OFFICE OF THE SPECIAL INSPECTOR GENERAL FOR IRAQ RECONSTRUCTION

BASRAH INTERNATIONAL AIRPORT – AIR SIDE POWER SUPPLY TO NAVAIDS AND VISAIDS BASRAH, IRAQ

PROJECT NUMBER SIGIR-PA-06-050

JUNE 30, 2006

SPECIAL INSPECTOR GENERAL FOR IRAQ RECONSTRUCTION

June 30, 2006

MEMORANDUM FOR COMMANDING GENERAL, MULTI-NATIONAL FORCES - IRAQ
COMMANDER, GULF REGION DIVISION-PROJECT AND CONTRACTING OFFICE, U.S. ARMY CORPS OF ENGINEERS
DIRECTOR, IRAQ RECONSTRUCTION MANAGEMENT OFFICE

SUBJECT: Basrah International Airport – Air Side Power Supply to NAVAIDS and VISAIDS, Basrah, Iraq (Report Number SIGIR-PA-06-050)

We are providing this project assessment report for your information and use. We assessed the work performed for the Basrah International Airport-Air Side Power Supply to NAVAIDS and VISAIDS, Basrah, Iraq to determine its status and whether intended objectives will be achieved. This assessment was made to provide you and other interested parties with real-time information on a relief and reconstruction project underway and in order to enable appropriate action to be taken, if warranted. The assessment team included an engineer and an auditor.

The Commander, Gulf Region Division-Project and Contracting Office, U.S. Army Corps of Engineers, in response to a review of the draft of this report concurred with the report. As a result, comments on this final report are not required.

We appreciate the courtesies extended to our staff. This letter does not require a formal response. If you have any questions please contact Mr. Brian Flynn at (703) 604-0969 or brian.flynn@sigir.mil or Mr. Andrew Griffith, P.E., at (703) 343-9149 or andrew.griffith@iraq.centcom.mil.

Stuart W. Bowen, Jr.
Inspector General

Special Inspector General for Iraq Reconstruction

SIGIR-PA-06-050 **June 30, 2006**

Basrah International Airport – Air Side Power Supply to NAVAIDS and VISAIDS, Basrah, Iraq

Synopsis

Introduction. This project assessment was initiated as part of our continuing assessments of selected sector reconstruction activities for Facilities and Transportation. The overall objectives were to determine whether selected sector reconstruction contractors were complying with the terms of their contracts or task orders and to evaluate the effectiveness of the monitoring and controls exercised by administrative quality assurance and contract officers. We conducted this project assessment in accordance with the Quality Standards for Inspections issued by the President's Council on Integrity and Efficiency. The assessment team included a professional engineer and an auditor.

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

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

Conclusions. The assessment determined that:

1. The objective for the project was to define the scope and costs of future construction activities required to provide reliable power to the medium voltage electrical network, special equipment to be installed during upcoming aviation projects, and other critical aviation infrastructure at the Basrah International Airport. The completed interim and final Preliminary Design Reports were sufficiently complete and detailed to meet the stated objectives.

2. This project was the preliminary design for the rehabilitation of the medium voltage electrical system and did not include any construction or installation of equipment. The project included the evaluation of the medium voltage electrical system at the Basrah International Airport, recommendations for replacement or repair, and determination of estimated costs for the recommendations. The review of the interim, draft, and final preliminary design reports show the submitted reports are consistent with the contract requirements. The preliminary design reports, associated photos, test data, and schematics should be detailed and specific enough to guide future contracting actions.

3. This project was the preliminary design for the rehabilitation of the medium voltage electrical system and did not include any construction or installation of equipment. Therefore, determination whether construction met the standards of the design was not evaluated during this assessment.

4. Based upon a review of the contract, the contractor and the government quality assurance program were performed to the extent possible for the Basrah International Airport Air Side Power Supply to Navigational Aids and Visual Aids project that was a preliminary design for the rehabilitation of the medium voltage electrical system and did not include any construction or installation of equipment.

5. Sustainability was not an issue because the project was to evaluate an electrical distribution system and did not include any construction components. Since specialized equipment was not required by the contract, operation and maintenance manuals or training were not needed.

Recommendations. This report does not contain any negative findings or recommendations for corrective action.

