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Inventory Report and Condition Assessment		Project: WO-LT-0091 SEPS Completion GFE inventory	
Location: Kandahar Province		Coordinates: Latitude: N 31.608280°	Longitude: E 65.769949°
Inspection Period: November 30, 2014 through April 15, 2015		Weather: Generally clear and sunny	
Tt / AESP Inspectors: [REDACTED]		Status: Completed	

PRESENTED TO

United States Agency for International Development (USAID)
Office of Economic Growth and Infrastructure (OEGI)

PRESENTED BY

Tetra Tech, Inc.
Afghanistan Engineering Support Program
Contract No. EDH-I-00-08-00027-00
Task Order No. 1

Work Order WO-A-0091 SEPS Completion
GFE Inventory

Approved by:



Title: Deputy Chief of Party

Date: 05/31/2015

EXECUTIVE SUMMARY

The purpose of this Site Visit Report is to document the work performed to complete an inventory of Government Furnished Equipment (GFE) for the anticipated SEPS Completion project. The effort commenced under Administrative Work Order WO-A-0099 and was transferred to Long Term Work Order WO-LT-0091 SEPS Completion, Task No. 1. The primary goal of this inventory is to conduct a physical verification of the material and equipment in the custody of DABS. The GFE material and equipment are designated to be used for the SEPS Completion project. This GFE had previously been stored at the Kandahar Air Field (KAF) and has now been transferred to a DABS storage yard (Junction #2) in Kandahar. The material was transferred from KAF to the Storage Yard in several trips over a three months period. Using an inventory list (spreadsheet titled Annex A by the USACE) provided by USACE (see Appendix A), Tetra Tech AESP performed a physical inventory and verification of the GFE moved to the DABS Junction #2 Storage Yard.

1. Tt was able to verify that 46.3 % (26,295 of 56,840) of the inventory units listed in Annex A that has been received by DABS and stored at the Junction #2 storage yard. Tt was not able to verify 53.7 % (30,545 of 56,840 inventory units). The itemization is found in Appendix B (cells H472:J475).
2. The items that could not be found are valued at \$ 1,017,944 of total value (\$6,666,649) which is 15.3 percent of the total value. The valuation is found in Appendix B (cells H467:J470).

The level of site protection for the GFE material at the storage yard for the GFE equipment is consistent with the protection of the DABS's equipment at the storage yard. Some site protection practices are good, however, there are opportunities for improved site protection. The elaboration is in Section 3.5.

DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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ACRONYMS

A	Administrative
AESP	Afghanistan Engineering Support Program
CT	Current Transformer
DABS	Da Afghan Breshna Sherkat
E	East
EMT	Electrical Metallic Tubing
Eng.	Engineer
GCB	Gas Circuit Breaker
GFE	Government Furnished Equipment
KAF	Kandahar Air Field
kV	kilo Volt
LT	Long Term
MV	Medium Voltage
N	North
No.	Number

OEGI	Office of Economic Growth and Infrastructure
PO	Purchase Order
SEL	Schweitzer Engineering Laboratories
SEPS	Southeast Power System
Tt	Tetra Tech
USACE	United States Army Corps of Engineers
USAID	United States Agency for International Development
WO	Work Order

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1.0 INTRODUCTION

The purpose of the site visits was to conduct a physical inventory of the SEPS completion GFE located at the Kandahar DABS Junction #2 Storage Yard. Junction #2 Storage Yard is located in southwest portion of Kandahar city. This facility is watched by DABS personnel and is surrounded by burned brick boundary walls. Appendix D is the aerial map for Kandahar DABS Junction #2 Storage Yard.

2.0 SITE VISITS

Engineers from Tetra Tech (Tt), Afghanistan Engineering Support Program (AESP) conducted four site visits to Kandahar for several days beginning on these dates: November 30, 2014; February 22, 2015; March 28, 2015; and April 15, 2015 for the inventory effort as specified in WO-A-0099 and WO-LT-0091.

3.0 SITE VISIT DETAILS

3.1 FIRST TRIP

Upon arrival at Kandahar, Tt contacted [REDACTED] (Project Manager for USACE in the Middle East) for access confirmation for Monday morning. [REDACTED] stated that he was not able to provide access until Wednesday, December 3, 2014.

On December 2, 2014, at 4:00pm, Tt again contacted [REDACTED] for confirmation of access for December 3, 2014. Brian confirmed the access and suggested meeting at gate #5 at 9:00 am on December 3.

On December 3, 2014, the Tt team reached KAF gate #5 at 9:00 am. After registration and badge scanning, the Tt team entered the military compound at KAF. Tt contacted [REDACTED] to tell him, they were through the gate. [REDACTED] stated that since he was not able to find transportation, he could not come to meet them. Walking inside the military compound was not possible without an escort, so Tt personnel returned to their hotel. After 45 minutes [REDACTED] contacted Tt and confirmed that he found transportation and was now ready to escort Tt team to the equipment storage area for only two hours.

Tt arrived at the equipment storage facility with [REDACTED] at approximately 11:30am on the same day. The storage facility was secured by a fence.

There were 18 closed containers, 14 open roof containers, and outdoor palletized materials. In general, all the equipment seemed to be in good condition.

Tt and [REDACTED] randomly opened five of the 18 closed containers. These containers at KAF were not locked nor sealed. Two of them contained 110kV Gas Circuit Breakers (GCB) and three of them contained a total of 19 distribution transformers. These last three containers and their contents were not shown on the GFE inventory list.

The equipment in the yard included, but was not limited to, the following: power transformers, 20kV circuit breakers, 20kV manual vertical breaker switch, 110kV vertical breaker switches, current and potential transformers, control and relay panels, electrical substation structural steel, suspension insulators, EMT elbows, conduit rigid, cable, aluminum conductor wire, capacitor bank, line post insulators, concrete poles, pad mounted transformers, diesel generators, and fiberglass poles.

There was other SEPS equipment, such as well pipes and steel structures for storage yard construction, which were not part of GFE inventory list (spreadsheet) provide by the USACE [REDACTED] stated the he would hand over at a later stage the construction material to a future SEPS contractor for installation.

[REDACTED] mentioned that he had scheduled the delivery of equipment to DABS on Sundays, Tuesdays, and Thursdays until all the equipment are transferred. The actual transfers took place over a three months period.

Due to time limitations and security issues at KAF, Tt was not able to conduct a full inventory of all equipment inside KAF. It was decided that the full inventory could be possible once all the GFE material and equipment was delivered to DABS.

3.2 SECOND TRIP

Upon arrival at Kandahar, Tt contacted [REDACTED] (Kandahar DABS Manager) to set up a meeting. At 2:00 pm Tt met with Eng. [REDACTED] he introduced [REDACTED] (Kandahar DAB'S Finance Manager) to assist Tt with the inventory. After introduction, Tt and DABS' Finance Manager conducted a site visit to Junction #2 Storage yard where the SEPS completion GFE equipment was stored.

The Kandahar DABS Finance Manager introduced Mr. [REDACTED] (DABS Junction#2 Storage Yard Employee) in charge to help Tt during the inventory.

On February 23, 2015, at 8:00am, Tt started outdoor equipment inventory till 11:30am. Tt could not continue the inventory for the full day due to rain. The next day, Tt resumed the inventory efforts till February 26, 2015. On February 26, 10:30am Tt completed the inventory of outdoor equipment.

Tt could not conduct an inventory of equipment inside the wooden boxes and of the steel structures since opening the crate and boxes was required. Tt also could not verify the equipment located inside the containers, since Kandahar DABS placed the containers door to door and door to wall. To verify the contents of those containers, Tt required a crane to move them in such a way to allow one or two persons get into the containers, perform the inventory, and finally move the containers back to their original place. However, the crates and the containers were opened on the third and fourth trips, as reported below.

Tt could only verify the outdoor equipment, which is a small percentage of the entire GFE in this site visit.

During the inventory, Tt learned that there was a discrepancy between DABS and KAF; some GFE was still located at KAF. The time when DABS would be able to get the remaining equipment from KAF was not clear during this trip. By the end of the fourth trip it was Tt's understanding that this remaining equipment had been moved from KAF to DABS.

Tt also noticed that there was equipment and materials at the storage yard which was not included in Annex A, SEPS Completion GFE inventory received from USACE. Annex A is included in Appendix A of this report.

3.3 THIRD TRIP

Upon arrival at Kandahar, Tt contacted [REDACTED] (Kandahar DABS Finance Manager) and set up a meeting. At 1:30pm Tt met with [REDACTED] to make a plan to have a crane in order to move the containers to allow one or two persons into the containers. Mr. Abdul Nasir Hassanzada directed the DABS Transportation Manager to arrange a crane for the next day.

Kandahar DABS Finance Manager introduced [REDACTED] (DABS Junction #2 Storage yard Person) and [REDACTED] (Junction #2 Manager) to help Tt during the inventory.

The next day (March 29, 2015) at 8:00am, Tt started the outdoor equipment verification which were inside crates until the DABS crane arrived at 11:00am and started moving the containers. Then Tt started verification of the equipment inside containers. The next day Tt resumed the verification efforts and continued till April 8, 2015.

On this trip, the Tt inventory team included [REDACTED] (Tetra Tech, Civil Engineer) for verification of structural equipment.

The Tt Civil Engineer could not find the structural steel which was listed in GFE inventory list, as shown in Section 3.3.1, below. However, there were other steel structures delivered to the Kandahar DABS Junction #2 Storage Yard. Those steel structures are listed in Appendix B.

3.3.1 Table: 1 PO-0076 Electrical Substation Structural Steel part of GFE inventory list

See explanation above.

No	Item Description	Quantity
1	Structural Steel Column Galvanized	10
2	Structural Steel Bundled Galvanized	19

3	Support Structural Steel Galvanized	72
4	Column 10m Steel Galvanized	5
5	Fittings Palletized Box	1

3.3.2 Containers and Seal Numbers

At the end of each day during the inventory work, the containers were left open (unlocked and unsealed), and the containers were not placed up against the walls. Tt and Kandahar DABS storage yard supervisor locked and sealed all containers on last day of the verification.

Below are the containers and seal numbers as left by DABS at the end of the inventory:

1. Containers # 1 (934548) DABS Seal # (GXZ 2597)
2. Containers # 2 (5001278) DABS Seal # (GXZ 2636)
3. Containers # 3 (994036) DABS Seal # (GXZ 2591)
4. Containers # 4 (286922) DABS Seal # (GXZ 2539)
5. Containers # 5 (158491) DABS Seal # (GXZ 2571)
6. Containers # 6 (902842) DABS Seal # (GXZ 2647)
7. Containers # 7 (521957) DABS Seal # (GXZ 2599)
8. Containers # 8 (684300) DABS Seal # (GXZ 2638)
9. Containers # 9 (546873) DABS Seal # (GXZ 2642)
10. Containers # 10 (515129) DABS Seal # (GXZ 2652)
11. Containers # 11 (000158) DABS Seal # (GXZ 2632)
12. Containers # GFE 1 (468843) DABS Seal # (GXZ 2561)
13. Containers # GFE 2 (479677) DABS Seal # (GXZ 2547)
14. Containers # GFE 3 (704408) DABS Seal # (GXZ 2567)
15. Containers # GFE 4 (461735) DABS Seal # (GXZ 2646)

3.3.3 Photo from the Third Trip



Photograph 1- Container Seal Type

3.4 FOURTH TRIP

Tt received notification from [REDACTED] (USAID) that all equipment and material had been transferred from KAF to the DABS storage yard as of April 13, 2015.

Tt deployed one Electrical Engineer to finalize the inventory of GFE material at Kandahar DABS Junction #2 storage yard.

Tetra Tech (Tt) left Kabul for Kandahar on Wednesday, April 15th, 2015 at 8:30 am and arrived at Kandahar at 9:30 am local time.

The only additional GFE items that had arrived at the DABS Junction #2 storage yard were pre-stressed concrete 20kV distribution poles. Tt conducted the inventory of the concrete poles and returned back to Kabul on April 16th, 2015 at 1:30 PM local time.

The concrete poles were not stored in a manner that keeps them from breaking. The poles should be stacked on timbers, with a timber supporting each end of a pole.



Photograph 2- Pole Arrangement

3.5 SITE CONDITION

See Appendix D for an aerial map of the Kandahar DABS Storage Yard.

During the second, third and fourth trips the team observed the physical security of the DABS Junction #2 Storage Yard. The first trip was the KAF facilities.

