance by the government construction warranty was applicable. However, the coverage period had expired by the time SIGIR conducted its assessment.

### **Project Objective and Pre-Construction Description of the Facility**

The objective of this project was to repair and reconstruct the Bab Shams' Police Station Facility located in Mosul, Iraq. The contract's SOW included specific requirements and stated that work should adhere to International or Iraqi Code as specified. The facility consisted of a single-story masonry block structure located in the eastern area of Mosul. The facility was occupied by Iraqi Police (IP) personnel during the period of performance. Unlike new construction, renovation projects have unique and inherent work process difficulties. For example, existing facilities and personnel required to be in the area might impede construction work crews or equipment. In addition, renovation projects sometimes do not appear to be as complete as new projects because renovation construction is beside or in addition to existing facilities which have been exempted from renovation. Based on SIGIR's review of the SOW and USACE pre-construction photos<sup>1</sup>, it appeared that the renovation project was reasonably well planned and focused on high priority needs. Needs addressed included upgrades to the electrical systems and installation of a new

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<sup>1</sup> Although undated, all USACE pre-construction photos were attached to the Purchase Request dated 16 April 2005.

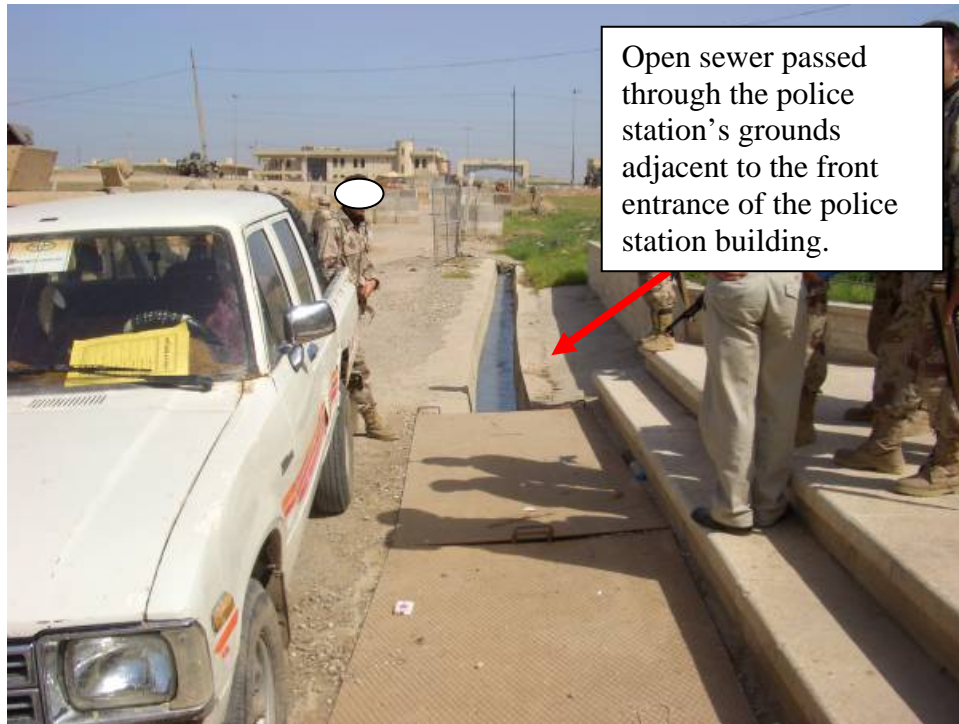
back-up generator system, construction of a full perimeter solid block security wall, construction of new guard towers and rooftop fighting positions, installation of exterior lighting, complete exterior and interior painting, and construction of a 36-inch concrete pipe to convey sewer water around the perimeter of the station.

As an overview of general requirements, USACE Pre-Construction Photo 1 documented several pre-existing conditions that needed to be addressed in the renovation project. For example, an open sewer, shown in USACE Pre-Construction Photo 2, passed near the front of the station; the building and grounds were not protected by a solid material security wall, building perimeter security lighting was inadequate, exterior paint was severely weathered, and rooftop fighting positions were inadequate. The subsequent status of all of the aforementioned pre-existing conditions are described and/or shown more clearly via photos taken by USACE officials during construction or by SIGIR inspectors while on site on 28 January 2007. Significant issues relating to the (1) open sewer, (2) electrical system improvements, and (3) construction of the security wall are discussed in detail later in this report.



**USACE Pre-Construction Photo 1.**





**USACE Pre-Construction Photo 2.**

Prior to construction, the facility was minimally protected by a chain link fence and gate system that offered virtually no cover or concealment if the facility came under attack<sup>2</sup>. It appeared the fence and gate could be easily breached by vehicles or personnel (USACE Pre-Construction Photo 3). In addition, encroachment avenues for vehicles and personnel were accessible to all four sides of the facility and grounds. To correct these critical pre-existing deficiencies, the SOW included requirements to build a solid block security wall with a heavy metal gate.

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<sup>2</sup> The facility was attacked and over-run 10 November 2004.



**USACE Pre-Construction Photo 3. Without a solid block wall, police station was vulnerable to direct fire and tactical observation from nearby buildings and open fields.**

Pre-existing rooftop fighting positions and guard houses were constructed in a crude and non-uniform manner. Some positions did not have overhead cover and were nothing more than a makeshift berm made of sand bags (USACE Pre-Construction Photo 5). Another corner position included overhead protection, but fields of fire were very likely too narrow to provide sufficient defensive coverage because field of vision was constrained. Accordingly, the contract's SOW required the contractor to build a suitable fighting position/guard house at each corner of the police station building.



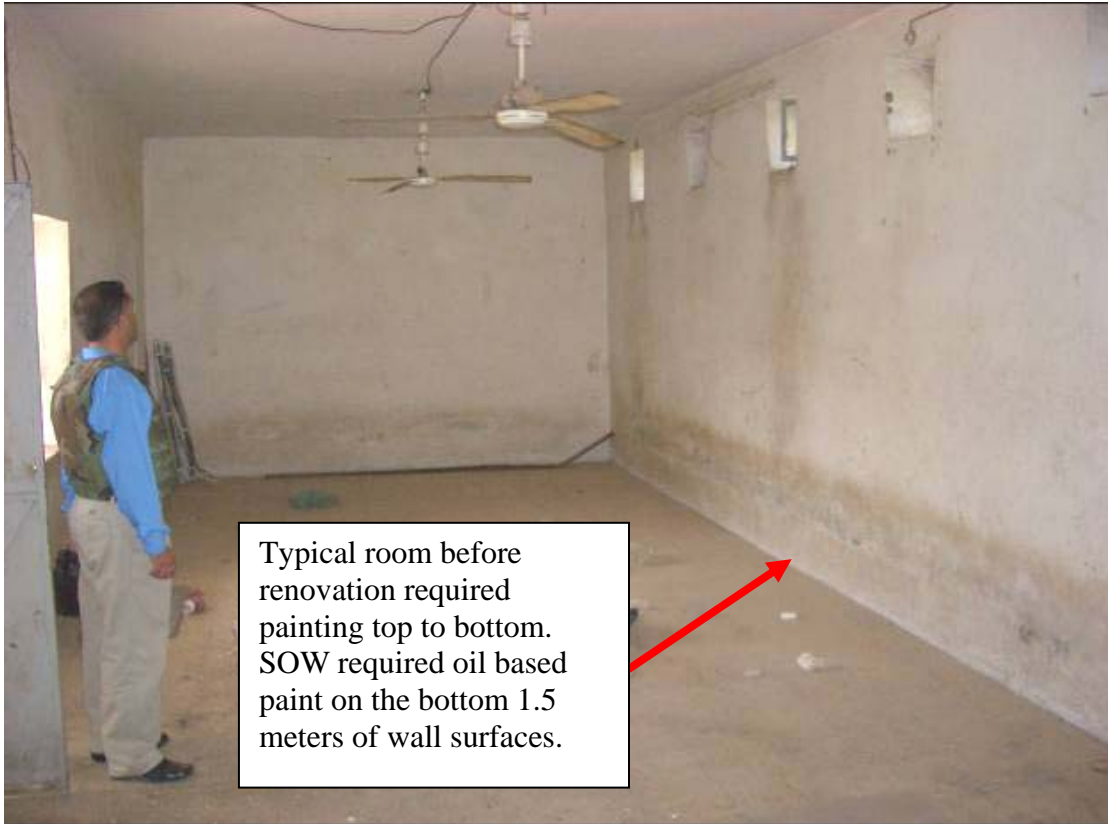
**USACE Pre-Construction Photo 5. Rooftop fighting positions/guard houses before renovation.**

The SOW specified that the pre-existing electrical system needed to be significantly upgraded during renovation. The contractor was required to repair exposed wiring, add wiring/circuits, switches, plug-ins, fluorescent lighting ballasts, building perimeter lighting, and other electrical upgrades. In addition, the SOW included a requirement to securely attach all wiring to walls. An example of the pre-existing condition of the electrical system is shown in USACE Pre-Construction Photo 6. The photo shows “jury-rigged” and unsecured wiring.



**USACE Pre-Construction Photo 6.**

The renovation also required the contractor to paint interior rooms and place tile on all steps. The SOW specified that oil based paint was to be used on the lower 1.5 meters of walls. USACE Pre-Construction Photo 7 shows a typical room in need of new paint while unsealed concrete steps are shown in USACE Pre-Construction Photo 8.



**USACE Pre-Construction Photo 7.**



**USACE Pre-Construction Photo 8. Before renovation, steps were bare, unsealed concrete.**

### **Statement of Work and Requirements**

A SOW was included in the basic contract document dated 18 May 2005. The table below (Table 1) paraphrased each requirement broken out in the manner described in the SOW.