Management Comments. The Gulf Region Division-Project and Contracting Office concurred with the conclusions contained in the report.

Evaluation of Management Comments. No additional comment required.

Table of Contents

Introduction

Objective of the Project Assessment

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

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

Pre-Site Assessment Background

Contract, Task Order, and Costs

The Basrah International Airport (BIA) - Air Side Power Supply to Navigational Aids (NAVAIDS) and Visual Aids (VISAIDS) project was completed under Contract W917BK-06-P-0005, dated 22 October 2005, with a firm-fixed price contract, for $383,043. The contract was between the United States Army Corps of Engineers (USACE) Gulf Regional Division – Southern District (GRS) and Reyam LTD, Basrah, Iraq. Contract W917BK-06-P-0005 was awarded to define the scope and costs of future construction activities required to provide reliable power to the medium voltage electrical network, special equipment to be installed during upcoming aviation projects, and other critical aviation infrastructure at the Basrah International Airport (BIA) in Basrah, Iraq. There are no modifications to the initial contract.

Project Objective

The contract Scope of Work (SOW) stated that:

> "*The objective for the project is to define the scope and costs of future construction activities required to provide reliable power to the medium voltage (MV) electrical network, special equipment to be installed during upcoming aviation projects, and other critical aviation infrastructure at the Basrah International Airport (BIA) in Basrah, Iraq.*"

In addition, the contract showed:

> *"The stated intent of this project is to test, assess, and perform engineering and cost analysis of the 33 kilovolt (kV) and 11 kV distribution network at BIA to provide reliable power to aviation facilities for the certification by the International Civil Aviation Organization (ICAO)."*

Description of the Facility (preconstruction)

The description of the facility (preconstruction) and previous applicable project was based on information obtained from the contract and the USACE project file.

The BIA was an existing airport located outside of the city of Basrah in southern Iraq. Site Photo 1 shows the exterior of the terminal building at BIA. The airport is one of three major airports in Iraq. The airport electrical distribution systems were not operational because the systems were not properly maintained throughout the previous regime, and the electrical systems were damaged, looted, and cannibalized.

Site Photo 1: Exterior view of the terminal building

Based on information from the contract files, the BIA electrical system is serviced through two 33 kV (transmission voltage) feeder lines and three on-site generators. The feeder lines transmit power to switchgears and step-down transformers, which convert the electricity from 33 kV to 11 kV. The on-site generators were designed to produce 11kV electricity. The 11 kV electricity, referred to as medium voltage (MV), is distributed through three distribution circuits and are referred to as MV-1, MV-2, and MV-3. The distribution circuits transmit the 11kV electricity to secondary transformers, located at individual facilities within the airport. The secondary transformers convert the voltage from 11kV to 0.4 kV for usage. Figure 1 shows the schematic of the electrical distribution system at the BIA.

The USACE contracted out the renovation of the NAVAIDs to the Raytheon Company for the amount of $27,810,105 on 20 March 2005. The scope of work included the acquisition, installation, integration, testing, operational maintenance support, and training of terminal approach radar, air traffic control automation system, integrated landing system / distance measuring equipment, ground to air radio system, automated weather system, automated terminal information system, and an aeronautical fixed telecommunication network. The contract was subsequently canceled because the terms of the contract could not be agreed to between the contractor and the USACE.

The condition, extent of deficiencies, and required repairs of the electrical distribution system to include feeder lines, generators, transformers, and conduit

condition was unknown at the initiation of the contract for the Basrah Air Side Power Supply to NAVAIDS and VISAIDS.

