



Qatar General Electricity & Water Corporation

MANAGEMENT MEETING PHASE VI, VII, VIII & IX

**ENERGOPROJEKT
ENTEL**

Doha, 29th August, 2010.



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A.1 LIST OF CONTRACTS WITH DETAILS

PHASE	CONTRACT #	CONTRACTOR	CONTRACT COMPLETION DATE	REVISED CONTRACT COMPLETION DATE (Under Review)	CONTRACT PRICE INCL. FINAL VARIATIONS	PROGRESS (End of July 2010)	
						PLANNED	ACTUAL
PH VI	OVERALL PROGRESS PH VI:				3,202,757,254	100.00%	99.99%
PHASE VII	GTC 122/2006	NCC	10/Jun/2011 (VO#4)	10/Jun/2011 (VO#7)	397,592,634	100.00%	93.10%
	GTC 123/2006/A	ABB AG	15/Aug/2008	-	1,782,393,141	100.00%	99.96%
	GTC 123/2006/B	SIEMENS	15/Feb/2009	7/Jan/2011 (VO#11)	3,536,393,185	100.00%	99.62%
	GTC 123/2006/C	ABB LLC	15/Nov/2008	-	16,692,158	100.00%	90.21%
	GTC 124/2006/A	NPC	14/Feb/2010	-	409,464,707	100.00%	100.00%
	GTC 124/2006/B	MITSUBISHI	31/Jul/2010	-	478,539,538	100.00%	100.00%
	GTC 124/2006/C	MARUBENI	20/Aug/2008	31/Dec/2010 (VO#1)	356,572,001	100.00%	99.76%
	GTC 124/2006/D	SCC	15/Dec/2008	-	831,072,555	100.00%	97.79%
	GTC 125/2006	AREVA	31/Dec/2008	-	161,052,726	100.00%	99.00%
	OVERALL PROGRESS PH VII:				7,969,772,645	100.00%	99.20%
PHASE VIII	GTC/142/G/2006	MITSUBISHI	15/Feb/2010	15/Aug/2011 (VO#3)	772,425,215	100.00%	88.22%
	GTC/142/H/2006	VISCAS	14/Feb/2010	15/May/2011 (VO#2)	505,125,823	100.00%	89.26%
	GTC/143/2006	HYUNDAI	15/Dec/2009	-	363,211,706	100.00%	96.23%
	GTC/144/A/2006	AREVA TD	30/Oct/2011	-	2,753,214,888	85.40%	84.20%
	GTC 142 I 2006 VO2	NEXANS	31/Aug/2011	-	12,091,698	1.00%	3.60%
	OVERALL PROGRESS PH VIII:				4,406,069,330	90.61%	86.25%
PHASE IX	GTC/240/A/2008	SIE CON	2/Apr/2013	-	2,461,926,235	22.11%	18.54%
	GTC/240/B/2008	HYO	21/Apr/2012	-	378,788,459	19.34%	13.82%
	GTC/240/C/2008	AREVA	9/Apr/2013	-	20,392,767	9.06%	7.39%
	GTC/240/D/2008	SIE AG	19/Apr/2012	-	288,954,853	21.42%	18.56%
	GTC/241/A/2008	SIE LTD	20/Oct/2011	-	472,100,795	37.46%	16.13%
	GTC/241/B/2008	MIT	11/Mar/2012	-	540,049,635	22.32%	14.49%
	GTC/242/2008	NCC	30/Sep/2013	-	125,726,272	15.51%	20.24%
	OVERALL PROGRESS PH IX:				4,287,939,016	23.28%	17.35%
O V E R A L L UNDER EPE RESPONSIBILITY					19,866,538,245		

A.2 COMMISSIONING SCHEDULE

NUMBER OF ENERGIZED SUBSTATIONS, PERIOD MARCH 2007 – AUGUST 2010

PHASE	CONTRACTS		TOTAL NO. OF S/S	ENERGIZED
VI	SIEMENS, ABB	P1, P2	39	39
PHASE VI TOTAL			39	39
VII	ABB	PACKAGE 1	3	3
	SIEMENS	PACKAGE 2	4	4
		PACKAGE 3	19	16
		PACKAGE 4	12	8
PHASE VII TOTAL			38	31
VIII	AREVA	S-5	3	1
	HDEC/ABB	RLC - CE	1	0
PHASE VIII TOTAL			4	1
IX	SIEMENS CON.	S-1, S-4, S-5, S-6	18	0
	HYOSUNG	S-2	5	0
	SIEMENS WLL	S-3	5	0
	AREVA	S-9 Telecom	-	-
PHASE IX TOTAL			28	0
TOTAL			109	71
TOTAL RATING OF ENERGIZED TRANSFORMERS				24,350 MVA

A.2 COMMISSIONING SCHEDULE

LIST OF NOT ENERGIZED SUBSTATIONS (PHASE VII):

Package 3:

- **66/11kV South West Wakrah-1 Substation**
- **66/11kV Ain Khalid South Substation**
- **66/11kV Al Wadi Substation**

Package 4:

- **66/11kV MIC-2 Substation**
- **66/11kV MIC-3 Substation**
- **66/11kV Al Dhahiya West Substation**
- **132/66/11kV Al Dhahiya Substation**

A.3 PAYMENT SCHEDULE (EPC)

	CONTRACT #	CONTRACTOR	CONTRACT PRICE INCL. VARIATIONS	INVOICED	PAID	%
PH VI	OVERALL PH VI:		3,202,757,254	2,920,652,215	2,630,210,111	91.19%
PHASE VII	GTC 122/2006	NCC	397,592,634	244,353,870	243,081,769	61.46%
	GTC 123/2006/A	ABB AG	1,782,393,141	1,487,826,212	1,331,440,677	83.47%
	GTC 123/2006/B	SIEMENS	3,536,393,185	3,298,720,061	2,619,356,223	93.28%
	GTC 123/2006/C	ABB LLC	16,692,158	5,676,907	4,967,331	34.01%
	GTC 124/2006/A	NPC	409,464,707	662,479,134	477,599,161	161.79%
	GTC 124/2006/B	MITSUBISHI	478,539,538	379,461,124	252,558,284	79.30%
	GTC 124/2006/C	MARUBENI	356,572,001	267,997,284	239,576,309	75.16%
	GTC 124/2006/D	SCC	831,072,555	551,890,392	457,000,917	66.41%
	GTC 125/2006	AREVA	161,052,726	76,080,407	59,861,382	47.24%
	OVERALL PH VII:		7,969,772,645	6,974,485,391	5,685,442,054	87.51%
PHASE VIII	GTC/142/G/2006	MITSUBISHI	772,425,215	498,930,282	413,972,875	64.59%
	GTC/142/H/2006	VISCAS	505,125,823	304,089,840	248,245,013	60.20%
	GTC/143/2006	HYUNDAI	363,211,706	243,033,569	240,000,525	66.91%
	GTC/144/A/2006	AREVA TD	2,753,214,888	1,579,278,058	1,474,123,371	57.36%
	GTC 142 I 2006 VO2	NEXANS	12,091,698	-	-	0.00%
	OVERALL PH VIII:		4,406,069,330	2,625,331,748	2,376,341,783	59.58%
PHASE IX	GTC-240/A	SIEMENS CON	2,461,926,235	166,407,641	0	6.76%
	GTC-240/B	HYOSUNG	378,788,459	-	0	0.00%
	GTC-240/C	AREVA	20,392,767	-	0	0.00%
	GTC-240/D	SIEMENS QATAR	288,954,853	9,801,724	0	3.39%
	GTC-241/A	SIEMENS LTD.	472,100,795	31,913,664	4,799,810.93	6.76%
	GTC-241/B	MITSUBISHI	540,049,635	48,253,742	0	8.94%
	GTC-242	NCC	125,726,272	-	0	0.00%
	OVERALL PH IX:		4,287,939,016	256,376,771	4,799,811	5.98%
OVERALL UNDER EPE RESPONSIBILITY			19,866,538,246	12,776,846,126	10,696,793,760	64.31%