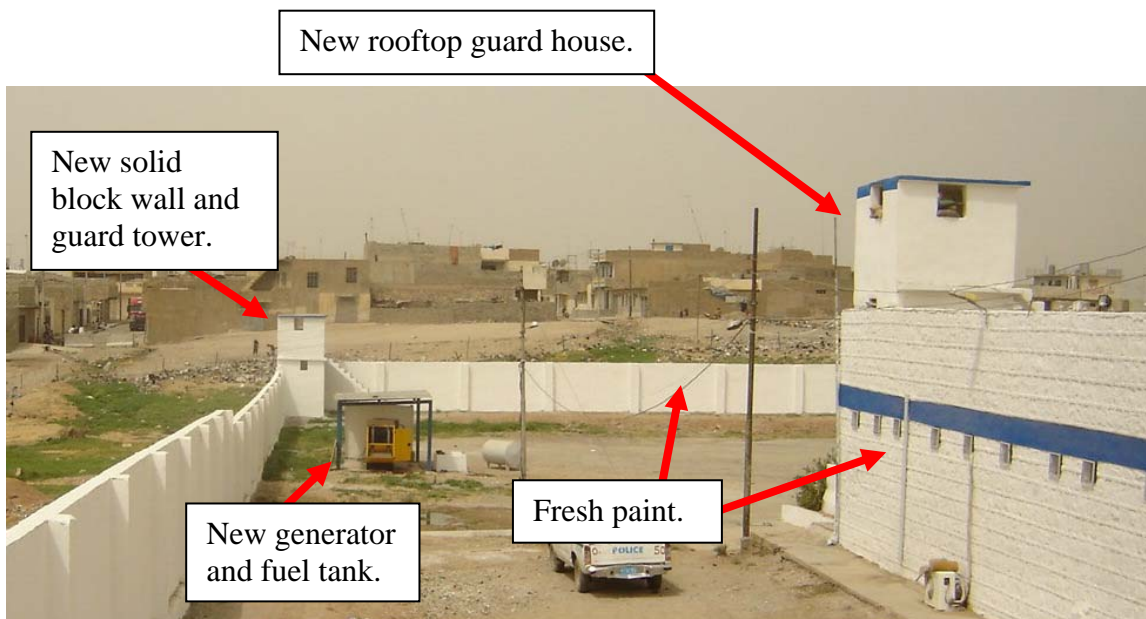
<b>Statement of Work Requirements</b>	<b>Contract Price</b>
Install heating and cooling units.	\$24,900
Place tile on all steps.	800
Repair windows and screens.	3,200
Rewire damaged and exposed wiring and tightly secure to walls. Install switches, fluorescent lighting ballasts and plugs as needed. Install exterior build perimeter lighting.	11,000
Clean all sewer lines so each toilet, sink and shower drain properly.	4,000
As necessary, replace plumbing lines and fixtures.	2,000
Install generator, automatic relay controls and fuel tank so that generator system is able to provide power when city grid power is lost.	79,000
Repaint buildings interior and exterior.	58,800
Install heavy metal gate to control access to station.	2,000
Construct a rooftop guard house at each corner of the station. Total of (4).	18,000
Remove scraped metal (cars) and fill and level parking.	2,700
Remove wire fence and posts and construct solid block security wall topped with barbed wire.	120,000
Construct a guard tower at each corner of the perimeter security wall. Total of (4).	22,000
Construct a 36" concrete pipe to convey sewer water around the perimeter wall and not through station.	5,000
<b>Total</b>	<b>*\$353,400</b>

**Table 1**

\* Basic price for contract dated 18 May 2005 was \$294,900. Modification. P00001 dated 24 June 2005, in the amount of \$58,800, increased total contract value to \$353,400.

## **During Construction Progress**

Between the 22 May 2005 project start date and the final invoice date of 31 Oct 2005, USACE personnel took photos dated 11 and 12 June 2005, 11 and 15 August 2005, 23 September 2005 and 8 October 2005. SIGIR reviewed and relied on selected USACE photos to assess construction progress and show examples of construction requirements completed before the project was turned over to Iraqi Police officials on 24 October 2005.



USACE Construction Photo 1 (12 Aug 05)

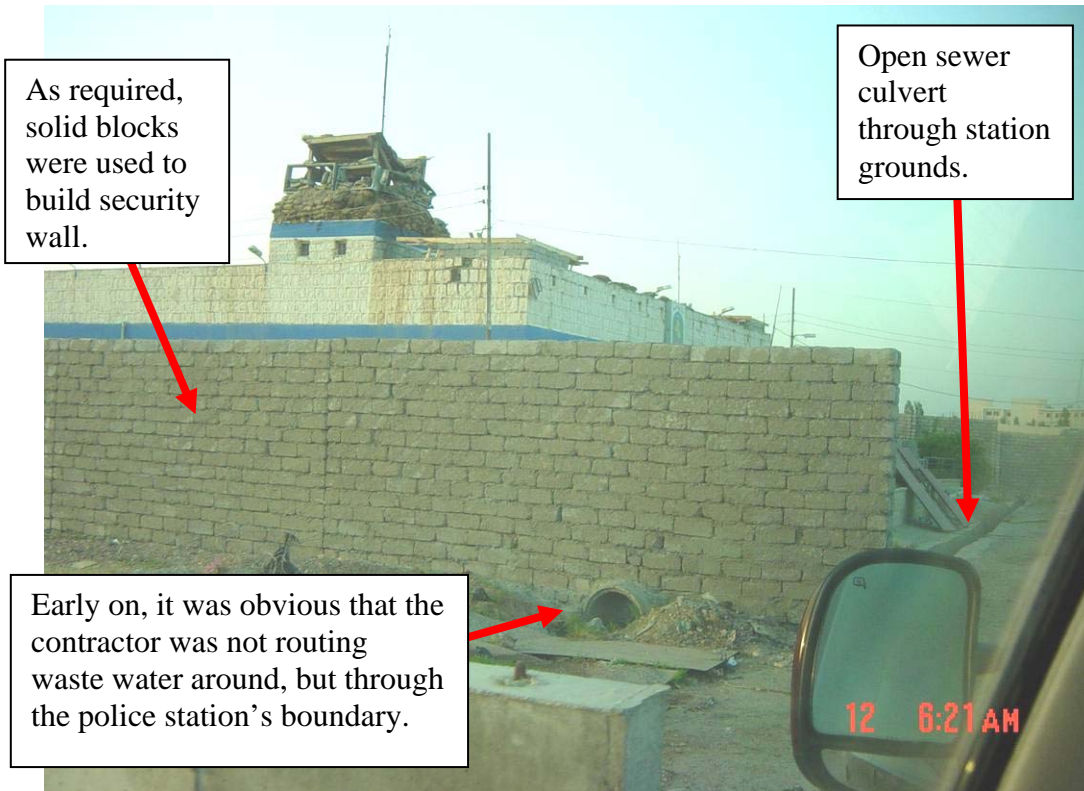
USACE Construction Photo 1 shows five high value requirements: generator system (\$79,000), painting (\$58,800), rooftop guard houses (\$18,000), solid block security wall (\$120,000) and guard towers (\$22,000). All were very likely constructed or installed in accordance with contract requirements. When combined, the aforementioned high value requirement totaled \$297,800 or approximately 84% of the contact's total value of \$353,400.

### **Perimeter Wall, Door, and Sewer**

Per the SOW, the contractor was required to build a solid block wall 2.5 meters high around the full perimeter of the facility. In addition, the wall would be located at least 30 meters away from the police station building and include a heavy metal gate to control access. USACE Construction Photo 2, taken near what became the main entrance; shows that solid concrete blocks were used to construct the wall. USACE Construction Photo 3 shows that required materials were also used to construct the wall opposite the main entrance. USACE Construction Photo 4 shows that a heavy metal door was constructed in accordance with requirements. The new solid block wall and door system replaced a pre-existing chain link fence and gate system (USACE Pre-Construction Photo 3) and represented a substantial improvement in force protection capability<sup>3</sup>.

Contrary to SOW requirements, USACE Construction Photos 2 and 3 show that sewer water was not being routed around the perimeter of the police station, but through the station's boundaries. Issues related to the location of the sewer water conveyance system are addressed in the Site Assessment section of this report.

<sup>3</sup> The requirement was that the razor wire would be properly placed and fastened atop the wall before final payment would be made.

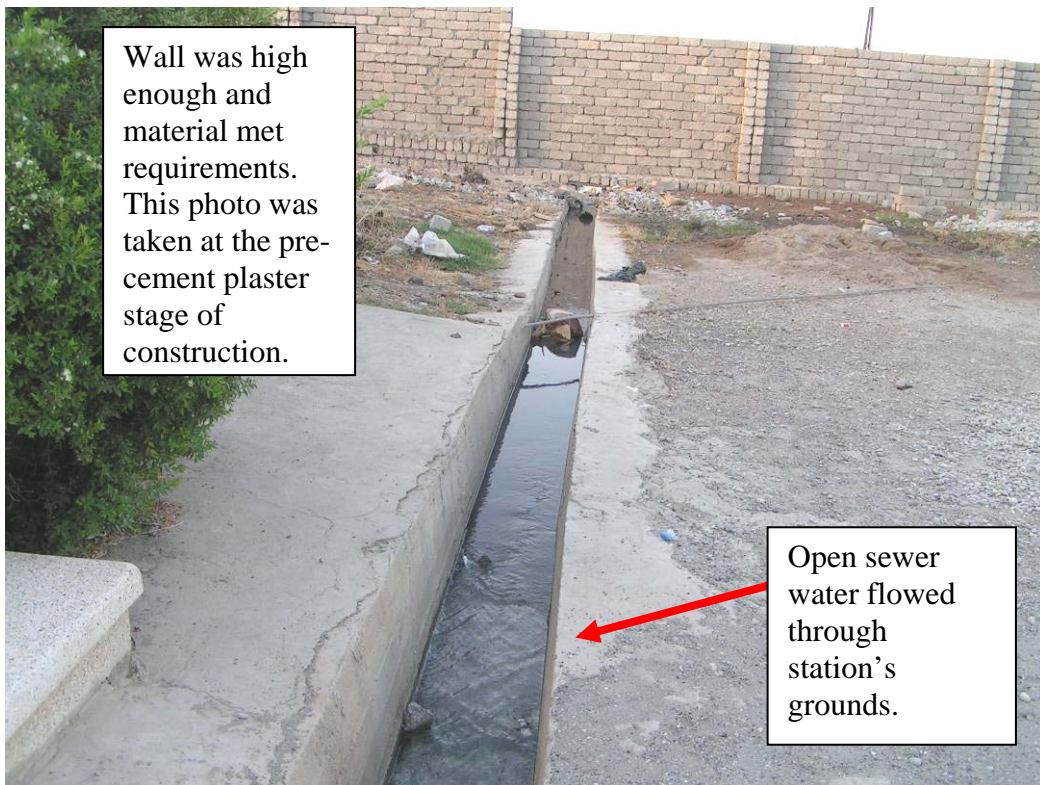


As required, solid blocks were used to build security wall.

Open sewer culvert through station grounds.

Early on, it was obvious that the contractor was not routing waste water around, but through the police station's boundary.

