



ENERGY POLICY PROGRAM

VISIT REPORT OF TPS GUDDU



February, 2014

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Visit Report of TPS Guddu

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Background

CPGCL placed Purchase Order (PO) upon GE for supply of uprate equipment and material on April 10, 2012 and Service Orders (SO) on April 20, 2012. The original delivery period was given as 26 weeks from the issuance of PO but at least one month earlier than the outage start date. It was later on amended by extending the delivery period up to November 30, 2012 and then the last shipment date was given as May 22, 2013 and subsequently amended to July 30, 2013. Finally it was extended to August 20, 2013 on the request of GE. But the shipments are still pouring in up to February, 2014. Joint inspections of material received were carried out at site by GE, CPGCL and insurance company's designated surveyor. The recent dispatches containing nozzles and other critical equipment are being done by air. During reconciliation of equipment received at site, GE's representative pointed out on February 17 that some 23 packages out of already received consignments are not found at site. Therefore, the start of shutdown decided earlier as 24th February became disputed. Ghulam Abbas Malik visited TPS Guddu from February 19 to 21, 2014 to sort out the problems in uprate equipment and material dispatches / receipts and assess the tentative outage start date.

Uprate equipment receipts and inspections

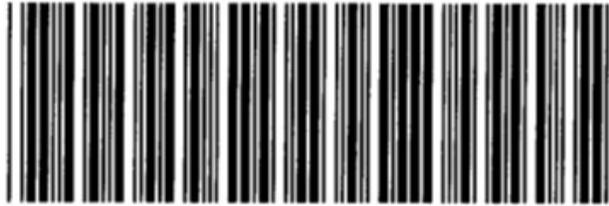
CPGCL has a list of equipment as per original PO in excel sheet against which entries were made from time to time for the received and jointly inspected equipment and material and the remaining parts were conveyed to GE after each joint inspection. During one of the previous visit of AEAI's expert, the copy of such items was obtained. This is being attached at Annexure 'A' for reference only.

GE has its own system of dispatch documentation. The shipments packing lists had part number, brief item description and reference to PO (an example at Annexure 'B'). Since these dispatches are being made from USA, Hungary, Netherlands and other countries given in PO, their references are sometimes mixed up and become difficult for CPGCL to reconcile. That's why GE's representative present during joint inspection having cross references in his laptop used to identify parts. Despite the fact that two spells of joint inspections were passed, GE's representative at end of third joint inspection pointed out on Feb 17 that 23 packages containing some of the critical parts are not found at site. The list of packages with current status is given below:

Status of Remaining Parts				
SN	Invoice No	Pending Packages Details	Packages Quantity	Remarks
1	14020872	IW0372026	1	The consignments comprising of total 6 x 40'+ 1x20' containers including part container under CRR reference EDGUD/C/4749 were delivered to CPGCL on 23.09.2013, 26.09.2013 & 27.09.2013. GE will be contacted for identification.
2	14020873	IW0539338, IW0539343, IW0532328, IW0532329, IW0532333	5	
3	14021314	IW0372080, IW0372085, IW0540266, IW0529527,	4	
4	14023781	IW0376775	1	
5	14023783	IW0539433, IW0539434, IW0373025, IW0539429	4	
6	14030877	IW0530644	1	
7	14031566	V14031566-1, V14031566-2, V14031566-3, V14031566-4, V14031566-5	5	
8	14044444	AW29824	1	
9	14054836	AW32087	1	
Total Remaining Packages pointed out by GE from consignments shipped in July-Nov 2013			23	All are available in stores except 2 by air

Subsequently, the list of such critical parts was conveyed by GE which is available at Annexure 'C'. CPGCL also conveyed the same numbers of packages to CRRK to know about their status. CRRK also clarified the current status of these packages.