A.4 REVIEW OF VARIATIONS

PHASE	CONTRACT #	CONTRACTOR	CONTRACT COMPLETION DATE	REVISED CONTRACT COMPLETION DATE (Under Review)	VARIATIONS			
					UNDER REVIEW	AGREED (by TA)	FINALIZED (VO ISSUED)	NO. OF VO's APPROVED
PHASE VI	GTC 05/2004-P1	SIEMENS	31/Jul/2008	-	-12,701,017	-1,552,748	605,288,276	8
	GTC 05/2004-P2	ABB	15/Apr/2008	-	1,460,148	5,028,638	20,346,111	10
	GTC 116/2006	ABB	15/Apr/2009	-	5,009,370	282,951	44,349	4
	GTC 117/2006	MARUBENI	7/Feb/2010	7/Jul/2010	1,744,094	0	-31,554,521	4
	GTC 20/2004	ABB	15/Mar/2009 (VO#3)	-	0	0	-6,627,604	3
	OVERALL PROGRESS PH VI:				-4,487,405	3,758,841	587,496,611	29
PHASE VII	GTC 122/2006	NCC	10/Jun/2011 (VO#4)	10/Jun/2011 (VO#7)	4,000,000	0	84,656,838.00	6
	GTC 123/2006/A	ABB AG	15/Aug/2008	-	0	0	157,273,941	5
	GTC 123/2006/B	SIEMENS	15/Feb/2009	7/Jan/2011 (VO#11)	-9,204,759	0	326,281,185	9
	GTC 123/2006/C	ABB LLC	15/Nov/2008	-	1,344,679	0	2,519,760	4
	GTC 124/2006/A	NPC	14/Feb/2010	-	14,595,173	0	-14,595,171	2
	GTC 124/2006/B	MITSUBISHI	31/Jul/2010	-	0	0	0	0
	GTC 124/2006/C	MARUBENI	20/Aug/2008	31/Dec/2010 (VO#1)	0	0	0	0
	GTC 124/2006/D	SCC	15/Dec/2008	-	0	0	57,462,224	9
	GTC 125/2006	AREVA	31/Dec/2008	-	118,170	0	-947,274	4
	OVERALL PROGRESS VII:				10,853,263	0	612,651,503	39

A.4 REVIEW OF VARIATIONS

PHASE	CONTRACT #	CONTRACTOR	CONTRACT COMPLETION DATE	REVISED CONTRACT COMPLETION DATE (Under Review)	VARIATIONS			
					UNDER REVIEW	AGREED (by TA)	FINALIZED (VO ISSUED)	NO. OF VOs APPROVED
PHASE VIII	GTC/142/G/2006	MITSUBISHI	15/Feb/2010	15/Aug/2011 (VO#3)	-5,210,738	0	48,329,903	1
	GTC/142/H/2006	VISCAS	14/Feb/2010	15/May/2011 (VO#2)	-39,330,534	0	63,106,373	1
	GTC/143/2006	HYUNDAI	15/Dec/2009	-	4,608,711	0	89,020	1
	GTC/144/A/2006	AREVA TD	30/Oct/2011	-	-2,900,973	630,060	230,943,864	7
	GTC 142 I 2006 VO2	NEXANS	31/Aug/2011	-	0	0	0	0
	OVERALL PROGRESS PH VIII:				-42,833,533	630,060	342,469,160	10
PHASE IX	GTC/240/A/2008	SIE CON	2/Apr/2013	-	-4,446,629	0	2,519,265	1
	GTC/240/B/2008	HYO	21/Apr/2012	-	53,085,925	0	0	0
	GTC/240/C/2008	AREVA	9/Apr/2013	-	0	0	0	0
	GTC/240/D/2008	SIE AG	19/Apr/2012	-	65,109,019	0	0	0
	GTC/241/A/2008	SIE LTD	20/Oct/2011	-	13,771,699	0	0	0
	GTC/241/B/2008	MIT	11/Mar/2012	-	0	0	0	0
	GTC/242/2008	NCC	30/Sep/2013	-	0	1,762,350	0	0
	OVERALL PROGRESS PH IX:				127,520,014	1,762,350	2,519,265	1
O V E R A L L UNDER EPE RESPONSIBILITY					91,052,339	6,151,251	1,545,136,539	79

A.5 EPC PROJECT CERTIFICATION

		CERTIFICATE OF OPERATION	TAKING OVER CERTIFICATE	REMAINING TOC	FINAL COMPLETION CERTIFICATE
PH VI	SS	54	37	2	-
	CAB	40	38	5	8
PH VII	SS	68	27	26	-
	CAB	31	3	28	-
	OHL	10	-	10	2 (Dismantling)
PH VIII	SS	1	-	3	-
	CAB	3	-	8	-
	OHL	5	-	5	-
PH IX	SS	-	-	-	-
	CAB	-	-	-	-
	OHL	-	-	-	-
OVERALL		212	105	85	10

A.6 MAJOR REMAINING WORKS

PHASE VII

GTC 122/06- NCC

- **Construction of 400kV OHL ANS/DRS (Connection to Saliyah Super S/S)**

GTC 123A/06 – ABB

- **Additional 2 nos. 400kV, 150 MVar Shunt reactors in DRS.**
- **Additional 132kV bays at Al Sulaimi S/S, scheduled after summer 2010.**

GTC 123B/06 – SIE Consortium

- **Ain Khaled 66/11kV & Al Wadi 66/11kV can not be energized (expected in second quarter of 2011).**
- **Al Dhahiya and Al Dhahiya West, works almost completed, energization by end of October, 2010 .**

A.6 MAJOR REMAINING WORKS

PHASE VII

GTC 123C/06 – Telecomm

- Telecom network finalization can be done only after completion of the corresponding primary equipment (2Q11).

GTC 124D/06 – Saudi Cable

- Completion of the following lines:
 - 132kV HV Cable DSS / Al Dahahiya,
 - 66kV HV Cable Al Dahahiya / Al Dahahiya West / Ain Khaled / Al Wadi,Expected completion is by 2Q11.