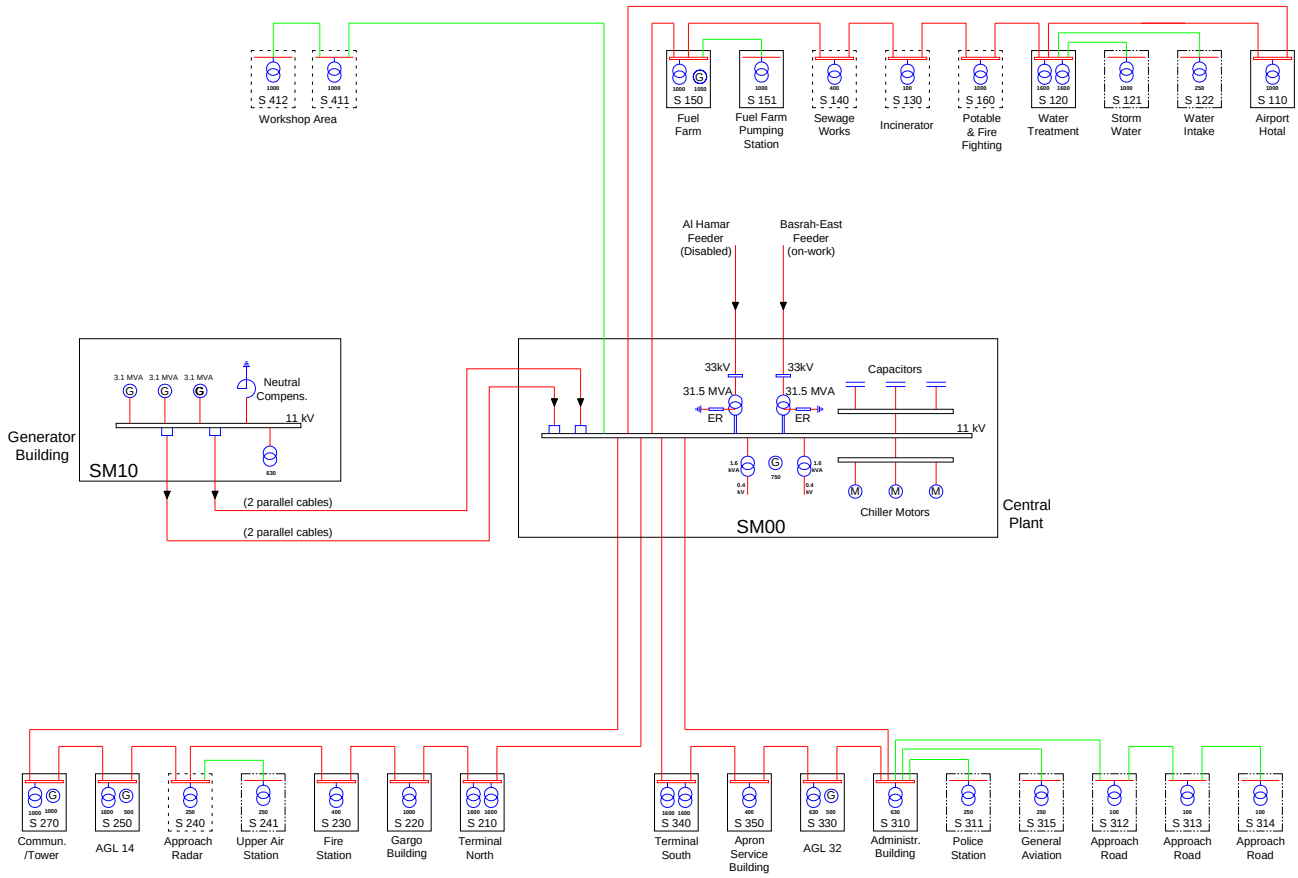

Figure 1: Schematic of electrical distribution system at the Basrah International Airport

Scope of Work of the Contract

The contract Scope of Work is to test, assess, and perform engineering and cost analyses of the 33 kV and 11 kV distribution network at BIA to provide reliable power to the aviation facilities for the certification by the International Civil Aviation Organization (ICAO). Components of the distribution network requiring evaluation where to include the following:

- Cable
- Transformers (current and voltage)
- Protection relays
- Battery tripping units
- Switchgears
- Substation buildings
- Grounding systems
- Generators

The work was required to include, but not limited to, the following facilities:

- Central plant

- Generator building
- Terminal
- Aviation fuel farm
- Upper air station
- Aviation ground lighting (AGL) 14
- AGL 32
- Air traffic control tower
- General aviation building

All network systems were required to have visual and non-destructive testing completed and documented. In addition, an interim preliminary design report (PDR), draft PDR, and final PDR were required.

The PDRs were to include SOWs and rough order magnitude (ROMs) estimates with at least two alternatives for each facility (repair/upgrade and replacement). The interim PDR was to identify fast track projects for the repair and/or replacement at AGL-14 (substation (S)-250), AGL-32 (S-330), and the approach radar (S-240).