USACE Construction Photo 2 (12 Jun 05)

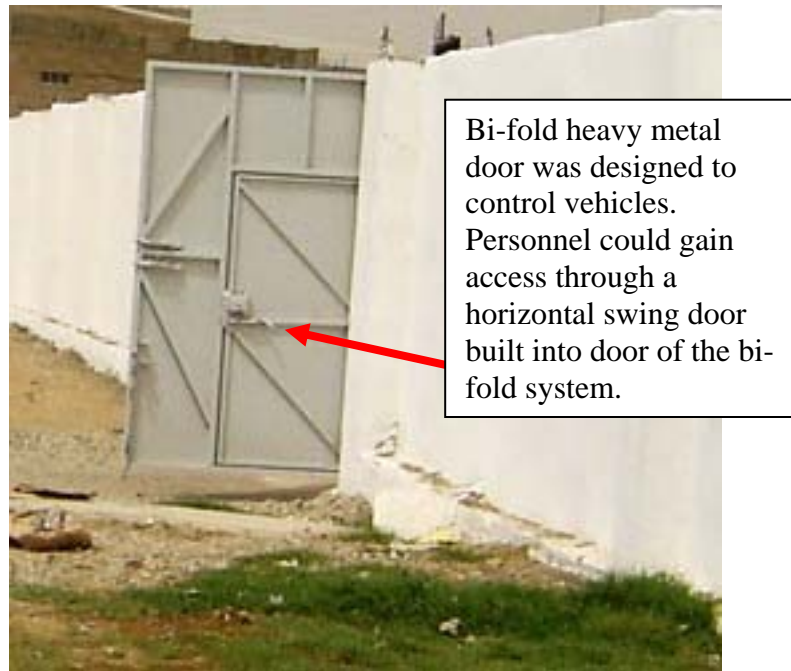


Wall was high enough and material met requirements. This photo was taken at the pre-cement plaster stage of construction.

Open sewer water flowed through station's grounds.

USACE Construction Photo 3 (12 Jun 05)





USACE Construction Photo 4 (15 Aug 05)

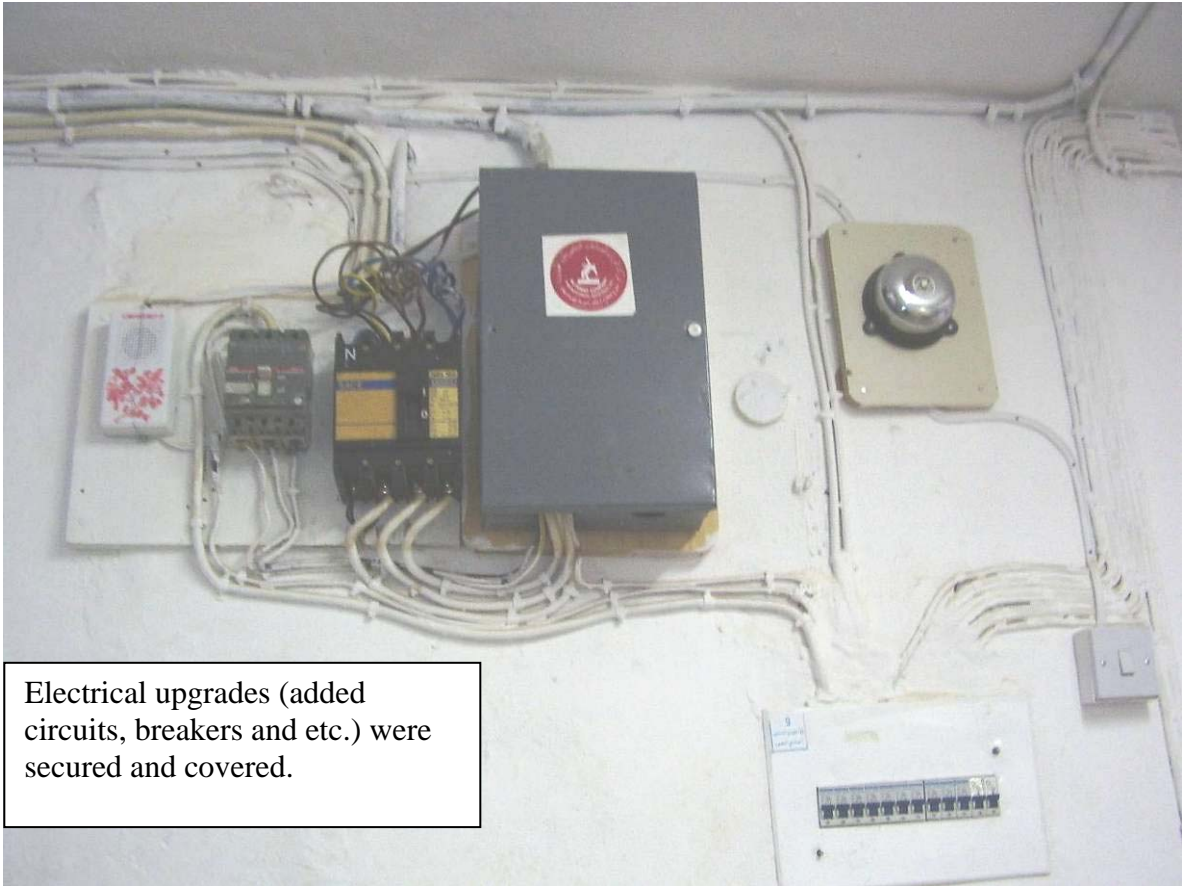
### **Electrical Repairs and Upgrades**

The contract's SOW described various requirements related to the overall electrical system. Exposed or damaged wiring needed to be replaced (rewired) and all wiring needed to be securely fastened to walls. Switches, plug-ins, and lighting needed to be installed, as required. Lastly, electric system upgrades included the installation of a new generator with all necessary connections and controls to facilitate automatic conversion to generator power in the event of a disruption or service loss from the municipal power distribution grid.

While USACE Pre-Construction Photo 6 documented that damaged, exposed, and unsecured wiring was present before renovation, USACE Construction Photo 5 shows that the pre-construction conditions were corrected by the contractor during the renovation project. In short, USACE Pre-Construction Photo 5 and USACE Construction Photo 6 document a "before and after" comparison of an electrical box and wiring at the same location within the building. USACE Construction Photo 6 shows a circuit breaker box that was properly covered and free of tampering following renovation. Other photos taken during construction by USACE personnel show examples of work properly completed by the contractor. For example, USACE Construction Photo 7 shows that switches and plug-ins were installed, USACE Construction Photo 8 confirmed that wiring and electrical system components were securely fastened to walls, and USACE Construction Photo 9 shows where exterior lighting was installed on the building's perimeter. All of the aforementioned examples appeared to meet contract requirements.

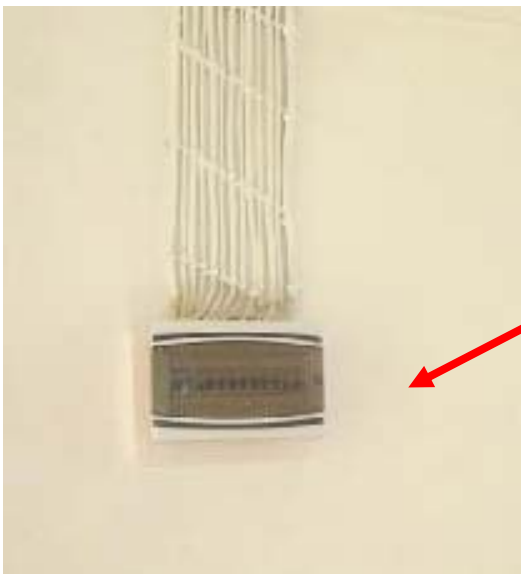
Lastly, complete installation of the generator and system components appeared imminent based on a close-up review of USACE Construction Photo 1. However, the close-up picture of the generator shown in USACE Construction Photo 1 was not included in this report because picture quality decreased when the original photo was electronically cropped to isolate the generator. In the review of the close-up photo, SIGIR inspectors confirmed that the generator, fuel tank, and automatic transfer switch and control panel

were all in place. Deficiencies related to the generator and transfer switch and controls, as of 28 January 2007, are addressed in the Site Assessment section of this report.



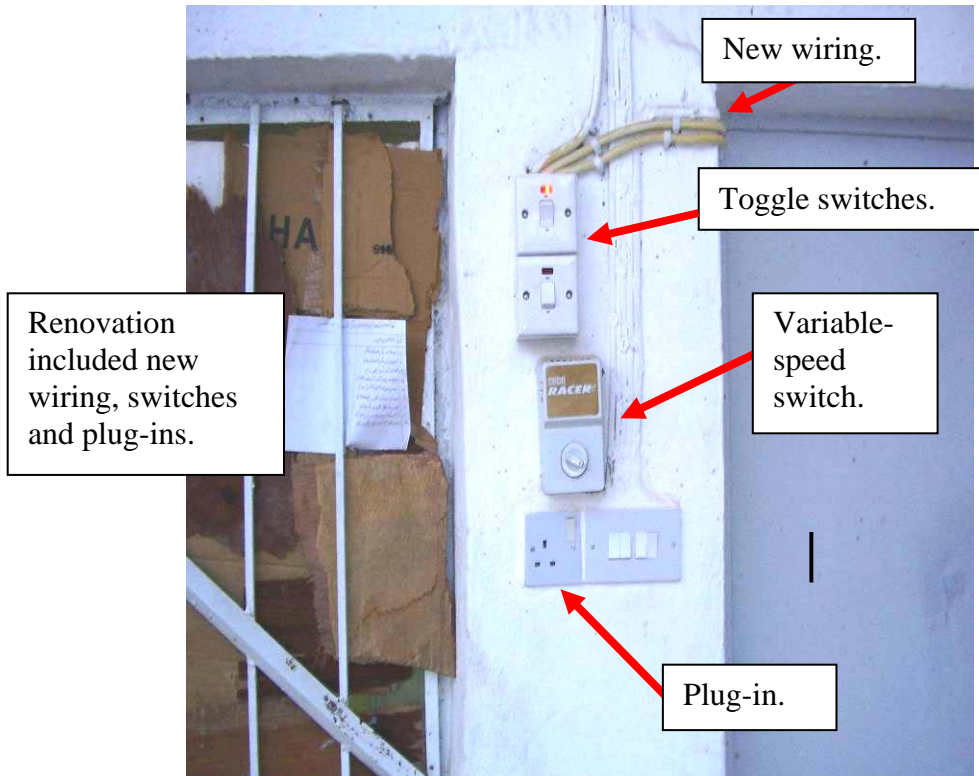
Electrical upgrades (added circuits, breakers and etc.) were secured and covered.

USACE Construction Photo 5 (23 Sep 05)



USACE Construction Photo 6 (15 Aug 05)

Breaker boxes were covered and free off tampering.



