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Closeout Report
Kandahar Helmand Power Project (KHPP)
COMPONENT 6 SUBCOMPONENT 3
Support for Installation and Commissioning of Unit
2 at the Kajaki Dam Hydro Power Plant



Submitted by: Black & Veatch Special Projects Corporation (BVSPC)
Federal Services Division
Kandahar Helmand Power Project (KHPP)
USAID Contract Number 306-C-00-11-00506-00

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| Document # (if applicable) | Description (Note: The Section references below are the BVSPC-USAID Contract sections wherein specific deliverable requirements are located.) | Status | In Closeout Package? |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------------|
| a-01 | Contract Closeout Procedures Manual (CCPM). | Complete | Yes |
| a-02 | Security Plan [Section F.4.B(A)] - Site Specific. | Complete | Yes |
| a-03 | Implementation Plan - Work Plan (Section F.4.B-B). | Complete | Yes |
| a-04 | Health and Safety Plan and Procedures (Section C.4.6; Section F.4.B-C). | Complete | Yes |
| a-04_a | Demining Reports. | Complete | Yes |
| a-05 | Quality Control Plan (Section C.4.5; Section F.4.B-C). | Complete | Yes |
| a-06 | Warranty Administration Plan (Section C.4.11; FAR 52.246.21). | Complete | Yes |
| a-07 | Construction Manual (Section C.4.10) (Kajaki Project Execution Plan). | Complete | Yes, see d-06 |
| a-08 | Construction Schedule/Final Schedule (Section C.4.10; Section F.4.B-C) - Component Specific. | Complete | Yes; see d-05 and a-08 |
| a-09 | Photo Album. | Complete | Yes |
| a-10 | Small Business Utilization Subcontracting Plan (Section H.23; Section J - Attachment 19; FAR 52.219-8). | Complete | Yes |
| a-11 | Operations and Maintenance Manuals (Section C.4.11; Section F.4.B-C). | Not Applicable | N/A |
| a-12 | Performance Monitoring and Evaluation Plan - each contract component, as stipulated by COR (Section C.4.13). | Not Applicable | N/A |
| a-13 | Branding Implementation Plan (Section F.4 B, C; Section D.2). | Complete | Yes |
| a-14 | Environmental Plan (Section H.16). | Complete | Yes |
| a-15 | Environmental Compliance Documentation Schedule (Section H.16). | Complete | Yes |
| a-16 | Environmental Closeout Report (Section H.16) - Site Specific. | Complete | Yes |
| a-17 | Environmental Reports (Section F.4.B-C) -- Annual Reports until Mod 10 (16 Feb 2013), and then Quarterly Reports | Complete | Yes |
| a-18 | Weekly Highlight Report (Section F.4.B-B). | Complete | Yes |
| a-19 | Short Term Report - STTA Trip Reports (Section F.4.B-B) - Site Specific. | Complete | Yes |
| a-20 | Design Submittals (Section F.4.B-C) - Site Specific. | Complete | Yes, see d-07 |



| Document # (if applicable) | Description (Note: The Section references below are the BVSPC-USAID Contract sections wherein specific deliverable requirements are located.) | Status | In Closeout Package? |
|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------|
| a-21 | Inspection and Equipment Test Reports (Section F.4.B-C) - Site Specific. | Not Applicable | N/A |
| a-22 | Concrete Strength tests: Steel reinforcements test reports (Section F.4.B-C) - Site Specific. | Complete | Yes |
| a-23 | Testing and Commissioning Report (Section F.4.B-C) - Site Specific. | Not Applicable | N/A |
| a-24 | As-built Construction Drawings (Section C.4.11; Section F.4.B-C) - Site Specific. | Not Applicable | N/A |
| a-25 | Training Reports - Component Specific. | Complete | Yes |
| a-26 | Demining Reports – site specific. | Complete | Yes |
| a-27 | Final Closeout Report (Section C.4.11; Section F.4.B-C). | Complete | Yes |
| Deliverables for Subcomponent 6.3: Support for Installation and Commissioning of Kajaki Unit 2 (Section F.4.A) | | | |
| d-01 | Provide security for the Kajaki Dam site and maintenance of camp facilities. | Complete | Yes |
| d-02 | Provide on-call technical support for Units 1 and 3 and the switchyard. On-call support includes procurement for emergency repairs which can be supported within the existing total estimated cost plus fixed fee and as approved by the COR. | Complete | Yes |
| d-03 | Completion report on repairing the 93 kVA hydroelectric unit. | Complete | Yes |
| d-04 | Inventory management software installed on DABS computers at Kajaki. | Complete | Yes |
| d-05 | Construction Schedule submitted. | Complete | Yes |
| d-06 | Mobilization Plan. | Complete | Yes |
| d-07 | Plan for handover of all Government Furnished Equipment (GFE), GFE documentation (Revised Unit 2 GFE Assessment Report), and additional Unit 2 related engineering and design work performed under the KHPP contract (d-07 Add'l Engineering + Design). | Complete | Yes |
| d-08 | Plan for partial turnover of camp facilities and equipment to DABS for support of the USACE Contractor for the SEPS Helmand transmission line. | Complete | Yes, see d-07 |
| d-09_1 | Kajaki Camp Upgrade - Expat House Building. | Complete | Yes |
| d-09_2 | Kajaki Camp Upgrade - Low voltage system servicing camp. | Complete | Yes |
| d-09_3 | Kajaki Camp Upgrade - Warehouse. | Complete | Yes |
| d-09_4 | Kajaki Camp Upgrade - GFE laydown yard. | Complete | Yes |
| d-09_5 | Kajaki Camp Upgrade - Heavy fencing and security gates of the camp. | Complete | Yes |
| d-09_6 | Kajaki Camp Upgrade - Main road through camp. | Complete | Yes |
| d-09_7 | Kajaki Camp Upgrade - Irrigation pipe repairs. | Complete | Yes |
| d-09_8 | Kajaki Camp Upgrade - Camp nonpotable water filtration system. | Complete | Yes |
| d-10 | Upgrade and repair the overhead crane as needed within the Kajaki Powerhouse and certify the crane. | Complete | Yes |



| Document # (if applicable) | Description (Note: The Section references below are the BVSPC-USAID Contract sections wherein specific deliverable requirements are located.) | Status | In Closeout Package? |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------|
| d-11 | Procure and certify a mobile crane capable of providing lifting capacity for the GFE located on the Kajaki Dam camp site. | Complete | Yes |
| d-12 | BVSPC Tender for the installation and commissioning of Kajaki Unit 2. | Complete | Yes |
| d-13 | Minutes and select presentations from the Kajaki Unit 2 Information Transfer Workshop – 11 to 15 December 2013. | Complete | Yes |
| c-05 | Procurement Matrix which indicates Closeout Status of Subcontract/Purchase Order. | Complete | Yes |
| g-06 | USAID Final Disposition Instructions. | Complete | Yes |
| g-07 | Complete and Submit Handover/Disposal documents to USAID. | Complete | Yes, see g-06 |
| m-01a | SUBSTANTIAL COMPLETION: 1) Certificate of Substantial Completion with Schedule of Defects (if applicable). | Complete | Yes |
| m-01b | FINAL INSPECTION AND ACCEPTANCE: 1) Final Punch List (if applicable). 2) Final Completion and Acceptance Certificate (FCA). 3) Bilateral Agreement Document | Complete | Yes |
| m-01c | WARRANTY PERIOD & FINAL WARRANTY INSPECTION: 1) Warranty Certificate | Complete | Yes |
| m-02 | Prime Contract original signed copy in files KC. | Complete | Yes |
| m-03 | Copy of all Fully Executed Prime Contract Modifications and Change Orders in electronic folder. | Complete | Yes |
| m-04 | USAID Closing Statement Letter + BV Response Letter. | Not received from USAID | N/A |
| m-05 | Copy of Closeout Documentation - List of closeout documents handed over/uploaded to USAID. | Complete | Yes |

1 KANDAHAR HELMAND POWER PROJECT (KHPP) OVERVIEW

1.1 KHPP Background

The purpose of the Kandahar Helmand Power Project (KHPP) contract, issued by the United States Agency for International Development (USAID) on 09 December 2010, was to increase the supply and reliability of electrical power in the areas in southern Afghanistan served by the South East Power System (SEPS), particularly the City of Kandahar. The contract was to support the SEPS reconstruction and thereby increase the quality of life of people in Kandahar and Helmand Provinces. The KHPP contract was conceived as a critical component of the United States (US) government's Counterinsurgency (COIN) strategy in southern Afghanistan. KHPP is a part of a larger US government sponsored program involving multiple USAID Implementers, the US Army Corps of Engineers (USACE), and other Donors to improve the SEPS and connect it with other electrical grids in Afghanistan.

A reliable sustainable electric power generation, transmission, and distribution system in Kandahar and Helmand Provinces is an important objective of the Government of the Islamic Republic of Afghanistan (GIROA). The system is expected to fuel economic growth not currently possible, especially in Kandahar City, the second largest city in Afghanistan, and a center for education, health care, manufacturing, and transportation. Kandahar City has an electrical supply shortfall of at least 40 megawatt (MW) for its approximately 850,000 residents.

SEPS as a system is composed of multiple generation islands, aged transmission lines, and multiple distribution systems in southern Afghanistan serving 380,000 of the 1.7 million people residing in the region. Diesel generator sets and the Kajaki Hydroelectric Power Plant (HPP) provide the majority of the electric power generation in the system. The 222 kilometer (km) SEPS transmission system operates at 110 kilovolts (kV), medium voltage distribution at 20 kV, and low voltage distribution at 400 volts (V). Kandahar City represents the largest power demand node within SEPS.

The Kajaki HPP was the first significant generation source installed in SEPS. Supported by the US government, Kajaki HPP came online in the mid-1970s. Prior to execution of the KHPP contract, power arrived in Kandahar City through one aged 25 megavolt amperage (MVA) transformer located at the Kandahar Breshna Kot (BK) Substation. USAID began rehabilitation of the Kajaki HPP in 2003. At present, Kajaki HPP provides (at peak production) 32 MW (at high water periods), with 12 MW of power serving Kandahar City and 20 MW of power transmitted to the remaining distribution nodes served by the SEPS transmission backbone.

USAID facilitated the installation of fourteen (14) KTA-50 diesel generators at the BK Substation in late 2003 to supplement generation for Kandahar City during the Kajaki HPP rehabilitation. In 2008, five (5) additional diesel generators owned by Da Afghanistan Breshna Moasessa (now known as Da Afghanistan Breshna Sherkat, or

DABS) were installed at BK. This installation was done to increase short term generation capacity, as the rehabilitation efforts at Kajaki HPP had been prolonged due to continued insurgent activities and, the Kandahar City power supply was taking on increasing importance in International Security Assistance Forces' (ISAFs) counter-insurgency strategy in the area.

As of this report date, the BK Substation diesel generators have a combined generating capacity of 20.5 MW at peak due to new units either provided or installed by USAID. These units consist of the 10.5 MW MTU units, 5 MW of aged derated KTA-50 units, and 5 MW provided by aged derated QSK-60 units. The new 10.5 MW MTU units were installed and commissioned under the KHPP contract.

1.2 KHPP Summary of Scope of Work

The KHPP scope of work initially contained six (6) Components with ten (10) Subcomponents, outlined below which, integrated with other work on SEPS, were designed with the purpose of increasing and improving the sustainability and reliability of electric supply provided by the SEPS:

Component 1. Improve Kandahar Power Distribution System

- Subcomponent 1: Replace the Kandahar Breshna Kot Substation.
- Subcomponent 2: Refurbish Kandahar City Medium Voltage (MV) Distribution System.
- Subcomponent 3: Construct a new Kandahar East Substation to (1) enhance the reliability of the system serving Kandahar, and (2) serve as a receiving point for an expected link between the SEPS and the North East Power System (NEPS), which is Afghanistan's major source of lower cost imported power from the Central Asian Republics).
- Subcomponent 4: Construct a transmission line between the Kandahar Breshna Kot Substation and the new Kandahar East Substation.
- Subcomponent 5: Replacement of Aged Diesel Generators at the Breshna Kot Substation.

Component 2. Build Durai Junction Substation

- Subcomponent 1: Build a new Substation at Durai Junction.
- Subcomponent 2: Procure equipment for additional Substations.

Component 3. Program Support and Program Management

Component 4. Transportation, Installation, Operation and Maintenance of Kandahar (also known as Shorandam) Industrial Park Diesel Power Plant (also known as SIPD)

Component 5. Rebuild the Kajaki Dam Substation and Local Distribution System

Component 6. Installation and Commission Kajaki Unit 2

- Subcomponent 1: Perform inventory assessment of Government Furnished Equipment (GFE).
- Subcomponent 2: Repair GFE, provide missing and additional new equipment for completing Kajaki Unit 2 installation.
- Subcomponent 3: Install and commission Kajaki Unit 2.

USAID issued the KHPP contract to Black & Veatch Special Projects Corporation (BVSPC) to provide engineering, procurement, construction, and all material, equipment and/or services necessary to successfully complete each of the Components and Subcomponents in accordance with the requirements of the contract.

BVSPC was tasked with developing appropriate engineering design and construction methodologies, as well as be responsible for procurement, design, construction, quality control, and testing and commissioning. BVSPC was also to provide relevant warranties for each Component and Subcomponent and the support services needed to implement those activities (security, life support, ground and air movements, etc.). One of the key deliverables of the KHPP was the sustainability of the infrastructure being developed. Drawing from previous operation and maintenance (O&M) training programs that BVSPC implemented on behalf of USAID through the Afghanistan Infrastructure Rehabilitation Program (AIRP), BVSPC was required to recommend and, in most instances, implement the training and skills development needed to sustain the efforts undertaken in this contract. In addition, BVSPC was to provide spare parts inventory necessary for DABS to perform the required operation and maintenance (O&M) of installed equipment in each Component and its Subcomponent. These recommendations were, in select instances, to be submitted to USAID prior to initiation of the respective subcomponent, and were to be based on the BVSPC assessment of the capability and intent of the recipient to execute required O&M functions.