The Kandahar DABS Storage Yard has one entry and that one entry has a house for a watch person. DABS reports that the watch house is staffed 24 hours a day, seven days a week. The perimeter wall is about two and one-half meters high and is not topped with protective measures such as concertina wire. The perimeter wall is burned brick (that is, fired brick, not cinder block).

Protective measures done well:

1. As a positive point, the containers were placed in the yard with their doors against the wall. The container would have to be moved to provide access; not impossible, but very difficult and obvious.
2. There was a high perimeter wall.
3. There was perimeter lighting.
4. There was a watch person and a building for the watch person.
5. The site was graded and drained in such a manner that the site did not flood during a rain storm that occurred during the second visit.

Opportunities for improvement:

1. The TT team had a letter of authorization, and were escorted in the first day by a DABS person. However, the Tt team members were not asked to prove their identity by providing some form of generally accept identification. The TT persons were not asked to sign the log book. A good practice would be for the watch person to ask for and examine identification document and to ask the visitor to sign a log book¹.
2. A positive aspect is that the containers are both locked and sealed with one-time use, tamper resistant seals that have seal numbers. See Photograph 1 above. The Tt-DABS team recorded the seal numbers at the end of the trip (see Section 3.3.2, above) but a better practice is to seal the container each time the container is left unattended and to check the serial number of the seal each time the container is opened.
3. The substation equipment (for example, power transformers, steel, disconnect switches, MV CTs, concrete poles, etc.) are exposed to the elements. It is expected that they will not be damaged. However, some equipment (for example, the SEL electronic relay panels) are intended for indoor air conditioned environment. The SEL equipment is in containers, which are expected to get very hot in the sun. The materials have been in the Kandahar region about three years. The integrity of this kind of electronic equipment is a concern.
4. As reported above, the concrete poles were not stored in a manner that keeps them from breaking.
5. DABS has perimeter lighting. However, the perimeter lighting goes out when the local power goes out. There was no generator for the facility.
6. The layout of the yard is such that the watchman cannot see all of the storage yard from the watch house at the gate. There were no watch towers.
7. The neighbors to the Junction 2 Storage Yard are non-DABS industrial users and residential areas. A concern is that material and persons could pass between the DABS storage yard and the neighboring non-DABS facilities.
8. Suggestion is to install concertina wire along the top of the perimeter wall.

3.6 OBSTACLES OVERCOME

A brief description of the obstacles encountered during the inventory process follows. The obstacles were overcome and the inventory was conducted.

- A. The number identification on the containers at KAF were removed or destroyed during the transfer process between KAF and the DABS Junction#2 storage yard.
- B. Tt was not able to locate manufacturer's or the shipper's packing lists for any of the listed items inside the crates or on the palletized outdoor equipment.
- C. All of the containers were oriented so that the doors were facing the walls, and could not be opened without moving the containers away from the walls. As mentioned above, this was a logistical obstacle, but it was a good site protection practice.

¹ In the future Tt personnel will be instructed to both present some form of identification and to offer to sign the log book.

- D. USACE did not submit any documents other than Annex A, found in Appendix A, to Kandahar DABS regarding GFE equipment which were delivered to Kandahar DABS storage yard from KAF.

4.0 CONCLUSION

The inventory of GFE items for the SEPS completion, based on the GFE list received from USACE, was concluded at the end of the fourth trip.

At the end of this inventory work Tt was not aware or told of any remaining GFE material at KAF.

Tt conducted all of the inventory efforts in the presence of DABS representatives. During the inventory Tt needed to break the seals on the containers. After the inventory was done, the containers were resealed by DABS' representatives.

4.1 COUNT

Appendix B shows the identified GFE items marked with (√). Those GFE items that were not verified are unmarked. The right hand columns of Appendix B are derived from USACE Annex A (Appendix A).

A significant portion of steel structure, grounding connection hardware, conductors, fittings, nuts and bolts and other small material and equipment (refer to Appendix B inventory list for details) were not found at the DABS Junction #2 Storage Yard during the inventory. However, there is the possibility that these items could be found later somewhere else.

When conducting the count an inventory unit was defined to be an object that could be identified and counted. For example, the following are examples of one inventory unit: one circuit breaker, one power transformer, one relay panel, one reel of wire (regardless of length), one box of fittings. Examples of a multiple inventory unit are concrete poles, lengths of tubing, large anchor bolts, and large steel structures; each of these items could be individually identified and counted. Therefore, interpreting what percentage is missing is problematic since all items inventoried are relatively equal, regardless of quantity. For example, does one reel of wire that is two kilometers long count as 1, 2, or 2000? Also, is one box of washer counted as one box or as 250 washers. A better expression of the unaccounted for items is presented in Section 4.2, below.

See the bottom of the table (Cells H472: J475) in Appendix A where the following are reported.

Analysis Based on Counts (Inventory Units)		
Observed Quantity (Column G)	Missing Items (Column C - Column G)	Expected Quantity (Column C)
26,295.6	30,545.0	56,840.6
46.3%	53.7%	100.0%

Tt also encountered structural steel that was not included in the GFE list from USACE, but were part of a delivery from KAF to Kandahar DABS Junction #2 Storage Yard. Since verification of items not included in the USACE list nor part of the SOW for this work order, Tt did not perform an inventory of them. However, Tt did list them. Those items are included in Appendix C.

4.2 VALUE

The unit values used in Appendix C are the unit values that are on the Annex A GFE list that was provided by the USACE.

Appendix B shows the valuation of the GFE items. This Appendix B shows both the value of (a) what appears on USACE Annex A and (b) what Tt found during the inventory. The table below summarizes the results. See Appendix B, cells H467 : J470.

Analysis Based Upon Valuation		
Value of Items Verified (Column H)	Value of Missing Items (Column I)	Value of Items Verified Plus Items Not Found
\$5,648,705.69	\$1,017,944.02	\$6,666,649.71
84.7%	15.3%	100.0%

The expensive items such as: power transformers, circuit breakers, and disconnect switches were included in the verified item list. The items that were missing appear to be small items such as grounding fittings, discharge counters, fuse assemblies, nuts, bolts, washers, supports, clamps, and anchors; though, there is a large quantity of these small items as reported in Appendix B.

4.3 SITE PROTECTION

Some practices and facilities at the Kandahar DABS Junction # 2 Storage Yard are done well, such as having a high perimeter wall, perimeter lighting, a watch person with a watch house, and placing the doors of the containers up against the walls. However, there are opportunities for improvement, such as full time power for the perimeter lighting, installing concertina wire along the top of the perimeter wall, watch tower or higher watch house so that the watch person can see the whole yard, checking identification and signing log book at entry and exit, sealing as well as locking the containers. Also, the environmentally sensitive electronic equipment should be moved to an air conditioned facility.

APPENDICES

APPENDIX A
ANNEX A RECEIVED FROM USACE

	A	B	C	D	E	F	
1	Annex A to Attachment 1						
2	Inventory of Electrical Equipment transferred from USFOR-A to Da Afghanistan Breshna Sherkat						
3							
4	Container 1 934548			Qty	Unit Cost	Subtotal	PO total
5	<i>PO-0057 Lightning Arrestors</i>						
6		110 kV surge arrester w/insulating base	6				
7		Discharge counter	5				
8		110 kV surge arrester w/insulating base	9				
9		20 kV surge arrester w/insulating base	57				
10		13.8 kV surge arrester w/insulating base	6				
11		Horizontal inverted power distribution fuse assembly	9				
12		Vertical offset power distribution fuse assembly	18				
13	<i>PO-0074 Substation Battery Room Equipment</i>						
14		Battery Charger	2				
15		Battery	2				
16		Battery Rack	2				
17		Battery Charger	1				
18		Battery	1				
19		Battery Rack	1				
20	<i>PO-06939 Grounding Connection Hardware for use with PO-6530</i>						
21		4/0 to 4 splice	483				
22		4/0 to 4/0 tee splice	539				
23		4/0 to #2 tee splice	153				
24		4/0 to 3/4 ground rod	181				
25		4/0 to 2" tee post	154				
26		Hydraulic hand operated tool	1				
27		U997 die	1				
28		PU998 die	1				
29		UPRECRIMP 34	1				
30		Sectional ground rod 3/4" x 10'	50				
31		Coupling for sectional ground rod	27				
32		Ground rod standard 3/4" x 10'	131				
33	<i>PO-28415 20KV Pole Hardware</i>						
34		INSULATOR PORCELAIN DEAD END In yard	192				
35		VIBRATION DAMPER FOR ACSR	340				

Annex A (Continued)

	A	B	C	D	E	F
36		COMPRESSION JOINT FOR ACSR	28			
37		GALV BOLT SQUAREHEAD 7/8 x 3"	28			
38		GALV BOLT SQUAREHEAD 7/8 x 4"	172			
39		POLE BAND, GALV, 4-WAY 90	68			
40		CONNECTING LINK 3/8 x 2"	450			
41		ROLLER POLE BAND, GALV, 2-3/4"	68			
42		KELLEMS SUPPORT GRIPS	12			
43	<i>PO-48091 Fittings</i>					
44		EMT COMPRESSION CONNECTORS 1"	250			
45		EMT COMPRESSION CONNECTORS 2"	100			
46		EMT COMPRESSION COUPLINGS 1"	151			
47		EMT COMPRESSION COUPLINGS 1"	100			
48		GRC 3/ 4" COUPLINGS	50			
49		GRC 1" COUPLINGS	100			
50		GRC 2" COUPLINGS	100			
51		GRC 4" COUPLINGS	25			
52		GRC 3/ 4" CONNECTOR	25			
53		GRC 1" CONNECTOR	25			
54		GRC 2" CONNECTOR	25			
55		GRC 4" CONNECTOR	25			
56		LOCK NUTS 1"	200			
57		LOCK NUTS 2"	100			
58		LOCK NUTS 4"	100			
59		GROUNDING BUSHINGS 1"	25			
60		GROUNDING BUSHINGS 2"	25			
61		GROUNDING BUSHINGS 4"	25			
62		LIQUID TIGHT FLEX 1" STRAIGHT	25			
63		LIQUID TIGHT FLEX 2" STRAIGHT	25			
64		LIQUID TIGHT FLEX 4" STRAIGHT	16			
65		LIQUID TIGHT FLEX 1" 90 DEGREE CONNECTOR	25			
66		LIQUID TIGHT FLEX 2" 90 DEGREE CONNECTOR	25			
67		LIQUID TIGHT FLEX 4" 90 DEGREE CONNECTOR	16			
68		RED WIRE NUTS	1000			
69		BLACK ELECTRICAL TAPE	50			
70		EMT COMPRESSION CONNECTORS 3/4	100			
71		CONDUIT HANGER, "MINI'S" W BOLT & NUT 3/4"	600			
72		CONDUIT HANGER, "MINI'S" W BOLT & NUT 1"	250			

Annex A (Continued)

	A	B	C	D	E	F
73		CONDUIT HANGER, "MINI'S" W BOLT & NUT 2"	125			
74		CONDUIT HANGER "MINI'S" W BOLT & NUT 4"	25			
75						
76		Container 2 5001278	Qty			
77		PO-0048 ATYS 630Amp	2			
78		PO-0048 ATYS 400Amp	1			
79		PO-0048 Gen Set Control Panel	3			
80		PO-0073 Tangi Relay Panel #1	1			
81						
82		Container 3 994036	Qty			
83		PO-23230 Centrifugal Roof Exhausts	2			
84		PO-32203 Conductors and Fittings				
85		BUS TUBING 90 MM 3" In Yard	960			
86		BOLT, GALVANIZED 1/2" x 2 1/2"	1600			
87		NUT, GALVANIZED 1/2"	1600			
88		WIRE, SHIELD, 3/8 IN	500			
89		WASHER, FLAT, GALVANIZED 1/2"	3200			
90		BUS SUPPORT, 3"	17			
91		END BELL, 3"	9			
92		TERMINAL BOLTED, 3"	18			
93		DEADEND, COMPRESSION, EYE TYPE	42			
94		SHACKLE, ANCHOR 5/8"	48			
95		Y-CLEVIS, HOT LINE SOCKET 3/4"	6			
96		Y-CLEVIS, HOT LINE BALL 3/4"	72			
97		WASHER, BELLEVILLE SPRING	1600			
98		COUPLER, BOLTED, ALUMINUM 3"	12			
99		TERMINAL, TEE, BOLTED, ALUMINUM, 3"	30			
100		BUS SUPPORT, 3"	21			
101		BUS SUPPORT, ALUMINUM, 3"	6			
102		TERMINAL, BOLTED, STRT, ALUMINUM, #4	12			
103		CLAMP, SINGLE CABLE TO FLAT	240			
104		CLAMP, TWO CABLES TO FLAT	300			
105		TERMINAL, BOLTED, 2 HOLE PAD	14			
106		BOLT, HEX HEAD, 1/2"	35			
107		WASHER, ROUND, 1/2"	35			
108		BRAID, FLEXIBLE COPPER, TYPE B	5			
109		CONNECTOR, GROUND, FENCE POST 4"	8			