GTC 125/06 – AREVA

- Connection of Phase VIII substation to new NCC/ENCC. Expected completion is the end of 2011.

A.6 MAJOR REMAINING WORKS

PHASE VIII

GTC 142G/06- MITSUBISHI

- 400kV HV Cable line UAAS/LDS2 could be completed only after 400kV SWG at LDS2 is established, which is scheduled to be in November, 2011.

GTC 142H/06 – VISCAS

- Due to the late completion of the 220kV SWG at LDS2, 220kV HV Cable line LDS2/LDS1 can be completed by 31st March, 2011.

GTC 143/06 – HYUNDAI

- Modifications of 220kV OHL DRS/RL in the area close to Umm Birka SS as well as completion of the 400kV OHL line no.2 UBS/RGPC CC. Therefore expected activities shall continue by first quarter of 2011.

GTC 144A/06 – AREVA

- As per the VO no 4, Areva shall complete the LDS2 substation by 14th November, 2011.

A.7 MAJOR CONCERNS

PHASE VI

- **Project Certification Follow Up**
- **Price Re-conciliation / Projects Closing**

PHASE VII

- **Time Extensions / Associated Cost**

OH Line

- **400kV OHL ANS/DRS – connection to Saliyah Super Substation**

HV Cables

- **Corridor Allocation for BARWA – Al Wadi & Ain Khalid**
- **220kV GIS SE – Failure Investigation**
- **220kV HVC DNS/NDJ – S3 B Phase replacement**

Substation

- **11kV SWG – Flashover**
- **Energization of Dahahiya, Dahahiya West, MIC2, MIC3, SWW1, Ain Khalid & Al Wadi**
- **ABB 220kV HV Cable & Joints Failure investigation**

A.7 MAJOR CONCERNS

PHASE VIII

HV Cables

- **400kV HVC UAAS/LDS2 - Final road & ground levels near LDS-2 S/S**
- **220kV HVC LDS1/LDS2 - Final road & ground levels near LDS-2 S/S**

OH Lines

- **GTC143 HY – Time Extension & Cost prolongation**
- **400kV OHL UBS/RLFC cct1 & cct2 – Corridor Availability**

Substations

- **CT Replacement - Shunt Reactors**
- **UBS SS – Energization Schedule – Delayed**
 - **Missing materials & shortage of testing engineers**
 - **Tap Changer on 315MVA TX – Replacement of Diverter Switch**
 - **Rejected Shunt Reactor No. 2**

A.7 MAJOR CONCERNS

PHASE IX

HV Cables

- **132kV Khore South - Semaisma S/S - Cable Route rejected by UPDA.**
- **220KV LDS-1 - New Doha N – Part of the route is on hold**
- **220KV LDS1 – LDS2 - Final road & ground levels near LDS-2 S/S**

Substations

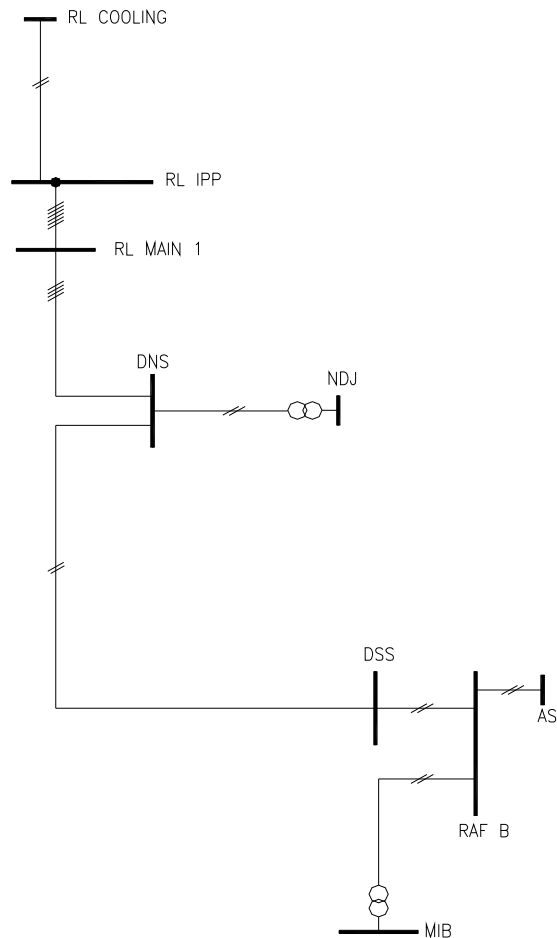
- **Property document is not available:**
 - **North Road S/S**
 - **Semaisma S/S**
 - **Khalifat S/S**
- **Dukhan-2 S/S – Lease agreement with QP for the site to be finalized**
- **Merghab Al Remth S/S - 11kV HV cable passing through the site**
- **Naeaja Local S/S – Existing Naeaja North S/S was flooded during dewatering of the adjacent Naeaja Local S/S site**