Current Project Design and Specifications

This project evaluated an electrical distribution system and did not include any construction. The required PDRs were to document the current condition of the electrical distribution systems at the BIA, evaluate the current conditions, and develop alternatives for repairing or replacing the systems.

The contract required the contractor to make recommendations to the government based upon results of the field-testing and engineering judgment. The contractor's recommendations were to be based on a combination of the contractor's working knowledge of airport operations, coordination with airport staff, and the requirements of ICAO. The contract stated that the design and installation of the equipment, materials, and work should conform to the following standards, codes and regulations where applicable, except where otherwise indicated. The contractor may propose equipment, materials, and works that meet the intent of the publications listed here, provided documented justification requests for such alternates are submitted and approved by the Contracting Officer Representative. The codes identified in the contract are:

- American Standard of Testing Materials
- American Concrete Institute
- American Welding Society
- Federal Specification
- Federal Test Method Specification
- International Civil Aviation Organization
- Independent Electrical Contractors
- Institute of Electrical and Electronics Engineers
- Portland Cement Association
- Underwriter's Laboratory

At the time of the SIGIR project assessment, the interim and draft PDR were complete and the final PDR was submitted to the USACE project manager. The assessment team reviewed the PDRs and associated test documentation.

Interim PDR

The interim PDR, dated December 2005, was prepared by Reyam Ltd and submitted to the USACE. The interim PDR included an engineering assessment of the airport lighting systems. The runway lighting system supplied electricity through substations S-250 on MV Ring 2 and S-330 on MV Ring 3. The assessment included an evaluation of the 11 kV switchgears, cables and terminations, generators, and condition of the airport ground lighting system. The interim PDR identified that most of the systems were not properly maintained, had numerous missing parts, and were not operational. The interim PDR recommended repair of the substation buildings, aircraft ground lighting system, and the S-330 transformer. Additionally, the interim PDR recommended replacement of the 11 kV switchgears, two 400 kilo-volt amp (kVA) generators, the S-250 transformer, battery charger, battery sets, control panel, and low voltage distribution cables. Total estimated costs for substation rehabilitation and equipment was $451,000. Equipment and installation for the VISAIDs lighting system was estimated to be $1,347,000. The total amount for an operational aircraft ground lighting system was $ 1,798,000. Included with the interim PDR was proposed contract specifications for 11 kV switch gears.

Draft PDR

The draft PDR, dated December 2005, was prepared by Reyam Ltd. and submitted to USACE. The submission included the draft PDR report, substation summary sheets, electrical schematic diagram, and photo logs. The draft PDR included general descriptions of the conditions of the substations, switchgears, battery chargers, battery sets, low voltage circuit breakers, power and distribution transformers, power control network, cables and terminations, and generators. Summary sheets and photo logs for each substation included a checklist for visual verification and photos of the individual components and data plates.

Final PDR

The final PDR, dated February 2006, was prepared by Reyam Ltd. and submitted to USACE. The submission included the PDR report, test report, substation summary sheets, substation test results, photo logs, electrical schematic diagram, and ROM estimates.

The final PDR was a revised version of the previously submitted draft PDR. The final PDR included findings, options, and recommendations. The findings included a description of the present condition of the 33 kV switchgears, 33kV auto transfer switch, MV cables, generators, 11 kV switchgears, battery charges, battery sets, remote control and operation system, and transformers. Options included replacement, partial replacement, repair, and repair/upgrade. Total estimates for the recommended repair and replacement for the MV electrical systems ranged between $57,436 and $594,885.

ROM estimates were developed for each substation and identified equipment and associated costs for the required repair, upgrade, or replacement of equipment. The ROMs included more specific breakdowns than the final PDR for the cost of the specific electrical systems. Photo logs were similar to the draft report and included photos of the individual components and data plates.

The electrical schematic diagram included the complete BIA MV system with the three MV rings and individual substations. Specific details for the quantity and type of components were included within the schematic. Figure 2 shows an example of a portion of the schematic, which included electrical system details for two of the substations.
The test report included a description of the testing equipment used and the tests which were conducted on the individual components of the electrical system. Individual components included voltage protection relays, current transformers, voltage transformers, battery sets, battery tripping units, switch gears, and cables. In addition, documentation of specific tests at the individual locations was included in a separate file.