USACE Construction Photo 7 (23 Sep 05)



USACE Construction Photo 8 (12 Jun 05)

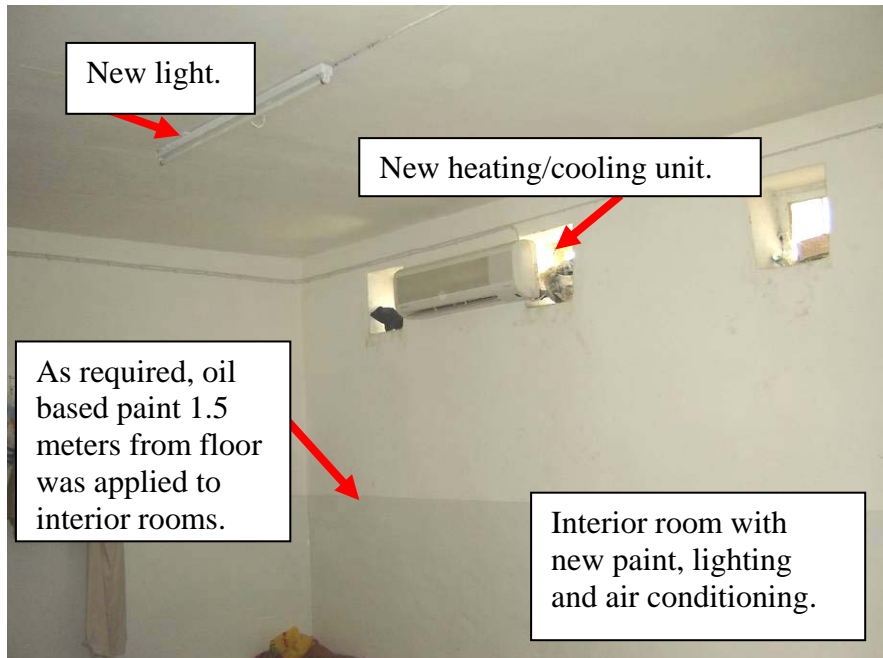


USACE Construction Photo 9 (11 Aug 05)

### **Interior Work**

Various renovation tasks comprised what the SIGIR inspectors categorized as interior work. Based on the SOW, interior work for the most-part was comprised of a mix of small unrelated tasks that collectively were an important part of the renovation project as a whole. Interior work included installation of individual room heating and cooling units, installation of ceiling fans and lights, room painting, plumbing and water distribution system upgrades, screen and window repair, and painting of walls exposed to outside hallways or the courtyard side of the building. A series of photos taken by USACE personnel and subsequently reviewed by SIGIR inspectors have been included in this report to confirm that all interior work was very likely completed. Specifically, USACE Construction Photos 10 and 11 show that interior rooms were painted and upgraded with improved, heating and cooling units and ceiling fans in accordance with SOW requirements. In addition, USACE Construction Photo 12 verified that steps which were unsealed, bare concrete before renovation were tiled during renovation as required by the contract. USACE Pre-Construction Photos 7 and 8, show the significant difference between the pre-construction conditions and the conditions following renovation.

SIGIR inspectors used USACE Construction Photo 13 to present a general overview of the facilities' interior condition following renovation. The interior is that part of the facility inside the outside perimeter of the building and generally accessed from the courtyard area. In USACE Construction Photo 13, it appeared that windows, screens, and painting met SOW requirements. In addition, an upgraded water storage system can be seen in USACE Construction Photo 13.



New light.

New heating/cooling unit.

As required, oil based paint 1.5 meters from floor was applied to interior rooms.

Interior room with new paint, lighting and air conditioning.

**USACE Construction Photo 10 (11 Aug 05)**

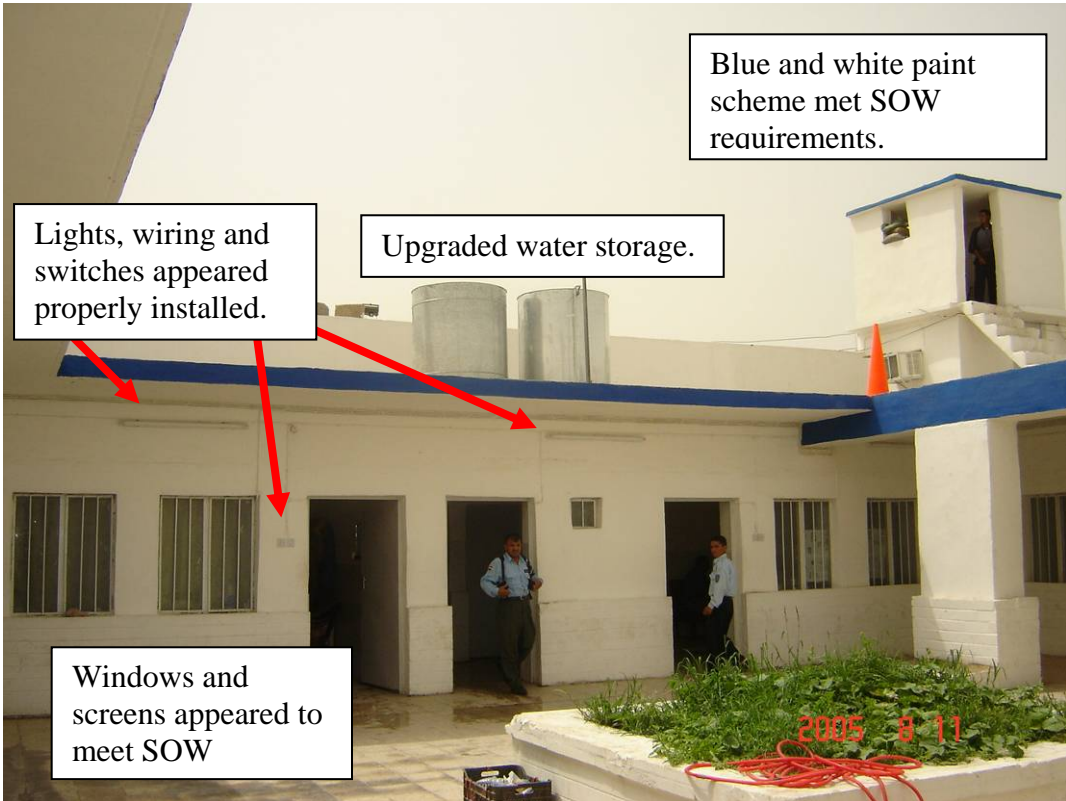


**USACE Construction Photo 11 (15 Aug 05)**

Tiles were placed on steps.



USACE Construction Photo 12 (15 Aug 05)



Blue and white paint scheme met SOW requirements.

Lights, wiring and switches appeared properly installed.

Upgraded water storage.

Windows and screens appeared to meet SOW

USACE Construction Photo 13 (11 Aug 05)

## Site Assessment

With the assistance of United States Army (USA) personnel, SIGIR inspectors conducted a site visit on 28 January 2007. While on site, we observed the current condition of the facility and took numerous photos to document what was observed. In that the facility was turned over to IP officials in late October 2005, the site visit and site photos were considered the most important sources of information in support of our conclusions. In addition, the inspectors conducted limited discussions with available IP personnel. Since time on site was limited for security reasons, SIGIR focused on key or high value elements of the renovation project in order to draw parallel lines between what was required, what was provided during the renovation, and what was observed on 28 January 2007. Since what was required (Project Objective and Pre-Construction Description) and what was provided during renovation (During Construction Progress) had already been addressed in this report, the following photos and narratives describe the conditions observed by inspectors. Site Photos 1 through 18 were taken 28 January 2007.

### General Observations

Most elements of the renovation project appeared to meet SOW requirements and the facility appeared to be able to operate at full capacity<sup>4</sup> when observed. Site Photo 1 confirmed that the same area shown in USACE Construction Photo 13 appeared to be or remained functional on 28 January 2007. Several toilets were flushed and several sinks were partially filled and drained to verify operability. In addition, the inspectors observed several sewer line traps and confirmed that they were open and that sewage generated within the police station building was able to flow. Site Photo 2 shows the specific traps observed by the inspectors. The area around the traps was dry and did not show evidence of routine plugging or backed-up sewage.

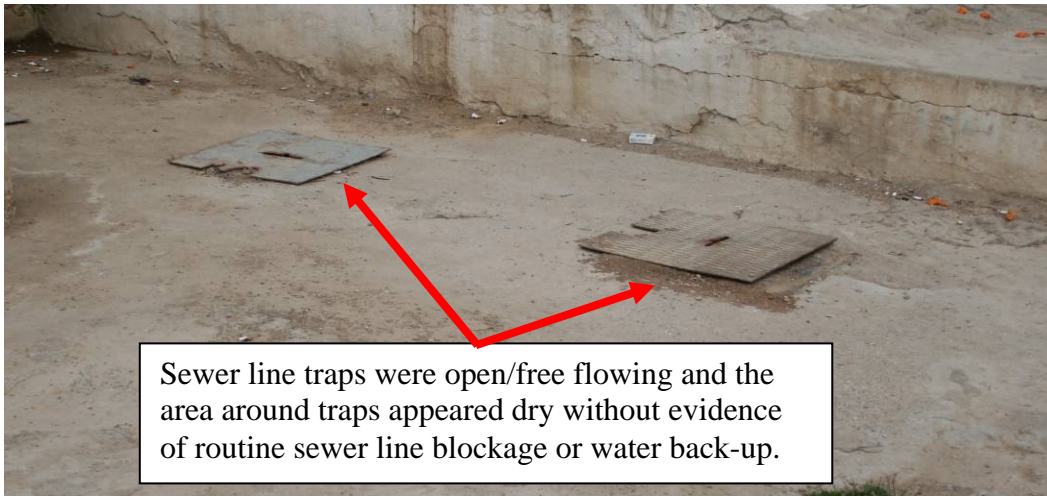
However, some work performed by the contractor did not meet SOW requirements and some post turnover sustainability issues were observed by the inspectors. Accordingly, this report includes the following sections to address such issues: Sewer Water Conveyance System, Full Perimeter Security Wall, Inoperable Generator, and Post Renovation Tampering.

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<sup>4</sup> USA officials confirmed that the facility was functional and staffed by approximately 80 IP personnel.



**Site Photo 1. Observed condition of the same general area shown in USACE Construction Photo 13 appeared functional.**



Sewer line traps were open/free flowing and the area around traps appeared dry without evidence of routine sewer line blockage or water back-up.

**Site Photo 2.**

### **Sewer Water Conveyance System**

The SOW included in the contract, dated 18 May 2005, required the contractor to install a 36-inch diameter concrete pipe to convey all waste water around the perimeter of the IP Station. Subsequently, the Bill of Quantities (BOQ) included in modification P00001, dated 24 June 2005, increased the contract value by \$58,500 and included specific reference to construct a 36-inch concrete pipe around the perimeter of the IP Station and not through IP Station boundaries. In addition P00001 added “*If this is not feasible, propose an alternative design*” to the SOW wording.



A review of the USACE construction photos and the on-site inspection by SIGIR inspectors revealed that the original contract requirement for rerouting the sewer water was not met. Instead, the contractor capped some sections of the existing sewer channel that ran through the grounds of the IP Station. SIGIR also found construction quality, drainage, health and security concerns with the current design and construction.

### **Construction Design**

In order to determine whether there was a design change submittal and approval related to the contractor not routing the sewer water conveyance around but through the IP station boundaries, the inspectors reviewed all documentation provided by the USACE. In addition, the matter was discussed with the GRN Commander, Area Engineer, and Resident Engineer on 1 February 2007. At that time, the RE stated that after a review of Mosul Area Office records and coordination with Gulf Region Division, no documentation to support a design change or any form of approval could be located. In addition, the RE told inspectors that all available information had been provided to the inspectors.