OH Lines

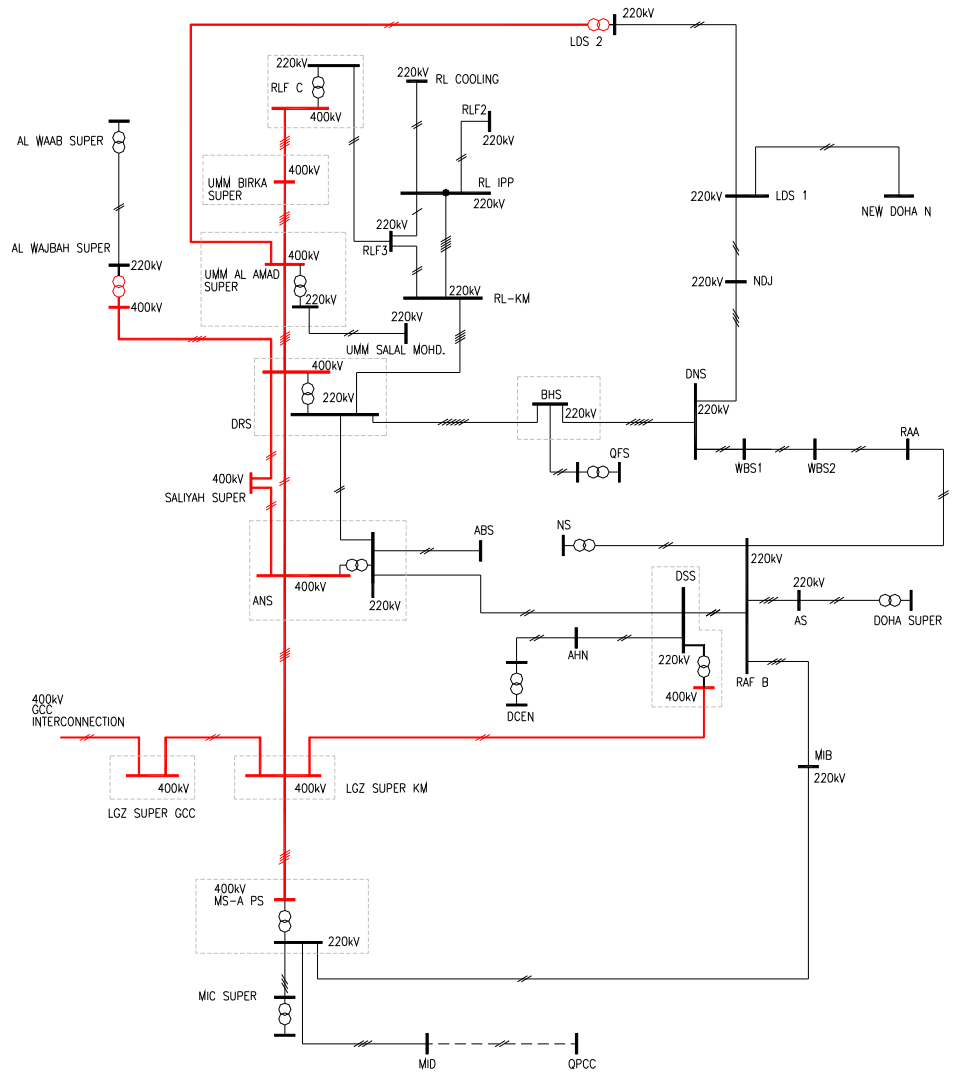
- **Delay in Engineering**

A.8 DEVELOPMENT OF 220/400kV NETWORK

400kV & 220kV NETWORK COMPARISON 2005 & 2010/11



2005



2010/11

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- B.4 VARIATIONS
- B.5 CONCERNS
- B.6 DETAILS FROM CEMS

B.1 LIST OF ECS CONTRACTS

ECS CONTRACT		AWARD DATE	COMPLETION DATE	CONTRACT PRICE (QR)
GTC 64/2005	ECS FOR PHASE VI	19. Dec 2005.	19. Dec 2007.	49,295,420,00
GTC 126/2006	ECS FOR PHASE VII	24. Sep 2006.	24. Mar 2010.	139,837,882.50
GTC 179/2007	ECS FOR MESAIEED A IWPP	04. Sep 2007.	30. Jun 2010.	9,993,618.30
GTC 145C/2006	ECS FOR PHASE VIII	20. Sep 2007.	20. Dec 2009.	64,899,425.00
GTC 239A/2008	PHASE IX – PART A	17. Nov 2008.	17. Jul 2009.	2,984,000.00
GTC 239B/2008	ECS FOR PHASE IX – PART B	29. Dec 2009.	29. Sep 2012.*	73,965,450.00

* 29. Apr 2013 for works related to DSS – remaining cable diversions

B.2 MAJOR ACHIEVEMENTS

GENERAL

Establishment of CEMS developed according to KM requirements

Basic ENTIS CEMS software features:

- Immediate access to processed documents and their respective status
- Assistance in generating documents and following emails
- Electronic documents archival and on-line access to archives

ENTIS CEMS Software development is based on:

- Data security, automatic backup is performed on daily basis
- Data integrity - System is resistant to deliberate/accidental data deletion and non-approved data update
- Authorized system access

SYSTEM FUNCTIONS

- Correspondence management with coding control and related files attachment (scanned or original). Correspondence includes letters, transmittals sheets, advices, minutes of meeting, invoices etc.
- Project related correspondence management according to status/revision approval rules
- Correspondence selection and distribution in relation to user functions
- Producing advice documents based on appropriate processed documents and Client /Consultant comments
- DTA and/or DTS creation related to processed data
- Automatic E-mail distribution according to document type
- Document status and process duties monitoring in respect to contract schedules
- System access control in accordance with information level and user project function
- Statistical presentation of the project document flow and status


B.2 MAJOR ACHIEVEMENTS

Established standard procedures in the following areas:

- **Documentation Handling / Communication**
- **Execution Plan and Reporting**
- **Invoicing**
- **Variation**
- **Commissioning**
- **FAT Procedure**
- **Proposal for O&M and As Built documentation management**

B.2 MAJOR ACHIEVEMENTS

PHASE VI

- **Substation Compact Design**
- **Naeaja Super 220/132/66kV SS – Erected and Commissioned in 8 months**
- **Typical List of Signals for All Voltage Levels**
- **First remote online monitoring at Naeaja Super** 

PHASE VII

- **First 400kV S/S and OHL in Qatar Transmission System energized**
- **Optimization on Cable Temperature Monitoring (DTS):**
 - **Reduced number of DTS Unit from 54 Nos. to 4 Nos., only**
 - **Saving, 92% in equipment Nos., or approx. 58 M QRs**
- **Replacement of Optical Terminal Boxes (OTBs) by Optical Terminal Panels (OTPs)**
 - **Space saving and better FO cables arrangement**
- **EPE has been declared as best HSE Consultant for year 2008**

REMOTE ONLINE MONITORING OF CONSTRUCTION WORKS – NAEEJA SUPER 19/12/2006



B.2 MAJOR ACHIEVEMENTS

PHASE VIII

- **Scope Optimization**
- **Contingency Plan**
- **Initiative Approach Proposal to establish KM S/Ss Overall Security System (CCTV, etc.,...)**

PHASE IX

- **Update of Technical Specifications**
- **Improved Contractual Documents (GCC, Price Schedule)**
- **SCS Optimization: Reduced hardware, easier maintenance, cost saving**
- **Integration of Online Remote Monitoring System:**
- **Detailed Interface Matrix between EPC Contractor & others**