The final PDR stated:

"Those results show that although these facilities [were] neglected mostly for many years, we got good testing results for most of the parts tested in this network, which means we can keep many parts of the existing network for years!"

The review of the interim PDR, draft PDR, and final PDR showed the submitted reports are consistent with the contract requirements. Although specific scopes of work were not included in the final submittal, the data and schematics should be detailed and specific enough to guide future contracting actions.

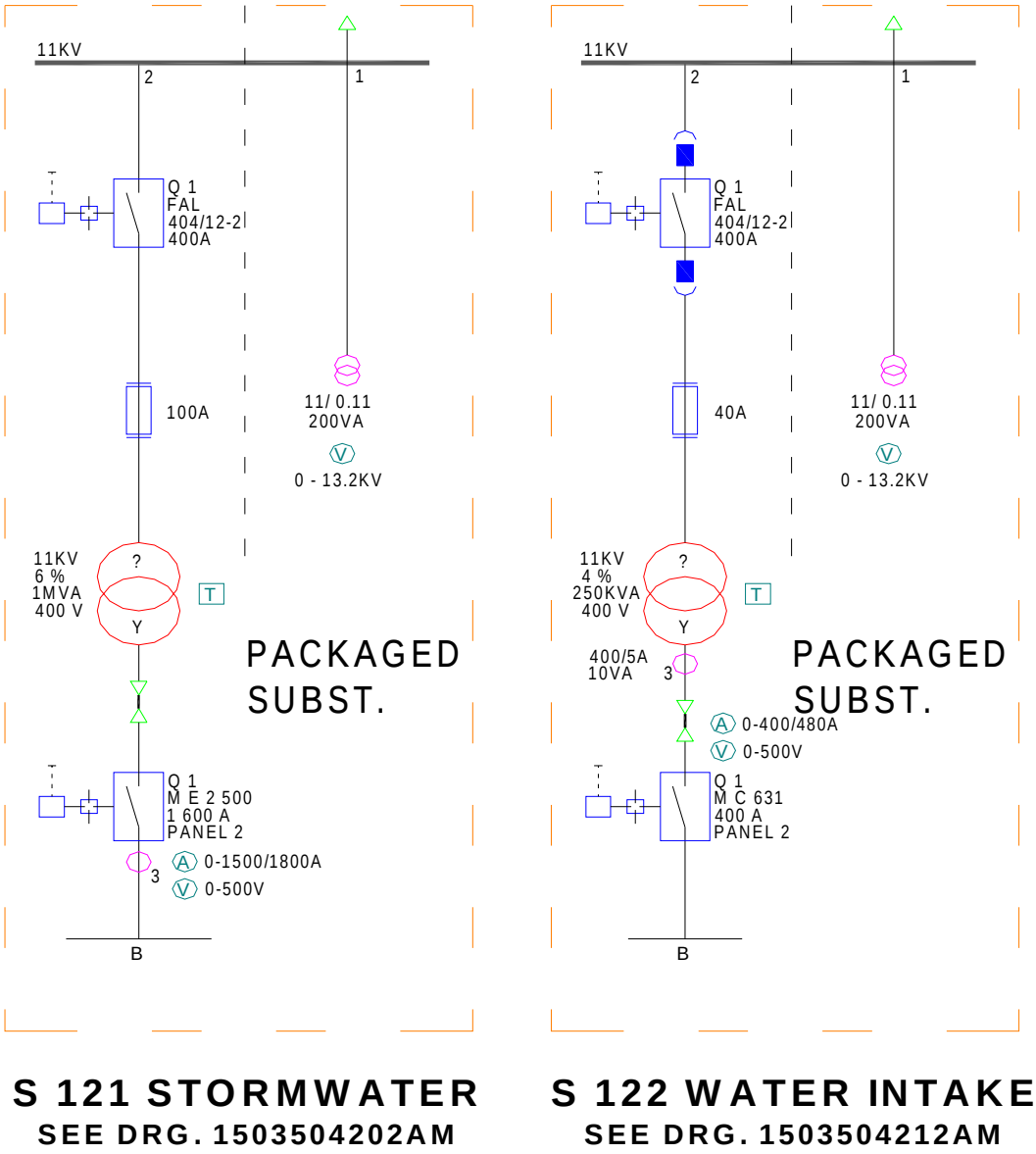

Figure 2: Excerpt from PDR schematic showing details of the electrical distribution system at the Basrah International Airport

Site Assessment

Between 21 and 24 January 2006, we performed an on-site assessment of the Air Side Power Supply to NAVAIDS and VISAIDS project at the BIA. This project did not include a construction component and was limited to the testing and evaluation of the electrical system at the airport. The contractor had completed field work prior to our visit and was not on site at the time of this assessment. The on-site assessment included only a visual check of selected electrical systems at BIA to confirm the accuracy and completeness of the PDRs. The USACE project manager and quality control representative were both available during the assessment.