As far as Air Way Bills (AWB) are concerned, most of the recent dispatches by air have erroneously destined / consigned to WAPDA, Lahore by GE which, were not traceable by CRRK. One such example is given below:

Account No. : 190742825	ORIGIN : FROM : CEVA LOGISTICS / GE ENERGY
Sender's Reference : 14044444 - 14054836	AMS
LHE SVC	ROB DOORNHOUWER
AIR WAYBILL: 9290114385	BELLSINGEL 26
(Non Negotiable)	
	SCHIPHOL-RIJK 1119 NV
	NETHERLANDS, THE
(2L)PK54000+48000000	TO : PAKISTAN WATER & POWER
	WAREHOUSE DEPARTMENT
	WAPDA HOUSE
	SHAHRAH-E-QUAID-AZAM
	LAHORE 54000
	PAKISTAN

During the stay at Guddu, reconciliation was got done through Manager, Material Management (MMM) and at the same time unidentified boxes in store were checked. It was found that the number of unidentified boxes having no marking was the same as reported by GE's representative.

Once it was ensured that no package is under transit and then CEO, CPGCL was requested to announce the tentative outage start date because GE wanted one week advance notice.

CEO, CPGCL with consensus of his MMM and Plant Manager decided to inform GE to have March 01, as tentative outage start date. The mail was sent to Project Manager (PM) of GE, Shehzad Malik on Feb 21, 2014 which is being reproduced below:

Dear Shehzad,

After reconciliation of shipped equipment for uprate, we have reached to the conclusion that shutdown of GT-7 & 8 can be started from March 01, 2014. Please treat it one week ahead notification to mobilize your TAs accordingly.

Please also ensure that all requisite parts are dispatched from your end which should not become a bottleneck during execution of uprate project.

Thanks,
CEO, CPGCL

In response to this mail, GE's PM sent reply on Feb 24, 2014 as below below:

Dear Sir

Thank you very much for your below note, we appreciate CPGCL gesture. As we have told you a number of times before GE has shipped all the outage related parts long time ago. We shipped the shortage material via air and that has already arrived at site. GE will fulfill its responsibility and ship by air any other shortages, if found, so as not to impact the outage. However, at this time we have not received any information from CPGCL about the remaining boxes that were shipped in July-September time frame. In the absence of that our inventory cannot be completed and hence a firm outage start date can't be established.

However in the interest of work and cooperation we will keep 01 March as tentative start date unless a confirmation about arrival of remaining parts is received from CPGCL by close of business 25 February 2014. Any delay will cause further delay to the outage start date and hence mobilization of TA's will not start. Notwithstanding, if CPGCL agrees to pay idle charges for the GE TA's in case of delay in arrival of parts, GE will mobilize its TA's before March 01, 2014. Please confirm by return message.

It is to be further noted that GE had shipped erection tools as per CPGCL provided plan of starting outage on 1 February and those are lying at site now. GE reserves its right to charge rental of these tools in lieu of CPGCL delays in starting the outage.

Best regards

SHEHZAD

The objectives of visit were achieved in a sense that tentative outage start was fixed, conveyed to GE and strenuous efforts were started to trace the packages reportedly not available at site.

The latest updates reveal that CPGCL has been able to trace more than the number of pointed out packages in their stores having no marking. This will hopefully resolve the issue and outage may commence between 3 & 6 March, 2014.

A recent consignment shipped by GE consisting of 9 packages out of 10 dispatched was received at site on 20th Feb and the Surveyor was called who reached on 21st Feb to carryout joint inspection. Photographs of latest consignment can be seen at Annexure 'D'.

UPRATE MATERIAL INSPECTION STATUS AT TPS GUDDU IN JAN-14

MECHANICAL SECTION:

S.No	Equipment Received at site	Equipment Installed at site	Remarks
01	Lube oil Pump P/No: 262A4842P081 Capacity = 660 GPM Head = 275 , Impeller Dia = 10 ¼"	Lube Oil pump P/ No: 197B8548C109 Size : 8011 Head = 295 Capacity = 900 GPM Impeller Dia = 11"	Need to be supplied as per site installation/requirement.
02	Hydraulic Cylinder DWG# 255A4186P001	Hydraulic Cylinder Parker cylinders Sr. No. FF2162866A Model : 02.50 KJBJ2HTV53323C 2.250 Hydraulic Press = 3000psi DWG # 242A4435P001	

–□□□□□□□□ The 1st Stage Shroud blocks received at Guddu are having different colors

–□□□□□□□□ Exhaust plenum received is of old design as already installed at machine G-7 & G-8, whereas as per PO the demanded exhaust plenum comprised of compact piece as installed on machine G-9 & G-10 during the last uprate/upgrade of block-II.