B.3 CONSULTANCY STAFF

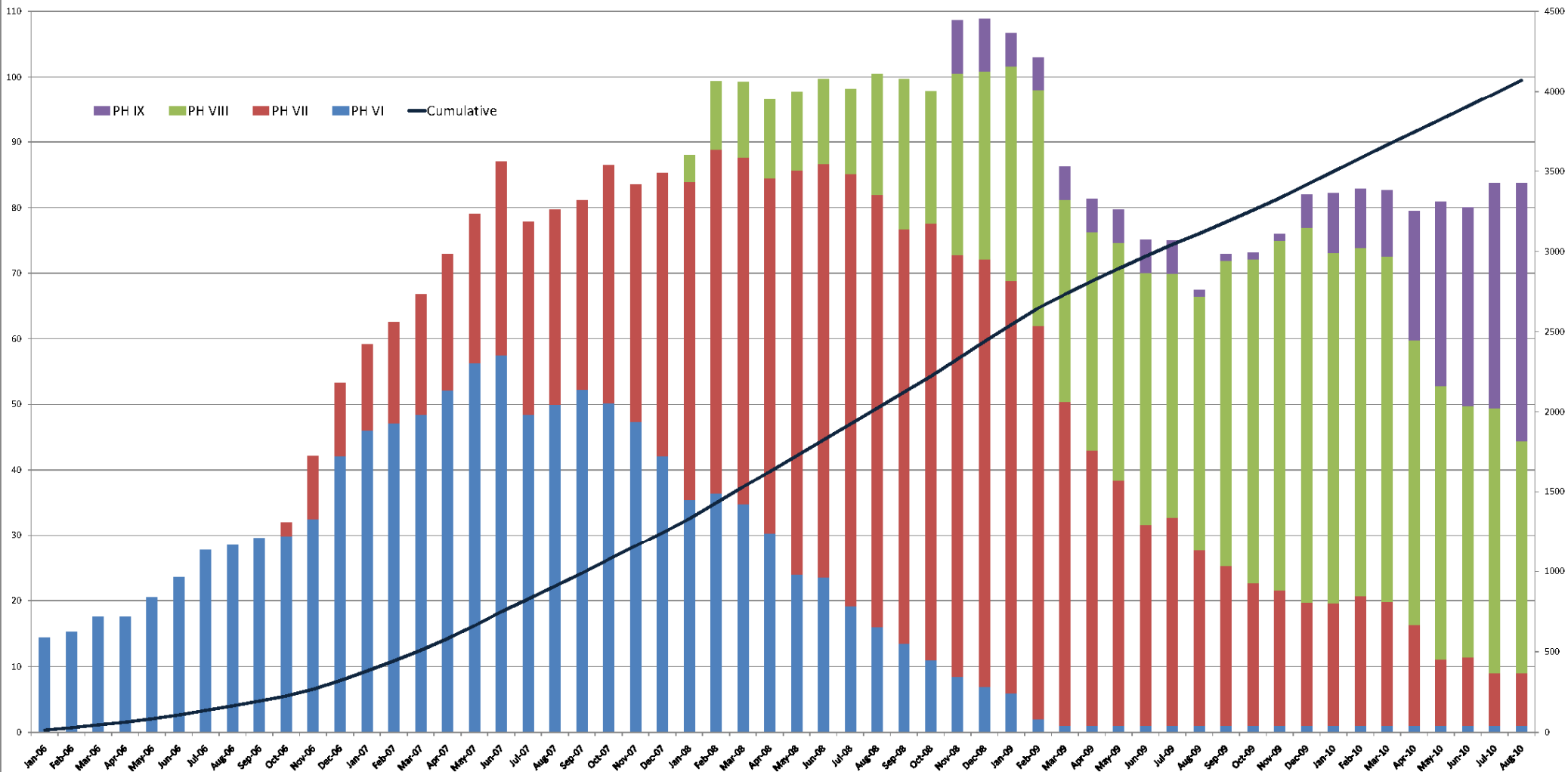
	DESIGN REVIEW	SITE SUPERVISION <Eng. + Adm.>	TOTAL
PH VI	0	1	1
PH VII	2	8	10
MPCL IPP	0	2	2
PH VIII	6	40	46
RGPC IWPP	1	10	11
PH IX	10	40	50
OVERALL	19	101	120
SENIOR ENGINEERS	14	26	40
ENGINEERS	5	43	48
INSPECTORS	-	19	19
ADMINISTRATION	-	13	13

B.3 CONSULTANCY STAFF

- **Total Number of Staff in Doha Office:** 170
- **Engaged in KM Projects:** 101 + 19 in Head Office
- **Engaged in Other EPE Projects:** 69

B.3 CONSULTANCY SITE SUPERVISION STAFF

PH VI, PH VII, PH VIII & PH IX, TOTAL NUMBER OF STAFF
PERIOD: from JAN/2006 to AUG/2010



B.4 PENDING VARIATIONS

PHASE VII (EFC)

- GTC 126/2006 – VO3 – Approved by LCS
 - VO Value: 6,062,826.78 QR
 - Completion Date: 24th December 2010. (9 Months Extension)

PHASE VIII (EPE)

- GTC 145/2006C – VO1 – Approved by LCS
 - VO Value: 12,979,885.00 QR
 - Completion Date: 20th December 2011. (24 Months Extension)

PHASE IX – PART A (EPE)

- GTC 239A/2008 - To be prepared by EPE.

B.5 CONCERNS

PHASE VI

- Project Closing (Certification & Payments)

PHASE VII

- VO 3 Finalization
- Coverage of GTC 125 with Phase VIII Substations
- Project Closing (Certification & Payments)

PHASE VIII

- VO 1 Finalization

PHASE IX

- Design Review & Approvals

PHASE X

- Tender Clarification and Evaluation

B.6 DETAILS FROM CEMS – PH7

Phase VII - Approval Status of Received Documents period up to: Mid August, 2010

APPROVAL STATUS		Contracts																					
		GTC-122		GTC-123/A		GTC-123/B		GTC-123/C		GTC-124/A		GTC-124/B		GTC-124/C		GTC-124/D		GTC-125		GTC-126		TOTAL	
		NCC		ABBAG		SIEMENS		ABBLLC		NPC		MITSUBISHI		MARUBENI		SCC		AREVA		EFC			
		Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
	Not Replied	19	1.05	350	4.97	595	2.35	29	1.47	1	0.10	6	0.64	4	0.58	18	0.63	20	0.43	28	80.00	1,070	2.31
	INFO	7	0.39	9	0.13	243	0.96	9	0.46	3	0.30	0	0.00	0	0.00	0	0.00	24	0.51	7	20.00	302	0.65
A-	Approved (Issue as AFC*)	312	17.19	1,113	15.79	3,469	13.72	487	24.72	190	19.29	230	24.36	121	17.49	561	19.64	621	13.24	0	0.00	7,104	15.34
B-	Approved Except as Noted	337	18.57	1,725	24.47	5,491	21.72	211	10.71	202	20.51	205	21.72	140	20.23	601	21.04	896	19.10	0	0.00	9,808	21.18
C-	Approved Except as Noted &	419	23.09	643	9.12	2,066	8.17	329	16.70	160	16.24	144	15.25	154	22.25	539	18.87	940	20.04	0	0.00	5,394	11.65
D-	Not Approved	374	20.61	245	3.48	727	2.88	51	2.59	71	7.21	55	5.83	28	4.05	173	6.06	259	5.52	0	0.00	1,983	4.28
E-	As Built	0	0.00	622	8.82	6,646	26.29	220	11.17	14	1.42	38	4.03	40	5.78	46	1.61	709	15.12	0	0.00	8,335	18.00
I-	Collect Stamped Document	99	5.45	2,067	29.32	5,482	21.69	517	26.24	274	27.82	194	20.55	181	26.16	694	24.30	1,124	23.97	0	0.00	10,632	22.96
F-	For Information	4	0.22	139	1.97	116	0.46	100	5.08	21	2.13	31	3.28	1	0.14	102	3.57	6	0.13	0	0.00	520	1.12
G-	Superseded	63	3.47	70	0.99	253	1.00	9	0.46	4	0.41	10	1.06	4	0.58	24	0.84	38	0.81	0	0.00	475	1.03
H-	See Remark	40	2.20	58	0.82	164	0.65	8	0.41	41	4.16	18	1.91	15	2.17	77	2.70	13	0.28	0	0.00	434	0.94
J-	Rejected	141	7.77	8	0.11	27	0.11	0	0.00	4	0.41	13	1.38	4	0.58	21	0.74	40	0.85	0	0.00	258	0.56
Total		1,815	100%	7,049	100%	25,279	100%	1,970	100%	985	100%	944	100%	692	100%	2,856	100%	4,690	100%	35	100%	46,315	100%