The security situation in the southern region of Afghanistan changed as KHPP was implemented. While Regional Command Southwest and the U.S. Marines achieved substantial success in clearing the Upper Sangin Valley in late 2011, thus enabling BVSPC to execute the first contractor convoy to Kajaki in several years, the region was impacted by significant increases in anti-government activity in 2011 to 2012 as the GIRoA, with ISAF support, increasingly imposed GIRoA control over the region. As a result, companies and organizations willing to work in the region significantly increased their pricing to accommodate higher risk and security costs by increasing their “risk premium” with their standard pricing. In addition, commodity costs and construction costs increased more rapidly than expected within Afghanistan during 2011. The unexpected cost increases impacted all implementing agencies from BVSPC to USACE and diminished the collective capability of all agencies involved to meet initial objectives.

Recognizing that budgets would not allow delivery of all Components and Subcomponents, USAID, in concert with Regional Command South, reviewed the KHPP program in mid-2011 to determine what adjustments could be made to retain core program objectives aligned with COIN strategy while cutting projected costs. This review resulted in the realignment and descoping of select project activities. The net result was the descoping of Subcomponents 1.3, construction of a new Kandahar East Substation and Subsection 1.4, construction of a transmission line between the Kandahar BK Substation and the new Kandahar East Substation, with the intent to transfer these activities to USAID’s Power Transmission Expansion and Connectivity (PTEC) program then in development. In addition the scope of Subcomponent 1.2 was adjusted to eliminate planned additional connections to the Kandahar distribution system, thereby avoiding potential “negative COIN impact” until such time as additional sustainable non-diesel based generation could be brought to bear to supply additional customers (Kajaki Unit 2 and the NEPS to SEPS connection to bring lower cost imported hydropower).

The elimination of the Substation at Kandahar East and the transmission line was accompanied by a realignment of Subcomponent 1.5, the placement of 14 MTU generators, representing 21 MW of installed capacity at the Kandahar East location. With the implementation of the diesel power “bridging solution” in Kandahar City by US Forces Afghanistan, which added two (2) 10 MW diesel plants in early 2011 operating in separate island modes and, increasing concern regarding the sustainability of additional diesel generation within Kandahar City, the installation of the 14 MTU units was suspended until USAID could further assess the situation. Following the adjustment of KHPP scope, all six (6) original Components remained in the contract, but with the original ten (10) Subcomponents reduced to eight (8).

1.3 KHPP Contract Evolution

Table 1 lists a history of the changes which have occurred in the Prime Contract between BVSPC and USAID as the needs and demands evolved due to changing ground conditions in order to maximize benefits to the people of Afghanistan.

Table 1: History of Changes in USAID Contract No. 306-C-00-11-00506-00

| Contract | Date | Description |
|--------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Initial Contract Award | 09 Dec 2010 | This contract will support USAID-Afghanistan Mission’s Kandahar Power Initiative (KPI). |
| Contract Modification 01 | 17 Feb 2011 | The purpose of this modification was to add the following in Section H: Special Provisions/Special Contract Requirements to the listed contract as follows: <ul style="list-style-type: none"> • Use of Synchronized Pre-deployment and Operational Tracker (SPOT) for Contractors Supporting a Diplomatic or Consular Mission outside the United States (Supplement to FAR 52.225-19). • Serious Incident Reporting in Afghanistan. • Gender Integration Requirements. |

| Contract | Date | Description |
|------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contract Modification 02 | 17 Mar 2011 | The purposes of this modification were to: <ul style="list-style-type: none"> • Revise Section B.5: Indirect Cost based on BVSPC latest approved Negotiated Indirect Cost Rate Agreement (NICRA) for FY2010. • Revise Section H.22: Consent to Subcontracts to incorporate the approved Subcontracting Plan dated 28 February 2011. • Change the project name from “Kandahar Power Initiative (KPI)” to “Kandahar Helmand Power Project (KHPP).” |
| Contract Modification 03 | 27 Jun 2011 | The purposes of this modification were to: <ul style="list-style-type: none"> • Incorporate the following clause: <i>The Contractor shall comply with and adhere to all USAID Afghanistan Implementing Partner Notices. Copies of the notices are provided to implementing partners at the time of issuance. Copies are also available upon request from your Cognizant Contracting Officer.</i> • Remind the Contractor of the recently issued Implementing Partner Notice No. OAA-IP- 2011 – 004, which incorporates Mission Order No. 201.04 entitled, "National Security Screening (Non-US Party vetting)." |
| Contract Modification 04 | 17 Jul 2011 | The purposes of this modification were to: <ul style="list-style-type: none"> • Incorporate no cost changes in Sections C and F. • Incorporate the FAR Clause 52.209-9 under PART II – CONTRACT CLAUSES. SECTION I – CONTRACT CLAUSES. |
| Contract Modification 05 | 19 Jul 2011 | The purpose of this modification was to provide funding in the amount of [REDACTED], thereby bringing the total obligated amount to [REDACTED]. |
| Partial Suspension of Work | 09 Aug 2011 | Partial suspension of work affecting: <ul style="list-style-type: none"> • Subcomponent 1.3 • Subcomponent 1.4 • Subcomponent 1.5 • Component 4 |
| Change Order – Scope of Work | 08 Sep 2011 | SOW changes affecting: <ul style="list-style-type: none"> • Subcomponent 1.3 • Subcomponent 1.4 • Subcomponent 1.5 • Component 4 |
| Change Order – Amendment 01 | 20 Sep 2011 | Changes affecting: <ul style="list-style-type: none"> • Subcomponent 1.3 |
| Change Order – Amendment 02 | 22 Sep 2011 | Changes affecting: <ul style="list-style-type: none"> • Subcomponent 1.5 - Diesel Generators |
| Change Order – Amendment 03 | 01 Oct 2011 | Changes affecting: <ul style="list-style-type: none"> • Subcomponent 1.5 – Diesel Generators • Extension of the Submission Deadline |
| Change Order – Amendment 04 | 13 Oct 2011 | Changes affecting: <ul style="list-style-type: none"> • Subcomponent 1.5 – Diesel Generators |
| Change Order – Amendment 05 | 16 Oct 2011 | Changes affecting: <ul style="list-style-type: none"> • Subcomponent 1.5 – Diesel Generators |

| Contract | Date | Description |
|------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Change Order – Amendment 06 | 22 Oct 2011 | Changes affecting: <ul style="list-style-type: none"> • Subcomponent 1.5 – Diesel Generators |
| Contract Modification 06 | 12 Nov 2011 | The purposes of this modification were to: <ul style="list-style-type: none"> • Provide incremental funding in the amount of [REDACTED], thereby increasing the total obligated amount from [REDACTED] to [REDACTED]. • Revise Section B.5: Indirect Cost based on BVSPC's approved provisional rates for FY2011. • Revise Sections C, F and J. |
| Partial Notice to Proceed | 15 Dec 2011 | Partial notice to proceed with work affecting: <ul style="list-style-type: none"> • Subcomponent 6.2 • Subcomponent 6.3 |
| Full Notice to Proceed | 18 January 2012 | Full notice to proceed with work affecting: <ul style="list-style-type: none"> • Subcomponent 6.2 • Subcomponent 6.3 |
| Change Order – Scope of Work | 06 Feb 2012 | Statement of work (SOW) changes affecting: <ul style="list-style-type: none"> • Subcomponent 1.1 • Subcomponent 1.5 |
| Contract Modification 07 | 26 Sep 2012 | The purposes of this modification were to: <ul style="list-style-type: none"> • Provide incremental funding in the amount of [REDACTED], thereby increasing the total obligated amount from [REDACTED] to [REDACTED]. • Modify PART I-THE SCHEDULE I. SECTION B-SUPPLIES OR SERVICES AND PRICE/COSTS, paragraph (c). |
| Contract Modification 08 | 29 Sep 2012 | The purposes of this modification were to: <ul style="list-style-type: none"> • Provide incremental funding in the amount of [REDACTED], thereby increasing the total obligated amount from [REDACTED] to [REDACTED]. • Modify PART I-THE SCHEDULE I. SECTION B-SUPPLIES OR SERVICES AND PRICE/COSTS, paragraph (c). |
| Contract Modification 09 | 30 Sep 2012 | The purposes of this modification were to: <ul style="list-style-type: none"> • Correction to Modification 8 to provide incremental funding in the amount of [REDACTED], thereby decreasing the total obligated amount from [REDACTED] to [REDACTED]. • Provide incremental funding in the amount of [REDACTED], thereby increasing the total obligated amount from [REDACTED] to [REDACTED]. |
| Partial Suspension of Work | 28 Jan 2013 | Partial suspension of work affecting: <ul style="list-style-type: none"> • Subcomponent 6.3 |
| Contract Modification 10 | 14 Feb 2013 | The purposes of this modification were to revise Sections B, C, F, H, I, and J and contract attachment. |
| Contract Modification 11 | 30 Sep 2013 | The purposes of this modification were to extend the period of performance from 30 September 2013 to 31 December 2013, revise budgets, and to clarify deliverables in multiple sections. |
| Contract Modification 12 | 29 Dec 2013 | The purposes of this modification were to add Subcomponent 6.4: Technical Assistance to USAID on Kajaki Unit 2 on budget implementation until 30 November 2015 and to extend all remaining Subcomponents to 28 February 2014. |
| Contract Modification 13 | 06 Aug 2014 | The purpose of this modification was to finalize agreements on fee, Durai Junction cure cost absorbed by BVSPC, applicable NICRA, and clarify Tasks and Deliverables as needed. |

| Contract | Date | Description |
|--------------------------|-------------|------------------------------------------------------------------------------------------------------|
| Contract Modification 14 | 22 Sep 2014 | Environmental considerations for generators changed from USEPA Tier 4 standards to Tier 2 standards. |

See **Attachment m-03** for the documentation listed in the table above.

The key to effectiveness throughout the implementation of the KHPP has been to maintain flexibility to meet new opportunities in order to enhance program impact as the succession of operations in southern Afghanistan evolved. In partnership with USAID, BVSPC maintained significant flexibility and made adjustments as needed and directed to deliver significant benefit to the people served by the SEPS.

1.4 KHPP Contract Coordination and Communication

At the inception of the KHPP, USAID coordinated the relationship with DABS-Kabul to maintain communication and reporting of KHPP activity and progress. BVSPC maintained communication and reporting of KHPP field activity with the DABS-Kandahar Director and his direct reports. BVSPC continued to coordinate and maintain liaison with Kandahar DABS, as well as Regional Command South (RC-S) and Regional Command Southwest (RC-SW) as requested by the COR and the USAID Onsite Managers (OSM). BVSPC worked directly with DABS in Kandahar and Helmand Provinces, throughout the implementation of the KHPP. The COP and the Transmission and Distribution Lead and Generation Lead (“Leads”) coordinated the communications with all stakeholders in Kandahar and Helmand addressing with each issues of concern as needed. The COP and COR communicated and coordinated all issues of implementation between themselves usually on a daily basis.

In order to establish USAID field presence for the project, and facilitate two-way reporting and communication, USAID designated one OSM for each of the two Regional Commands. The OSMs played a strong role in enhancing communications between all stakeholders in Kandahar and Helmand Provinces. The OSM reported to the COR, while maintaining coordination lines of communication with BVSPC Leads and Managers. The BVSPC Construction Managers and the O&M Managers, meanwhile, worked directly with their counterparts in Kandahar DABS, and also communicated mutual needs and concerns in coordination with Leads. The working relationships between BVSPC staff and the Kandahar DABS Director, senior managers, and DABS staff, in coordination with the COR and OSM, were consistently positive and productive.

2 SUBCOMPONENT 6.3 – SUPPORT FOR INSTALLATION AND COMMISSIONING OF UNIT 2 AT THE KAJAKI HYDRO POWER PLANT

2.1 Objectives

The original overall objective of Component 6 was to install and commission the Unit 2 turbine at the Kajaki Hydroelectric Power Plant (HPP) at the Kajaki Dam. The

implementation of Component 6 was divided into three (3) phases. The objective of the first phase, Subcomponent 6.1, was to assess the Kajaki HPP Unit 2 Government Furnished Equipment (GFE) which had been transported to Kajaki Dam camp by the British military in Operation “Eagle’s Summit” in September 2008. The objective of the second phase, Subcomponent 6.2, was to address the repair of GFE and provide missing and additional new equipment for completing Unit 2 Installation. The objectives of the third phase, Subcomponent 6.3, have evolved substantially over the period of the KHPP contract. The original objective of Subcomponent 6.3 was to install and commission Kajaki Unit 2, as shown in Table 2. Following a request by the Government of Afghanistan and, at an advanced stage of installation subcontract award, USAID initiated a decision to transfer Kajaki Unit 2 implementation to the national electric utility, Da Afghanistan Breshna Sherkat (DABS) as an “on budget” National Priority Project. Subcomponent 6.3 objectives then changed to those listed below:

1. Performing a Unit 2 GFE joint inventory carried out by BVSPC, DABS, and IRD-EQUALS (on behalf of USAID) for inventory handover to DABS.
2. Upgrading the Kajaki Dam camp site as directed by USAID for the follow-on Contractor.
3. Supporting and facilitating handover of Unit 2 implementation to DABS and their Prime Contractor.