Although the minor detail is attached with, few missing parts are also highlighted below:

S.No	Description
1	Cooling/sealing air 3-way valve as per BOQ I
2	Unit rotor marriage bolting stud assembly/Turbine and compressor rotor coupling bolt as per BOQ I
3	Bushing of IGV, GE Part No.158A7888P002 as per BOQ I
4	Bushing of IGV, GE Part No.158A7888P007 as per BOQ I
5	Oil Deflector for Bearing#7 as per BOQ I
6	Bearing No.6 along with Oil Deflector and floating seals at forward side for bone shaft as per BOQ I
7	Flow Divider as per BOQ I

INSTRUMENT SECTION:

MARK VIE PANEL GT-7 DWG: 3VHBV025CA001 **Installed Ethernet PGH UDH cables are found damaged**

HMI (02 GTs, 01 Historian, 01 Engineering Work Station, 03 Operator Console) Mouse/power cable missing

ELECTRICAL SECTION:

It is obligatory on M/s GE to provide 04 Nos Exhaust frame blowers along with control panel and power cables from control panel to motor whereas this office up till now has received only 03 Nos Exhaust Frame Blowers. Power cables and their control panels (Item at serial No. 684, 02 sets= 04 Nos) and one exhaust frame blower are missing.

As already communicated, the rewinding kit (BOQ-VI item No. 11& 12) received at site is of 125MVA whereas as per PO it should be of 118MVA.

BOQ-VI items from serial No 1 to 15 has not been received yet. Below are the remarks in PO:

Sr. No	Description of Stores	Quantity Required	Qty Received
1.	Shrouded Stator blades (stage 17 and EGV) with HC inner barrel + Counter bore covers for USN 282546 as per BOQ I	02 Sets	
2.	Upgraded Exhaust frame for reduced cracking as per BOQ I	02 Sets	Frame reached is of old design
3.	Spacer shaft SL 29067 for size375FT SSS Clutch (bone shaft) as per BOQ I	02 sets	
4.	Cooling/sealing air 3-way valve as per BOQ I	02 Sets	Not received
5.	Unit rotor marriage bolting stud assembly/Turbine and compressor rotor coupling bolt as per BOQ I	02 Sets	Not received
6.	Bushing of IGV, GE Part No.158A7888P002 as per BOQ I	02 Sets	Not received
7.	Bushing of IGV, GE Part No.158A7888P007 as per BOQ I	02 Sets	Not received