B.6 DETAILS FROM CEMS – PH7

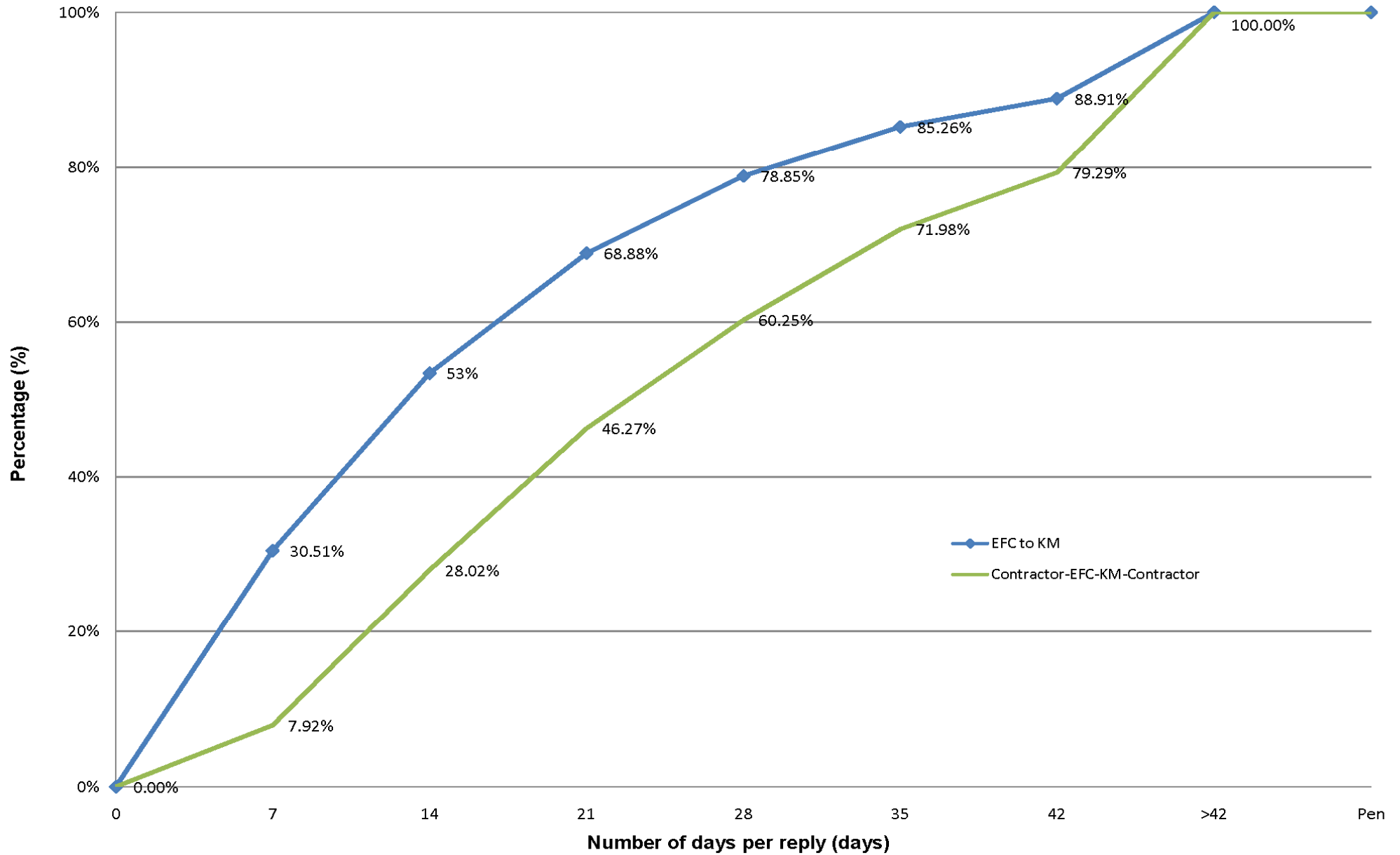
Phase VII - Revision Status of Received Documents period up to: Mid August, 2010

REVISION STATUS	Contracts																					
	GTC-122		GTC-123/A		GTC-123/B		GTC-123/C		GTC-124/A		GTC-124/B		GTC-124/C		GTC-124/D		GTC-125		GTC-126		TOTAL	
	NCC		ABBAG		SIEMENS		ABBLLC		NPC		MITSUBISHI		MARUBENI		SCC		AREVA		EFC			
	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
R0	696	38.35	2,804	39.78	7,921	31.34	753	38.22	393	39.90	455	48.20	218	31.50	1,159	40.58	1,263	26.93	19	54.29	15,681	33.86
R1	394	21.71	756	10.72	2,269	8.98	249	12.64	135	13.71	133	14.09	109	15.75	440	15.41	706	15.05	4	11.43	5,195	11.22
R2	197	10.85	168	2.38	479	1.89	63	3.20	44	4.47	29	3.07	39	5.64	123	4.31	248	5.29	2	5.71	1,392	3.01
R3	102	5.62	20	0.28	95	0.38	9	0.46	20	2.03	7	0.74	14	2.02	34	1.19	90	1.92	2	5.71	393	0.85
R4	54	2.98	6	0.09	24	0.09	3	0.15	8	0.81	4	0.42	6	0.87	10	0.35	37	0.79	1	2.86	153	0.33
R5	22	1.21	2	0.03	3	0.01	3	0.15	2	0.20	0	0.00	2	0.29	4	0.14	21	0.45	1	2.86	60	0.13
R6	17	0.94	2	0.03	3	0.01	3	0.15	0	0.00	0	0.00	0	0.00	1	0.04	9	0.19	1	2.86	36	0.08
R7	10	0.55	0	0.00	0	0.00	1	0.05	0	0.00	0	0.00	0	0.00	0	0.00	3	0.06	1	2.86	15	0.03
R8	7	0.39	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	2	0.04	1	2.86	10	0.02
R9	5	0.28	2	0.03	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	2.86	8	0.02
A	164	9.04	1,980	28.09	5,420	21.44	521	26.45	216	21.93	186	19.70	174	25.14	759	26.58	1,012	21.58	0	0.00	10,432	22.52
B	110	6.06	356	5.05	1,217	4.81	46	2.34	73	7.41	57	6.04	44	6.36	160	5.60	371	7.91	1	2.86	2,435	5.26
C	35	1.93	884	12.54	7,783	30.79	313	15.89	92	9.34	72	7.63	85	12.28	164	5.74	927	19.77	0	0.00	10,355	22.36
NO REV	2	0.11	69	0.98	64	0.25	6	0.30	2	0.20	1	0.11	1	0.14	2	0.07	1	0.02	1	2.86	149	0.32
Total	1,815	100%	7,049	100%	25,278	100%	1,970	100%	985	100%	944	100%	692	100%	2,856	100%	4,690	100%	35	100%	46,314	100%