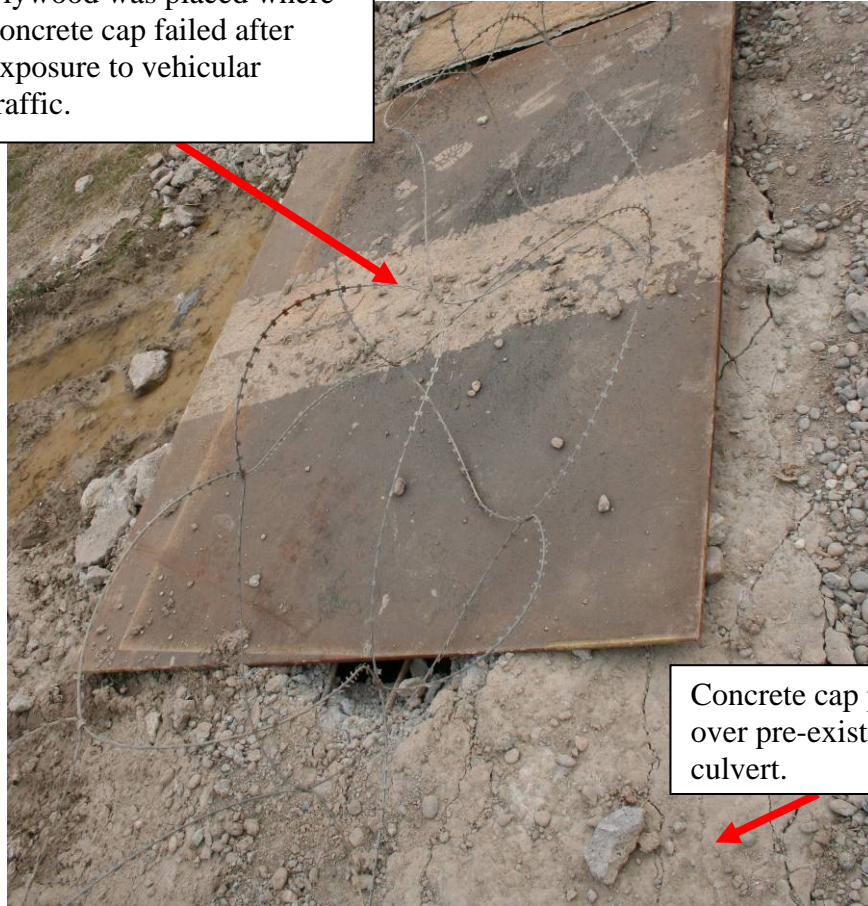
In the absence of any quality control (QC) or sufficient quality assurance (QA) reports and any design submittal and approval documentation within the information provided by USACE, SIGIR was not able to determine why contractor personnel proceeded, or were allowed to proceed, as they did. However, the contractor's intention not to route waste water around the perimeter should have been obvious to USACE personnel as early as 12 June 2007 when USACE Construction Photos 2 and 3 were taken.

### **Construction Quality**

Rather than route sewer water around the perimeter of the station, the contractor merely capped the pre-existing open culvert with concrete. SIGIR inspectors observed that the construction of the concrete cap was poor for a number of reasons and had collapsed under the weight of vehicle traffic (Site Photo 3). As shown in Site Photo 4, the concrete was not uniformly mixed, was cast too thin and was cast without rebar or wire to improve the tensile strength.

In addition, forms should have been constructed in such a manner that the new concrete material would have been placed to touch the culvert's concrete side wall, which is concrete on concrete without wood between the new casting and the existing sidewall. The technique used by the contractor only increased the likelihood of concrete failure. As the wood rots, more stress is placed on the casting as it settles towards a concrete on concrete position.

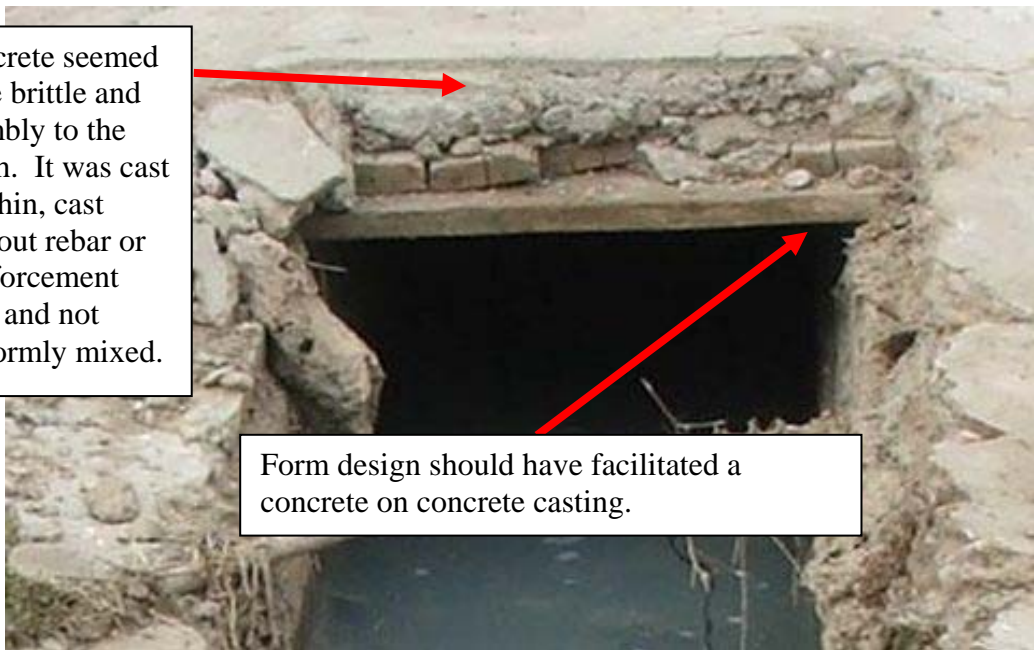
Plywood was placed where concrete cap failed after exposure to vehicular traffic.



Concrete cap placed over pre-existing open culvert.

Site Photo 3.

Concrete seemed to be brittle and crumbly to the touch. It was cast too thin, cast without rebar or reinforcement wire and not uniformly mixed.



Form design should have facilitated a concrete on concrete casting.

Site Photo 4.

## **Drainage**

Before renovation, the chain linked fence (USACE Pre-Construction Photo 3) that surrounded the IP station did not impede runoff water. Conversely, the new solid block security wall (USACE Construction Photo 3 and Site Photo 5) on the low<sup>5</sup> side of the compound could block or impede the flow of rain water runoff and sewage water flow (Site Photo 6). The runoff from within the compound, combined with the regular sewer water flow and rain water runoff channeled into the station from outside the compound, could lead to standing water conditions within the compound.

At the time of the site inspection, the conditions were dry and not impacted by recent rains. Nevertheless, Site Photo 7 shows that the open culvert on the high side or half of the compound was running free and able to handle the waste water volume entering the compound that day. However, Site Photo 8 taken at the exit and the open culvert's lowest spot within the confines of the compound shows the open culvert nearly full. It would not take much rain water runoff to create a flooded condition within parts of the IP compound area.

The runoff and waste water from outside would not be channeled into the compound had the original SOW requirement to "install a 36-inch diameter concrete pipe to convey all waste water around the perimeter of the IP Station and not through the IP Station boundaries" been followed.

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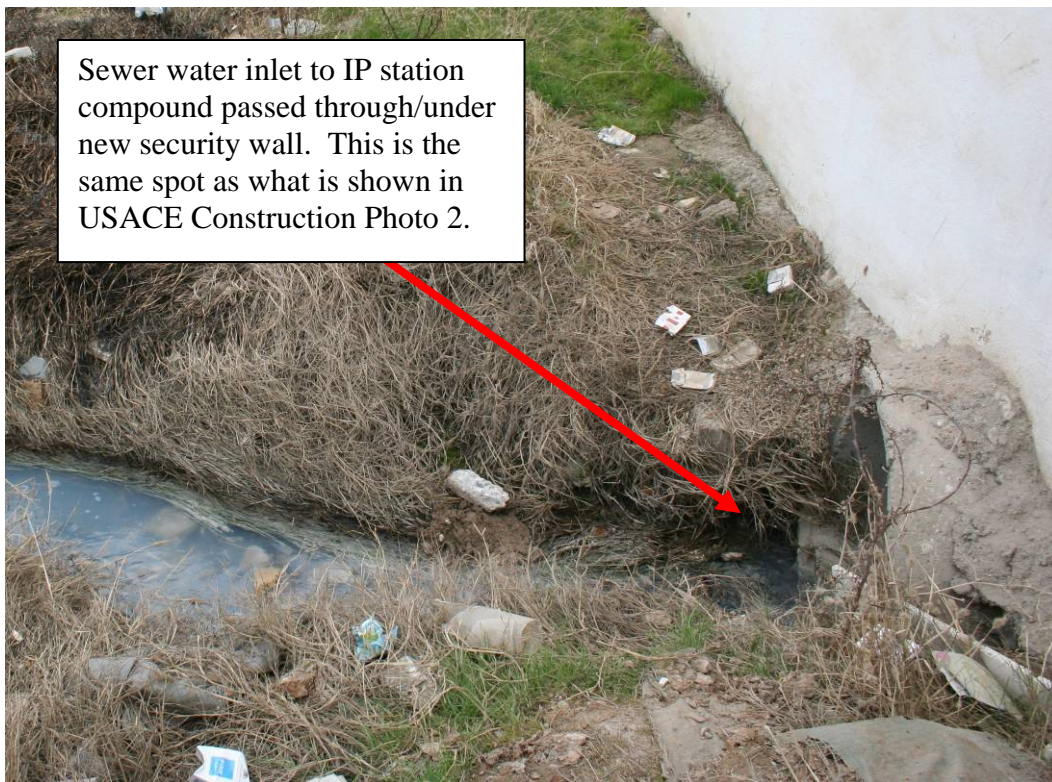
<sup>5</sup> The IP station was located on moderately sloped site. Adjacent property at a lower elevation was referred to as the low side. Conversely, property at a higher elevation was called the high side.