8.	Oil Deflector for Bearing#7 as per BOQ I	02 Sets	Not received
9.	Bearing No.6 along with Oil Deflector and floating seals at forward side for bone shaft as per BOQ I	02 Sets	Not received
10.	Flow Divider as per BOQ I	02 Sets	Not received
11.	Upgraded Stage 3 complete nozzles as per BOQ I	02 Sets	
12.	Shell Expansion Probe as per BOQ I	01 No.	
13.	Instrument Interconnecting Cables between MKVle, Excitation system and DCS; and Ethernet cables as per BOQ I	3sets	
14.	Instrument interconnecting cables (for the additional instrument provided) between the turbine skid edge to the MKVle) as per BOQ I	3 sets	
15	# 1 Shaft Gear Assembly Dwg: 878E872G02	2 sets	
16	# 2 Shaft Gear Assembly Dwg : 874E990-G01	2 sets	
17	Inner Barrel and Bore Plugs modifications as per BOQ I	02 Sets	
18	High Pressure Packing Brush seal system as per BOQ I	02 Sets	
19	No. 2 Bearing brush seal as per BOQ I	02 Sets	
20	Stage 3 Aero designed Buckets with installation hardware as per BOQ I	02 Sets	
21	Stage 3 Aero designed Nozzle as per BOQ I	02 Sets	
22	Stage 1 Shrouds as per BOQ I	02 Sets	
23	Stage 2 Honey Comb Shrouds as per BOQ I	02 Sets	
24	Stage 3 Honey Comb Shrouds as per BOQ I	02 Sets	
25	Thick slot-cooled TBS coated combustion liners with cross fire tubes and retainers as per BOQ I	02 Sets	
26	Long Nimonic transition pieces with bull horns and floating seals as per BOQ I	02 Sets	
27	Flow Sleeves as per BOQ I	02 Sets	
28	Combustion (Longer Canned) system modification including all hardware, and fuel (oil/gas) piping modification as per BOQ I	02 Sets	
29	Extender™ kits as per BOQ I	02 Sets	
30	Bone shaft assembly for SSS Clutch replacement and elimination of unit vibration as per BOQ I	02 Sets	
31	Exhaust frame blowers upgrade as per BOQ I	02 Sets	
32	Inner-stage packing seal (S2N) as per BOQ I	02 Sets	
33	Additional sensors / instruments for MK Vle and EX2100 systems as per BOQ I	02 Sets	

1. Bill of Quantity (BOQ)

SUPPLY OF Spare Parts / Equipment for Reliability Assurance (Uprating/Upgrading) including MK Vle Control System for Two Gas Turbines GT-07 (282546) & GT-08 (282547) and One Steam Turbine ST-05 (197996)			
Sr. No	Description of Stores	Quantity Required	Qty received
1.	ALY STL 12PT SCREW DWG: N733AP50102	34 Nos.	34 Nos.

2.	CASE COMBUSTION OUTER DWG: 726E9192G029	2 Nos.	01 No
3.	CASE COMBUSTION OUTER DWG: 726E9192G030	2 Nos.	2 Nos
4.	CASE COMBUSTION OUTER DWG: 726E9192G031	2 Nos.	01 No
5.	CASE COMBUSTION OUTER DWG: 726E9192G032	2 Nos.	
6.	CASE COMBUSTION OUTER DWG: 726E9192G033	2 Nos.	02 Nos
7.	CASE COMBUSTION OUTER DWG: 726E9192G034	2 Nos.	01 No
8.	CASE COMBUSTION OUTER DWG: 726E9192G035	2 Nos.	01 No
9.	CASE COMBUSTION OUTER DWG: 726E9192G036	2 Nos.	01 No
10.	CASE COMBUSTION OUTER DWG: 726E9192G037	2 Nos.	01 No
11.	CASE COMBUSTION OUTER DWG: 726E9192G038	2 Nos.	01 No
12.	CASE COMBUSTION OUTER DWG: 726E9192G039	2 Nos.	02 Nos
13.	CASE COMBUSTION OUTER DWG: 726E9192G040	2 Nos.	01 No
14.	CASE COMBUSTION OUTER DWG: 726E9192G041	2 Nos.	01 No
15.	CASE COMBUSTION OUTER DWG: 726E9192G042	2 Nos.	2 Nos.
16.	PP ATMG AIR TURB LWR DWG: 143E6141G002	2 Nos.	2 Nos.
17.	PP ATMG AIR TURB LWR DWG: 143E6141G003	2 Nos.	01 No
18.	RIGHT SIDE EXHAUST PLENUM DWG: 229A7961P002	2 Nos.	2 Nos Not Uprated
19.	PIPING ARR, COOLING AIR DWG: 143E6131G003	2 Nos.	02 Nos
20.	TRANSMITTER,PRESS-ELE 287A1762P102	4 Nos.	
21.	TRANSMITTER,PRESS-ELEC 287A1762P103	4 Nos.	
22.	WIRE LOCKING INSERT DWG: N926BP00339	8 Nos.	
23.	STL LOCKNUT DWG: N265BP00025	2 Nos.	2 Nos
24.	STRAINER DWG: 315A4623P006	2 Nos.	2 Nos