For Approval	1,506	82.98	3,829	54.32	10,858	42.95	1,090	55.33	604	61.32	629	66.63	389	56.21	1,773	62.08	2,380	50.75	34	97.14	23,092	49.86
For Construct	274	15.10	2,336	33.14	6,637	26.26	567	28.78	289	29.34	243	25.74	218	31.50	919	32.18	1,383	29.49	1	2.86	12,867	27.78
As Built	35	1.93	884	12.54	7,783	30.79	313	15.89	92	9.34	72	7.63	85	12.28	164	5.74	927	19.77	0	0.00	10,355	22.36
Total	1,815	100%	7,049	100%	25,278	100%	1,970	100%	985	100%	944	100%	692	100%	2,856	100%	4,690	100%	35	100%	46,314	100%

B.6 DETAILS FROM CEMS – PH7

PHASE VII - REPLAY DAYS ANALYSIS



B.6 DETAILS FROM CEMS – PH8

PhaseVIII-Review Status of Received Documents period up to: mid August, 2010

REVIEW STATUS		Contracts													
		GTC-142G		GTC-142H		GTC-142I VO1		GTC-143		GTC-144A		GTC-145C		TOTAL	
		MITSUBISHI		VISCAS		NEXANS		HYUNDAI		AREVA		EPE			
		Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
CLOSED		1264	97.01	1311	98.35	5	25.00	1711	97.00	15,710	98.87	0	0.00	20,001	98.43
Pending CNT		0	0.00	1	0.08	0	0.00	1	0.06	47	0.30	0	0.00	49	0.24
EPE Pending	OnTrack	20	1.53	6	0.45	2	10.00	21	1.19	28	0.18	0	0.00	77	0.38
	Late	11	0.84	11	0.83	0	0.00	15	0.85	20	0.13	0	0.00	57	0.28
KM Pending	On Track	8	0.61	4	0.30	13	65.00	16	0.91	79	0.50	0	0.00	120	0.59
	Late	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	11	100.00	11	0.05
COMMON Pending	On Track	0	0.00	0	0.00	0	0.00	0	0.00	1	0.01	0	0.00	1	0.00
	Late	0	0.00	0	0.00	0	0.00	0	0.00	4	0.03	0	0.00	4	0.02
Total		1303	100%	1333	100%	20	100%	1764	100%	15,889	100%	11	100%	20,320	100%

B.6 DETAILS FROM CEMS – PH8

Phase VIII - Approval Status of Received Documents period up to: Mid August, 2010

APPROVAL STATUS		Contracts													
		GTC-142G		GTC-142H		GTC-142I VO1		GTC-143		GTC-144A		GTC-145C		TOTAL	
		MITSUBISHI		VISCAS		NEXANS		HYUNDAI		AREVA		EPE			
		Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
	Not Replied	23	1.77	16	1.20	2	10.00	0	0.00	301	1.86	11	100.00	390	1.89
	INFO	1	0.08	1	0.08	0	0.00	1	0.06	171	1.06	0	0.00	174	0.84
A-	Approved (Issue as AFC*)	282	21.64	265	19.88	0	0.00	380	21.54	2,148	13.28	0	0.00	3,075	14.92
B -	Approved Except as Noted	258	19.80	265	19.88	6	30.00	420	23.81	5,551	34.32	0	0.00	6,500	31.54
C -	Approved Except as Noted & Resubmit	232	17.81	192	14.40	11	55.00	412	23.36	3,289	20.33	0	0.00	4,136	20.07
D -	Not Approved	34	2.61	48	3.60	0	0.00	229	12.98	863	5.34	0	0.00	1,174	5.70
E-	As Built	45	3.45	2	0.15	0	0.00	17	0.96	162	1.00	0	0.00	226	1.10
I -	Collect Stamped Document	376	28.86	404	30.31	0	0.00	177	10.03	2,924	18.08	0	0.00	3,881	18.83
F -	For Information	22	1.69	39	2.93	0	0.00	3	0.17	172	1.06	0	0.00	236	1.15
G -	Superseded	8	0.61	9	0.68	0	0.00	12	0.68	362	2.24	0	0.00	391	1.90
H -	See Remark	15	1.15	77	5.78	0	0.00	73	4.14	160	0.99	0	0.00	325	1.58
J-	Rejected	7	0.54	15	1.13	1	5.00	3	0.17	73	0.45	0	0.00	99	0.48
Total		1,303	100%	1,333	100%	20	100%	1,764	100%	16,176	100%	11	100%	20,607	100%

B.6 DETAILS FROM CEMS – PH8

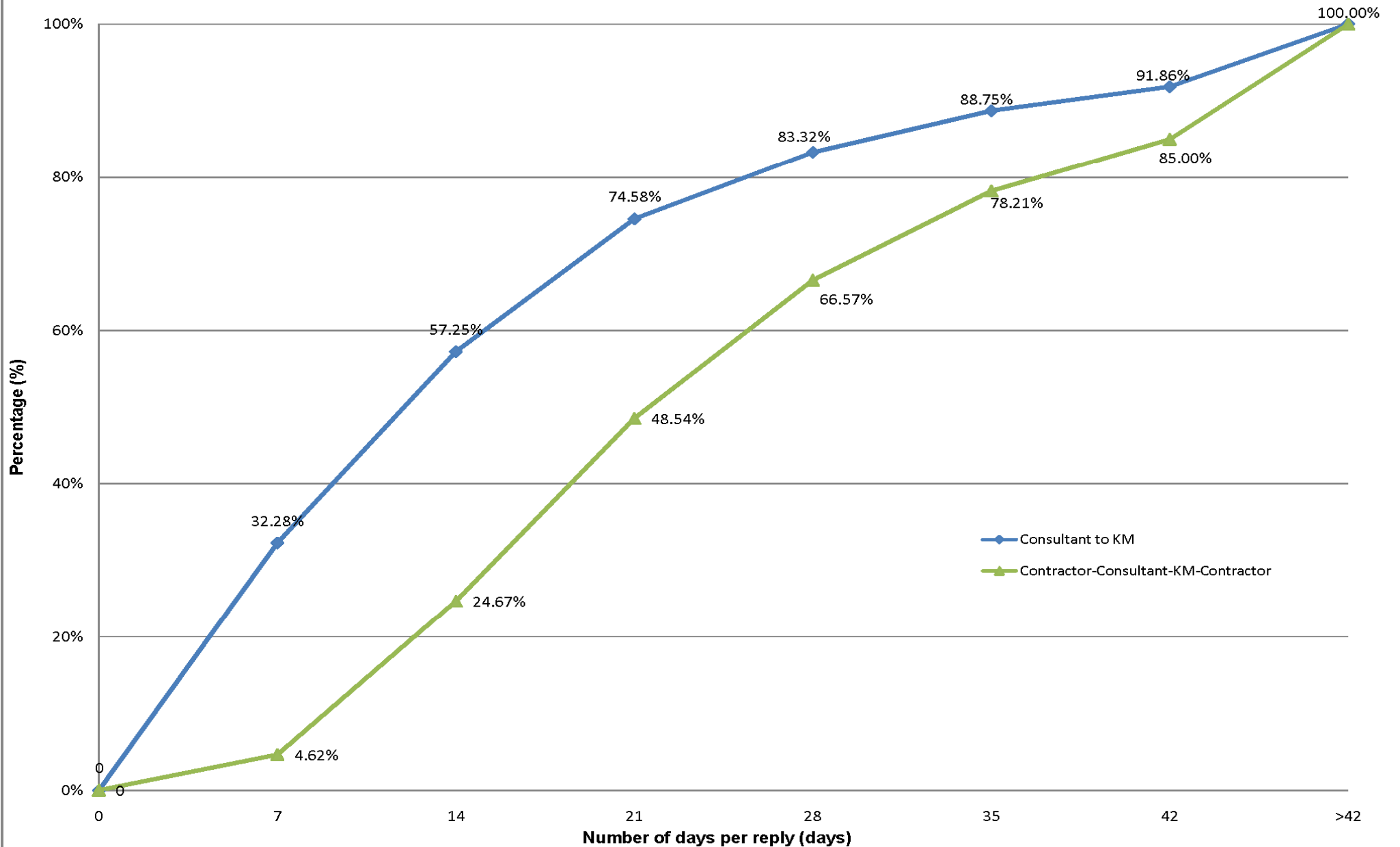
Phase VIII - Revision Status of Received Documents period up to: Mid August, 2010