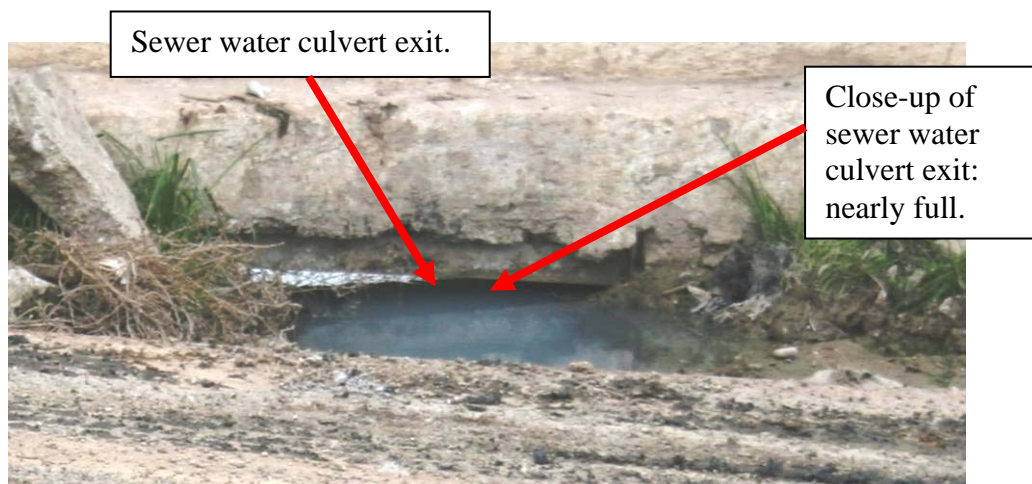
**Site Photo 5.**



**Site Photo 6.** Outside the entrance, there was a sizeable area with sufficient slope to generate substantial runoff to IP station boundaries.



**Site Photo 7.**



Site Photo 8.

### **Security/Health**

Police station security could be compromised by personnel or explosive devices unless structural changes are made. As currently built, personnel could enter the IP Station grounds via the sewer water conveyance system that breeches the security wall and the flowing sewer water could be used as a delivery system for explosives.

In addition, vehicle maneuverability would be less constrained if the waste water conveyance system had been placed around the perimeter and not through the station boundaries.

An open sewer that passes so close to where personnel work would also likely be a health risk. The open sewer could draw rodents known to carry diseases harmful to humans and when overloaded by rain runoff could cause health issues within the compound.

### **Full Perimeter Security Wall**

In accordance with the SOW, the contractor was required to construct a solid block security wall, 2.5 meter high, completely around, but no closer than 30 meters from the IP building. The wall was to be topped with triple strand barbwire (razor). Lastly, the SOW required the contractor to remove the pre-existing (USACE Pre-Construction Photo 3) chain link fence and fence posts.

All requirements related to the construction of the security wall were met with the exception of the barbwire which was not adequately secured and placed on the top side of the wall. Site Photo 9 shows that the wire was merely held in place by sand bags that could be pushed or pulled off by personnel wanting to scale the wall. Without the sand bags in place, the wire does not stay in place atop the wall. In addition, the wire was stretched in such a manner that spaces or gaps between the wire and wall developed. SIGIR inspectors observed several places where the wire was not attached or placed in a manner that enhanced the defensive effectiveness of the security wall.

A review of the USACE final inspection report dated 23 September 2005, disclosed that the wire for the top of the perimeter wall was not installed and was “still piled up on the ground where it was unloaded from the delivery truck”. USACE officials were aware of

the problem; however, it appeared that issues related to the wire were not adequately addressed before final payment to the contractor was approved by the USACE RE.



Site Photo 9.

### Inoperable Generator

It appeared that the contractor installed, in accordance with SOW requirements, a new working generator with a fuel tank and automatic controls to start and switch to generator power in the event of disruption or loss of power from the municipal power grid. However, the generator system was inoperable when observed by SIGIR inspectors on 28 January 2007. IP personnel told SIGIR inspectors that various electrical control components “*did not work*” and no one knew how to operate or fix the generator. At the time of the site visit, the relay control panel door on the generator system was wide open and switch and control components were exposed to the elements. In addition, the inspectors checked and verified that the generator’s oil level was low (at the add mark when cold). While the oil was dirty and gritty to the touch, there was no visible evidence of metal shavings to suggest excessive engine wear. Lastly, the fuel line between the fuel tank and engine had been removed (Site Photo 10).



**Site Photo 10. Fuel line between the tank and the generator engine had been removed.**

The new generator, which cost \$79,000, appeared to have been abandoned (Site Photo 11). Issues related to automatic transfer switch and controls will be addressed in the next section of this report.



**Site Photo 11. Without a fuel line and working controls, the new generator appeared abandoned.**



### **Post Renovation Tampering**

SIGIR inspectors observed considerable tampering with electrical system upgrades and components. The SOW required the contractor to “rewire damaged or exposed electrical wiring.” In addition, the contractor was required to securely fasten all wiring to walls and install needed switches and plug-ins. As previously described in the Electrical Repairs and Upgrades paragraph of this report, it appeared that the contractor satisfied SOW requirements related to electric repairs and upgrades. However, examples of post renovation tampering are shown and briefly described in Site Photos 12, 13, 14, and 15.

SIGIR inspectors observed that the automatic transfer switch and control panel had been tampered with and that the door on the automatic transfer switch and controls panel was wide open and the expensive switching components were exposed. While the inspectors were told by IP personnel that the transfer switches were broken, we could not determine when or by whom the “jury-rigged” wiring was added to the circuitry (SIGIR Site Photo 12). In any case, “jury-rigged” wiring likely could have caused the automatic transfer switch and control panel components to short circuit and break down.

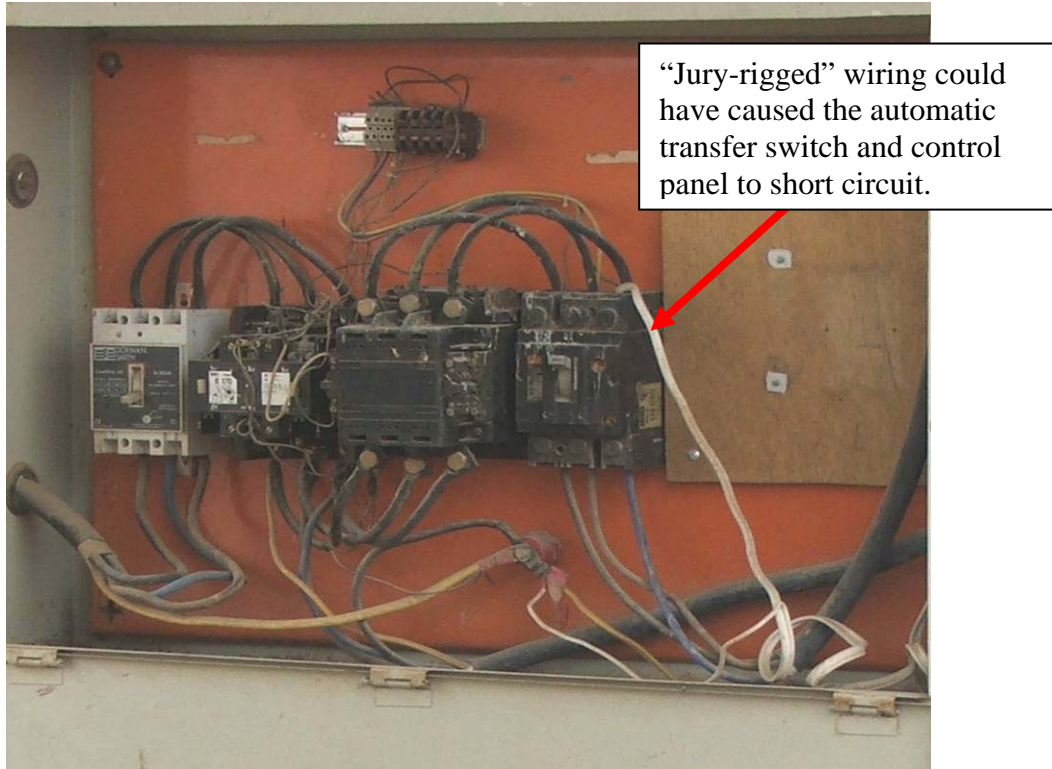
Throughout the facility, SIGIR inspectors observed that numerous switches or plug-ins had been removed. In every case of a missing switch or plug-in, the wiring was crudely twisted together in order to keep the circuit closed as a means to allow power to flow to draw points (lights, switches, plug-ins, etc.) farther down the circuit. SIGIR Site Photo 13 is an example of one of several places where a switch or plug-in was removed.

In Site Photos 14 and 15 a typical form of tampering observed by SIGIR inspectors is shown. Site Photo 14 shows how added wiring was loosely strung. Site Photo 15 is a close up and it shows the technique used to “tap into” an existing circuit. Specifically, the existing circuit and load requirement was maintained by twisting the wiring together in order to close the existing circuit. However, the “jury-rigged” wiring that fed a draw point only added to the circuit’s potential load or draw.

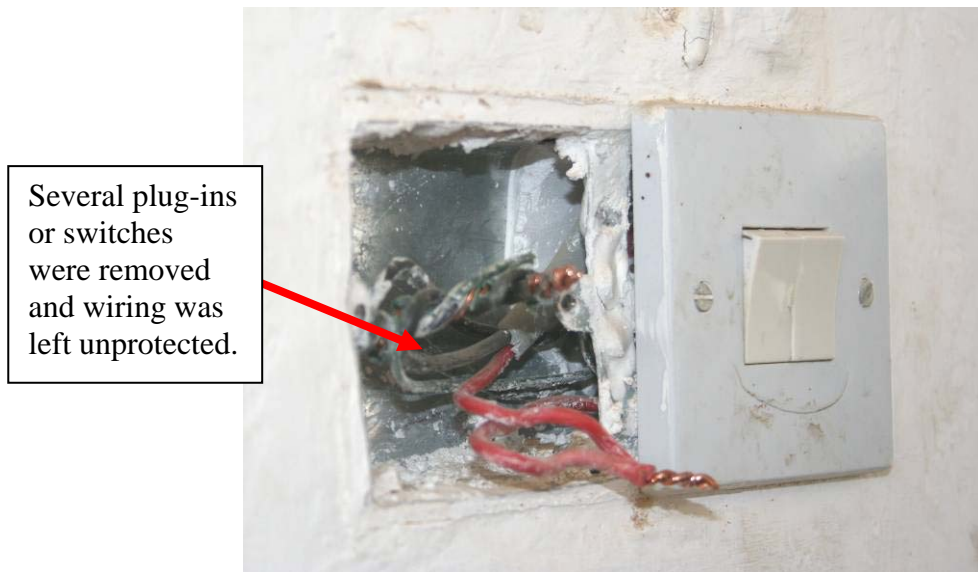
To present a comparison between some of the contractor provided/installed electrical system and the status of the same electrical system components observed on 28 January 2007, the following three specific examples are included in this report.