2.2 Kajaki HPP History

In the early 1970s, USAID, in cooperation with the Government of Afghanistan, funded the construction of the Kajaki Hydro Power Plant (HPP) and, completed the installation and commissioning of two 16.5 MW hydroelectric turbine generating units in 1975. The powerhouse was designed to house three (3) units. When the powerhouse was built, Units 1 and 3 (16.5 MW each) were installed and commissioned, and a vacant, unimproved “skeleton” bay for the future erection of Unit 2 was provided. After almost 35 years of continuous service to the people of southern Afghanistan, USAID funded the rehabilitation of Units 1 and 3 between 2004 and 2009. Although this work did not include upgrades to controls, switchgear, metering, and protection, the rehabilitation successfully restored the units to their installed capacities.

In January 2005, the USAID Prime Contractor, the Louis Berger Group, awarded a subcontract to China Machine-Building International Corporation (CMIC) for the design, manufacturing, and erection of an 18.5 MW hydroelectric turbine generator to be installed as Unit 2 at Kajaki HPP Powerhouse. The CMIC subcontract also provided for supply and installation of remaining control, switchgear, metering, and protection systems for Units 1 and 3 not performed during the units’ previous rehabilitation. The CMIC subcontract also included supply and installation of certain upgrades and replacement of common powerhouse equipment required due to the increased total power output of the station with the installation of Unit 2. The Unit 2 components and associated upgrade components were manufactured by various Chinese manufacturers and delivered by CMIC to Afghanistan.

Delivery of components began in the summer of 2006 and continued through 2008. Delivery was difficult due to the non-permissive environment created by anti-government elements along Route 611 to Kajaki. Some components were airlifted to the site; many larger components were delivered by a British military convoy in September 2008, known as Operation “Eagle’s Summit.” Due to lack of warehouse space at Kajaki HPP, the Unit 2 components, as well as other CMIC equipment supplied, were placed in storage under tarpaulins and inside shipping containers, and remained stored in this manner at the time the KHPP contract was issued. Initial site preparation and civil work for the installation of Unit 2 commenced in March 2008 with a small construction crew from CMIC. In November 2008, the Chinese Government ordered all Chinese contractors, including CMIC, to withdraw from Afghanistan citing security concerns. CMIC employees withdrew from the Kajaki work site later that month without performing any significant work.

The KHPP contract required BVSPC to complete the Kajaki Unit 2 project initiated by the Louis Berger Group and CMIC, starting with the equipment and materials delivered to the Kajaki HPP. As the RFP for the KHPP contract stated, “All components of the Unit 2 turbine generator installation, upgrades for Units 1 and 3, common equipment upgrades, improvements to Tangi Substation, and spare parts are now believed to be onsite.” Limited inventory of this equipment had been made by the Louis Berger – Black & Veatch Joint Venture (JV) under USAID’s Afghanistan Infrastructure Rehabilitation Program (AIRP) within which Louis Berger Group was responsible for Kajaki rehabilitation. This inventory was limited primarily due to JV not possessing the CMIC shipping bills of quantity; these bills were missing or never provided. USAID provided this limited inventory information to the BVSPC as a GFE Inventory List.

BVSPC was required by contract to complete Subcomponent 6.1 prior to receiving notice to proceed from USAID to implement Subcomponents 6.2 and 6.3. BVSPC received Full Notice to Proceed with Subcomponents 6.2 and 6.3 (USAID Letter No. OAA-BVSPC-2012-00010) on 18 January 2012. BVSPC immediately proceeded with requirements to prepare a Request for Proposals (RFP) for the installation and commissioning of Kajaki Unit 2, which is detailed below under Section 3: Project Execution.

During a protracted period of deliberation by USAID Washington leadership, President Karzai requested that the project be handed over to the Afghan Government for implementation as an “on-budget” funded National Priority Project in January 2013. Pursuant to this request, as noted in Section 2.1, USAID initiated a decision to transfer Kajaki Unit 2 implementation to DABS and, on 28 January 2013, USAID issued a Partial Suspension of Work notice to BVSPC on Subcomponent 6.3 to suspend further efforts in implementing the installation and commissioning of Kajaki Unit 2. (USAID Letter No. OAA-BVSPC-2013-00008, **Attachment m-03**, 20130128 Partial Suspension of Work). The suspension notice continued the implementation of select tasks under

Subcomponent 6.3, which included site security, on-call technical support to DABS, and the completion of in-progress Kajaki site upgrades.

As the needs for transition to DABS further become realized and subsequent to the Partial Suspension of Work, USAID directed (through Modifications in the Prime Contract) BVSPC to focus on the following tasks (as partially noted in Section 2.1):

1. Perform a Unit 2 GFE joint inventory by BVSPC, DABS, and IRD-EQUALS (on behalf of USAID) for inventory handover to DABS.
2. Confirm inventory results and have all parties sign a Protocol indicating the acceptance of results. Ensure DABS staff at Kajaki is trained on inventory evaluation and records maintenance within this process.
3. Given inventory completion, undertake inventory protection measures to the extent available storage facilities allow. (Refer to The Final GFE Assessment Report, as amended 05 February 2014, provided as **Attachment d-07**, and the report related to the recommended inventory control and protection procedures which are also provided as part of **Attachment d-07** of the closeout package.)
4. Upgrade Kajaki Dam camp support facilities, including:
 - The warehouse which had been partially rebuilt previously to enhance storage capability and protection for electrical equipment provided by CMIC for Kajaki upgrade.
 - The laydown yard, including grading, gravel base and fencing for additional security of Unit 2 equipment.
 - The “Expat House,” the camp low voltage system, and the camp heavy perimeter security fencing and entry control point gates.
 - The main road through the camp to support all Unit 2 construction vehicles.
 - Repairing leaks in the irrigation pipe which traverses the camp and caused road erosion.
 - The camp nonpotable water filtration system.
 - The overhead crane in the powerhouse, including having the crane re-certified for safe use.
 - Procure a safe and certified mobile crane of at least 60 tons capacity and transport to Kajaki.
5. Supporting and facilitate the handover of Unit 2 implementation to DABS and their prime Contractor. This support included:
 - Timely response to multiple Requests for Information (RFI) from DABS and their Prime Contractor through USAID.
 - Development and implementation of an Information Transfer Workshop staged in Dubai, which will be addressed below under Section 3: Project Execution.

BVSPC continued to provide site security, camp maintenance, and logistical support at Kajaki Dam while the above tasks were being implemented.

2.3 Subcomponent 6.3: Tasks and Deliverables Modifications and Change Order History

Table 2 lists USAID Task (Contract Section C) and Deliverables (Contract Section F) modifications to Subcomponent 6.3 to date. The final Tasks and resulting Deliverables agreed upon between USAID and BVSPC described in the following modifications and change orders are shown in **bold** within Table 2.

Table 2: Subcomponent 6.3 – USAID Contract Modification History

| Source & Date | Tasks | Change & Date |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| Original Contract 09 Dec 2010 | Task i: Provide security of the Kajaki Dam site and maintenance of camp facilities. Phased replacement with existing Contractor shall begin no later than 15 April 2011. | |
| USAID Full Notice to Proceed Letter 18 Jan 2012 | USAID issues Full Notice to Proceed (NTP) for Subcomponent 6.3. | SOW change 28 Jan 2013 |
| Partial Suspension of Work Letter 28 Jan 2013 | Task i: Provide security for the Kajaki Dam site and maintenance of camp facilities. | Delete and replace 14 Feb 2013 |
| Contract Modification 10 14 Feb 2013 | Task i: Provide security of the Kajaki Dam site and maintenance of camp facilities. Phased replacement with existing Contractor shall begin no later than 15 April 2011. | Delete and replace; however, no change 30 Sep 2013 |
| Contract Modification 11 30 Sep 2013 | Task i: Provide security for the Kajaki Dam site and maintenance of camp facilities. Phased replacement with existing Contractor must begin no later than 15 April 2011. | |
| Original Contract 09 Dec 2010 | Task ii: Provide on-call technical support for Units 1 and 3 and the switchyard. | SOW change 29 Feb 2012 |
| Request for Proposal - Contract Modification 07 29 Feb 2012 | Task ii: Provide on-call technical support for Units 1 and 3 and the switchyard. On-call support includes procurement for emergent repairs which can be supported within the existing total estimated cost plus fixed fee and as approved by the Contracting Officer's Representative (COR). | Delete and replace 14 Feb 2013 |
| Contract Modification 10 14 Feb 2013 | Task ii: Provide on-call technical support for Units 1 and 3 and the switchyard. On-call support includes procurement for emergency repairs which can be supported within the existing total estimated cost plus fixed fee and as approved by the COR. | Delete and replace; however, no change 30 Sep 2013 |
| Contract Modification 11 30 Sep 2013 | Task ii: Provide on-call technical support for Units 1 and 3 and the switchyard. On-call support includes procurement for emergency repairs that can be supported within the existing total estimated cost plus fixed fee and as approved by the COR. | |
| Original Contract 09 Dec 2010 | Task iii: Provide training classes for DABS staff (detailed in Attachment 10 – Section GS-9). | SOW change 29 Feb 2012 |

| Source & Date | Tasks | Change & Date |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Request for Proposal-Contract Modification 07 29 Feb 2012 | Task iii: Provide training classes for DABS staff (detailed in Attachment 10 – Section GS-9). The Contractor shall videotape all classroom training. Provide videotape copies to DABS and USAID. | Partial suspension 28 Jan 2013 |
| Partial Suspension of Work letter 28 Jan 2013 | Task iii: Task 3 suspended via USAID letter. | Delete and replace 14 Feb 2013 |
| Contract Modification 10 14 Feb 2013 | Task iii: Provide training classes for DABS staff (detailed in Attachment 10 - Section GS-9). The Contractor must videotape all classroom training and provide videotape copies to DABS and USAID. In addition to the requirements of Attachment 10, provide training of DABS personnel in inventory management for maintenance supplies and critical spare parts using a system for inventory management which DABS Kandahar agrees can be maintained by Kajaki plant staff in the future. Provide and install this software on DABS computers onsite. | Delete and replace 30 Sep 2013 |
| Contract Modification 11 30 Sep 2013 | Task iii: Provide training of DABS personnel in inventory management for maintenance supplies and critical spare parts using a system for inventory management which DABS Kandahar agrees can be maintained by Kajaki plant staff in the future. | |
| Original Contract 09 Dec 2010 | Task iv: Install, test, and commission Kajaki Unit 2 as detailed in Attachment 10: Unit 2 Technical Document. | SOW change 29 Feb 2012 |
| Request for Proposal-Contract Modification 07 dated 29 Feb 2012 | Task iv: Design as required, install, test, and commission Kajaki Unit 2 as detailed in Attachment 10: Unit 2 Technical Document. | Partial suspension 28 Jan 2013 |
| Partial Suspension of Work letter 28 Jan 2013 | Task iv: Task 4 suspended via USAID letter. | Delete and replace 14 Feb 2013 |
| Contract Modification 10 14 Feb 2013 | Task iv: Design as required, install, test, and commission Kajaki Unit 2 as detailed in Attachment 10: Unit 2 Technical Document. | Delete and replace 30 Sep 2013 |

| Source & Date | Tasks | Change & Date |
|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| <p>Contract Modification 11 30 Sep 2013</p> | <p>Task iv: The Contractor must submit a mobilization plan to support the installation of Unit 2 if given notice to proceed with installation. At a minimum, the mobilization plan must contain the following:</p> <ul style="list-style-type: none"> (a) Earliest start time for construction. (b) Identification of long lead time items (independent of those being assessed, e.g., batch plant, crane, heavy civil construction items, etc.) required for construction. (c) Procurement schedule for long lead items for delivery to the Kajaki work site. (d) Earliest time wheeled vehicles will need access to Kajaki Dam. (e) Estimated number and frequency of convoys needed, number and type of vehicle in each convoy, and time intervals between convoys. (f) Quantity of materials and list of equipment needed to be taken to Kajaki Dam by wheeled vehicle. <p>The Contractor must coordinate the final construction schedule with USAID, International Security Assistance Force (ISAF), and Da Afghanistan Breshna Sherkat (DABS).</p> | |
| <p>Original Contract 09 Dec 2010</p> | <p>Task v: No task v in the contract; goes from iv to vi.</p> | <p>Task v added 14 Feb 2013</p> |
| <p>Contract Modification 10 14 Feb 2013</p> | <p>Task v: The Contractor must submit a mobilization plan. At a minimum, the mobilization plan must contain the following:</p> <ul style="list-style-type: none"> (a) Earliest start time for construction. (b) Identification of long lead time items (independent of those being assessed, e.g., batch plant, crane, heavy civil construction items, etc.) required for construction. (c) Procurement schedule for long lead items for delivery to the Kajaki work site. (d) Earliest time wheeled vehicles will need access to Kajaki Dam. (e) Estimated number and frequency of convoys needed, number and type of vehicle in each convoy, and time intervals between convoys. (f) Quantity of materials and list of equipment needed to be taken to Kajaki Dam by wheeled vehicle. <p>Contractor must coordinate the final construction schedule with USAID, ISAF, and DABS.</p> | <p>Delete and replace 30 Sep 2013</p> |
| <p>Contract Modification 11 30 Sep 2013</p> | <p>Task v: Provide technical assistance and procurement support to DABS in repairing the 93 kVA micro-hydroelectric unit at Kajaki Dam to improve black start reliability for the Kajaki Hydro Power Plant. Provide a completion report in accordance with Section F. Notify the COR if the cost of repair exceeds [REDACTED].</p> | |