Annex A (Continued)

	A	B	C	D	E	F
110		CONNECTOR, GROUND, FENCE POST 2"	9			
111		CONNECTOR, GROUND, FENCE POST 1 5/8"	63			
112		CONNECTOR, GROUND, FENCE POST 3"	4			
113		CONNECTOR, BRONZE, VICE-COMPRESSION	189			
114		ANCHOR SHACKLE, 5/8"	12			
115		STRAIN CLAMP, BOLTED, DUCTILE IRON	6			
116		CHAIN LINK, GALVANIZED, 30K LBS	6			
117		CONNECTOR, GROUND, FENCE POST 2 1/2"	50			
118		LUG, TERMINAL, ONE HOLE #4	2			
119		LUG, TERMINAL, COMPRESSION	1			
120		WASHER, LOCK, SPLIT 1/2"	10			
121		NUT, HEX HEAD, 1/2"	10			
122		LUG, TERMINAL, COMPRESSION	6			
123		CONNECTOR, TEE, COMP, 120 - 120MM	152			
124		CONNECTOR, TEE, COMP, 120-35MM	70			
125		BOLT M12 -1.75x60MM	50			
126		BOLT M12 -1.75x70MM	20			
127		BOLT M18- 2.5x65MM	26			
128		BOLT M12 -1.75x75MM	26			
129		BOLT M12 -1.75x50MM	40			
130		NUT M12 -1.75	286			
131		WASHER ROUND 16MM	160			
132		WASHER, LOCK, SPLIT 16MM	160			
133		BUS TUBING 90 MM 3"	960			
134		BOLT, GALVANIZED 1/2" x 2 1/2"	1400			
135		NUT, GALVANIZED 1/2"	1400			
136		WASHER, FLAT, GALVANIZED 1/2"	2800			
137		BUS SUPPORT, 3"	27			
138		END BELL, 3"	12			
139		TERMINAL BOLTED, 3"	18			
140		DEADEND, COMPRESSION, EYE TYPE	30			
141		SHACKLE, ANCHOR 5/8"	33			
142		Y-CLEVIS, HOT LINE SOCKET 3/4"	33			
143		Y-CLEVIS, HOT LINE BALL 3/4"	21			
144		WASHER, BELLEVILLE SPRING	1400			
145		COUPLER, BOLTED, ALUMINUM 3"	15			
146		TERMINAL, TEE, BOLTED, ALUMINUM, 3"	30			

Annex A (Continued)

	A	B	C	D	E	F
147		BUS SUPPORT, 3"	21			
148		TERMINAL, TEE, BOLTED, ALUMINUM, #4	1			
149		TERMINAL, BOLTED, STRT, ALUMINUM, #4	3			
150		CLAMP, SINGLE CABLE TO FLAT	210			
151		CLAMP, TWO CABLES TO FLAT	205			
152		TERMINAL, BOLTED, 2 HOLE PAD	14			
153		BOLT, HEX HEAD, 1/2"	34			
154		WASHER, ROUND, 1/2"	34			
155		BRAID, FLEXIBLE COPPER, TYPE B	3			
156		CONNECTOR, GROUND, FENCE POST 4"	4			
157		CONNECTOR, GROUND, FENCE POST 2"	5			
158		CONNECTOR, GROUND, FENCE POST 1 5/8"	48			
159		CONNECTOR, GROUND, FENCE POST 3"	10			
160		CONNECTOR, BRONZE, VICE-COMPRESSION	144			
161		ANCHOR SHACKLE, 5/8"	15			
162		CHAIN LINK, GALVANIZED, 30K LBS	10			
163		LUG, TERMINAL, ONE HOLE #4	3			
164		WASHER, LOCK, SPLIT 1/2"	6			
165		NUT, HEX HEAD, 1/2"	6			
166		ROD, FULL THREADED, 5/8"	8			
167		NUT, OVAL EYE, ULTIMATE STRENGTH	4			
168		LUG, TERMINAL, COMPRESSION, COPPER	3			
169		LOCKNUT, SQUARE, 5/8"	12			
170		CONNECTOR, TEE, COMP, 120- 120MM	130			
171		CONNECTOR, TEE, COMP, 120-35MM	50			
172		BOLT M12 -1.75x60MM	50			
173		BOLT M18- 2.5x75MM	18			
174		BOLT M12 -1.75x70MM	10			
175		BOLT M18- 2.5x65MM	13			
176		BOLT M12 -1.75x75MM	25			
177		BOLT M12- 1.75x50MM	40			
178		BOLT M16- 2x65MM	115			
179		BOLT M12 -1.75x50MM	150			
180		NUT M12 -1.75	365			
181		NUT M16-2	296			
182		WASHER ROUND 16MM	296			
183		WASHER, LOCK, SPLIT 16MM	296			

Annex A (Continued)

	A	B	C	D	E	F
184		TERMINAL, COMPRESSION, 477	162			
185		TERMINAL, COMPRESSION, 1590	223			
186		TERMINAL, TEE-TAP, COMPRESSION, 477	7			
187		TERMINAL, TEE-TAP, COMPRESSION, 1590	44			
188		BUS SUPPORT, 1590	12			
189		EXTENSION LINK, HOT LINE	24			
190		SUSPENSION INSULATOR	110			
191		TERMINAL, COMPRESSION, 477	180			
192		TERMINAL, COMPRESSION, 1590	164			
193		TERMINAL, TEE-TAP, COMPRESSION, 477	21			
194		TERMINAL, TEE-TAP, COMPRESSION, 1590	30			
195		BUS SUPPORT, 1590	9			
196		EXTENSION LINK, HOT LINE	15			
197		SUSPENSION INSULATOR	274			
198		STRAIN CLAMP	10			
199		JOINT COMPOUND	3			
200		CABLE MOUNTING BRACKET DOUBLE CLAMP	3			
201		CROSSARM MOUNTING BRACKET	3			
202		HILTI DRILL BIT	1			
203		HILTI STD STUD ANCHOR	8			
204		CONNECTOR TERMINAL EYEBOLT	173			
205		CHANNEL 1 5/8" x 1 5/8" GALVANIZED	2			
206		CHANNEL NUT 3/8" -16 GALVANIZED	8			
207		BOLT M16 - 2 x45 MM GALVANIZED	160			
208		BOLT M12 -1.75 x 45 MM GALVANIZED	150			
209		NUT, M16- 2 GALVANIZED	160			
210		JOINT COMPOUND	3			
211		CABLE MOUNTING BRACKET DOUBLE CLAMP	7			
212		CROSS ARM MOUNTING BRACKET	7			
213		CONNECTOR, GROUND, FENCE POST	33			
214		HILTI DRILL BIT	1			
215		HILTI STD STUD ANCHOR	8			
216		CONNECTOR TERMINAL EYEBOLT	150			
217		CHANNEL 1 5/8" x 1 5/8" GALVANIZED	2			
218		CHANNEL NUT 3/8" - 16 GALVANIZED	8			
219		CHANNEL NUT METRIC	8			
220		BOLT M16- 2 x 45 MM GALVANIZED	150			

Annex A (Continued)

	A	B	C	D	E	F
221		BOLT M12 - 1.75 x 45 MM GALVANIZED	90			
222		TERMINATION, CABLE OUTDOOR	3			
223		CLAMP, SINGLE CABLE TO FLAT 70-125 SQ	100			
224		CLAMP, TWO CABLES TO FLAT 25-150 SQ	275			
225		WASHER, ROUND 1/2" DIA	26			
226		BRAID FLEXIBLE COPPER TYPE B	4			
227		CONNECTOR, GROUND, FENCE POST 4"	4			
228		CONNECTOR, GROUND, FENCE POST 2"	6			
229		CONNECTOR, GROUND, FENCE POST 1 5/8"	34			
230		CONNECTOR, GROUND, FENCE POST 3"	8			
231		SAFETY PLANK, 14 GA 2'X6', 2" CHANNEL	13			
232		CONNECTOR, GROUND, FENCE POST, 2 1/2"	20			
233		HILTI DRILL BIT	1			
234		HILTI STD STUD ANCHOR	8			
235		CONNECTOR, BRONZE, VICE-COMPRESSION	6			
236		CONNECTOR, TERMINAL, EYEBOLT #8	93			
237		CONNECTOR, TEE, COMP, 120MM-120MM	150			
238		CONNECTOR, TEE, COMP, 120MM-35MM	40			
239		DIE, CIRCULAR, TWIN, NON BUTTING	1			
240		DIE, TWIN, RADIAL, NON BUTTING	1			
241		ADAPTER PLATE, 4 HOLE TO 6 HOLE	6			
242		CABLE BREAKOUT, 35KV, 3 PHASE COND.	4			
243		CLAMP, SINGLE CABLE TO FLAT 70-125 SQ	24			
244		CLAMP, TWO CABLES TO FLAT 25-150 SQ	26			
245		WASHER, ROUND 1/2" DIA	11			
246		BRAID FLEXIBLE COPPER TYPE B	4			
247		CONNECTOR, GROUND, FENCE POST 4"	4			
248		CONNECTOR, GROUND, FENCE POST 2"	5			
249		CONNECTOR, GROUND, FENCE POST 1 5/8"	17			
250		CONNECTOR, GROUND, FENCE POST 3"	4			
251		CONNECTOR, GROUND, FENCE POST, 2 1/2"	8			
252		ANCHOR SHACKLE, 30,000 LBS STEEL	6			
253		CONNECTOR, TERMINAL, EYEBOLT #8	3			
254		CONNECTOR, TEE, COMP, 120MM-120MM	70			
255		CONNECTOR, TEE, COMP, 120MM-35MM	20			
256		DIE, TWIN, RADIAL, NON BUTTING	1			
257						

Annex A (Continued)

A	B	C
258	Container 4 286922	Qty
259	<i>PO-0073 Control and Relay Panels</i>	
260	Tangi marked	1
261	Kajaki marked	1
262		
263	Container 5 158491	Qty
264	<i>PO-27826 Conductors and Fittings</i>	
265	Wire, 120 SQ MM (1 Drum, 100x100x74cm)	1
266	Wire, 35 SQ MM (Pallet, 108x79x102cm)	1
267	Wire, 25 SQ MM	
268	Wire, 25 SQ MM	
269	WIRE "HAWK"	840
270	WIRE "LAPWING"	200
271	WIRE SHIELD 3/8 IN 7 STRAND	325
272	WIRE "PIGEON"	50
273	SAFETY PLANK, 14 GA 2'X6', 2" CHANNEL	13
274	WIRE "HAWK"	200
275	WIRE "LAPWING"	500
276	Bus Support PS6199-5-AA AL	3
277	CFTV- 3N-AA AL TEE CONN CABLE	4
278	FP30D-45-AA AL ELBOW 95Deg	3
279	PSG 199-3-AA AL Bus Support	3
280	S3Z4.3 TEE Tap	5
281	TPC300 AA AZ TEE Con 3SP	12
282	CP300-AA-AL Coupler 3SPS	6
283	AC 470 AL Parallel Clamp	5
284	CFT V60-3N-AA AL TEE Con Cable	3
285	CI300 E-AA AL Int Corm a Bell	12
286	5340.3 Tee Tap	13
287	PSD 300-3-CH-AA AL Bus Spt	36
288	PSG 131-3-AA AL Bus Spt	15
289	VES164 Dead End Sub Assembly	6
290	VES 083 Dead End Assembly	3
291	P1008 H6 3/8 Unistrut Chain	100
292	P1006 EG 6mm Unistrut Channel	100
293	PFTS300-14N AA AL Tee Conn 3	33
294	Hi Temp Filler Compound	3 Tins

Annex A (Continued)