- USACE Construction Photo 5 shows where the contractor added electric system upgrades and properly covered and secured wiring. Conversely, Site Photo 16 taken at the same spot shows where covers were removed and energized system components were exposed. In addition, the photograph shows that “jury-rigged” wiring was added and not secured to walls.
- USACE Construction Photo 6 documented that a circuit breaker box was properly installed and covered. Based on Site Photo 17 taken at the same spot, it appears that added circuits/wiring could have resulted in a breaker box overload and fire. As a result, some “jury-rigged” circuits are now direct wired and not protected by a circuit breaker.
- USACE Construction Photo 9 shows that exterior lighting was installed by the contractor in accordance with SOW requirements. However, the lighting does not appear in Site Photo 18, which was taken at the same spot. SIGIR inspectors observed similar instances of missing lighting.

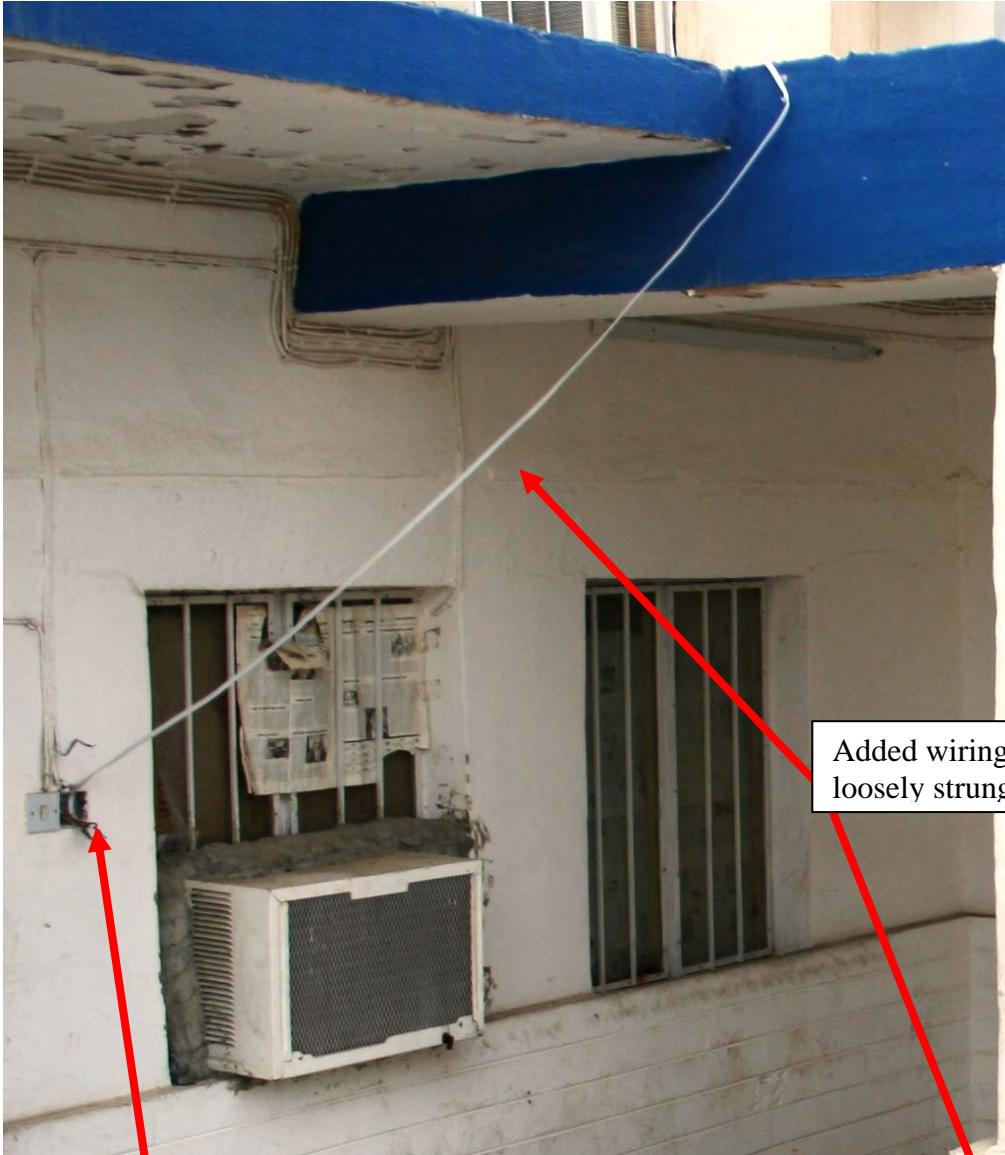
SIGIR inspectors observed some electrical system conditions that likely resembled those before renovation, which are described previously in the Project Objective and Pre-Construction Description of the Facility section of this report. Accordingly, some significant positive effects resulting from the electrical system repairs and upgrades have been diminished.



**Site Photo 12.**



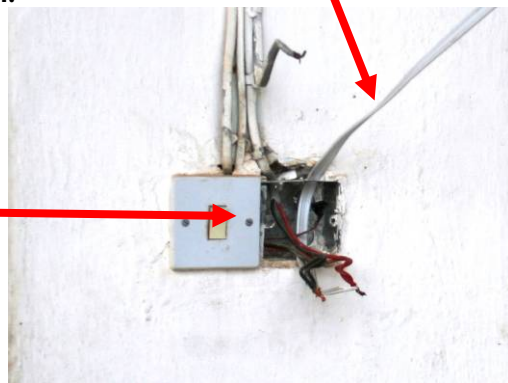
**Site Photo 13.**



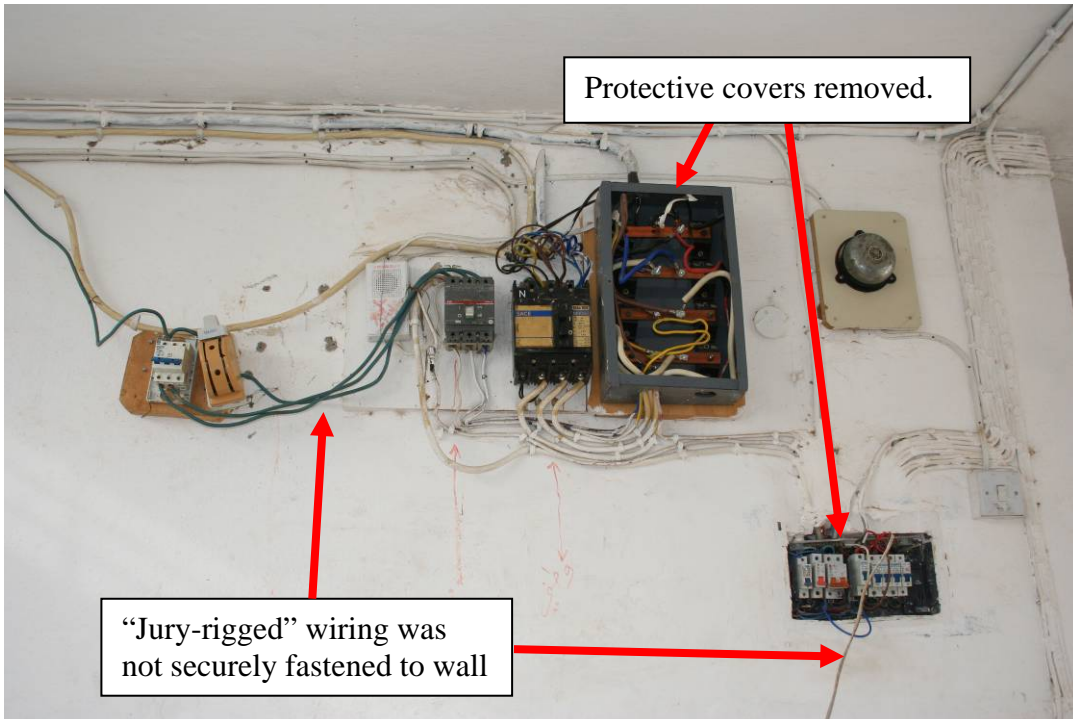
Added wiring was loosely strung.

Site Photo 14.

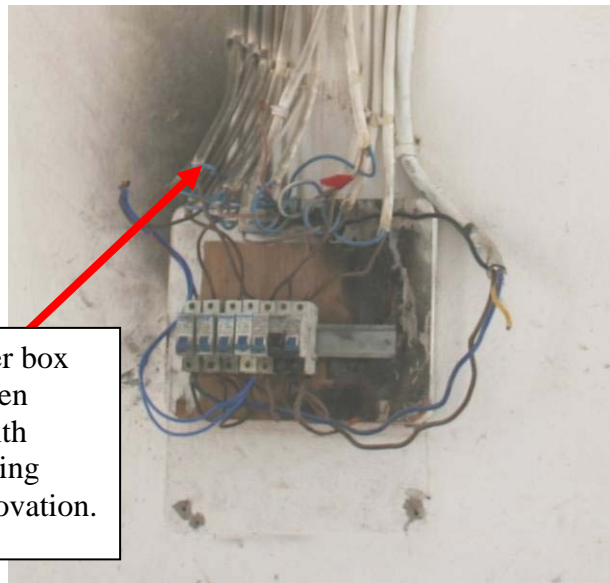
Switch or plug-in was removed and added wiring "tapped into" the circuitry.



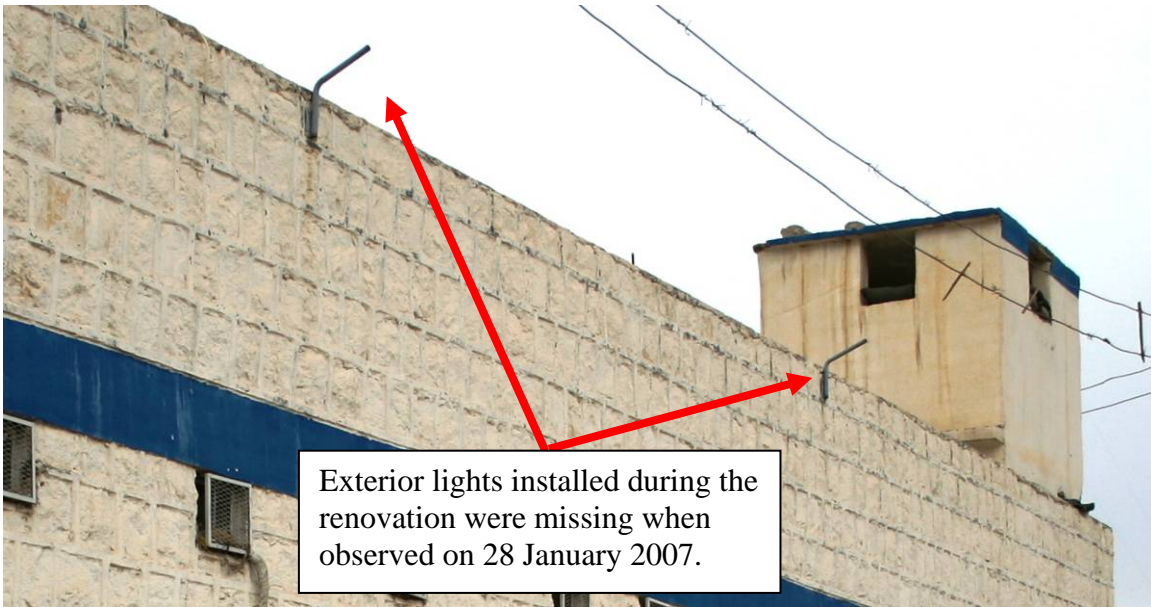
Site Photo 15.