25.	BOLT HEX HD ALLOY STL DWG: N14P35144	42 Nos.	28 Nos.
26.	SCREW CAP HEX HD DWG: N22P35048	3 Nos.	3 Nos
27.	GASKET DWG: 389A3595P002	50 Nos.	229 Nos.
28.	VLV TRSFER DWG: 185A1645P001	3 Nos.	3 Nos.
29.	GASKET DWG: 372A1159P010	14 Nos.	14 Nos
30.	BOLT HX HD DWG: 315A9191P020	6 Nos.	16 Nos
31.	HYDRAULIC PUMP DWG: 255A4806P001	5 Nos.	5 Nos
32.	VLV BUTFLY DWG: 226A1035P004	10 Nos.	10 Nos.
33.	EXHUAUST DIFFUSERS	2 Nos.	02
34.	HAZ MAT SILICONE RUBBER / RETAINING COMPOUND DWG: 143E3142G003	2 Nos.	
35.	O RING VITAN A 75 DUROMTR DWG: 185A1343P112	12 Nos.	12 Nos.

Confidential information redacted

List of Critical Parts

SN	Part No	Part Description	Checked / Inspected	Shipment Date	Comments
1	109E3736G019	1ST STG NOZ KIT U/R MS9/1	NO	19-Jan-2014	Air Freight
2	119E2064G024	NOZZLE KIT,TURB-STG 2	NO	19-Jan-2014	Air Freight
3	131E3123G007	9E UR S3, NOZZLE KIT	NO	19-Jan-2014	Air Freight
4	117E8692G003	FLOW SLEEVE,COMBUSTION	NO	30-Jul-2013	By Sea
5	143E6141G003	PP, ATMG AIR-TURB LWR	NO	30-Jul-2013	By Sea
6	287A1399P023	FITTING,TUBE	NO	30-Jul-2013	By Sea
7	361A2327P022	CABLE,THERMOCOUPLE	NO	30-Jul-2013	By Sea
8	219B6840P001	ORIFICE,OIL FEED	NO	3-Sep-2013	By Sea
9	143E6211G003	PP ARR, LWR CLG&SEG-MOD	NO	30-Jul-2013	By Sea
10	34871	B7A17B2 000.37D 000.03T	NO	3-Sep-2013	By Sea
11	34871	B7A17B2 000.37D 000.03T	NO	3-Sep-2013	By Sea
12	114E1249P015	SEAL,CLOTH	NO	30-Jul-2013	By Sea
13	159D6801P001	BLOCK,SPACER-T/P SUPPT	NO	3-Sep-2013	By Sea
14	114E1249P015	SEAL,CLOTH	NO	3-Sep-2013	By Sea
15	199D3180P007	SEAL,TURBINE AT H/J	NO	19-Jul-2013	By Sea
16	985E0648G001	PIPING ARR,INTCON-FIELD	NO	3-Sep-2013	By Sea
17	362A1102P018	TC,EXHAUST TYPE K,W/STUDS	NO	30-Jul-2013	By Sea
18	324A9074P002	JUNCTION BOX N751	NO	3-Sep-2013	By Sea
19	236C1251G001	COOLING WATER-TURB	NO	3-Sep-2013	By Sea
20	20191	B7A23A 000.04D 000.0	NO	3-Sep-2013	By Sea
21	354A1513P173	FLEXIBLE IGNITION LEAD	NO	3-Sep-2013	By Sea
22	227B9544G001	SUPPORT,THERMOCOUPLE	NO	3-Sep-2013	By Sea
23	143E6302G002	PPG ARR,CLG & SLG AIR-MOD	NO	30-Jul-2013	By Sea
24	315A4204P001	IGNITION EXCITER	NO	30-Jul-2013	By Sea
25	362A1102P018	TC,EXHAUST TYPE K,W/STUDS	NO	30-Jul-2013	By Sea
26	141E7468G001	CONDUIT ARR TURBINE COMPT	NO	3-Sep-2013	By Sea
27	159D6801P001	BLOCK,SPACER-T/P SUPPT	NO	3-Sep-2013	By Sea
28	143E3142G002	MOD-COND ARR,EXHAUST AREA	NO	30-Jul-2013	By Sea
29	114E1249P015	SEAL,CLOTH	NO	3-Sep-2013	By Sea
30	362A1344P016	SHIELD RAD ASM EXH TC	NO	30-Jul-2013	By Sea
31	361A2407P001	EXT PRESSURIZED E-SEAL	NO	30-Jul-2013	By Sea
32	105T3137G0001	ENCLOSURE ARR. F6251G5-16	NO	3-Sep-2013	By Sea
33	353B1136P001	PIN,SEAL	NO	3-Sep-2013	By Sea
34	114E1249P015	SEAL,CLOTH	NO	30-Jul-2013	By Sea
35	114E1249P016	SEAL,CLOTH	NO	30-Jul-2013	By Sea
36	114E1249P014	SEAL,CLOTH	NO	30-Jul-2013	By Sea