	A	B	C	D	E	F
295		TS16 Terminal Conn	80			
296		TS10 Terminal Conn	120			
297		Term, AL OMP Cable Flat 9	3			
298		Hubble Link Ext	20			
299		SWD E46N Ductile Quadrant	7			
300		AS25LBNK	12			
301		ACF6B Gaffney	3			
302		BW500 Washer 1/2	1050			
303		VHCL500 12BW Lug 2 Hole	10			
304		VHCS 10' Term Comp	10			
305		VHCL400 12BN Lug 2 Hole	10			
306		SWL050C Term Cable	1			
307		AS25 Clevis 30K	2			
308		LK30	5			
309		HYBC 30	7			
310		SWL025B Term Tee Flat	20			
311		hsyc50 Link Socket Y Clevis	12			
312		EC500Z Vise Type Connector	200			
313	<i>PO-32203 Conductors and Fittings</i>					
314		WIRE "LAPWING"	1600 FT			
315		WIRE "PIGEON"	50			
316		SAFETY PLANK 14 GA	24			
317		WIRE "LAPWING"	1400 FT			
318		SAFETY PLANK 14 GA	21			
319						
320	Container 6 902842		Qty			
321	<i>PO-0076 Anchor Bolts</i>					
322		1-1/4" Anchor Bolts	1128			
323		1" Anchor Bolts	136			
324		3/4" Anchor Bolts	2072			
325		1-1/4" x 2' 8-1/2" Anchor Bolts	312			
326		3/4" x 1' 7-3/4" Anchor Bolts	460			
327		1" x 1' 11-1/2" Anchor Bolts	32			
328		1/4" x 2' Anchor Bolts	1688			
329		3/8" x 3' Anchor Bolts	336			
330		3/8" x 2-1/2" Anchor Bolts	112			
331		1/2" x 3' Anchor Bolts	624			

Annex A (Continued)

A	B	C	D	E	F
332	<i>PO-06530 Grounding Cable Reels</i>				
333	1 x 120.0mm ² (Class 2 Stranded) BARE COPPER CONDUCTOR SOFT DRAWN 4 reels	8.1			
334	1 x 35.0mm ² (Class 2) non-compacted BARE COPPER CONDUCTOR SOFT DRAWN 1 reel	0.5			
335					
336	Container 7 521957	Qty			
337	<i>PO-0055 V Switch Actuator Motors</i>	21			
338	<i>PO-32203 Conductors and Fittings</i>				
339	Wire, 120 SQ MM (1 Drum, 100x100x74cm)	1			
340	Wire, 35 SQ MM (1 Drum, 130x130x95cm)	1			
341	Wire, 25 SQ MM (1 Pallet, 133x85x55cm)	1 Pallet			
342	Wire, 25 SQ MM				
343	WIRE "HAWK"	1700FT			
344	WIRE "LAPWING"	1600FT			
345	WIRE "PIGEON"	50			
346	WIRE "HAWK"	1700FT			
347	WIRE "LAPWING"	1400FT			
348	WIRE SHIELD 3/8 IN	550			
349	WIRE "PIGEON"	50			
350					
351	Container 8 684300	Qty			
352	<i>PO-0073 CONTROL & RELAY PANELS APHU 684300 9 45G1</i>	1			
353	<i>PO-27826 Machine Bolt 19mm Galvanized</i>	2			
354	<i>PO-28415 Clamps</i>				
355	STRAIN CLAMP QUADRANT	141			
356	CLAMP, PARALLEL GROOVE	126			
357					
358	Container 9 546743	Qty			
359	<i>PO-0073 CONTROL & RELAY PANELS APHU 546873 2 45G1</i>	1			
360					
361	Container 10 515129	Qty			
362	<i>PO-0073 CONTROL & RELAY PANELS 515129 5 45G1</i>	1			
363					
364	Container 11 000158	Qty			
365	<i>PO-0073 CONTROL & RELAY PANELS U000158 9 45G1</i>	1			
366					
367	GFE Container 1 468843-0	Qty			

Annex A (Continued)

	A	B	C
368		110KV GCB (CAXU 468843 0 42G1 G-1916U)	2
369		Support Column	2
370		Base Frame	2
371			
372	GFE Container 2 479677-9		Qty
373		110KV GCB (TRLU 479677 9 42G1 G1915U)	2
374		Support Column	2
375		Base Frame	2
376			
377	GFE Container 3 704408-8		Qty
378		110KV GCB (CAXU 704408 8 42G1 G-1918U)	2
379		Support Column	2
380		Base Frame	2
381			
382	GFE Container 4 461735-0		Qty
383		110KV GCB (TTNU 461735 0 42G1 G-1914U)	2
384		Support Column	2
385		Base Frame	2
386			
387	Outdoor Materials		Qty
388	<i>PO-0033 B919A Transformer 483200A001</i>		1
389	<i>PO-0033 B919B Transformer 483200A001</i>		1
390	<i>PO-0033 Transformer Installation Components</i>		5 pallets
391	<i>PO-0036 Circuit Breakers</i>		
392		20KV Circuit Breaker 600amp	15
393		20KV Circuit Breaker 1250amp	1
394	<i>PO-0047 20kV Vertical Circuit Breakers</i>		
395		20kV manual vertical breaker switch 600 amp	30
396		20kV manual vertical breaker switch 1250 amp	3
397		20kV motor operated vertical breaker switch 600 amp	3
398		Full load break vacuum interrupter 600 amp	3
399	<i>PO-0048 Generator Model: MP220E MARAPCO SAC</i>		1
400	<i>PO-0048 Generator Model: MP400E MARAPCO SAC</i>		2
401	<i>PO-0051 110KV Circuit Breaker and Components</i>		1
402	<i>PO-0051 Sulphur Hexafluoride Gas</i>		
403	<i>PO-0055 110kV Circuit Breakers</i>		
404		Vertical Breaker Switches	9

Annex A (Continued)

	A	B	C	D	E	F
405		Vertical Breaker Switch Controls	12			
406		Vertical Fuses	18			
407		Horizontal Fuses	9			
408	<i>PO-0058 Switchgear Assemblies</i>					
409		Switchgear Assembly, 13.8kV Indoor, NEMA I, 15kV, Free-standing	1			
410		Switchgear Assembly, 20kV Outdoor, NEMA 3R, metal-clad switchgear aisleless	1			
411	<i>PO-0059 Current & Potential Transformers</i>		18			
412	<i>PO-0061 Distribution TX 400KVA</i>		1			
413	<i>PO-0061 Distribution TX 100KVA</i>					
414	<i>PO-0062 Line Traps and Line Tuners</i>					
415		Wave Traps 110kV	4			
416		Wave Tuners 110kV	4			
417	<i>PO-0068 Pad Mounted TX 300KVA</i>		2			
418	<i>PO-0068 Pad Mounted TX 175KVA</i>		1			
419	<i>PO-0071 Coupling Capacitor and Transformer</i>					
420		Coupling Capacitor Voltage Transformer	18			
421		Current Transformer	6			
422		Current Transformer	6			
423	<i>PO-0073 Control & Relay Panels</i>		1			
424	<i>PO-0076 Electrical Substation Structural Steel</i>					
425		Structural Steel Column Galvanized	10			
426		Structural Steel Bundled Galvanized	19			
427		Support Structural Steel Galvanized	72			
428		Column 10m Steel Galvanized	5			
429		Fittings Palletized Box	1			
430	<i>PO-0078 Transformer Distribution Platforms</i>		22			
431	<i>PO-0083 24KV Insulator Station Post C10-170</i>		1			
432	<i>PO-0083 24KV Insulator Station Post CB- 650</i>		1			
433	<i>PO-20015 Concrete Poles</i>					
434		T7-B14 Concrete Poles- 14 meter	27			
435		T12-B14 Concrete Poles - 14 meter	95			
436	<i>PO-27826 Suspension Insulators</i>		96			
437	<i>PO-27826 - Bus Bars</i>		22			
438	<i>PO-27826 Dead End Tee, Galvanized</i>		2			
439	<i>PO-28415 Steel Arrester & Terminator</i>		2			
440	<i>PO-28415 20kV 3 MV Armored Cable (247m)</i>		1			
441	<i>PO-28415 Tangent Crossarms - 2000</i>		83			

Annex A (Continued)

	A	B	C	D	E	F
442		<i>PO-28415 Tangent Crossarms - 2500</i>	16			
443		<i>PO-32203 Suspension Insulators</i>	576			
444		<i>PO-32203 Bus Bars</i>	297			
445		<i>PO-43236 Aluminium Conductor Wire (3 reels, \$30,816 total)</i>	18			
446		<i>PO-43433 Fiberglass Poles and Fittings</i>				
447		COMPOSITE FIBERGLASS POLES	15			
448		JACKING LUG KIT	2			
449		TOP CAP	15			
450		<i>PO-48091- Fittings</i>				
451		EMT 90 DEGREE ELBOW 1"	25			
452		EMT 90 DEGREE ELBOW 2"	25			
453		CONDUIT SWEEP FOR 1" RIGID	25			
454		CONDUIT SWEEP FOR 2" RIGID	25			
455		CONDUIT SWEEP FOR 4" RIGID	25			
456		<i>PO-50466 Conductor Cable "Pigeon" (9 reels)</i>	5			
457		<i>PO-50466 Compression Joint for #3 ACS "Pigeon"</i>	20			
458		<i>PO-85 Capacitor Bank</i>	1			
459		<i>PO-7659 Line Post Insulators</i>	407			
460		<i>PO-42154 Battery Room Equipment</i>	2			
461		<i>PO-62807 Hilti Drills, Bits, etc.</i>	1			
462		<i>PO-63220 Hilti Anchors, Brushes, etc.</i>	1			
463		<i>PO-69069 Bolts, Washers, Taps, etc.</i>	1			
464		<i>PO-62566 Threaded Rod, Nuts, Washers, etc.</i>	1			
465						

APPENDIX B
GFE INVENTORY LIST VERIFICATION AND COST COMPARISON

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Appendix C Inventory Units and Valuation of Electrical Equipment transferred from USFOR-A to Da Afghanistan Breshna Sherkat													
2	USACE Annex A (Repeated)					Tetra Tech Findings								
3	Container 1 934548	Qty	Unit Cost	Subtotal	PO Total	Observed Quantity	Value of Verified and Extra Items	Value of Missing Items	Model/Part/Serial Number	Catalog	Condition - Damage	Condition - Appears Good	Brand	Remarks
4	<i>PO-0057 Lightning Arrestors</i>													
5	110 kV surge arrester w/insulating base	6										√	COOPER	
6	Discharge counter	5												
7	110 kV surge arrester w/insulating base	9										√	COOPER	
8	20 kV surge arrester w/insulating base	57										√	COOPER	
9	13.8 kV surge arrester w/insulating base	6												
10	Horizontal inverted power distribution fuse assembly	9												
11	Vertical offset power distribution fuse assembly	18												
12	<i>PO-0074 Substation Battery Room Equipment</i>													
13	Battery Charger	2										√	GNB	Found in container#2 5001278
14	Battery	2										√	MARATH	Found in container#2 5001278
15	Battery Rack	2										√		Found in container#2 5001278
16	Battery Charger	1										√	GNB	Found in container#2 5001278
17	Battery	1										√	MARATH	Found in container#2 5001278
18	Battery Rack	1										√		Found in container#2 5001278
19	<i>PO-06939 Grounding Connection Hardware for use with PO-6530</i>													
20	4/0 to 4 splice	483												
21	4/0 to 4/0 tee splice	539												
22	4/0 to #2 tee splice	153												
23	4/0 to 3/4 ground rod	181												
24	4/0 to 2" tee post	154												
25	Hydraulic hand operated tool	1												
26	U997 die	1												
27	PU998 die	1												
28	UPRECRIMP 34	1												
29	Sectional ground rod 3/4" x 10'	50												
30	Coupling for sectional ground rod	27												
31	Ground rod standard 3/4" x 10'	131												
32	<i>PO-28415 20KV Pole Hardware</i>													
33	INSULATOR PORCELAIN DEAD END In yard	192												
34	VIBRATION DAMPER FOR ACSR	340										√	FAFL	
35	COMPRESSION JOINT FOR ACSR	28										√	FAFL	
36	GALV BOLT SQUAREHEAD 7/8 x 3"	28										√	DIPR	
37	GALV BOLT SQUAREHEAD 7/8 x 4"	172										√	DIPR	
38	POLE BAND, GALV, 4-WAY 90	68										√	DIPR	
39	CONNECTING LINK 3/8 x 2"	450										√	DIPR	
40	ROLLER POLE BAND, GALV, 2-3/4"	68												
41	KELLEMS SUPPORT GRIPS	12										√	HUBBELL	
42	<i>PO-48091 Fittings</i>													
43	EMT COMPRESSION CONNECTORS 1"	250										√	TOPAZ	
44	EMT COMPRESSION CONNECTORS 2"	100										√	TOPAZ	
45	EMT COMPRESSION COUPLINGS 1"	151										√	TOPAZ	Found in container#3 994036
46	EMT COMPRESSION COUPLINGS 1"	100										√	TOPAZ	
47	GRC 3/4" COUPLINGS	50										√	TOPAZ	
48	GRC 1" COUPLINGS	100										√	TOPAZ	
49	GRC 2" COUPLINGS	100										√	TOPAZ	
50	GRC 4" COUPLINGS	25										√	TOPAZ	
51	GRC 3/4" CONNECTOR	25										√	TOPAZ	
52	GRC 1" CONNECTOR	25										√	TOPAZ	
53	GRC 2" CONNECTOR	25										√	TOPAZ	
54	GRC 4" CONNECTOR	25										√	TOPAZ	
55	LOCK NUTS 1"	200										√	TOPAZ	
56	LOCK NUTS 2"	100										√	TOPAZ	
57	LOCK NUTS 4"	100										√	TOPAZ	
58	GROUNDING BUSHINGS 1"	25										√	TOPAZ	
59	GROUNDING BUSHINGS 2"	25										√	TOPAZ	
60	GROUNDING BUSHINGS 4"	25										√	TOPAZ	
61	LIQUID TIGHT FLEX 1" STRAIGHT	25										√	TOPAZ	
62	LIQUID TIGHT FLEX 2" STRAIGHT	25										√	TOPAZ	