| Source & Date | Tasks | Change & Date |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Original Contract 09 Dec 2010 | <p>vi. The Contractor shall submit a mobilization plan. At a minimum, the mobilization plan shall contain the following:</p> <ul style="list-style-type: none"> a. Earliest start time for construction. b. Identification of long lead time items (independent of those being assessed, e.g., batch plant, crane, heavy civil construction items, etc.) required for construction. c. Procurement schedule for long lead time items that delivers those items to the Regional Camp (Component 3) for staging and later transit as early as practicable to the Kajaki work site. d. Earliest time wheeled vehicles will need access to Kajakai Dam. <p>b. Estimated number and frequency of convoys needed, number and type of vehicle in each convoy, and time intervals between convoys.</p> <ul style="list-style-type: none"> a. Quantity of materials and list of equipment needed to be taken to Kajakai Dam by wheeled vehicle. <p>Contractor shall coordinate the final construction schedule with USAID, ISAF, and DABS. Notice to proceed for construction will not be issued until final construction schedule is determined.</p> | SOW change 29 Feb 2012 |
| Request for Proposal-Contract Modification 07 dated 29 Feb 2012 | <p>vi. The Contractor must submit a mobilization plan. At a minimum, the mobilization plan must contain the following:</p> <ul style="list-style-type: none"> a. Earliest start time for construction. b. Identification of long lead time items (independent of those being assessed, e.g., batch plant, crane, heavy civil construction items, etc.) required for construction. c. Procurement schedule for long lead time items for delivery to the Kajaki work site. d. Earliest time wheeled vehicles will need access to Kajakai Dam. <p>b. Estimated number and frequency of convoys needed, number and type of vehicle in each convoy, and time intervals between convoys.</p> <ul style="list-style-type: none"> c. Quantity of materials and list of equipment needed to be taken to Kajakai Dam by wheeled vehicle. d. Contractor shall coordinate the final construction schedule with USAID, ISAF, and DABS. | Partial suspension 28 Jan 2013 |
| Partial Suspension of Work letter 28 Jan 2013 | Task vi: This work was NOT suspended by USAID Partial Suspension of Work Letter. | Delete and replace 14 Feb 2013 |
| Contract Modification 10 14 Feb 2013 | Task vi: Provide technical assistance and procurement support to DABS in repairing the 93 KVA micro-hydroelectric unit at Kajaki Dam to improve black start reliability for the Kajaki Hydro Power Plant. Provide completion report in accordance with Section F. Notify the COR if the cost of repair exceeds [REDACTED]. | Delete and replace 30 Sep 2013 |

| Source & Date | Tasks | Change & Date |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| <p>Contract Modification 11 30 Sep 2013</p> | <p>Task vi: Provide upgrades to the following Kajaki Dam camp components and facilities as approved by the COR:</p> <ul style="list-style-type: none"> a. Expat House. b. Low voltage system. c. Warehouse. d. GFE laydown yard. e. Heavy perimeter fencing and entry control point gates. f. Main road through camp. g. Irrigation piping. h. Camp nonpotable water filtration system. | |
| <p>Contract Modification 10 14 Feb 2013</p> | <p>Task vii: Conduct a basic construction skills apprenticeship training program. The program should leverage the skills and experience of onsite Contractor personnel. Candidates for the program must be selected from among the local labor force supporting the Contractor, in coordination with DABS and local elders. The number of apprentices at any given time should not exceed ten (10) in order to maximize training quality and to prevent interference with Unit 2 installation activity. Provide skills testing before and after training to measure skills attainment.</p> | <p>Delete and replace 30 Sep 2013</p> |
| <p>Contract Modification 11 30 Sep 2013</p> | <p>Task vii: Provide the following upgrades to the Kajaki Dam Powerhouse as approved by the COR:</p> <ul style="list-style-type: none"> a. Repair and certification of overhead crane. b. Internet access for Kajaki Powerhouse for use and ultimate support by DABS. | |
| <p>Contract Modification 10 14 Feb 2013</p> | <p>Task viii: Provide on-call technical support to USAID and/or Afghan government personnel as required to monitor Kajaki reservoir levels. Such support may include training Afghan government personnel in monitoring methods.</p> | <p>Delete and replace 30 Sep 2013</p> |
| <p>Contract Modification 11 30 Sep 2013</p> | <p>Task viii: Procure and certify a mobile crane capable of handling all GFE components to include generator step-up transformers.</p> | |
| <p>Contract Modification 11 30 Sep 2013</p> | <p>Task ix: Transfer all GFE, GFE documentation, and additional Unit 2 related engineering and design work performed under the KHPP contract to USAID in preparation for DABS assuming responsibility for Unit 2 installation. Conduct appropriate training of DABS staff in inventory management, and provide technical support as directed by USAID to facilitate GFE inventory documentation and assumption of responsibility by DABS. Submit a proposed plan to the COR that includes recommended measures for inventory control, inventory protection, and appropriate training for DABS staff to successfully receive and maintain care and custody of all Unit 2 GFE and associated documentation. Inventory protection measures must be based on a potential 3 year mothball period.</p> | |
| <p>Contract Modification 13 06 Aug 2014</p> | <p>Task x: Conduct a technical workshop in December 2013 with representatives from USAID, DABS, DABS' contractor GFA Consulting Ltd, and BVSPC to facilitate technical handover of the project to install and commission Kajaki Unit 2.</p> | |

| Source & Date | Tasks | Change & Date |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Contract Modification 13 06 Aug 2014 | Task xi: Review and update the Contractor's Final Kajaki Dam Unit 2 Hydro Inventory and Condition Assessment Report previously provided under Subcomponent 6.1, and conduct a joint inventory of Unit 2 Government Furnished Equipment (GFE) with DABS and USAID or USAID's designee. Update all relevant technical information in the initial report issued 31 January 2012. | |
| Source & Date | Deliverables | Change & Date |
| Original Contract 09 Dec 2010 | Deliverable 1: Systems commissioned – Not to Exceed (NTE) months after NTP. | Delete and replace 14 Feb 2013 |
| Contract Modification 10 14 Feb 2013 | Deliverable 1: Systems commissioned wherein systems refer to Unit 2 and common control systems for Units 1, 2 and 3. - 31 December 2014. | Delete and replace 30 Sep 2013 |
| Contract Modification 11 30 Sep 2013 | Deliverable 1: Provide security for the Kajaki Dam site and maintenance of camp facilities. - From contract NTP to 31 December 2013 | |
| Original Contract 09 Dec 2010 | Deliverable 2: Security and maintenance of camp facilities provided. | Delete and replace 14 Feb 2013 |
| Contract Modification 10 14 Feb 2013 | Deliverable 2: Security and maintenance of camp facilities provided – from contract NTP. | Delete and replace 30 Sep 2013 |
| Contract Modification 11 30 Sep 2013 | Deliverable 2: Provide on-call technical support for Units 1 and 3 and the switchyard. On-call support includes procurement for emergency repairs which can be supported within the existing total estimated cost plus fixed fee and as approved by the COR. - from contract NTP to 30 September 2013. | |
| Original Contract 09 Dec 2010 | Deliverable 3: Provide on-call technical support for Units 1 and 3 and the switchyard. | Delete and replace 14 Feb 2013 |
| Contract Modification 10 14 Feb 2013 | Deliverable 3: Provide on-call technical support for Units 1 and 3 and the switchyard - from contract NTP. | Delete and replace 30 Sep 2013 |
| Contract Modification 11 30 Sep 2013 | Deliverable 3: Completion report on repairing the 93 kVA hydroelectric unit - 01 December 2013. | |
| Original Contract 09 Dec 2010 | Deliverable 4: Training of DABS staff - Training Plan NLT 4 months after NTP. | Delete and replace 14 Feb 2013 |
| Contract Modification 10 14 Feb 2013 | Deliverable 4: Written curriculum on Hydro Power & Industry Specific Training (see Attachment 10, Section GS-9) - 60 days from Component 6, subcomponent NTP. | Delete and replace 30 Sep 2013 |
| Contract Modification 11 30 Sep 2013 | Deliverable 4: Inventory management software installed on DABS computers at Kajaki - 90 days prior to completion of the contract. | |

| Source & Date | Tasks | Change & Date | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------------------|--------------------------|------------|-----------------------------------------------|--------------------------|------------|------------------------|--------------------------|------------|------------------------------|--------------------------|------------|---------------------------------------------------------|--------------------------|------------|------------------------------------|--------------------------|------------|--------------------------------------|--------------------------|------------|-------------------------------------------------------|------------------------|--|
| Original Contract 09 Dec 2010 | Deliverable 5: Construction Schedule submitted – 60 days following NTP. | Delete and replace 14 Feb 2013 | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract Modification 10 14 Feb 2013 | Deliverable 5: Training of DABS staff, including videotapes of Hydro power & Industry Specific Training - Training Plan - no later than (NLT) 4 months after NTP (training detailed in Attachment 10 - Section GS-9 and Component 6, Subcomponent 3, Task iii). Videotapes – upon completion of each course. | Delete and replace 30 Sep 2013 | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract Modification 11 30 Sep 2013 | Deliverable 5: Construction Schedule submitted - 60 days following NTP on Unit 2 installation. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Original Contract 09 Dec 2010 | Deliverable 6: Mobilization Plan – 15 days following NTP. | Delete and replace 14 Feb 2013 | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract Modification 10 14 Feb 2013 | Deliverable 6: Completion report on repairing the 93 kVA hydroelectric unit – 01 December 2013. | Delete and Replace 30 Sep 2013 | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract Modification 11 30 Sep 2013 | Deliverable 6: mobilization Plan - 15 days following NTP on Unit 2 installation. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract Modification 10 14 Feb 2013 | Deliverable 7: Training Schedule and curriculum for basic construction skills training program. - NLT 60 days following mobilization of Unit 2 Subcontractor. | Delete and replace 30 Sep 2013 | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract Modification 11 30 Sep 2013 | Deliverable 7: Plan for handover of all GFE, GFE documentation, and additional Unit 2 related engineering and design work performed under the KHPP contract - 24 February 2013. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract Modification 10 14 Feb 2013 | Deliverable 8: Completion report on construction skills training – prior to Unit 2 Commission. | Delete and replace 30 Sep 2013 | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract Modification 11 30 Sep 2013 | Deliverable 8: Plan for partial turnover of camp facilities and equipment to DABS for support of the USACE Contractor for the SEPS Helmand transmission line. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract Modification 10 14 Feb 2013 | Deliverable 9: Inventory management software installed on DABS computers at Kajaki – 90 days prior to completion of contract. | Delete and replace 30 Sep 2013 | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract Modification 11 30 Sep 2013 | <p>Deliverable 9: Upgrade the Kajaki Dam Camp, including:</p> <table border="1"> <tbody> <tr> <td>9.1</td> <td>i. Expat House building.</td> <td>30 September 2013</td> </tr> <tr> <td>9.2</td> <td>ii. Low voltage system servicing camp.</td> <td>30 September 2013</td> </tr> <tr> <td>9.3</td> <td>iii. Warehouse.</td> <td>30 September 2013</td> </tr> <tr> <td>9.4</td> <td>iv. GFE Laydown yard.</td> <td>30 September 2013</td> </tr> <tr> <td>9.5</td> <td>v. Heavy fencing and security gates of the camp.</td> <td>30 September 2013</td> </tr> <tr> <td>9.6</td> <td>vi. Main road through camp.</td> <td>30 September 2013</td> </tr> <tr> <td>9.7</td> <td>vii. Irrigation pipe repairs.</td> <td>30 September 2013</td> </tr> <tr> <td>9.8</td> <td>viii. Camp nonpotable water filtration system.</td> <td>31 October 2013</td> </tr> </tbody> </table> | 9.1 | i. Expat House building. | 30 September 2013 | 9.2 | ii. Low voltage system servicing camp. | 30 September 2013 | 9.3 | iii. Warehouse. | 30 September 2013 | 9.4 | iv. GFE Laydown yard. | 30 September 2013 | 9.5 | v. Heavy fencing and security gates of the camp. | 30 September 2013 | 9.6 | vi. Main road through camp. | 30 September 2013 | 9.7 | vii. Irrigation pipe repairs. | 30 September 2013 | 9.8 | viii. Camp nonpotable water filtration system. | 31 October 2013 | |
| 9.1 | i. Expat House building. | 30 September 2013 | | | | | | | | | | | | | | | | | | | | | | | | |
| 9.2 | ii. Low voltage system servicing camp. | 30 September 2013 | | | | | | | | | | | | | | | | | | | | | | | | |
| 9.3 | iii. Warehouse. | 30 September 2013 | | | | | | | | | | | | | | | | | | | | | | | | |
| 9.4 | iv. GFE Laydown yard. | 30 September 2013 | | | | | | | | | | | | | | | | | | | | | | | | |
| 9.5 | v. Heavy fencing and security gates of the camp. | 30 September 2013 | | | | | | | | | | | | | | | | | | | | | | | | |
| 9.6 | vi. Main road through camp. | 30 September 2013 | | | | | | | | | | | | | | | | | | | | | | | | |
| 9.7 | vii. Irrigation pipe repairs. | 30 September 2013 | | | | | | | | | | | | | | | | | | | | | | | | |
| 9.8 | viii. Camp nonpotable water filtration system. | 31 October 2013 | | | | | | | | | | | | | | | | | | | | | | | | |