Site Photo 16.



Site Photo 17.



Site Photo 18.

## Conclusions

1. Most key construction observed by SIGIR appeared to meet SOW requirements and the facility appeared to be able to operate at full capacity. However, some work performed by the contractor did not meet SOW requirements. Specifically:
  - The contract specifications were not met regarding the waste water culvert/pipeline. The contract required 36-inch concrete pipe or an approved alternative method to convey waste water around the perimeter of the police station, rather than through the station's boundaries, was not constructed. Rather, a crude cap made of poor quality concrete was constructed over a portion of the existing open culvert used to convey waste water through the station's boundaries. Aside from whether modifying the existing culvert that ran through the boundary of the IP Station was a viable option for routing the waste water around the perimeter, the concrete used was not uniformly mixed, was cast too thin, and was cast without rebar or wire to improve the tensile strength. In addition, the concrete was cast in such a manner that there was no concrete on concrete contact between the new concrete cap and the existing concrete side wall of the open culvert.
  - Razor wire around the perimeter was not properly secured to the top of the station's new perimeter security wall. Rather, it was held in place with unevenly spaced sand bags. When the bags fell off the wall, the razor wire, which is necessary for force protection, fell off as well. In addition, the wire was placed in such a manner that it did not always have contact with the top of the wall.

These conditions occurred because QC and QA activities and design submittal and approval processes were not as effective as they should have been during construction and before final payment was made. As a result, renovation improvements linked to force protection (safety and health) likely were not as effective as they could have been.

2. Operability and sustainability of some of the improvements to the facility might not be realized over the long term if the equipment and the facility are not properly used and maintained. For example, a generator installation that appeared to meet SOW requirements was not operational at the time of the site visit. Local Iraqi Police personnel stated that various electrical control components “*did not work*” and no one knew how to operate or fix the generator. At the time of the site visit, the automatic transfer switch and control panel door on the generator system was wide open and there was evidence of tampering. Additionally, SIGIR observed that the generator’s oil level was low and that the oil was dirty and gritty to the touch and the fuel line had been removed between the fuel tank and engine. The generator system appeared abandoned. SIGIR also observed numerous instances of tampering with the electrical system and components throughout the facility. Switches, plug-ins, and exterior lighting were removed, “jury-rigged” wiring was tapped into several existing circuits and there were numerous instances of exposed wiring and energized electrical system components.

These conditions likely occurred because Bab Shams’ Police Station managers did not effectively implement policies and procedures to stand-up an O&M program to properly take care of equipment and the facility over the long term. In addition, managers did not effectively implement procedures to ensure that the electrical system and components were not tampered with or removed.

As a result, the new generator system, which cost \$79,000, is not used and the repaired and upgraded electrical system and components have been degraded.

## **Recommendations**

USACE/IRMO should survey the site’s current condition and develop cost effective plans to (1) route waste water around the perimeter of the police station and (2) securely attach wire to the security perimeter wall.

The MNSTC-I /IRMO should coordinate with the appropriate Iraqi Ministry officials and develop plans to:

- Make the generator operational.
- Reinstall lighting, switches, and other electrical components that have been removed or damaged.
- Implement an effective equipment and facility O&M program staffed with trained personnel.
- Implement supervisory procedures to ensure that equipment and facilities are not misused and electrical components are not tampered with or removed.

## **Management Comments**

SIGIR requested and received management comments from the Commanding General, MNSTC-I and the Commanding General, USACE-GRD.

The Commanding General, MNSTC-I generally concurred with our recommendations noting that they are tracking the construction, turnover of responsibility, warranty, and assumption of operations and maintenance responsibility by the two security Ministries. They are liaising with the Provincial Directorates of Police and the Minister of Interior regarding maintenance procedures and stewardship of their facilities. Within the past six months, they convinced both the Minister of Defense and the Minister of Interior to

appoint Directors of Infrastructure Management in each ministry. They will engage these directors to form an Iraqi project to repair the generator referenced in this report and to correct the damaged electrical components.

The Commanding General, USACE-GRD did not concur with SIGIR's recommendation to survey the site's current condition and develop cost effective plans to route waste water around the perimeter of the police station and securely attach razor wire to the perimeter wall. GRD noted that the Chief of Police signed the final acceptance agreeing that work was in accordance with contract requirements, renovations were complete and no other work was to be performed unless noted. GRD added that additional funds and a new contract will be required for any changes to the police station. However, if additional funds were made available then the Gulf Region Division would take one or more of five proposed actions to remedy the problems. The full text of the USACE-GRD's comments is included as Appendix E of this report.

### **Evaluation of Management Comments**

The comments from the Commanding General, MNSTC-I are fully responsive to SIGIR's recommendations and demonstrate a responsible effort to support an Iraqi managed program to sustain transitioned projects.

The USACE-GRD was assigned and compensated for performing quality assurance on the site construction. They were responsible for insuring the contractor met the design and quality standards specified in the contract. The USACE-GRD did not adequately discharge their responsibility when they approved sewage renovation work that did not meet design requirements specified in the contract and when they accepted inferior workmanship associated with installing razor wire on the perimeter walls. Without corrective action, the facility will suffer exposure to health hazards and security breaches. Unfortunately, there is no apparent recourse available to the USG other than funding additional work to repair these deficiencies.

## **Appendix A. Scope and Methodology**

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We performed this project assessment from January through March 2007 in accordance with the Quality Standards for Inspections issued by the President's Council on Integrity and Efficiency. The assessment team included an engineer/inspector and an auditor/inspector.

In performing this Project Assessment we:

- Reviewed contract and SOW documentation;
- Reviewed USACE Site Visit Reports and related pre-construction and during construction photos taken by USACE officials;
- Conducted field level discussions with the USACE Resident Engineer;
- Conducted an on-site assessment on 28 January 2007; and
- Briefed the results of fieldwork with USACE GRN Commander, Area Engineer and Resident Engineer before returning to the International Zone. Upon completion of fieldwork, we briefed our conclusions with the MNSTC-I / J-7 representative located in the International Zone.



## **Appendix B. Acronyms**

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BOQ	Bill of Quantities
FAR	Federal Acquisition Regulations
FFP	Firm Fixed Price
GRN	Gulf Region District-North
IRMO	Iraq Reconstruction Management Office
IP	Iraqi Police
IRRF	Iraq Relief and Reconstruction Fund
J-7	Engineering Staff Section
MNSTC-I	Multi-National Security Transition Command-Iraq
O/M	Operations and Maintenance
PCO	Project and Contracting Office
PM	Program Manger
QA	Quality Assurance
QC	Quality Control
QM	Quality Management
SIGIR	Special Inspector General for Iraq Reconstruction
SOW	Statement of Work
USA	United States Army
USACE	United States Army Corps of Engineers

# **Appendix C. Report Distribution**

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## **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 Reconstruction Management 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)

Director, Project and Contracting Office

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  
    Subcommittee on Defense  
    Subcommittee on State, Foreign Operations and Related Programs  
Senate Committee on Armed Services  
Senate Committee on Foreign Relations  
    Subcommittee on International Operations and Organizations, Democracy and Human Rights  
    Subcommittee on International Development and Foreign Assistance, Economic Affairs and International Environmental Protection  
    Subcommittee on Near East and South and Central Asian Affairs  
Senate Committee on Homeland Security and Governmental Affairs  
    Subcommittee on Federal Financial Management, Government Information, Federal Services and International Security  
    Permanent Subcommittee on Investigations  
    Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia

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

House Committee on Appropriations  
    Subcommittee on Defense  
    Subcommittee on State, Foreign Operations, and Related Programs  
House Committee on Armed Services  
House Committee on Oversight and Government Reform  
    Subcommittee on Government Management, Organization, and Procurement  
    Subcommittee on National Security and Foreign Affairs  
House Committee on Foreign Affairs  
    Subcommittee on Middle East and South Asia  
    Subcommittee on International Organizations, Human Rights, and Oversight

## **Appendix D. Project Assessment Team Members**

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

William Tweedy

Lloyd Wilson

## Appendix E. Management Comments – USACE-GRD

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REPLY TO  
ATTENTION OF

CEGRD-CG

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

30 March 2007

MEMORANDUM FOR Special Inspector General for Iraq Reconstruction, 400 Army Navy Drive, Arlington, VA 22202

SUBJECT: Draft SIGIR Project Assessment Report – Bab Shams Police Station, Mosul, Iraq (SIGIR-PA-06-091)

1. The purpose of this memorandum is to provide the U.S. Army Corps of Engineers, Gulf Region Division response to the subject draft assessment report.
2. The Gulf Region Division non-concurs with the recommendation contained in the draft report. Thank you for the opportunity to provide our response for incorporation as an appendix in the final report.
4. If you have any questions, please contact Mr. Milton L. Naumann at (540) 665-5021 or his email Milton.L.Naumann@tac01.usace.army.mil.

Encl

A handwritten signature in black ink, appearing to read "Michael J. Walsh".

Michael J. Walsh  
Brigadier General, USA  
Commanding

## COMMAND REPLY

### SIGIR Draft Assessment Report – Bab Shams Police Station Renovation (SIGIR-PA-06-091)

**SIGIR Recommendation and Gulf Region Division Comments.** GRD provides the following comments in response to the recommendation.

**Recommendation.** The United States Army Corps of Engineers/Iraq Reconstruction Management Office should survey the site's current condition and develop cost effective plans to (1) route waste water around the perimeter of the police station and (2) securely attach wire to the security perimeter wall.

**Actions Taken.** Non-Concur. On 24 October 2005, the Chief of Police signed the final acceptance agreeing that work was in accordance with contract requirements, renovations was complete and no other work was to be performed unless noted. No exceptions were noted on the acceptance form. The contract is complete—the contractor signed a release of claims on 22 October 2005—and out of warranty. Additional funds and a new contract will be required for any changes to the Police Station. However, if additional funds were made available then the Gulf Region Division proposes selecting one of the following courses of action.

- Remove existing trough and install 36-inch-diameter concrete pipe along current route through interior of the police station. A load bearing cover or stile may be required for traffic in the yard.
  - Reroute waste water around station, maintaining required grades. Install lift station or locate alternate connection or discharge point.
  - Divert external waste water as above. Reroute police station waste water to new septic tank and leaching lines.
  - Rebuild cap and continue to use trough in its current configuration.
  - The concertina wire will be reinstalled on top of the perimeter wall.
-