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	to Da Afghanistan Breshna Sherkat													
2	USACE Annex A (Repeated)													
64	LIQUID TIGHT FLEX 4" STRAIGHT	16												
65	LIQUID TIGHT FLEX 1" 90 DEGREE CONNECTOR	25												
66	LIQUID TIGHT FLEX 2" 90 DEGREE CONNECTOR	25												
67	LIQUID TIGHT FLEX 4" 90 DEGREE CONNECTOR	16												
68	RED WIRE NUTS	1000												
69	BLACK ELECTRICAL TAPE	50												
70	EMT COMPRESSION CONNECTORS 3/4	100												
71	CONDUIT HANGER, "MINI'S" W BOLT & NUT 3/4"	600												
72	CONDUIT HANGER, "MINI'S" W BOLT & NUT 1"	250												
73	CONDUIT HANGER, "MINI'S" W BOLT & NUT 2"	125												
74	CONDUIT HANGER "MINI'S" W BOLT & NUT 4"	25												
75														
76	Container 2 5001278		Qty											
77	PO-0048 ATYS 630Amp	2												
78	PO-0048 ATYS 400Amp	1												
79	PO-0048 Gen Set Control Panel	3												
80	PO-0073 Tangi Relay Panel #1	1												
81														
82	Container 3 994036		Qty											
83	PO-23230 Centrifugal Roof Exhausts	2												
84	PO-32203 Conductors and Fittings													
85	BUS TUBING 90 MM 3" In Yard	960												
86	BOLT, GALVANIZED 1/2" x 2 1/2"	1600												
87	NUT, GALVANIZED 1/2"	1600												
88	WIRE, SHIELD, 3/8 IN	500												
89	WASHER, FLAT, GALVANIZED 1/2"	3200												
90	BUS SUPPORT, 3"	17												
91	END BELL, 3"	9												
92	TERMINAL BOLTED, 3"	18												
93	DEADEND, COMPRESSION, EYE TYPE	42												
94	SHACKLE, ANCHOR 5/8"	48												
95	Y-CLEVIS, HOT LINE SOCKET 3/4"	6												
96	Y-CLEVIS, HOT LINE BALL 3/4"	72												
97	WASHER, BELLEVILLE SPRING	1600												
98	COUPLER, BOLTED, ALUMINUM 3"	12												
99	TERMINAL, TEE, BOLTED, ALUMINUM, 3"	30												
100	BUS SUPPORT, 3"	21												
101	BUS SUPPORT, ALUMINUM, 3"	6												
102	TERMINAL, BOLTED, STRT, ALUMINUM, #4	12												
103	CLAMP, SINGLE CABLE TO FLAT	240												
104	CLAMP, TWO CABLES TO FLAT	300												
105	TERMINAL, BOLTED, 2 HOLE PAD	14												
106	BOLT, HEX HEAD, 1/2"	35												
107	WASHER, ROUND, 1/2"	35												
108	BRAID, FLEXIBLE COPPER, TYPE B	5												
109	CONNECTOR, GROUND, FENCE POST 4"	8												
110	CONNECTOR, GROUND, FENCE POST 2"	9												
111	CONNECTOR, GROUND, FENCE POST 1 5/8"	63												
112	CONNECTOR, GROUND, FENCE POST 3"	4												
113	CONNECTOR, BRONZE, VICE-COMPRESSION	189												
114	ANCHOR SHACKLE, 5/8"	12												
115	STRAIN CLAMP, BOLTED, DUCTILE IRON	6												
116	CHAIN LINK, GALVANIZED, 30K LBS	6												
117	CONNECTOR, GROUND, FENCE POST 2 1/2"	50												
118	LUG, TERMINAL, ONE HOLE #4	2												
119	LUG, TERMINAL, COMPRESSION	1												
120	WASHER, LOCK, SPLIT 1/2"	10												
121	NUT, HEX HEAD, 1/2"	10												
122	LUG, TERMINAL, COMPRESSION	6												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Appendix C Inventory Units and Valuation of Electrical Equipment transferred from USEF08-A to Da Afghanistan Breshna Sherkat														
2	USACE Annex A (Repeated)			Tetra Tech Findings											
123		CONNECTOR, TEE, COMP, 120 - 120MM	152												
124		CONNECTOR, TEE, COMP, 120-35MM	70												
125		BOLT M12 -1.75x60MM	50												
126		BOLT M12 -1.75x70MM	20												
127		BOLT M18- 2.5x65MM	26												
128		BOLT M12 -1.75x75MM	26												
129		BOLT M12 -1.75x50MM	40												
130		NUT M12 -1.75	286												
131		WASHER ROUND 16MM	160												
132		WASHER, LOCK, SPLIT 16MM	160												
133		BUS TUBING 90 MM 3"	960												
134		BOLT, GALVANIZED 1/2" x 2 1/2"	1400							-	-	-	v		
135		NUT, GALVANIZED 1/2"	1400							-	-	-	v		
136		WASHER, FLAT, GALVANIZED 1/2"	2800												
137		BUS SUPPORT, 3"	27												
138		END BELL, 3"	12												
139		TERMINAL BOLTED, 3"	18												
140		DEADEND, COMPRESSION, EYE TYPE	30												
141		SHACKLE, ANCHOR 5/8"	33												
142		Y-CLEVIS, HOT LINE SOCKET 3/4"	33												
143		Y-CLEVIS, HOT LINE BALL 3/4"	21												
144		WASHER, BELLEVILLE SPRING	1400												
145		COUPLER, BOLTED, ALUMINUM 3"	15												
146		TERMINAL, TEE, BOLTED, ALUMINUM, 3"	30												
147		BUS SUPPORT, 3"	21												
148		TERMINAL, TEE, BOLTED, ALUMINUM, #4	1												
149		TERMINAL, BOLTED, STRT, ALUMINUM, #4	3												
150		CLAMP, SINGLE CABLE TO FLAT	210							-	-	-	v		
151		CLAMP, TWO CABLES TO FLAT	205							-	-	-	v		
152		TERMINAL, BOLTED, 2 HOLE PAD	14							-	-	-	v		
153		BOLT, HEX HEAD, 1/2"	34							-	-	-	v		
154		WASHER, ROUND, 1/2"	34												
155		BRAID, FLEXIBLE COPPER, TYPE B	3							-	-	-	v		
156		CONNECTOR, GROUND, FENCE POST 4"	4							-	-	-	v		
157		CONNECTOR, GROUND, FENCE POST 2"	5							-	-	-	v		
158		CONNECTOR, GROUND, FENCE POST 1 5/8"	48												
159		CONNECTOR, GROUND, FENCE POST 3"	10												
160		CONNECTOR, BRONZE, VICE-COMPRESSION	144							-	-	-	v		
161		ANCHOR SHACKLE, 5/8"	15												
162		CHAIN LINK, GALVANIZED, 30K LBS	10												
163		LUG, TERMINAL, ONE HOLE #4	3												
164		WASHER, LOCK, SPLIT 1/2"	6							-	-	-	v		
165		NUT, HEX HEAD, 1/2"	6							-	-	-	v		
166		ROD, FULL THREADED, 5/8"	8												
167		NUT, OVAL EYE, ULTIMATE STRENGTH	4												
168		LUG, TERMINAL, COMPRESSION, COPPER	3												
169		LOCKNUT, SQUARE, 5/8"	12												
170		CONNECTOR, TEE, COMP, 120- 120MM	130												
171		CONNECTOR, TEE, COMP, 120-35MM	50												
172		BOLT M12 -1.75x60MM	50												
173		BOLT M18- 2.5x75MM	18												
174		BOLT M12 -1.75x70MM	10												
175		BOLT M18- 2.5x65MM	13												
176		BOLT M12 -1.75x75MM	25												
177		BOLT M12- 1.75x50MM	40												
178		BOLT M16- 2x65MM	115												
179		BOLT M12 -1.75x50MM	150												
180		NUT M12 -1.75	365												
181		NUT M16-2	296												
182		WASHER ROUND 16MM	296												
183		WASHER, LOCK, SPLIT 16MM	296												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1															
2	USACE Annex A (Repeated)										Tetra Tech Findings				
184		TERMINAL, COMPRESSION, 477	162												
185		TERMINAL, COMPRESSION, 1590	223												
186		TERMINAL, TEE-TAP, COMPRESSION, 477	7												
187		TERMINAL, TEE-TAP, COMPRESSION, 1590	44												
188		BUS SUPPORT, 1590	12												
189		EXTENSION LINK, HOT LINE	24												
190		SUSPENSION INSULATOR	110												
191		TERMINAL, COMPRESSION, 477	180												
192		TERMINAL, COMPRESSION, 1590	164												
193		TERMINAL, TEE-TAP, COMPRESSION, 477	21												
194		TERMINAL, TEE-TAP, COMPRESSION, 1590	30												
195		BUS SUPPORT, 1590	9												
196		EXTENSION LINK, HOT LINE	15												
197		SUSPENSION INSULATOR	274												
198		STRAIN CLAMP	10												
199		JOINT COMPOUND	3												
200		CABLE MOUNTING BRACKET DOUBLE CLAMP	3							-	-	-	v		
201		CROSSARM MOUNTING BRACKET	3							-	-	-	v		
202		HILTI DRILL BIT	1							-	-	-	v		
203		HILTI STD STUD ANCHOR	8							-	-	-	v		
204		CONNECTOR TERMINAL EYEBOLT	173												
205		CHANNEL 1 5/8" x 1 5/8" GALVANIZED	2							-	-	-	v		
206		CHANNEL NUT 3/8" -16 GALVANIZED	8												
207		BOLT M16 - 2 x45 MM GALVANIZED	160												
208		BOLT M12 -1.75 x 45 MM GALVANIZED	150												
209		NUT, M16- 2 GALVANIZED	160												
210		JOINT COMPOUND	3												
211		CABLE MOUNTING BRACKET DOUBLE CLAMP	7												
212		CROSS ARM MOUNTING BRACKET	7							-	-	-	v		
213		CONNECTOR, GROUND, FENCE POST	33												
214		HILTI DRILL BIT	1							-	-	-	v		
215		HILTI STD STUD ANCHOR	8							-	-	-	v		
216		CONNECTOR TERMINAL EYEBOLT	150												
217		CHANNEL 1 5/8" x 1 5/8" GALVANIZED	2							-	-	-	v		
218		CHANNEL NUT 3/8" - 16 GALVANIZED	8												
219		CHANNEL NUT METRIC	8												
220		BOLT M16- 2 x 45 MM GALVANIZED	150							-	-	-	v	FASTENAL	
221		BOLT M12 - 1.75 x 45 MM GALVANIZED	90							-	-	-	v		
222		TERMINATION, CABLE OUTDOOR	3							-	-	-	v		
223		CLAMP, SINGLE CABLE TO FLAT 70-125 SQ	100												
224		CLAMP, TWO CABLES TO FLAT 25-150 SQ	275												
225		WASHER, ROUND 1/2" DIA	26												
226		BRAID FLEXIBLE COPPER TYPE B	4												
227		CONNECTOR, GROUND, FENCE POST 4"	4												
228		CONNECTOR, GROUND, FENCE POST 2"	6												
229		CONNECTOR, GROUND, FENCE POST 1 5/8"	34												
230		CONNECTOR, GROUND, FENCE POST 3"	8							-	-	-	v		
231		SAFETY PLANK, 14 GA 2'X6', 2" CHANNEL	13												
232		CONNECTOR, GROUND, FENCE POST, 2 1/2"	20							-	-	-	v		
233		HILTI DRILL BIT	1							-	-	-	v		
234		HILTI STD STUD ANCHOR	8							-	-	-	v		
235		CONNECTOR, BRONZE, VICE-COMPRESSION	6							-	-	-	v		
236		CONNECTOR, TERMINAL, EYEBOLT #8	93												
237		CONNECTOR, TEE, COMP, 120MM-120MM	150												
238		CONNECTOR, TEE, COMP, 120MM-35MM	40												
239		DIE, CIRCULAR, TWIN, NON BUTTING	1												
240		DIE, TWIN, RADIAL, NON BUTTING	1												
241		ADAPTER PLATE, 4 HOLE TO 6 HOLE	6												
242		CABLE BREAKOUT, 35KV, 3 PHASE COND.	4												
243		CLAMP, SINGLE CABLE TO FLAT 70-125 SQ	24												
244		CLAMP, TWO CABLES TO FLAT 25-150 SQ	26												