| Source & Date | Tasks | Change & Date |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Contract Modification 10 14 Feb 2013 | Deliverable 10: Construction Schedule submitted – 60 days following NTP. | Delete and replace 30 Sep 2013 |
| Contract Modification 11 30 Sep 2013 | Deliverable 10: Upgrade and repair the overhead crane as needed within the Kajaki Powerhouse and certify the crane – 31 October 2013. | |
| Contract Modification 10 14 Feb 2013 | Deliverable 11: Mobilization Plan – 15 days following NTP. | Delete and replace 30 Sep 2013 |
| Contract Modification 11 30 Sep 2013 | Deliverable 11: Procure and certify a mobile crane capable of providing lifting capacity for the GFE located on the Kajaki Dam Camp site. – 31 October 2013. | |
| Contract Modification 13 06 Aug 2014 | Deliverable 12: Update Final Kajaki Dam Unit 2 Hydro Inventory and Condition Assessment Report | |
| B – Subcomponent 6.3: Specific Reports | | |
| Original Contract 09 Dec 2010 | Construction Schedule (note specific requirements exist for Components 5 & 6) - Schedule showing mobilization, construction, demobilization, commissioning, and O&M start dates. Contractor identified milestones to be added. | Delete and replace 14 Feb 2013 |
| Contract Modification 10 14 Feb 2013 | Construction Schedule (note specific requirements exist for Component 6) - Level 1 (program) and Level 2 (project) schedules; 3-week “Look Ahead” schedule. | |
| Original Contract 09 Dec 2010 | Component 6: Head-cover bolts and spiral case pressure test - Prior to installation per Attachment 10, Unit 2 Technical Documents, Section GS-3.1.A.4. | Delete and replace 14 Feb 2013 |
| Contract Modification 10 14 Feb 2013 | Component 6: Head-cover bolts and spiral case pressure test - See Attachment 10, Unit 2 Technical Documents, Section GS-3.1 A.4. | Deleted 30 Sep 2013 |
| Contract Modification 11 30 Sep 2013 | DELETE Component 6: Head-cover bolts and spiral case pressure test - See attachment 10, Unit 2 Technical Documents, Section GS-3.1 A.4. | Deleted 30 Sep 2013 |
| Original Contract 09 Dec 2010 | Component 6: Index Tests - Index test results including relative efficiency at GFE guaranteed points; estimated turbine characteristics; efficiency and output verification test results. | Delete and replace 14 Feb 2013 |
| Contract Modification 10 14 Feb 2013 | Component 6: Index Tests - Index test results including relative efficiency at GFE guaranteed points; estimated turbine characteristics; efficiency and output verification test results. | Deleted 06 Aug 2014 |
| Contract Modification 13 06 Aug 2014 | DELETE Component 6: Index Tests - Index test results including relative efficiency at GFE guaranteed points; estimated turbine characteristics; efficiency and output verification test results. | |
| Original Contract 09 Dec 2010 | Component 6: Report on estimated pressure rise at full load rejection - Implications and results of a full load rejection by Unit 2. | Delete and replace 14 Feb 2013 |

| Source & Date | Tasks | Change & Date |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Contract Modification 10 14 Feb 2013 | Component 6: Report on estimated pressure rise at full load rejection - Implications and results of a full load rejection by Unit 2. | Deleted 30 Sep 2013 |
| Contract Modification 11 30 Sep 2013 | DELETE Component 6: Report on estimated pressure rise at full load rejection - Implications and results of a full load rejection by Unit 2. | |

2.4 Deliverables

Deliverables under Subcomponent 6.3 changed significantly when BVSPC received the 28 January 2013 Partial Suspension of Work for Component 6. Tables 3 and 4 list completion dates and status, respectively, for the contract deliverables applicable to Component 6.3 in Contract Modification 11.

Table 3: Subcomponent 6.3 – Contract Deliverables Scheduled and Achieved Dates

| Item | Deliverable | Mod 11 Schedule | Achieved Date |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|-----------------------------|
| 1. | Provide security for the Kajaki Dam site and maintenance of camp facilities. | From Contract NTP to 31 December 2013 | Ongoing to 31 December 2013 |
| 2. | Provide on-call technical support for Units 1 and 3 and the switchyard. On-call support includes procurement for emergency repairs which can be supported within the existing total estimated cost plus fixed fee and as approved by the COR. | From Contract NTP to 30 September 2013 | 30 September 2013 |
| 3. | Completion report on repairing the 93 kVA hydroelectric unit. | 01 December 2013 | April 2013 |
| 4. | Inventory management software installed on DABS computers at Kajaki. | 90 days prior to completion of contract | April 2013 |
| 5. | Construction Schedule submitted. | 60 days following NTP of Unit 2 installation | 08 June 2012 |
| 6. | Mobilization Plan. | 15 days following NTP on Unit 2 installation | 06 February 2012 |
| 7. | Plan for handover of all GFE, GFE documentation, and additional Unit 2 related engineering and design work performed under the KHPP contract. | 24 February 2013 | 24 February 2013 |



| Item | Deliverable | Mod 11 Schedule | Achieved Date |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------|
| | A joint inventory by KHPP, DABS, and USAID's quality control implementer was undertaken from August to September 2013 under the above deliverable. The Final GFE Assessment Report produced under Subcomponent 6.1 was amended to incorporate both confirmed joint inventory results and updated engineering and design information. The amended report was filed with USAID as Amended 05 February 2014. | 05 February 2014 | 05 February 2014 |
| 8. | Plan for partial turnover of camp facilities and equipment to DABS for support of the USACE Contractor for the SEPS Helmand transmission line. | 24 February 2013 | 24 February 2013 |
| 9. | Upgrade the Kajaki Dam camp, including: | | |
| 9.1 | i. Expat House. | 30 September 2013 | 30 September 2013 |
| 9.2 | ii. Low voltage system servicing camp. | 30 September 2013 | 30 September 2013 |
| 9.3 | iii. Warehouse. | 30 September 2013 | 30 September 2013 |
| 9.4 | iv. GFE laydown yard. | 30 September 2013 | 15 November 2013 |
| 9.5 | v. Heavy fencing and security gates of the camp. | 30 September 2013 | 30 September 2013 |
| 9.6 | vi. Main road through camp. | 30 September 2013 | 30 September 2013 |
| 9.7 | vii. Irrigation Pipe Repairs. | 30 September 2013 | 30 September 2013 |
| 9.8 | viii. Camp nonpotable water filtration system. | 15 October 2013 | 01 November 2013 |
| 10. | Upgrade and repair the overhead crane as needed within the Kajaki Powerhouse and certify the crane. | 15 October 2013 | 28 October 2013 |
| 11. | Procure and certify a mobile crane capable of providing lifting capacity for the GFE located on the Kajaki Dam camp site. | 15 October 2013 | 23 December 2013 – Crane Certification; 27 December 2013 – Purchase & Transfer to DABS |
| 12. | Update Final Kajaki Dam Unit 2 Hydro Inventory and Condition Assessment Report (see Task xi) | 28 February 2014 | 06 February 2014 |

Deliverables and schedule dates taken from Schedule of Deliverables of Contract Modification 13.

Table 4 lists the deliverables applicable to Component 6.3, the method by which their delivery was verified, and the location in the appendices of Deliverable documentation.

Table 4: Subcomponent 6.3 – Contract Deliverables Status

| No. | DELIVERABLE | METHOD OF VERIFICATION | STATUS | ATTACH. |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------|---------|
| 1. | Provide security for the Kajaki Dam site and maintenance of camp facilities. | Site inspections and document review | Complete | d-01 |
| 2. | Provide on-call technical support for Units 1 and 3 and the switchyard. On-call support includes procurement for emergency repairs which can be supported within the existing total estimated cost plus fixed fee and as approved by the COR. | Site inspections and document review | Complete | d-02 |
| 3. | Completion report on repairing the 93 kVA hydroelectric unit. | Site inspections and document review | Complete | d-03 |
| 4. | Inventory management software installed on DABS computers at Kajaki. | Site inspections and document review | Complete | d-04 |
| 5. | Construction Schedule submitted. | Review of schedule | Complete | d-05 |
| 6. | Mobilization Plan. | Review of plans, schedule and charts | Complete | d-06 |
| 7. | Plan for handover of all GFE, GFE documentation, and additional Unit 2 related engineering and design work performed under the KHPP contract. | Document and plan review | Complete | d-07 |
| 8. | Plan for partial turnover of camp facilities and equipment to DABS for support of the USACE Contractor for the SEPS Helmand transmission line. | Document review | Complete | d-08 |
| 9. | Upgrade the Kajaki Dam Camp including: | | | |
| 9.1 | Expat House Building. | By plan approved by COR | Complete | d-09_1 |
| 9.2 | Low voltage system servicing camp. | By plan approved by COR | Complete | d-09_2 |
| 9.3 | Warehouse. | By plan approved by COR | Complete | d-09_3 |
| 9.4 | GFE Laydown yard. | By plan approved by COR | Complete | d-09_4 |
| 9.5 | Heavy fencing and security gates of the camp. | By plan approved by COR | Complete | d-09_5 |
| 9.6 | Main road through camp. | By plan approved by COR | Complete | d-09_6 |
| 9.7 | Irrigation pipe repairs. | By plan approved by COR | Complete | d-09_7 |
| 9.8 | Camp nonpotable water filtration system. | By plan approved by COR | Complete | d-09_8 |

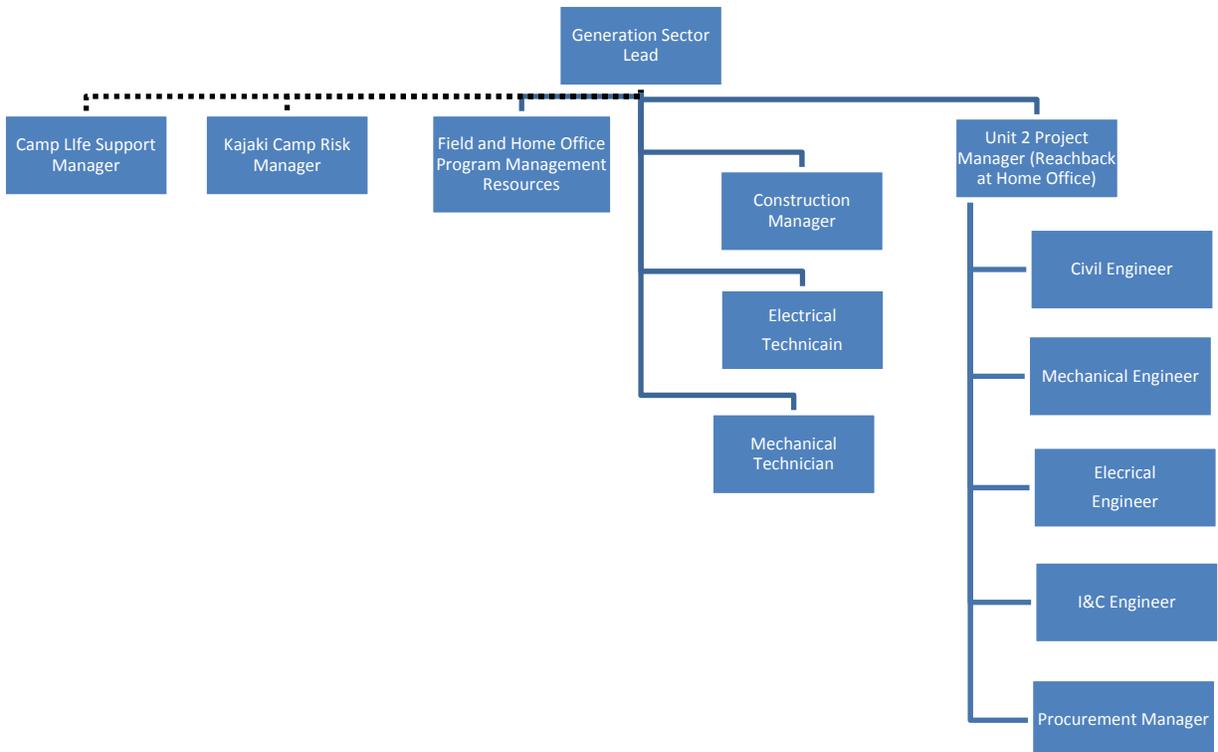
| No. | DELIVERABLE | METHOD OF VERIFICATION | STATUS | ATTACH. |
|-----|---------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------|---------|
| 10. | Upgrade and repair the overhead crane as needed within the Kajaki Powerhouse and certify the crane. | Document Review of Certification | Complete | d-10 |
| 11. | Procure and certify a mobile crane capable of providing lifting capacity for the GFE located on the Kajaki Dam camp site. | Document Review of Certification | Complete | d-11 |
| 12. | Update Final Kajaki Dam Unit 2 Hydro Inventory and Condition Assessment Report | Document Review | Complete | d-12 |

Deliverables and verification taken from Schedule of Deliverables of Contract Modification 13.

3 PROJECT EXECUTION

3.1 Organizational Structure and Management Details

The staff organizational chart for KHPP Subcomponent 6.3 is shown below (*the complete chain of command for the KHPP is provided in the closeout report for Component 3*).



3.1.1 Generation Sector Lead

The Generation Sector Lead was based at the Kajaki Dam Camp during the performance and completion of Subcomponent 6.3. The Sector Lead delegated complete authority for Subcomponent 6.3 implementation of Kajaki Dam camp-related activities to the Construction Manager. The Generation Sector Lead remained responsible for all related subcontract management, client coordination and reporting, correspondence, invoice approval, mobilization of personnel, approval of home office personnel applied to Subcomponent 6.3 and other project management activities in coordination with KHPP Program Management. The primary individuals responsible for this position included John Marks, Les Zotzman, and Cristian Susnoschi-Luca.