Work Completed

All fieldwork was reported completed at the time of the assessment. The site visit was used to visually verify the current conditions of the electrical systems. During the assessment, the buildings visited included: the main plant facility, which included the 33 kV to 11 kV switchgear and transformer, and the NAVAIDs substation, which included switchgears, transformers, and runway lights.

Main Plant Facility

The main plant facility is located across a large parking area from the BIA passenger terminal. The plant facility houses the airport chillers and boilers, as well as the 33 kV to 11 kV switchgears and transformers. The main plant building appeared to be in good condition, and the 33 kV to 11 kV switchgear and transformers were in-place. The 33 kV switchgear and transformers were designed to feed the three MV distribution rings to supply power to the secondary transformers for ultimate usage. At the time of the assessment, the 33 kV switchgear and transformer appeared to be complete with no obvious missing components. The final PDR ROM recommended repair, maintenance, and upgrade of the systems. Site Photo 2 shows the external cabinets of the 33 kV to 11 kV switchgears.

Site Photo 2: Exterior view of 33 kV to 11 kV switchgear cabinets

Airfield Lighting Substations

The aircraft lighting substations are located on the northern (S-250) and southern (S-330) ends of the taxiways, which parallel the main runway. During the site assessment, the S-330 substation facility and airfield lights located in the general area were accessed. S-330 is a substation building, which includes transformers, switchgears, and visual aids lighting equipment.

At the time of the assessment, the building appeared to be in good condition, although the electrical equipment appeared to be incomplete and was not operational. The recessed runway lighting receptacles were in-place, although the lights themselves were missing. The interim PDR recommended replacement of all equipment at S-330 and completing minor repairs to the existing building. The recommendations of the PDR were consistent with the observations during the site assessment visit.

Site Photo 3 shows the exterior of S-330; Site Photo 4 shows the exterior view of a transformer located at S-330; and Site Photo 5 shows missing electronic equipment at S-330. Site Photo 6 shows the view of the runway and Site Photo 7 shows a taxiway light receptacle.

Site Photo 3: Exterior view of S-330 substation

Site Photo 4: Transformer located at S-330

Site Photo 5: Missing electronic equipment at S-330

Site Photo 6: Runway system at Basrah International Airport

Site Photo 7: Runway light (VISAID)

Work in Progress

All field work was reported complete at the time of the assessment.

Work Pending

All field work was reported complete at the time of the assessment.

Project Quality Management

Contractor's Quality Control Program

The BIA Air Side Power Supply to NAVAIDS and VISAIDS project was completed under Contract W917BK-06-P-0005. The project's objective was to "define the scope and costs of future construction activities required to provide reliable power to the medium voltage (MV) electrical network" at the BIA. In addition, "[t]he stated intent of this project is to test, assess, and perform engineering and cost analysis of the 33 kilovolt (kV) and 11 kV distribution network at BIA."

The contractor was to submit a quality control plan, a safety plan, a security plan, manufacturer drawings, calibration certificates, testing and inspection reports, contractor and manufacturer fabrication drawings and calculations, and an interim, draft and final PDR. In addition, the contractor was to submit the manufacturer information, training manuals, training procedures, and environmental protection procedures. Since the project was an evaluation of an electrical distribution system that did not include any construction, the contractor did not submit a quality control plan, safety plan, security plan, manufacturer drawings, calibration certificates, contractor and manufacturer fabrication drawings, manufacturer's information, training manuals, training procedures, or environmental protection procedures. However, the contractor submitted the testing and inspection reports and the interim, draft, and final PDRs.