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the spreadsheet,

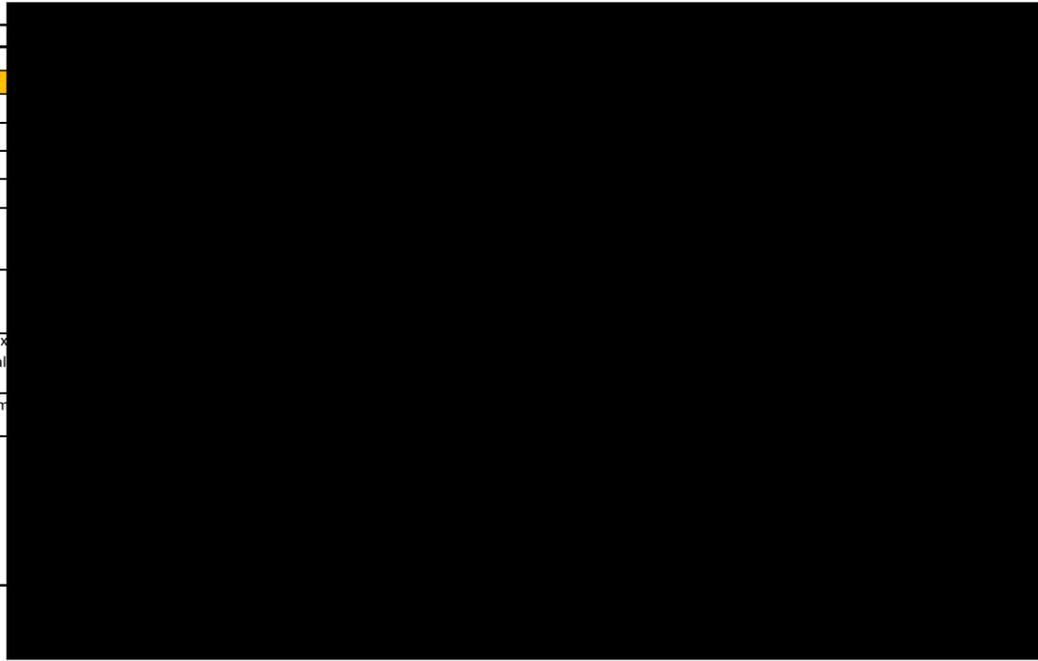
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Units and Valuation of Electrical Equipment transferred from USFOR-A to Da Afghanistan Breshna Sherkat													
2	USACE Annex A (Repeated)								Tetra Tech Findings					
245	WASHER, ROUND 1/2" DIA	11				0								
246	BRAID FLEXIBLE COPPER TYPE B	4				0								
247	CONNECTOR, GROUND, FENCE POST 4"	4				0								
248	CONNECTOR, GROUND, FENCE POST 2"	5				0								
249	CONNECTOR, GROUND, FENCE POST 1 5/8"	17				0								
250	CONNECTOR, GROUND, FENCE POST 3"	4				4						√		
251	CONNECTOR, GROUND, FENCE POST, 2 1/2"	8				8						√		
252	ANCHOR SHACKLE, 30,000 LBS STEEL	6				0								
253	CONNECTOR, TERMINAL, EYEBOLT #8	3				0								
254	CONNECTOR, TEE, COMP, 120MM-120MM	70				0								
255	CONNECTOR, TEE, COMP, 120MM-35MM	20				0								
256	DIE, TWIN, RADIAL, NON BUTTING	1				0								
257														
258	Container 4 286922 Qty					Observed Quantity			Model/Part/Serial Number	Catalog	Condition - Damage	Condition - Appears Good	Brand	Remarks
259	PO-0073 Control and Relay Panels													
260	Tangi marked	1				1			-	-	-	√	SEL	High value, highly specialized, electronic equipment that should be in an air conditioned environment. This cost is already counted Included in line item 80.
261	Kajaki marked	1				1			-	-	-	√	SEL	High value, highly specialized, electronic equipment that should be in an air conditioned environment.
262														
263	Container 5 158491 Qty					Observed Quantity			Model/Part/Serial Number	Catalog	Condition - Damage	Condition - Appears Good	Brand	Remarks
264	PO-27826 Conductors and Fittings													
265	Wire, 120 SQ MM (1 Drum, 100x100x74cm)	1				1			-	-	-	√	DAMCO	
266	Wire, 35 SQ MM (Pallet, 108x79x102cm)	1				1			-	-	-	√	BATT	
267	Wire, 25 SQ MM	1				1			-	-	-	√	BATT	
268	Wire, 25 SQ MM	1				1			-	-	-	√	BATT	
269	WIRE "HAWK"	840				840			-	-	-	√		
270	WIRE "LAPWING"	200				200			-	-	-	√	HWC	
271	WIRE SHIELD 3/8 IN 7 STRAND	325				325			-	-	-	√		
272	WIRE "PIGEON"	50				50			-	-	-	√		
273	SAFETY PLANK, 14 GA 2'X6', 2" CHANNEL	13				13			-	-	-	√		
274	WIRE "HAWK"	200				200			-	-	-	√	HWC	
275	WIRE "LAPWING"	500				500			-	-	-	√		
276	Bus Support PS6199-5-AA AL	3				3			-	-	-	√		
277	CFTV- 3N-AA AL TEE CONN CABLE	4				4			-	-	-	√	FAFL	
278	FP30D-45-AA AL ELBOW 95Deg	3				3			-	-	-	√	FAFL	
279	PSG 199-3-AA AL Bus Support	3				3			-	-	-	√		
280	S324.3 TEE Tap	5				5			-	-	-	√		
281	TPC300 AA AZ TEE Con 3SP	12				12			-	-	-	√	FAFL	
282	CP300-AA-AL Coupler 3SPS	6				6			-	-	-	√	FAFL	
283	AC 470 AL Parallel Clamp	5				5			-	-	-	√	FAFL	
284	CFT V60-3N-AA AL TEE Con Cable	3				3			-	-	-	√	FAFL	
285	CI300 E-AA AL Int Corm a Bell	12				12			-	-	-	√	FAFL	
286	S340.3 Tee Tap	13				13			-	-	-	√		
287	PSD 300-3-CH-AA AL Bus Spt	36				40			-	-	-	√	FAFL	
288	PSG 131-3-AA AL Bus Spt	15				15			-	-	-	√	FAFL	
289	VES164 Dead End Sub Assembly	6				6			-	-	-	√	FAFL	
290	VES 083 Dead End Assembly	3				3			-	-	-	√	FAFL	
291	P1008 H6 3/8 Unistrut Chain	100				100			-	-	-	√	TKORE	
292	P1006 EG 6mm Unistrut Channel	100				100			-	-	-	√		
293	PFTS300-14N AA AL Tee Conn 3	33				33			-	-	-	√		
294	Hi Temp Filler Compound (tins)	3				3			-	-	-	√	FAFL	
295	TS16 Terminal Conn	80				80			-	-	-	√	FAFL	
296	TS10 Terminal Conn	120				120			-	-	-	√	FAFL	
297	Term, AL OMP Cable Flat 9	3				3			-	-	-	√	HUBBELL	
298	Hubble Link Ext	20				20			-	-	-	√		
299	SWD E46N Ductile Quadrant	7				7			-	-	-	√		
300	AS25LBNK	12				12			-	-	-	√		

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
1	Appendix C Inventory Units and Valuation of Electrical Equipment transferred from USFOR-A to Da Afghanistan Breshna Sherkat														
2	USACE Annex A (Repeated)						Tetra Tech Findings								
301	ACF6B Gaffney	3				3							√	GUPN	
302	BW500 Washer 1/2	1050				1050							√	HUBBELL	
303	VHCL500 12BW Lug 2 Hole	10				10							√	WUN	
304	VHCS 10' Term Comp	10				10							√	WUN	
305	VHCL400 12BN Lug 2 Hole	10				10							√	HUBBELL	
306	SWL050C Term Cable	1				1							√	WUN	
307	AS25 Clevis 30K	2				2							√	WUN	
308	LK30	5				5							√		
309	HYBC 30	7				7							√		
310	SWL025B Term Tee Flat	20				20							√	HUBBELL	
311	hsyc50 Link Socket Y Clevis	12				12							√	HUBBELL	
312	EC500Z Vise Type Connector	200				200							√	HUBBELL	
313	<i>PO-32203 Conductors and Fittings</i>														
314	WIRE "LAPWING" (FT)	1600				1600							√	CVG	This cost is already Included with line items 199-256
315	WIRE "PIGEON"	50				50							√		This cost is already Included with line items 199-256
316	SAFETY PLANK 14 GA	24				24							√		This cost is already Included with line items 199-256
317	WIRE "LAPWING" (FT)	1400				1400							√	CVG	This cost is already Included with line items 199-256
318	SAFETY PLANK 14 GA	21				21							√		This cost is already Included with line items 199-256
319															
320	Container 6 902842		Qty			Observed Quantity			Model/Part/Serial Number	Catalog	Condition - Damage	Condition - Appears Good	Brand	Remarks	
321	<i>PO-0076 Anchor Bolts</i>														
322	1-1/4" Anchor Bolts	1128				0									This cost is already Included in line item 425-429
323	1" Anchor Bolts	136				0									This cost is already Included in line item 425-429
324	3/4" Anchor Bolts	2072				0									This cost is already Included in line item 425-429
325	1-1/4" x 2' 8-1/2" Anchor Bolts	312				0									This cost is already Included in line item 425-429
326	3/4" x 1' 7-3/4" Anchor Bolts	460				0									This cost is already Included in line item 425-429
327	1" x 1' 11-1/2" Anchor Bolts	32				0									This cost is already Included in line item 425-429
328	1/4" x 2' Anchor Bolts	1688				0									This cost is already Included in line item 425-429
329	3/8" x 3' Anchor Bolts	336				0									This cost is already Included in line item 425-429
330	3/8" x 2-1/2" Anchor Bolts	112				0									This cost is already Included in line item 425-429
331	1/2" x 3' Anchor Bolts	624				0									This cost is already Included in line item 425-429
332	<i>PO-06530 Grounding Cable Reels</i>														
333	1 x 120.0mm2 (Class 2 Stranded) BARE COPPER CONDUCTOR SOFT DRAWN 4 reels	8.1				8.1							√	BATT	
334	1 x 35.0mm2 (Class 2) non-compacted BARE COPPER CONDUCTOR SOFT DRAWN 1 reel	0.5				0.5							√	BATT	
335															
336	Container 7 521957		Qty			Observed Quantity			Model/Part/Serial Number	Catalog	Condition - Damage	Condition - Appears Good	Brand	Remarks	
337	1	<i>PO-0055 V Switch Actuator Motors</i>		21		21							√	PASCOR	This cost is already Included in line items 404-407
338	2	<i>PO-32203 Conductors and Fittings</i>													
339	3	Wire, 120 SQ MM (1 Drum, 100x100x74cm)		1		1							√	BATT	This cost is already Included in line item 199-256
340	4	Wire, 35 SQ MM (1 Drum, 130x130x95cm)		1		1							√	BATT	This cost is already Included in line item 199-256
341	5	Wire, 25 SQ MM (1 Pallet, 133x85x55cm) (pallet)		1		1							√	BATT	This cost is already Included in line item 199-256
342	6	Wire, 25 SQ MM		1		1							√	BATT	This cost is already Included in line item 199-256
343	7	WIRE "HAWK"		1700		1700							√	HWC	This cost is already Included in line item 199-256
344	8	WIRE "LAPWING" (FT)		1600		0									This cost is already Included in line item 199-256
345	9	WIRE "PIGEON"		50		0									This cost is already Included in line item 199-256
346	10	WIRE "HAWK" (FT)		1700		1700							√	HWC	This cost is already Included in line item 199-256
347	11	WIRE "LAPWING" (FT)		1700		0									This cost is already Included in line item 199-256
348	12	WIRE SHIELD 3/8 IN		550		0									This cost is already Included in line item 199-256
349	13	WIRE "PIGEON"		50		50							√	HWC	This cost is already Included in line item 199-256
350															
351	Container 8 684300		Qty			Observed Quantity			Model/Part/Serial Number	Catalog	Condition - Damage	Condition - Appears Good	Brand	Remarks	
352	<i>PO-0073 CONTROL & RELAY PANELS APHU 684300 9 45G1</i>		1			1							√		
353	<i>PO-27826 Machine Bolt 19mm Galvanized</i>		2			2							√		
354	<i>PO-28415 Clamps</i>														
355	STRAIN CLAMP QUADRANT		141			141							√	HUBBELL	
356	CLAMP, PARALLEL GROOVE		126			126							√	FAFL	
357															