3.1.2 Construction Manager

The Construction Manager (CM) was responsible for the implementation of all works at Kajaki Dam Camp. As noted in Section 2.2 above, USAID directed the majority of this work to focus on camp upgrades to prepare for the assumption of Unit 2 implementation by DABS. The CM participated in Subcontractor selection, and directed approval of design and engineering of all upgrades and oversight of delivery of all quality requirements within the scope, schedule, and budget of the subcontracts. The CM was responsible for final completion of the upgrades and approval of the acceptance of final works. The primary individuals responsible for this position included Brent Hauser and Jamal Yassien.

3.1.3 Mechanical Technician

The Mechanical Technician was critical for the performance of the work at the Kajaki Dam camp. The Mechanical Technician needed to possess the skills to assist in the management of Subcontractor work and in the oversight of the maintenance of camp facilities. In addition, the Mechanical Technician was available for on-call support for Kajaki Units 1 and 3 when required by DABS. The primary individual responsible for this position included Roger Healey.

3.1.4 Electrical Technician

The Electrical Technician played a vital role in the performance of the work at the Kajaki Dam camp. The Electrical Technician was required to possess the skills necessary to assist in the management of Subcontractor work and in the oversight of maintenance of camp facilities. In addition, the Electrical Technician was available for on-call support for Kajaki Units 1 and 3 when required by DABS. The primary individual responsible for this position included Dan Bitea.

3.1.5 Camp Life Support Manager

The Camp Life Support Manager reported to the Life Support and Air Operations Manager and was wholly responsible for operating and maintaining the Kajaki Dam camp. This position included management of all camp support staff, including kitchen, cleaning, grounds, and laundry personnel. In addition, the



Camp Life Support Manager was responsible for all food and cleaning supplies, inventory control and food ordering, as well as health and safety issues applicable to the camp operations and maintenance. The primary individuals responsible for this position included Oppies Opperman and Mirwais Zadran.

3.1.6 Kajaki Camp Risk Manager

The Camp Risk Manager was responsible for the management of all security, security personnel and security functions at the Kajaki Dam site. Responsibilities of the Kajaki Camp Risk Manager included management of both the Afghanistan Public Protection Force (APPF) guard force at the site and the Risk Management Company (RMC), which mentored the APPF at the site. The primary individuals responsible for this position included Tos Atkinson, Argus Luyt, and Bill Hardin.

3.1.7 Field and Home Office Program Management Resources

Field and Home Office Resources performed support functions throughout the duration of Subcomponent 6.3. Select engineering, subcontracting and procurement, and accounting functions and financial reviews of the project were performed both in the field at the Kandahar base camp at AMTEX Village and at the BVSPC Federal Services Division Headquarters in Overland Park, Kansas, USA.

3.1.8 Unit 2 Project Manager

The Unit 2 Project Manager was based at B&V's Overland Park, Kansas office. The Unit 2 Project Manager was responsible for the following:

- i. Oversight of the first GFE Assessment Report and subsequent review and updating of the GFE Assessment Report finalized 05 February 2014.
- ii. Specification and oversight of the procurement of long lead time equipment ordered by BVSPC.
- iii. Directing design and engineering efforts for the development of technical specifications for the Unit 2 Installation and commissioning tender and support to the Power Generation Lead.
- iv. Coordinating response and oversight of the transition of Unit 2 implementation to DABS, including the Information Transfer Workshop held 11 to 15 December 2013 in Dubai. The primary individuals responsible for this position included Bruce Duncan, Randy Boyce, and Simmie Clincy.

3.1.9 Civil Engineer

The Civil Engineer reported to the Unit 2 Project Manager and was based at B&V's Overland Park, Kansas office. The Civil Engineer was responsible for civil and structural design in support of new Unit 2 installation subcontract procurement. This role also functioned as the assistant engineering manager. The primary individuals responsible for this position included Tom Knox, Jeff Boos, and Douglas Duncan.

3.1.10 Hydro Electrical Engineer

The Hydro Electrical Engineer reported to the Unit 2 Project Manager and was based at B&V's Overland Park, Kansas office. The Hydro Electrical Engineer was responsible for electrical design and preparation of electrical technical specifications in support of new Unit 2 installation subcontract procurement. This role also functioned as the Unit 2 Project and Engineering Manager, ensuring coordination of work across the engineering disciplines. The primary individual responsible for this position included Zack Olson.

3.1.11 Hydro Instrumentation and Controls Engineer

The Hydro Instrumentation and Controls Engineer reported to the Unit 2 Project Manager and was based at B&V's Overland Park, Kansas office. The Hydro Instrumentation and Controls Engineer was responsible for control systems design and preparation of controls technical specifications in support of new Unit 2 installation subcontract procurement. The primary individual responsible for this position included Richard Taylor.

3.1.12 Hydro Mechanical Engineer

The Hydro Mechanical Engineer reported to the Unit 2 Project Manager and was based at B&V's Overland Park, Kansas office. The Hydro Mechanical Engineer was responsible for mechanical systems design and preparation of mechanical technical specifications in support of new Unit 2 installation subcontract procurement. The primary individuals responsible for this position included Thomas Spicher and Todd Briggeman.

3.1.13 Procurement Manager

The Procurement Manager reported to the Unit 2 Project Manager and was based at B&V's Overland Park, Kansas office. The Procurement Manager was responsible for developing commercial terms and conditions, preparing bid packages for new Unit 2 installation subcontract procurement, negotiating with potential Subcontractors, and providing procurement support to the Construction Manager for Kajaki Dam Camp related procurements.

3.2 Execution of Work

The implementation of the work under Subcomponent 6.3 commenced 18 January 2012 with a Full Notice to Proceed from USAID and, adjusting to changes in contract objectives, continued through 31 December 2013. This Notice to Proceed followed BVSPC's 30 August 2011 submittal to USAID of the Draft Final GFE Assessment Report under Subcomponent 6.1 and USAID review and negotiation of BVSPC's proposed project plan and cost for installation and commissioning Kajaki Unit 2.

Specific Subcomponent 6.3 tasks as finalized in Modification 13 were completed as described below. BVSPC's primary focus was the development and implementation of

tender for the installation and commissioning of Unit 2 prior to Modification 11, which incorporated the changes in objectives with the transition of the implementation of Unit 2 to DABS.

As noted above, BVSPC received a Notice to Proceed (NTP) within the current contract cost by OAA Letter, Log No. OAA-BVSPC-2012-00010, with the implementation of Subcomponents 6.2 and 6.3 on 18 January 2012. Subcomponent 6.2 addressed the need for long lead time procurement items required to implement Subcomponent 6.3. Subcomponent 6.3 was the execution of the installation and commissioning of Kajaki HPP Unit 2 and the upgrade of the control systems for Units 1 and 3 to ensure compatibility with the Unit 2 control system.

Immediately upon receipt of the NTP, BVSPC implemented the engineering and procurement actions prepared under the 15 December 2011 Partial NPT received from USAID (USAID Letter Log No. OAA-BVSPC-2011-00331). In addition, BVSPC began implementation of the development of an Engineer, Procure and Construct (EPC) tender for Unit 2 installation and commissioning while identifying potential Subcontractors which, in BVSPC's experience, possessed the inherent skills and capability to undertake the works within the challenging environment presented by the location and existing condition of Kajaki HPP. In the process of developing the tender, BVSPC undertook a very detailed assessment of the Division of Responsibility (DOR) between the potential Subcontractor and BVSPC which would best serve the implementation of the project in terms of schedule and cost. This process of tender development and review continued through the months of February, March, and April of 2012.

BVSPC sent a draft Request for Proposal (RFP) on 28 April 2012 to fifteen (15) companies believed to have the experience and skills necessary to perform the Subcontractor Scope of Work (SOW) as defined within CLIN 6 and the draft RFP. Invitations to participate in a pre-bid site review meeting and site visit from 05 May to 07 May 2012 were sent to all interested bidders based on interest derived from the 28 April 2012 release of the draft RFP. Of the bidders contacted, five (5) chose to attend the pre-bid meeting and four (4) elected to visit and assess the Kajaki HPP site. Following the pre-bid meeting, BVSPC fielded all question raised by potential bidders and provided response to all interested bidder questions. BVSPC sent Invitation to Bid Letters to fourteen (14) companies on June 01, 2012. The tender during this process had evolved in approach from an EPC to a "hybrid" EPC/Design Build tender which eliminated uncertainties facing the potential bidders regarding existing GFE and any additional engineering design required, which BVSPC would provide as needed during the installation and commissioning of Unit 2. (Refer to **Attachment b-10** for a copy of the BVSPC Tender for Unit 2 installation and commissioning.)

Bidders were requested to respond to the tender for Unit 2 installation and commissioning and specified control system upgrades to existing Units 1 and 3 by 30 June 2012. Multiple potential bidders requested an extension well before the suspense

date which was provided in order to maintain bidder interest. Tender suspense date was extended to 14 July 2012.

Five (5) of the fourteen (14) bidders responded with bids on or before the due date of 14 July 2012. All five (5) bidder proposals were reviewed and multiple communications were conducted with all bidders before establishment of the competitive range consistent with FAR 15.306. BVSPC established the competitive range with two (2) of the most highly rated proposals following communication and evaluation using criteria specified in the solicitation.

The establishment of the Competitive Range followed FAR 15.306(c) in which the Competitive Range is defined as follows: “...Based on the ratings of each proposal against all evaluation criteria, the contracting officer shall establish a competitive range comprised of all of the most highly rated proposals...”

Table 1 provides a summary which identifies bid amounts. Bidder name by country of origin has been redacted in order to protect confidential information.

Table 1: Bidding Companies, Country of Origin, and Bid Amount

| Country of Origin | Company | Bid Amount (Millions – USD) |
|-------------------|---------------------------------------|-----------------------------|
| Redacted | Redacted to maintain confidentiality. | ██████ |
| Redacted | Redacted to maintain confidentiality. | ██████ |
| Redacted | Redacted to maintain confidentiality. | ██████ |
| Redacted | Redacted to maintain confidentiality. | ██████ |
| Redacted | Redacted to maintain confidentiality. | ██████ |

Following the evaluation and scoring of the five (5) bids using criteria established in the solicitation and exclusion of three bidders in determination of the competitive range, BVSPC invited the remaining two (2) bidders to meet at BVSPC’s Dubai offices for discussions and negotiations.

The meeting with the two remaining bidders occurred from 07 through 12 August 2012. The BVSPC evaluation team and representatives of the bidders concluded discussions with a request for the remaining bidders to submit a Best and Final Proposal Revision, along with clarification of their bids incorporating any changes by 1:00 p.m. on 17 August 2012. BVSPC also requested each bidder by means of RFP Addendum No. 3, issued 11 August 2012, to incorporate pricing for switchgear, governor PLC, and generator auxiliary equipment into their Final Price Revision due 17 August 2012. (**Note:** These items were identified by BVSPC as long lead items needed for Unit 2 installation. It was determined the Subcontractor should procure the equipment both to ensure compatibility and to achieve better pricing following discussions and review.) Both bidders were also informed that, given the clarifications resulting from the meetings, their final base bid and

options, bid prices, and schedules were expected to show reductions commensurate with the reduction in uncertainties achieved during the meetings.

With USAID concurrence, two (2) members of the evaluation team traveled to the home office base of both remaining bidders during the week of 13 to 17 August 2012 to perform necessary due diligence relative to bidder home office and construction execution capability. Upon return, the due diligence team reported that home office capabilities and status of completed projects by both companies were consistent with discussions held in Dubai.

Both bidders provided their Best and Final Proposal Revision for their base bids, including option pricing for equipment procurements previously identified as purchaser provided equipment, on 17 August 2012. One bidder also provided pricing for two (2) alternative scheduling options. The BVSPC team re-scored the bidders' base bids, including option pricing for equipment using the solicitation criteria. As a result of the evaluations, an awardee was selected as providing the best value to the USG and was informed they will be proposed as the selected bidder by BVSPC to USAID. The optional bids which provided pricing for two (2) alternative schedules were assessed following completion of the final evaluation.

The selected bidder offered two alternative option prices and schedules. Alternative 1 was [REDACTED], resulting in a 1.5 month schedule reduction with an increased cost of [REDACTED] to the base bid price. (Note: Alternative 1 cost is [REDACTED]/schedule day saved.) Alternative 2 was [REDACTED], resulting in 3.5 month schedule reduction with an increased cost of [REDACTED] to the base bid price. (Note: Alternative 2 cost is [REDACTED]/schedule day saved.)

The selected bidder proposed an additional cost of [REDACTED] to reduce the schedule by one (1) month. BVSPC requested consent to proceed with the Subcontractor's Base Bid and Schedule following a risk assessment relative to the avoided cost tradeoff and a detailed review of the Base Schedule developed by BVSPC and the Base and Alternative schedules proposed by the Subcontractor.

Upon authorization from USAID, the Subcontractor statement of work was to include all construction field engineering, procurement, and construction required to complete the installation and commissioning of Unit 2 and perform specified control system upgrades to existing Units 1 and 3 at the Kajaki HPP. The Subcontractor was also to be responsible for transporting Purchaser furnished equipment from the Purchaser's Kandahar, Afghanistan storage facility, located approximately 100 kilometers from the site. In addition, the Subcontractor was to be responsible for loading the equipment from Purchaser's storage facility, transporting it to the site, unloading it at the site, and providing security during transportation.

The Firm Fixed Price Subcontract of [REDACTED] for the construction field engineering, procurement, and construction subcontract was expected to reach substantial completion 544 days from the effective date of the subcontract, with Liquidated Damages for failure to complete milestones in the agreed-upon time periods. Project completion under the base schedule proposed by the Subcontractor was 577 days. Project completion will be 31 March 2015, assuming a Notice to Proceed of 01 September 2012.