The contract stated that an interim preliminary design report (PDR), draft PDR, and final PDR were required. The contractor submitted the interim, draft, and final PDRs. The interim, draft, and final PDRs documented the current conditions of the electrical distribution systems at the BIA. The preliminary draft reports provided the contractor's findings, the options available to the government, and the contractor's recommendations regarding whether the items shall be repaired or replaced.

The contractor was to perform factory witness tests of primary components and be responsible for all site testing. All network systems were required to have visual and non-destructive testing completed and documented. The contractor used modern, calibrated testing equipment, along with testing techniques provided by Independent Electrical Contractors, Institute of Electrical Engineers, Institute of Electrical and Electronics Engineers, and American National Standards Institute to verify that the recommendations for repairing or replacing were informed and accurate. In addition, the contractor used Megger equipment to carry out the insulation resistance tests to verify insulation in the transformers. The final test report included a description of the testing equipment used and the tests that were conducted on the individual components, which included voltage protection relays, current transformers, voltage transformers, battery sets, battery tripping units, switchgears, and cables, of the electrical system.

Government Quality Assurance

Engineering Regulation 1110-1-12 specify requirements for a Government quality assurance program. The BIA Air Side Power Supply to NAVAIDS and VISAIDS project was to evaluate an electrical distribution system that did not include any construction. The USACE Project Engineer stated that due to the project not involving construction, quality assurance reports were not required. The Project Engineer reviewed the contractor's submitted items, which included the interim, draft, and final PDRs; the electrical schematic diagram; the final test report; the substation summary sheets; the substation test results; the electrical system photos; and the ROM estimates. In addition, the Project Engineer stated that the electrical distribution system project is the interpretation of the test results, finding solutions and alternatives, and pricing. Since most of this is office work, there was not much to check except to make sure the contractor provides acceptable submittals.

Project Sustainability

A review of the contract file, the site visit, and discussions with the USACE Project Engineer disclosed no sustainability issues associated with the project. The project was to evaluate an electrical distribution system that did not include any construction. Since this project did not include a construction component and was limited to the testing and evaluation of the electrical system at the airport, there was no specialized equipment provided by the contract, nor was there a need for any maintenance manuals.

Conclusions.

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

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

   The objective for the project was to define the scope and costs of future construction activities required to provide reliable power to the medium voltage electrical network, special equipment to be installed during upcoming aviation projects, and other critical aviation infrastructure at the Basrah International Airport. The completed interim and final Preliminary Design Reports were sufficiently complete and detailed to meet the stated objectives.

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

   This project was the preliminary design for the rehabilitation of the medium voltage electrical system and did not include any construction or installation of equipment. The project included the evaluation of the medium voltage electrical system at the Basrah International Airport, recommendations for replacement or repair, and determination of estimated costs for the recommendations. This project was the design for medium voltage and NAVAIDs projects at the airport. The review of the interim, draft, and final preliminary design report shows the submitted reports are consistent with the contract requirements. The PDRs, associated photos, test data, and schematics should be detailed and specific enough to guide future contracting actions.

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

   This project was a preliminary design for the rehabilitation of the medium voltage electrical system and did not include any construction or installation of equipment. Therefore, determination whether construction met the standards of the design was not evaluated during this assessment.

4. Determine whether the Contractor's Quality Control plan and the Government Quality Assurance Program were adequate.

   The contractor was to submit a quality control plan, a safety plan, a security plan, manufacturer drawings, calibration certificates, testing and inspection reports, contractor and manufacturer fabrication drawings and calculations, and an interim, draft and final PDR. In addition, the contractor was to submit the manufacturer information, training manuals, training procedures, and environmental protection procedures. Since the project was an evaluation of an electrical distribution system that did not include any construction, the contractor did not submit a quality control plan, safety plan, security plan, manufacturer drawings, calibration certificates, contractor and manufacturer fabrication drawings, manufacturer's information, training manuals, training procedures, or environmental protection procedures. The contractor submitted the testing and inspection reports and the interim, draft, and final PDRs.

   Engineering Regulation 1110-1-12 specify requirements for a Government quality assurance program. The BIA Air Side Power Supply to NAVAIDS and VISAIDS project was to evaluate an electrical distribution system that did not include any construction. The USACE Project Engineer stated that due to the project not involving construction, quality assurance reports were not required. The Project

Engineer reviewed the contractor's submitted items, which included the interim, draft, and final PDRs; the electrical schematic diagram; the final test report; the substation summary sheets; the substation test results; the electrical system photos; and the ROM estimates. In addition, the Project Engineer stated that the electrical distribution system project is the interpretation of the test results, finding solutions and alternatives, and pricing. Since most of this is office work there is not much to check except to make sure the contractor provides acceptable submittals.