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1														
2	USACE Annex A (Repeated)								A to Da Afghanistan Breshna Sherkat					
	Container 9 546743	Qty							Tetra Tech Findings					
358									Model/Part/Serial Number	Catalog	Condition - Damage	Condition - Appears Good	Brand	Remarks
359	PO-0073 CONTROL & RELAY PANELS APHU 546873 2 45G1	1							-	-	-	v	SEL	The container #546743 is not correct, the correct number is 546873 . High value, highly specialized, electronic equipment that should be in an air conditioned environment. This cost is already included in line item 352.
360														
361	Container 10 515129	Qty							Model/Part/Serial Number	Catalog	Condition - Damage	Condition - Appears Good	Brand	Remarks
362	PO-0073 CONTROL & RELAY PANELS 515129 5 45G1	1							-	-	-	v	SEL	High value, highly specialized, electronic equipment that should be in an air conditioned environment. This cost is already included in line item 352.
363														
364	Container 11 000158	Qty							Model/Part/Serial Number	Catalog	Condition - Damage	Condition - Appears Good	Brand	Remarks
365	PO-0073 CONTROL & RELAY PANELS U000158 9 45G1	1							-	-	-	v	SEL	High value, highly specialized, electronic equipment that should be in an air conditioned environment. This cost is already included in line item 352.
366														
367	GFE Container 1 468843-0	Qty							Model/Part/Serial Number	Catalog	Condition - Damage	Condition - Appears Good	Brand	Remarks
368	110KV GCB (CAXU 468843 0 42G1 G-1916U)	2							-	-	-	v	CG	
369	Support Column	2							-	-	-	v		One of the support column is bended
370	Base Frame	2							-	-	-	v	CG	
371														
372	GFE Container 2 479677-9	Qty							Model/Part/Serial Number	Catalog	Condition - Damage	Condition - Appears Good	Brand	Remarks
373	110KV GCB (TRLU 479677 9 42G1 G1915U)	2							-	-	-	v	CG	
374	Support Column	2							-	-	-	v		
375	Base Frame	2							-	-	-	v	CG	
376														
377	GFE Container 3 704408-8	Qty							Model/Part/Serial Number	Catalog	Condition - Damage	Condition - Appears Good	Brand	Remarks
378	110KV GCB (CAXU 704408 8 42G1 G-1918U)	2							-	-	-	v	CG	
379	Support Column	2							-	-	-	v		
380	Base Frame	2							-	-	-	v	CG	
381														
382	GFE Container 4 461735-0	Qty							Model/Part/Serial Number	Catalog	Condition - Damage	Condition - Appears Good	Brand	Remarks
383	110KV GCB (TTNU 461735 0 42G1 G-1914U)	2							-	-	-	v	CG	
384	Support Column	2							-	-	-	v		
385	Base Frame	2							-	-	-	v	CG	
386														
387	Outdoor Materials	Qty							Model/Part/Serial Number	Catalog	Condition - Damage	Condition - Appears Good	Brand	Remarks
388	PO-0033 B919A Transformer 483200A001	1							SL#483200A001-B919A	-	-	v	VT	
389	PO-0033 B919B Transformer 483200A001	1							SL#483200A001-B919B	-	-	v	VT	
390	PO-0033 Transformer Installation Components (pallets)	5							-	-	-	v		Included in line items above
391	PO-0036 Circuit Breakers													
392	20KV Circuit Breaker 600amp	15							-	-	-	v	ABB	
393	20KV Circuit Breaker 1250amp	1							-	-	-	v	ABB	
394	PO-0047 20kV Vertical Circuit Breakers													
395	20kV manual vertical breaker switch 600 amp	30							-	-	-	v	CP	
396	20kV manual vertical breaker switch 1250 amp	3							-	-	-	v	CP	
397	20kV motor operated vertical breaker switch 600 amp	3							-	-	-	v	CP	
398	Full load break vacuum interrupter 600 amp	3							-	-	-	v		Found in Container #8
399	PO-0048 Generator Model: MP220E MARAPCO SAC	1							-	-	-	v	MARAPCO SAC	This cost is already included in line items 77-79
400	PO-0048 Generator Model: MP400E MARAPCO SAC	2							-	-	-	v	MARAPCO SAC	This cost is already included in line items 77-79
401	PO-0051 110KV Circuit Breaker and Components	1							-	-	-	v	ABB	
402	PO-0051 Sulphur Hexafluoride Gas	1							-	-	-	v	ABB	2 cylinder are available in the warehouse.
403	PO-0055 110KV Circuit Breakers													
404	Vertical Breaker Switches	9							SL#13089B	-	-	v	PASCOR	21 Sets are available in the warehouse.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1									o Da Afghanistan Breshna Sherkat					
2	USACE Annex A (Repeated)													
405	Vertical Breaker Switch Controls	12							SL#13089B	--	--	√	PASCOR	21 Pcs are available in the ware house.
406	Vertical Fuses	18												
407	Horizontal Fuses	9							192223R2	--	--	√	S&C	These are 25kV Horizontal Fuses
408	PO-0058 Switchgear Assemblies													
409	Switchgear Assembly, 13.8kV Indoor, NEMA I, 15kV, Free-standing	1							--	--	--	√	EATON	
410	Switchgear Assembly, 20kV Outdoor, NEMA 3R, metal-clad switchgear aisle-less	1							--	--	--	√	EATON	
411	PO-0059 Current & Potential Transformers													
412	PO-0061 Distribution TX 400KVA	1							SL#51310693	--	--	√	ABB	
413	PO-0061 Distribution TX 100KVA								--	--	--	√	CG	However, transformer has oil leakage and presser gage is broken.
414	PO-0062 Line Traps and Line Tuners													
415	Wave Traps 110kV	4							SL#5013147-001	--	--	√	TRENCH	3pcs are in the outdoor materials and one pcs is the inside of the container#2 5001278
416	Wave Tuners 110kV	4							--	--	--	√	TRENCH	Found in container#2 5001278
417	PO-0068 Pad Mounted TX 300KVA													
418	PO-0068 Pad Mounted TX 175KVA	1							--	--	--	√	ABB	
419	PO-0071 Coupling Capacitor and Transformer													
420	Coupling Capacitor Voltage Transformer	18							--	--	--	√	ARTECHE	12 Pcs are available in the warehouse.
421	Current Transformer	6							--	--	--	√	ABB	
422	Current Transformer	6							--	--	--	√	ABB	15 Pcs are available in the warehouse; value of missing items is a negative number.
423	PO-0073 Control & Relay Panels													
424	PO-0076 Electrical Substation Structural Steel													
425	Structural Steel Column Galvanized	10							as not been					Including Sangin N \$236,125
426	Structural Steel Bundled Galvanized	19												Sangin S \$394,138
427	Support Structural Steel Galvanized	72												Tangi \$ 140,408
428	Column 10m Steel Galvanized	5												Kajaki \$ 11,744
429	Fittings Palletized Box	1												Total: 782,415.00
430	PO-0078 Transformer Distribution Platforms													
431	PO-0083 24KV Insulator Station Post C10-170	1							--	--	--	√	AF	
432	PO-0083 24KV Insulator Station Post CB- 650	1							--	--	--	√		Insulator Station Post CB- 650 are for 110kV.
433	PO-20015 Concrete Poles													
434	T7-B14 Concrete Poles- 14 meter	27							--	--	4	√		Four concrete pole are broken and also DABS didn't store concrete pole properly in warehouse.
435	T12-B14 Concrete Poles - 14 meter	95							--	--	2	√		Two concrete pole are broken and also DABS didn't store concrete pole properly in warehouse.
436	PO-27826 Suspension Insulators													
437	PO-27826 - Bus Bars	22							--	--	--	√	MP	This cost is already Included in line items 265-312
438	PO-27826 Dead End Tee, Galvanized	2							--	--	--	√	SAPA	This cost is already Included in line items 265-312
439	PO-28415 Steel Arrester & Terminator													
440	PO-28415 20kV 3 MV Armored Cable (247m)	1							--	--	--	√		
441	PO-28415 Tangent Crossarms - 2000	83							--	--	--	√	PUPI	Combined cost of \$71,025.80
442	PO-28415 Tangent Crossarms - 2500	16							--	--	--	√	PUPI	
443	PO-32203 Suspension Insulators	576							--	--	--	√		This cost is already Included in line items 199-256
444	PO-32203 Bus Bars	297							--	--	--	√	SAPA	This cost is already Included in line items 199-256
445	PO-43236 Aluminum Conductor Wire (3 reels, \$30,816 total)													
446	PO-43433 Fiberglass Poles and Fittings													
447	COMPOSITE FIBERGLASS POLES	15							--	--	--	√	RSPALES	
448	JACKING LUG KIT	2							--	--	--	√	RSPALES	
449	TOP CAP	15							--	--	--	√	RSPALES	
450	PO-48091- Fittings													
451	EMT 90 DEGREE ELBOW 1"	25												
452	EMT 90 DEGREE ELBOW 2"	25												
453	CONDUIT SWEEP FOR 1" RIGID	25							--	--	--	√	TOFAZELECTRIC	
454	CONDUIT SWEEP FOR 2" RIGID	25							--	--	--	√	TOFAZELECTRIC	
455	CONDUIT SWEEP FOR 4" RIGID	25							--	--	--	√	TOFAZELECTRIC	
456	PO-50466 Conductor Cable "Pigeon" (9 reels)													
457	PO-50466 Compression Joint for #3 ACS "Pigeon"	20							--	--	--	√	FAFL	
458	PO-85 Capacitor Bank													
459	PO-7659 Line Post Insulators	407							--	--	--	√	COPPER	1 Capacitor Bank containing 19 pcs. One of the 19 pcs damaged.
460	PO-42154 Battery Room Equipment	2												
461	PO-62807 Hilti Drills, Bits, etc.	1												

	A	B	C
1			
2	USACE Annex A (Repeated)		
462	PO-63220 Hilti Anchors, Brushes, etc.		1
463	PO-69069 Bolts, Washers, Taps, etc.		1
464	PO-62566 Threaded Rod, Nuts, Washers, etc.		1
465		Total (See Note 2 about Cell C465)	56,840.6
466			
467	Notes		
468	1	Columns A through and including F are the same as USACE Annex A (See Appendix A).	
469	2	The total quantity of USACE material is not an integer number because reel of wire have been exchanged delivered material to ordered material. For wire and cable the as delivered weight and price is as ordered quantity and price (which is an industry practice). For example, see Rows 335 and 336.	
470	3	Missing or unaccounted for items are valued as a positive number. Therefore, when additional material value in this Column I. For example, see Row 422.	
471			
472			
473			
474			
475			



K	L	M	N	O
herkat				
Tetra Tech Findings				

When the basis is "value" the value of the missing items is relatively small (15.3 %) compared the basis of "count" in 53.7% because the high value items (transformers, reels of wire, circuit breakers, relay panels, etc.) were found in the storage yard.