BVSPC filed with USAID a Request for Consent to proceed with the subcontract and also filed the requisite documentation required by the Vetting Support Unit to authorize utilization of the Subcontractor on 26 August 2012. USAID response was delayed due to a reconsideration of the approach USAID elected to use in implementing Unit 2 installation and commissioning. As noted above, USAID issued a Suspension of Work which stopped further BVSPC action in addressing the bid provided and the requested consent on 28 January 2013.

The following tasks were executed under Subcomponent 6.3:

Task i: *Provide security for the Kajaki Dam site and maintenance of camp facilities. Phased replacement with existing Contractor must begin no later than 15 April 2011.*

Status: COMPLETE

Security was provided at the Kajaki Dam site by BVSPC through 31 December 2013 to secure not only the Unit 2 GFE and Contractor camp, but also to protect national strategic infrastructure. The security perimeter encompassed key power and irrigation infrastructure, helicopter landing zones, and Contractor work camps and laydown areas. Security was provided by means of the Afghanistan Public Protection Force (APPF) and Mondial Risk Management Company (MRMC) under the direction of BVSPC Security. Refer to **Attachment a-02**, which provides detailed information on the Security Plan implemented at the Kajaki Dam site, including maps of the security cordon around the site. DABS staff was responsible for maintaining operations at the plant.

Task ii: *Provide on-call technical support for Units 1 and 3 and the switchyard. On-call support includes procurement for emergency repairs which can be supported within the existing total estimated cost plus fixed fee and as approved by the COR.*

Status: COMPLETE

BVSPC provided on-call technical support for Units 1 and 3 and the switchyard. On-call support included limited procurement for emergency repairs which could be supported and approved by the COR. The only emergency repair undertaken was the provision of materials and technical assistance to DABS Kajaki HPP staff in the installation of a runner cone extension on the Unit 1 turbine runner. Documentation of these repairs is included in **Attachment d-02** of the closeout package.

Task iii: *Provide training of DABS personnel in inventory management for maintenance supplies and critical spare parts using a system for inventory management which DABS Kandahar agrees can be maintained by Kajaki plant staff in the future.*

Status: COMPLETE

BVSPC provided training for DABS Kajaki HPP personnel in inventory management for maintenance of supplies and critical spare parts. The system established for inventory management was coordinated with and approved by DABS Kandahar, and can be maintained by Kajaki plant staff in the future. The DABS Inventory Management Training Report is included in **Attachment d-04** of the closeout package.

Task iv: *The Contractor must submit a mobilization plan to support the installation of Unit 2 if given notice to proceed with installation. At a minimum, the mobilization plan must contain the following:*

- a) *Earliest start time for construction.*
- b) *Identification of long lead time items (independent of those being assessed; e.g., batch plant, crane, heavy civil construction items, etc.) required for construction.*
- c) *Procurement schedule for long lead items for delivery to the Kajaki work site.*
- d) *Earliest time wheeled vehicles will need access to Kajaki Dam.*
- e) *Estimated number and frequency of convoys needed, number and type of vehicle in each convoy, and time intervals between convoys.*
- f) *Quantity of materials and list of equipment needed to be taken to Kajaki Dam by wheeled vehicle.*

The Contractor must coordinate the final construction schedule with USAID, ISAF, and DABS.

Status: COMPLETE

Task v: *Provide technical assistance and procurement support to DABS in repairing the 93 kVA micro-hydroelectric unit at Kajaki Dam to improve black start reliability for the Kajaki Hydro Power Plant. Provide a completion report in accordance with Section F. Notify the COR if the cost of repair exceeds [REDACTED].*

Status: COMPLETE

BVSPC assessed the existing 93 kVA micro-hydro unit and recommended replacement in lieu of repair. The Kajaki Micro Hydro Turbine Report is provided as **Attachment d-03** of the closeout package. As of 2014, replacement of the unit is part of planned Kajaki irrigation outlet works rehabilitation by the US Army Corps of Engineers (USACE).

Task vi: *Provide upgrades to the following Kajaki Dam camp components and facilities as approved by the COR:*

- a. *Expat House.*
- b. *Low voltage system.*
- c. *Warehouse.*
- d. *GFE laydown yard.*
- e. *Heavy perimeter fencing and entry control point gates.*
- f. *Main road through camp.*
- g. *Irrigation piping.*
- h. *Camp nonpotable water filtration system.*

Status: COMPLETE

AutoCAD Drawings and other completion documentation related to the camp improvement at Kajaki have been provided where appropriate. Simplified .pdf drawings, closeout statements, International Relief and Development (IRD) Sign-off on work completion activities, and other documents related to the completion of these tasks have been provided to USAID, and are included in **Attachment d-09** of this closeout report.

Task vii: *Provide the following upgrades to the Kajaki Dam Powerhouse as approved by the COR:*

- a. *Repair and certification of overhead crane.*
- b. *Internet access for Kajaki Powerhouse for use and ultimate support by DABS.*

Status: COMPLETE

The overhead crane has been certified, and the crane certification certificate is provided in **Attachment d-10** of the closeout package. The certification de-rates the crane from 115 to 95 tons due to the overload limit setting on the crane. During testing, the maximum weight which could be applied, lifted, and moved by the crane was 104.5 tonnes. The Safe Working Limit (“SWL”) is established at 90 percent of the maximum lift. BVSPC installed technical equipment to provide access to the internet at the Powerhouse. BVSPC provided internet service through ASIX Communications through 31 December 2013.

Task viii: *Procure and certify a mobile crane capable of handling all GFE components to include generator step-up transformers.*

Status: COMPLETE

The availability of certifiable mobile cranes proved to be a significant challenge. For reasons unknown, the crane operator raised the hoist directly into a medium voltage power line, damaging the crane, following receipt, repair, and testing of a mobile crane. (The operator immediately left the site before anyone could question his motives other than purposeful sabotage.) BVSPC then pursued multiple alternatives within the available cranes in Kandahar and Kabul.

The availability of new heavy lift mobile boom cranes in Afghanistan proved non-existent following months of searching and attempting to repair a crane to render it to a state enabling certification. BVSPC then requested USAID consent to procure a used mobile crane. Finally, on 23 December 2013, a 70 ton Zoomlion boom crane was certified with a safe work load (SWL) of between its maximum of 70 tons at a jib length of 11.6 meters to a minimum of 1 ton at a jib length of 44 meters. The certified limit of 31.5 tons at 19.6 meters was considered more than adequate to meet all needs for the lifts expected at Kajaki. Refer to **Attachment d-11** for the certificate of certification and the transfer documentation reflecting conveyance of the crane to DABS at Kajaki Dam site.

Task ix: *Transfer all GFE, GFE documentation, and additional Unit 2 related engineering and design work performed under the KHPP contract to USAID in preparation for DABS assuming responsibility for Unit 2 installation. Conduct appropriate training of DABS staff in inventory management, and provide technical support as directed by USAID to facilitate GFE inventory documentation and assumption of responsibility by DABS. Submit a proposed plan to the COR that includes recommended measures for inventory control, inventory protection, and appropriate training for DABS staff to successfully receive and maintain care and custody of all Unit 2 GFE and associated documentation. Inventory protection measures must be based on a potential three-year mothball period.*

Status: COMPLETE

BVSPC provided GFE joint (BVSPC/DABS/USAID) inventory documentation and additional Unit 2-related engineering and design work performed under the Prime Contract to USAID as DABS assumed responsibility for Unit 2 installation. Within **Attachment d-07**, “Additional Engineering and Design,” are four (4) folders which compile the design basis and additional key design efforts undertaken by BVSPC to partially fill in the majority of the gaps in design data available from CMIC on Unit 2. These folders are summarized as follows:

1. Kajaki Dam Archive Documents. This folder compiles documents which provided the starting point for BVSPC’s work. It includes original LBG tender documents for Unit 2, CMIC submittal drawings, and list of For Information Only (FIO drawings) provided to BVSPC by USAID.
2. Kajaki HPP Unit 2 Installation Tender (BVSPC). This document reflects the updated design progress incorporated into BVSPC’s tender document to perform the Unit 2 Installation subcontract.
3. BVSPC Engineering and Design Docs. This folder collects BVSPC design updates to the time of project turnover to USAID in July 2013. It includes design status documents, various design memoranda, the GFE Turnover Plan, and the set of BVSPC closeout drawings dated 7-17-2013 which indicate the status of each drawing and what design remains to be completed. This folder also includes GFE Inspection and Maintenance procedures.

4. Final Amended Unit 2 GFE Assessment Report. The final version of the BVSPC Kajaki Dam Unit 2 Hydro Inventory and Condition Assessment Report, dated 5 February 2014.

BVSPC provided technical support as directed by USAID to facilitate GFE inventory documentation and assumption of responsibility by others. BVSPC also applied, by plan approved by the COR, recommended measures for inventory control, inventory protection, and appropriate training for DABS staff to successfully receive and maintain care and custody of all Unit 2 GFE and associated documentation in implementing this project. Inventory protection measures were based on a potential 3 year “mothball” period. The report related to the recommended inventory control and protection procedures is also provided in the BVSPC Engineering and Design Docs as part of the **Attachment d-07** of the closeout package.

Task x: *Conduct a technical workshop in December 2013 with representatives from USAID, DABS, DABS’ contractor GFA Consulting Ltd, and BVSPC to facilitate technical handover of the project to install and commission Kajaki Unit 2.*

Status: COMPLETE

BVSPC conducted a Design Information Transfer Workshop involving BVSPC, USAID, DABS and GFA 11-15 December 2014 at the Park Regis Hotel in Dubai, United Arab Emirates. Given the decision to transfer responsibility for completion of the project to DABS, the objective of the workshop was to facilitate technical handover of the project by summarizing and presenting the status of all work performed by BVSPC for Kajaki Unit 2 under the Prime Contract to USAID to DABS and GFA. The workshop was a comprehensive summary of the engineering and design work, procurement activities, and site facilities improvements performed to date by BVSPC. It included a detailed description of remaining design to be completed by GFA and its subcontractors. The agenda included the following topics: Unit 2 design history; BVSPC tender for Unit 2 Installation and Commissioning; GFE assessment; project schedule; Kajaki site security transition; property transfer of GFE and camp facilities; and GFA approach to Kajaki CM-AR. The workshop was interactive and allowed for thorough question and answer sessions to allow all participants to become familiar with the project. A copy of the workshop agenda and all presentation materials was posted to project websites and distributed to all participants on memory sticks. Refer to **Attachment b-10** for minutes and select presentations from the Kajaki Unit 2 Information Transfer Workshop – 11 to 15 December 2013.

Task xi: *Review and update the Contractor’s Final Kajaki Dam Unit 2 Hydro Inventory and Condition Assessment Report previously provided under Subcomponent 6.1, and conduct a joint inventory of Unit 2 Government Furnished Equipment (GFE) with DABS and USAID or USAID’s designee. Update all relevant technical information in the initial report issued 31 January 2012.*

Status: COMPLETE

BVSPC conducted a joint GFE inventory at Kajaki HPP with DABS and IRD EQUALS, USAID’s designee, in August 2013. BVSPC provided technical support as directed by USAID to facilitate GFE inventory documentation and assumption of responsibility by others. This joint GFE Inventory documentation is presented in **Attachment g-06**. BVSPC frequently reviewed and updated the BVSPC Kajaki Dam Unit 2 Hydro Inventory and Condition Assessment Report throughout 2013 to incorporate the findings of the joint GFE inventory, changes in GFE status due to BVSPC’s procurement of selected long lead time GFE, relevant technical information from additional design work performed by BVSPC since the initial report was issued 31 January 2012. The Final Amended Kajaki Dam Unit 2 Hydro Inventory and Condition Assessment Report, dated 5 February 2014, is located in **Attachment d-12**.

3.3 Subcontracts and Major Procurements

Multiple subcontracts were executed as part of this contract subcomponent. All subcontracts followed the Afghan First policy and, when appropriate skills could be located, subcontracts were awarded to Afghan companies. The major subcontracts awarded within Subcomponent 6.3 are listed in Table 5 below and in detail within **Attachment c-05**, Procurement Matrix for Subcomponent 6.3.