SN	Part No	Part Description	Checked / Inspected	Shipment Date	Comments
37	143E6242G002	PPG ARR, FUEL NOZ PRG-FAB	NO	30-Jul-2013	By Sea
38	143E6242G004	PPG ARR, FUEL NOZ PRG-DEV	NO	30-Jul-2013	By Sea
39	258A4784P017	TP LKPLATE	NO	30-Jul-2013	By Sea
40	229A7615P001	EXAUSTE FRAME BLOWER	NO	30-Jul-2013	By Sea
41	141E7467G001	CONDUIT ARR FLAME DET	NO	3-Sep-2013	By Sea
42	101T1005P001	VALVE, AIR	NO	3-Sep-2013	By Sea
43	236C1248G013	RS FD MOD KIT	NO	3-Sep-2013	By Sea
44	354A1513P173	FLEXIBLE IGNITION LEAD	NO	3-Sep-2013	By Sea
45	381A7164P002	VENT VALVE	NO	30-Jul-2013	By Sea
46	199D3180P007	SEAL,TURBINE AT H/J	NO	22-Jul-2013	By Sea
47	361A2327P022	CABLE,THERMOCOUPLE	NO	30-Jul-2013	By Sea
48	219B6763P007	TP LKPLATE	NO	30-Jul-2013	By Sea
49	199D3180P007	SEAL,TURBINE AT H/J	NO	22-Jul-2013	By Sea
50	114E1249P016	SEAL,CLOTH	NO	3-Sep-2013	By Sea
51	114E1249P014	SEAL,CLOTH	NO	3-Sep-2013	By Sea
52	143E6211G003	PP ARR, LWR CLG&SEG-MOD	NO	30-Jul-2013	By Sea
53	287A1614P004	RING PACKG	NO	30-Jul-2013	By Sea
54	27841	B4A2X1 000.12T 000.5 W	NO	3-Sep-2013	By Sea
55	114E1249P017	SEAL,CLOTH	NO	3-Sep-2013	By Sea
56	188D7762G004	NOZZSPTRNG	NO	3-Sep-2013	By Sea
57	34871	B7A17B2 000.37D 000.03T	NO	30-Jul-2013	By Sea
58	143E6131G002	PIPING ARR, COOLING AIR	NO	30-Jul-2013	By Sea
59	20191	B7A23A 000.04D 000.0	NO	3-Sep-2013	By Sea
60	34871	B7A17B2 000.37D 000.03T	NO	30-Jul-2013	By Sea
61	178C6832G001	BRG DEFL#2	NO	19-Jul-2013	By Sea
62	351A3488P005	TC,TYPE K,EXTD	NO	30-Jul-2013	By Sea
63	226A1362P004	VLV CHECK, 5"	NO	30-Jul-2013	By Sea
64	351A3488P032	TC,TYPE K,EXTD	NO	14-Aug-2013	By Sea
65	298A7661P103	BOOSTER COMPRESSOR	NO	3-Sep-2013	By Sea
66	361A2285P111	FIRE DETECTOR, 325 DEG F	NO	3-Sep-2013	By Sea



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