APPENDIX C

STRUCTURAL STEEL LIST (NOT INCLUDED IN INVENTORY)

Structural Steel List (not included in GFE list)

Intro Many structural steel pieces were observed and listed by the Tt team during this inventory process. The pieces did not unequivocally match any unaccounted for materials on USACE Annex A list. For example, the pieces do not appear to be the material associated with USACE PO-0076 Electrical Substation Structural Steel.
It was later learned that another organization is looking for some unaccounted for structural steel. Tt is working with that organization to resolve the matter.

Container /570752-0

No	Item description	figure type	Structure type	Length (m)	Tag No	Painted No	Qty	Date	Remark
1	Galvanized Steel structural parted I beam type 2m	Wide Flange	Beam	2m	4255	133-B2	1bundle (20) pcs	30/03/2015	
2	Galvanized Steel structural parted I beam type 1.4m	Wide Flange	Plate	1.4m	3385	135-B1	2bundle (23) pcs	30/03/2015	
3	Galvanized Steel structural parted I beam type 1.6m	Wide Flange	Plate	1.6m	2611	137-B2	2bundle (56) pcs	30/03/2015	
4	Galvanized Steel structural Pipe type 3m	Pipe	Column	3m	280	101-C3	7	30/03/2015	

Container /570796-2

No	Item description	figure type	Structure type	Length/m	Tag No	Painted no	Qty	Date	
1	Galvanized Steel structural Angle Iron 2.8m	angle	Plate	2.8	2593	156-VB4	11bundle 56 pcs	31/03/2015	
2	Galvanized Steel structural Gutter I beam type 3m	Wide Flange	I Beam	3m	1600	136-B3	11	31/03/2015	

Container /571583-9

No	Item description	figure type	Structure type	Length/m	Tag No	Painted no	Qty	Date	
1	Galvanized Steel structural I beam type 5.9m	Wide Flange	Beam	5.9m	654	135-B3-4	12	30/03/2015	
2	Galvanized Steel structural I beam type 5.7m	Wide Flange	Beam	5.7m	569	135-B2	11	30/03/2015	

Container /875044-7

No	Item description	figure type	Structure type	Length/m	Tag No	Code No	Qty	Date	
1	Steel structural pipe type 6.5m Inlets and outlets are threaded	Pipe	Pipe	6.5m			4 bundle each 10 = 40 pcs	31/03/2015	Belongs to Choice Made Construction Company (CMCC), KDR DABS

Container /876233-1

No	Item description	figure type	Structure type	Length/m	Tag No	Painted no	Qty	Date	
1	Galvanized Steel structural I beam type 5.7m	Wide Flange	Beam	5.7m	639	NA	12	30/03/2015	
2	Galvanized Steel structural I beam type 5.9m	Wide Flange	Beam	5.9m	685	219-B3	12	30/03/2015	
3	Galvanized Steel structural I beam type 8.4m	Wide Flange	Beam	8.4m	WT-1491	221-B1	12	30/03/2015	
4	Galvanized Steel structural Pipe type 4.2m	Pipe	Column	4.2m	WT-459	201-C1	4	30/03/2015	
5	Galvanized Steel structural Pipe type 3.4m	Pipe	Column	3.4m	WT-486	204-C2	4	30/03/2015	

Container /877190-3

No	Item description	figure type	Structure type	Length/m	Tag No	Code No	Qty	Date	
1	angle iron different parts of structural materials with different sizes (angle Irons, steel plates, gutter type steel plates, small I beams type steel structural, tringle I beam type steel structural .							31/03/2015	

Container /877389-2									
No	Item description	figure type	Structure type	Length/m	Tag No	Painted no	Qty	Date	
1	Galvanized Steel Structural I beam type 5.7m	Wide Flange	I Beam	5.7	639	NA	10	31/03/2015	
2	Galvanized Steel Structural I beam type 8.4m	Wide Flange	I Beam	8.4m	973	NA	10	31/03/2015	
3	Galvanized Steel structural I Beam type 5.9m	Wide Flange	I Beam	5.9m	654m	135-B4	9	31/03/2015	
4	Galvanized Steel structural Pipe type 6.7m	Pipe	Column	6.7m	689	NA	4	31/03/2015	
5	Galvanized Steel structural Pipe type 3.8m	Pipe	Column	3.8m	421	102-C1	14	31/03/2015	
6	Galvanized Steel structural Pipe type 2.7m	Pipe	Column	2.7m	358	105-C2	6	31/03/2015	
Container /895243-4									
No	Item description	figure type	Structure type	Length/m	Tag No	Painted no	Qty	Date	
1	Galvanized Steel structural Column I beam type 11m	Wide Flange	Column	11m	2147	NA	2	30/03/2015	
2	Galvanized Steel structural I beam type 2.8m	Wide Flange	Beam	2.8m	4062	NA	32	30/03/2015	
3	Galvanized Steel structural parted I beam type 1.4m	Wide Flange	Plate	1.4m	3827	1338-B2	2bundle (18) pcs	30/03/2015	
4	Galvanized Steel structural Pipe type 4.2m	Pipe	Column	4.2m	460	103-C1	3	30/03/2015	
Container /895720-4									
No	Item description	figure type	Structure type	Length/m	Tag No	Painted no	Qty	Date	
1	Galvanized Steel Structural I beam type 2.8m	Wide Flange	I Beam	2.8m	WT.1861	215-B2	2bundle 15 pcs	31/03/2015	
2	Galvanized Steel Structural I beam type 6m	Wide Flange	I Beam	6m	NA	219-B2	2	31/03/2015	
3	Galvanized Steel structural Pipe type 3.8m	Pipe	Column	3.8m	WT.421	203-C2	4	31/03/2015	
4	Galvanized Steel structural Pipe type 5.10m	Pipe	Column	5.10m	592	201-C2	5	31/03/2015	
5	Galvanized Steel structural Pipe type 4.2m	Pipe	Column	4.2m	515	NA	20	31/03/2015	
Container /896505-1									
No	Item description	figure type	Structure type	Length/m	Tag No	Painted no	Qty	Date	
1	Galvanized Steel Structural I beam type 8.4m	Wide Flange	I Beam	8.4m	973	131-B1	5	31/03/2015	
2	Galvanized Steel Structural I beam type 11m	Column	11m	130-B1	957	130-B1	5	31/03/2015	
3	Galvanized Steel Structural I beam type 5,7m	Wide Flange	I Beam	5.7m	665	155-B1	3	31/03/2015	
4	Galvanized Steel structural Pipe type 5.10m	Pipe	Column	5.10m	546	105-C1	5	31/03/2015	
5	Galvanized Steel structural Pipe type 3.2m	Pipe	Column	3.2m	483	104-C2	3	31/03/2015	
Container /896879-1									
No	Item description	figure type	Structure type	Length/m	Tag No	Painted no	Qty	Date	
1	Galvanized Steel Column beam type 11m	Wide Flange	Column	11m	2117	118-C1	6	31/03/2015	
2	Galvanized Steel Column beam type 11m	Wide Flange	Column	11m	2105	117-C1	6	31/03/2015	
3	Galvanized Steel Column beam type 11m	Wide Flange	Column	11m	2105	115-C1	6	31/03/2015	
Container /897269-9									
No	Item description	figure type	Structure type	Length/m	Tag No	Code No	Qty	Date	
1	Galvanized Steel Column beam type 11m	Wide Flange	Column	11m	2105	209-C1	6	30/03/2015	
2	Galvanized Steel Column beam type 11m	Wide Flange	Column	11m	2117	2010-C1	6	30/03/2015	
3	Galvanized Steel Column beam type 11m	Wide Flange	Column	11m	2137	207-C1	6	30/03/2015	

Container /897564-0									
No	Item description	figure type	Structure type	Length/m	Tag No	Code No	Qty	Date	
1	Steel structural pipe type 6.5m Inlets and outlets are threaded	Pipe	Pipe	6.5m			6 bundle each 10 = 60 pcs	31/03/2015	Belongs to Choice Made Construction Company (CMCC), KDR DABS email dated May 26, 2015

Container /898095-0									
No	Item description	figure type	Structure type	Length/m	Tag No	Painted no	Qty	Date	
1	Galvanized Steel Column beam type 11m	Wide Flange	Column	11m	2117	109-C1	6	31/03/2015	
2	Galvanized Steel Column beam type 11m	Wide Flange	Column	11m	2125	124-C1	6	31/03/2015	
3	Galvanized Steel Column beam type 11m	Wide Flange	Column	11m	2106	115-C1	6	31/03/2015	

Container /899126-1									
No	Item description	figure type	Structure type	Length/m	Tag No	Painted no	Qty	Date	
1	Galvanized Steel Column beam type 11m	Wide Flange	Column	11m	2117	210-C1	5	30/03/2015	
2	Galvanized Steel Column beam type 11m	Wide Flange	Column	11m	2105	209-C1	5	30/03/2015	
3	Galvanized Steel structural Pipe type 3.8m	Pipe	Column	3.8m	422	203-C2	6	30/03/2015	
4	Galvanized Steel structural Pipe type 6.7m	Pipe	Column	6.7	690	202-C1	5	30/03/2015	
5	Galvanized Steel structural Pipe type 5.10m	Pipe	Column	5.1	546	205-C2	6	30/03/2015	

Container /899605-2									
No	Item description	figure type	Structure type	Length/m	Tag No	Painted no	Qty	Date	
1	Galvanized Steel Column beam type 11m	Wide Flange	Column	11m	2117	116-C1	3	31/03/2015	
2	Galvanized Steel structural Pipe type 3.10m	Pipe	Column	3.1m	358	104-C2	6	31/03/2015	
3	Galvanized Steel structural Pipe type 3.8m	Pipe	Column	3.8m	422	102-C1	12	31/03/2015	
4	Galvanized Steel structural Pipe type 4.2m	Pipe	Column	4.2m	460	103-C1	21		

APPENDIX D

KANDAHAR DABS JUNCTION #2 STORAGE YARD AERIAL MAP

P:\1298\Work Orders\WO-A-0099 SEPS Completion 6FE Inventory\CAD\SheetFiles\C-101.dwg 3/9/2015 9:18:51 AM Mahdi, Waleed

A B C D E F G H

6
5
4
3
2
1



**KANDAHAR DABS JUNCTION NO.2
WAREHOUSE**
SCALE : N.T.S

UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ARE IN METERS.



PLAN LEGEND

SYMBOL	DESCRIPTION
	CLOSED CONTAINER
	FLAT RACK CONTAINER
	OUTDOOR MATERIALS

ABBREVIATIONS

- SEPS - SOUTH EAST POWER SYSTEM
- JS - JUNCTION STATION
- NO. - NUMBER
- DABS - DA AFGHAN BRESHNA SHERKAT
- N.T.S - NOT TO SCALE

THIS PROJECT WAS MADE POSSIBLE BY THE UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT AND THE GENEROUS SUPPORT OF THE AMERICAN PEOPLE THROUGH USAID GLOBAL ARCHITECTURE AND ENGINEERING IQC CONTRACTS

SYMB	ISSUED FOR INFORMATION	DATE	BY
A		FEB. 22, 2015	BM
			APR

DESIGNED BY: WM	DATE: FEB. 22, 2015
DRAWN BY: WM	SUBMITTED BY: Tetra Tech
CHECKED BY: MAY	CAD FILE NAME: C-101

USAID - OEGI
WOL0099
KABUL, - AFGHANISTAN
KANDAHAR DABS JUNCTION NO.2
WAREHOUSE

SHEET REFERENCE NUMBER:
C-101

DRAFT



A E S P

NOT FOR CONSTRUCTION

NOTE: A3 SIZE REDUCED TO HALF SCALE