Table 5: Subcomponent 6.3 – Major Procurement Activities

| File Number | Subcontract/Procurement | Awardee | Award Completion date | Total Value |
|--------------|-------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------------|-------------|
| KJHD.78.1322 | Kajaki Camp Upgrade: Expat House, Warehouse Roof Repairs and Nonpotable Water Filtration System | E&G Group/Erector Construction and Road Building Company | 28 May 2012 | ██████████ |
| KJHD.73.0209 | Kajaki Camp Upgrade: Low Voltage System | Power Land Construction Company | 05 Nov 2013 | ██████████ |
| KJHD.78.2011 | Kajaki Camp Upgrade; Warehouse | Power Land Construction Company | 23 Sep 2013 | ██████████ |
| KJHD.78.2011 | Kajaki Camp Upgrade: GFE Laydown Yard | Power Land Construction Company | 09 Oct 2013 | ██████████ |
| KJHD.78.0135 | Kajaki Camp Upgrade: Heavy Fencing and Security Gates | Power Land Construction Company | 18 Sep 2013 | ██████████ |
| KJHD.78.2014 | Kajaki Camp Upgrade: Main Camp Road | Power Land Construction Company | 10 Sep 2013 | ██████████ |
| KJHD.78.2013 | Kajaki Camp Upgrade: Irrigation Pipe Repairs | Power Land Construction Company | 05 Sep 2013 | ██████████ |
| KJHD.78.0134 | Kajaki Powerhouse Overhead Crane Repair | Power Land Construction Company | 25 Sep 2013 | ██████████ |
| KJHD.78.0134 | Kajaki Powerhouse Overhead Crane Certification Part 1 | Lloyds British Testing | 26 May 2013 | ██████████ |

| File Number | Subcontract/Procurement | Awardee | Award Completion date | Total Value |
|--------------------------------|---------------------------------------------------------------------|------------------------|-----------------------|-------------|
| KJHD.78.0137 | Kajaki Powerhouse Overhead Crane Certification Part 2 | Safety Marine Services | 30 Nov 2013 | ██████████ |
| KJHD.68.1037 | Procurement of Mobile Crane | InterLink Logistics | 20 Dec 2013 | ██████████ |
| KJHD.78.1603 | Certification of Mobile Crane | Safety Marine Services | 17 Oct 2013 | ██████████ |
| KJHD.78.0127 / KJHD.78.0203 | Certification of Gottwald Mobile Crane and 1964 TCM 10 Ton Forklift | Safety Marine Services | 21 May 2012 | ██████████ |

3.4 Budgets and Expenditures

Per the Contract, the estimated cost and fixed fee values are established at the Component 6 level. The final costs of this subcomponent may vary; however, the sum of the final costs of all Component 6 subcomponents is limited to the total value of Component 6. A summary of the Subcomponent 6.3 estimated cost (revised as of Contract Modification 13) and costs billed through 25 July 2014 (as reflected in Invoice 105), is provided in Table 6 below.

Table 6: Subcomponent 6.3 – Financial Summary

| Cost Report | Estimated Cost (Modification 13) | Cost Billed thru 25 July 2014 | Remaining Budget |
|-----------------------------------|----------------------------------|-------------------------------|------------------|
| TOTAL COST (Including Fee) | ██████████ | ██████████ | ██████████ |

3.5 Government Property Summary

Government property at Kajaki was organized into four (4) distinct categories:

1. Unit 2 GFE procured by CMIC.
2. Long lead time equipment procured by BVSPC.
3. Kajaki Dam camp structures consisting of multiple barracks and container cabins and the Expat House, which was the largest camp living and office structure.
4. Kajaki Dam camp GFE consisting of furnishings, appliances, safety and security related equipment, as well as material handling equipment, including cranes, forklift, and backhoe.

The Unit 2 GFE, including long lead time equipment procured by BVSPC (Items 1 and 2 above), was (as instructed by USAID) conveyed to DABS and its Contractor, GFA Consulting Ltd., on 14 December 2013. See **Attachment g-06** for copy of the conveyance documentation as instructed by USAID.

The Kajaki Dam Camp structures were conveyed using two steps. The West Beena Barracks consisting of twenty (20) containerized rooms, including furnishings, were conveyed to DABS on 21 May 2013. **Attachment d-06** contains a file labeled, “Kajaki Dam Structures,” which provides documentation of the disposition per USAID direction. The remaining camp structures were assumed under DABS control as of 31 December 2013. Formal disposition has not been exercised as of this date (12 May 2014).

The Kajaki Dam camp non-Unit 2 GFE was to be conveyed as a single package to GFA. The Kajaki Dam camp-related GFE both inherited by the KHPP and procured for this Subcomponent is provided in the Kajaki Dam Camp Property Report (**Attachment g-06**). The file details the non-Unit 2 Kajaki inventory compiled and verified as of 20 June 2014.

Due to non-confirmed reports that various inventory might have been “walking away” following BVSPC’s departure from the Kajaki Dam site, USAID requested that IRD-EQUALS perform an independent assessment of inventory onsite during February 2014, over a month after BVSPC turned the Kajaki Dam site over to DABS. Multiple items were not located at the site after re-taking the inventory. Additionally, many items were identified as “unserviceable” and were conveyed as damaged property that could be cannibalized for parts.

BVSPC began reviewing items listed as inventory that could not be located. A number of items identified as not being onsite had been conveyed per USAID disposition instructions to other USAID implementers prior to 31 December 2013. For the items remaining on the missing list, BVSPC requested a waiver of liability. USAID granted that waiver of liability on 22 September 2014, and the waiver is included as part of **Attachment g-6**. This grant completes the work to inventory all GFE at the Kajaki site.

3.6 Final Schedule

The challenges related to project execution and schedule slippage are detailed above under Section 3.2: Execution of Work. The final project schedule applicable to Kajaki camp improvements is provided as **Attachment a-08**.

4 PHYSICAL COMPLETION OF THE WORK

4.1 Documentation of Completion

Activities associated with Subcomponent 6.3 were physically completed on 31 December 2013 when the security responsibility of the Kajaki Camp was transferred to DABS and its Implementing Contractor, GFA Consulting, Ltd.

USAID issued the Certificate of Substantial Completion for this contract subcomponent on 22 October 2013. BVSPC provided a Certificate of Warranty to USAID which outlined the warranty period for the Camp Upgrades/Improvements at the Kajaki Dam

site on 06 January 14. BVSPC received Final Completion and Acceptance Certificate for activities related to Subcomponent 6.3 from USAID on 26 November 2014.

4.2 Photo Album

A photo album is provided as **Attachment a-09**.

5 SUSTAINABILITY

The handover and transition in 2013 of the Kajaki Unit 2 project from USAID off-budget implementation to DABS on-budget implementation represented a larger shift in how the US government has chosen to execute much of its development assistance to Afghanistan. As international security forces and aid organizations accelerate their withdrawal from the country, on-budget implementation seeks strategic transition in Afghanistan, thus placing project ownership on the Afghan government and maintaining capacity building and sustainability as enabling objectives. While the Unit 2 project transfer served political objectives and reflected USAID's increasing confidence in DABS as a self-sustaining parastatal utility corporation, USAID acknowledged that the project transfer also incurred significant risks (financial, technical, and managerial) for implementation. Project transfer delivered both expectation and opportunity for the Afghan government to deliver services in a traditional Taliban stronghold. However, substantial challenges in technical turnover of the project, untested USAID on-budget processes, limited resolution of project financing considerations, and DABS limited capacity for contract and project management of a high-profile, technically complex, and high risk infrastructure project accompanied this transfer. DABS' sustainment and ultimate delivery of the project was of concern to USAID throughout the project transition.

Numerous steps were taken by USAID to mitigate risk and facilitate successful implementation by DABS. Actions USAID directed BVSPC to perform during the project transition period were among these steps. USAID redirected BVSPC's efforts to preparing DABS to inherit project responsibilities subsequent to USAID descoping of the installation and commissioning of Unit 2 from Subcomponent 6.3. These responsibilities included training in inventory management and a workshop for DABS and its Contractor on the Unit 2 GFE inventory, including technical sessions on GFE condition, as well as design and installation issues. **Attachment d-04** provides the report on the inventory management training undertaken by DABS staff at the Kajaki HPP. **Attachment d-13**, "Information Transfer Workshop," includes the workshop agenda, final Minutes of Meetings, and technical presentations attended by DABS and their Contractor in Dubai, UAE 11 to 15 December 2013. The agenda provides a guide for the day-to-day presentations provided by calendar day in **Attachment d-13**.

6 SECURITY PLAN AND INCIDENT REPORTS

BVSPC operated under a project-wide **Security Plan** in addition to a security plan specifically for the Kajaki Dam camp site (**Attachment a-02**). One major security incident

occurred at the site in December 2013 during the last week of the execution of this contract Subcomponent. A copy of the Incident Report is provided in **Attachment a-02**.

7 SAFETY PROGRAMS/PLANS

BVSPC operated under a program-wide **Health and Safety Plan and Procedures (Attachment a-04)** managed by the BVSPC Health and Safety Manager. Safety incidents were reported to USAID as required throughout the duration of the implementation of Subcomponent 6.3. BVSPC was required to perform multiple heavy lifts during the implementation of Subcomponent 6.3. Job hazard analyses (JHA) of the lifts were undertaken prior to all heavy lifts. In addition, during the implementation of Subcomponent 6.3, it became necessary to ensure the aged crane utilized was both repaired and certified to international standards per KHPP Prime Contract safety requirements. Due to the age and continued deterioration of the mobile crane and needs expected during Kajaki Unit 2 implementation, a more serviceable mobile crane was procured under this Subcomponent by direction of USAID.

In addition, BVSPC performed multiple unexploded ordnance (UXO) survey and clearance operations as precautionary measures at select areas of the site during the course of performing site upgrades throughout the implementation of Subcomponent 6.3. **Attachment a-26** provides copy of all demining reports, including certifications of clearance by the United Nations Mine Action Program. Shifts in land due to heavy rain and/or land leveling can result in exposing UXO, which occurred randomly at the Kajaki Dam site. The USMIL occasionally assigned the Forward Operating Base Zeebrugge at Kajaki to assist in helping clear and contain disposal of UXO. **Attachment a-26** provides documentation of these events.

8 QUALITY CONTROL (QC) PROGRAM/PLAN

BVSPC operated under a project-wide **Quality Control (QC) Plan (Attachment a-05)**. The implementation of the QC program at Kajaki was the responsibility of the KHPP professionals engaged in the performance of work. Qualified KHPP-assigned professionals provided oversight and guidance.

9 ENVIRONMENTAL CONTROL

The implementation of Subcomponent 6.3 required significant movement of equipment and materials. All reasonable environmental protective measures were taken. The Environmental Mitigation and Management Plan (EMMP) for all Kajaki work was implemented with overall site and site activity environmental issues addressed. Environmental reporting and compliance documentation are presented in **Attachments a-14** through **a-17**.

10 STATEMENT OF PATENTS, ROYALTIES OR CLASSIFIED MATERIALS

No patents, royalties, or classified materials were obtained or generated during the execution of this contract Subcomponent.

11 VALUE ENGINEERING CHANGES (IF APPLICABLE)

The objectives and tasks of Subcomponent 6.3 lent themselves to the application of value engineering. Most specifically, value engineering was effectively applied in the upgrade of the low voltage (LV) system at the Kajaki Dam camp. The upgrade of the LV system was initially to be undertaken under a single contract with Habib Bashar Construction Company (HBCC) as noted above. HBCC was not able to mobilize to Kajaki in a manner which could meet schedule requirements. A review of the approach to the LV upgrade was undertaken, which resulted in cancelling the HBCC contract for purposes of convenience and awarding a construction-only contract to PLCC, which was already mobilized at Kajaki, performing other camp upgrade works. BVSPC directly procured the material required after re-engineering the approach to the LV upgrade, ensuring it would meet the objective of enhancing safety and reliability of the LV system. The re-engineering saved approximately [REDACTED]. HBCC's firm fixed price was [REDACTED], for which USAID provided consent. The total cost to re-engineer and replace HBCC was approximately [REDACTED] to achieve the same objective.

12 ENHANCING PRACTICES (LESSONS LEARNED)

Table 7 lists considerations to enhance best practices, or lessons learned, which resulted from the implementation of Subcomponent 6.3:

Table 7: Subcomponent 6.3 – Considerations from Implementation

| Observation | Lesson | Recommendation |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Fit for purpose engineering and design. | Utilizing state-of-the-art US Standards for design and engineering for select activities is not necessarily the best means of meeting needs in a lesser developed country. Stepping back and using safe but less technically advanced designs may be more beneficial. | Review all proposed engineering and design from a "fit for purpose" perspective. |

| Observation | Lesson | Recommendation |
|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Integrating upgraded inventory management systems into an operating utility requires consideration of sustainability. | The intent of KHPP was to determine if an upgraded inventory management system could be applied to Kajaki HPP, especially for Unit 2 GFE. DABS staff at Kajaki HPP could manage an Excel-based system which mirrored their “inventory book.” The Excel-based system was implemented and worked; DABS staff should be maintaining the inventory more effectively with the simplified computerized system. | In developing countries with an often marginally literate work force, applying highly simplified systems that reflect how the staff is performing some functions may be a better alternative than imposing far more advanced systems in one major leap. |
| Weld quality control. | The Unit 1 runner cone extension was installed by DABS with BVSPC assistance and oversight. Installation involved a significant amount of overhead welding by DABS and weldments exposed to a high degree of turbulence and potential cavitation. Visual observation was the only form of weld QC performed. | A more effective method of identifying surface defects, including hairline cracks, would have been using a dye penetrant type test. This test is highly sensitive, easily applied, and inexpensive. |

13 WARRANTY

All KHPP contract components as applicable are subject to a USAID approved Warranty Administration Plan, a copy of which is provided in **Attachment a-06**. The warranty applicable is reflected in the Letter of Warranty provided to USAID and included herein as **Attachment a-06-a** for Subcomponent 6.3.

14 OUTSTANDING ISSUES

No outstanding actions remain in association with Subcomponent 6.3.

15 CONCLUSION: IMPACT ASSESSMENT

Given the significant changes in the deliverables under Subcomponent 6.3, the major impact of implementing actions are found in the preparation of the Kajaki Dam camp to allow immediate attention for the installation and commissioning of Unit 2 by DABS and its Unit 2 Contractor. The security infrastructure of the camp has been significantly enhanced at a time when threats in the Kajaki area are potentially increasing. The camp buildings,



laydown area control, and the camp road have been prepared to allow immediate use without further need for upgrades before Unit 2 work can commence.

16 DEVELOPMENT EXPERIENCE CLEARINGHOUSE (DEC)

The following reports will be submitted to the Development Experience Clearinghouse (DEC) as required:

1. Closeout Report of Subcomponent 6.3.

Note: The Final GFE Assessment Report was submitted to the DEC under Subcomponent 6.1.