Based upon a review of the contract, the contractor and the Government quality assurance program were performed to the extent possible for the BIA Air Side Power Supply to NAVAIDS and VISAIDS project.

5. Determine if project sustainability was addressed.

The project was to evaluate an electrical distribution system and did not include any construction components. In addition, the project was limited to the testing and evaluation of the electrical system at the airport; there was no specialized equipment provided by the contract, nor was there a need for any maintenance manuals. Therefore, sustainability was not an issue.

Recommendations.

This report does not contain any negative findings or recommendations for corrective action. Therefore, management comments are not required.

Management Comments.

The Gulf Region Division-Project and Contracting Office concurred with the conclusions contained in the report.

Evaluation of Management Comments.

No additional comment required.

Appendix A. Scope and Methodology

We performed this project assessment from February through June 2006, in accordance with the Quality Standards for Inspections issued by the President's Council on Integrity and Efficiency. The assessment team included a professional engineer and an auditor. In performing this Project Assessment we:

- Reviewed contract documentation to include the following: Contract, Contract documentation, and Statement of Work;
- Reviewed the design package (drawings and specifications), Quality Control Plan, Contractor's Quality Control Reports, Testing Reports, and Quality Assurance Reports;
- Interviewed the U.S. Army Corps of Engineers Project Engineer, and the Project and the Regional Aviation Consultant for the Iraq Reconstruction Management Office; and
- Conducted an on-site assessment and documented results at the Basrah International Airport in Basrah, Iraq.

Appendix B. Acronyms

AGL	aviation ground lighting
BIA	Basrah International Airport
GRS	Gulf Region South
ICAO	International Civil Aviation Organization
kV	kilovolt
kVA	kilovolt-amp
MV	medium voltage
NAVAIDs	navigational aids
PDR	preliminary design report
ROM	rough order magnitude
S	substation
SOW	Scope of Work
USACE	United States Army Corps of Engineers
VISAIDs	visual aids

Appendix C. Report Distribution

Department of State

Secretary of State
    Senior Advisor to the Secretary and Coordinator for Iraq
U.S. Ambassador to Iraq
    Director, Iraq Reconstruction Management Office
Inspector General, Department of State

Department of Defense

Deputy Secretary of Defense
    Director, Defense Reconstruction Support Office
Under Secretary of Defense (Comptroller)/Chief Financial Officer
    Deputy Chief Financial Officer
    Deputy Comptroller (Program/Budget)
Inspector General, Department of Defense

Department of the Army

Assistant Secretary of the Army for Acquisition, Logistics, and Technology
    Principal Deputy to the Assistant Secretary of the Army for Acquisition, Logistics, and Technology
    Deputy Assistant Secretary of the Army (Policy and Procurement)
    Director, Project and Contracting Office
    Commanding General, Joint Contracting Command – Iraq/Afghanistan
    Commander, Gulf Region Division, U.S. Army Corps of Engineers
Assistant Secretary of the Army for Financial Management and Comptroller
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 Defense Organizations

Director, Defense Contract Audit Agency

Other Federal Government Organizations

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Inspector General, Department of the Treasury
Inspector General, Department of Commerce
Inspector General, Health and Human Services
Inspector General, U.S. Agency for International Development

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- Subcommittee on Defense
- Subcommittee on Foreign Operations

Senate Committee on Armed Services
Senate Committee on Foreign Relations
- Subcommittee on Near Eastern and South Asian Affairs
- Subcommittee on International Operations and Terrorism

Senate Committee on Homeland Security and Governmental Affairs
- Subcommittee on Government Efficiency and Financial Management
- Subcommittee on Financial Management, the Budget, and International Security

U.S. House of Representatives

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House Committee on Armed Services
House Committee on International Relations
- Subcommittee on Middle East and Central Asia

House Committee on Government Reform
- Subcommittee on Government Efficiency and Financial Management
- Subcommittee on National Security, Emerging Threats and International Relations

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:

Michael Stanka, P.E.

Angelina Johnston