REVISION STATUS	Contracts													
	GTC-142G		GTC-142H		GTC-142I VO1		GTC-143		GTC-144A		GTC-145C		TOTAL	
	MITSUBISHI		VISCAS		NEXANS		HYUNDAI		AREVA		EPE			
	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
R0	553	42.44	552	41.41	20	100.00	538	30.50	6,781	41.92	7	63.64	8,451	41.01
R1	141	10.82	200	15.00	0	0.00	361	20.46	2,949	18.23	1	9.09	3,652	17.72
R2	49	3.76	71	5.33	0	0.00	201	11.39	827	5.11	1	9.09	1,149	5.58
R3	11	0.84	19	1.43	0	0.00	136	7.71	218	1.35	1	9.09	385	1.87
R4	4	0.31	7	0.53	0	0.00	84	4.76	49	0.30	1	9.09	145	0.70
R5	0	0.00	0	0.00	0	0.00	53	3.00	14	0.09	0	0.00	67	0.33
R6	0	0.00	0	0.00	0	0.00	34	1.93	2	0.01	0	0.00	36	0.17
R7	0	0.00	0	0.00	0	0.00	23	1.30	0	0.00	0	0.00	23	0.11
R8	0	0.00	0	0.00	0	0.00	17	0.96	0	0.00	0	0.00	17	0.08
R9	0	0.00	0	0.00	0	0.00	12	0.68	0	0.00	0	0.00	12	0.06
A	386	29.62	413	30.98	0	0.00	208	11.79	3,658	22.61	0	0.00	4,665	22.64
B	87	6.68	67	5.03	0	0.00	32	1.81	1,215	7.51	0	0.00	1,401	6.80
C	72	5.53	4	0.30	0	0.00	65	3.68	463	2.86	0	0.00	604	2.93
Total	1,303	94%	1,333	100%	20	100%	1,764	96%	16,176	97%	11	100%	20,607	97%

For Approval	758	58.17	849	63.88	20	100.00	1,459	85.87	10,840	68.99	11	100.00	13,937	69.67
For Construct	473	36.30	480	36.12	0	0.00	240	14.13	4,873	31.01	0	0.00	6,066	30.33
As Built	72	5.53	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Total	1,303	100%	1,329	100%	20	100%	1,699	100%	15,713	100%	11	100%	20,003	100%

B.6 DETAILS FROM CEMS – PH8

PHASE VIII - REPLAY DAYS ANALYSIS



B.6 DETAILS FROM CEMS – PH9

PhaseIX-Review Status of Received Documents period up to: Mid August, 2010

REVIEW STATUS		Contracts																	
		GTC-240A		GTC-240B		GTC-240C		GTC-240D		GTC-241A		GTC-241B		GTC-242		GTC-239B		TOTAL	
		SIEMENS		HYOSUNG		AREVA		SIEMENS QATAR		SIEMENS		MITSUBISHI		NCC		EPE			
		Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
Closed		1,694	61.05	687	70.10	185	87.26	523	68.28	400	92.38	339	90.88	312	87.89	1	50.00	4,141	70.23
Pending CNT		65	2.34	6	0.61	2	0.94	0	0.00	4	0.92	1	0.27	0	0.00	0	0.00	78	1.32
EPE Pending	OnTrack	231	8.32	55	5.61	11	5.19	34	4.44	5	1.15	7	1.88	19	5.35	0	0.00	362	6.14
	Late	632	22.77	194	19.80	0	0.00	110	14.36	18	4.16	16	4.29	2	0.56	0	0.00	972	16.49
KM Pending	OnTrack	153	5.51	38	3.88	14	6.60	99	12.92	6	1.39	10	2.68	22	6.20	0	0.00	342	5.80
	Late	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	50.00	1	0.02
Total		2,775	100%	980	100%	212	100%	766	100%	433	100%	373	100%	355	100%	2	100%	5,896	100%

B.6 DETAILS FROM CEMS – PH9

Phase IX - Approval Status of Received Documents period up to: Mid August, 2010

APPROVAL STATUS		Contracts																	
		GTC-240A		GTC-240B		GTC-240C		GTC-240D		GTC-241A		GTC-241B		GTC-242		GTC-239B		TOTAL	
		SIEMENS		HYOSUNG		AREVA		SIEMENS QATAR		SIEMENS		MITSUBISHI		NCC		EPE			
		Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
	Not Replied	862	31.06	226	23.06	2	0.94	98	12.79	24	5.54	19	5.09	17	4.79	1	50.00	1,249	21.18
	INFO	1	0.04	0	0.00	2	0.94	0	0.00	0	0.00	0	0.00	0	0.00	1	50.00	4	0.07
A-	Approved (Issue as AFC*)	353	12.72	64	6.53	9	4.25	105	13.71	103	23.79	67	17.96	58	16.34	0	0.00	759	12.87
B-	Approved Except as Noted	620	22.34	240	24.49	13	6.13	207	27.02	147	33.95	95	25.47	50	14.08	0	0.00	1,372	23.27
C-	Approved Except as Noted &	578	20.83	222	22.65	108	50.94	246	32.11	106	24.48	71	19.03	133	37.46	0	0.00	1,464	24.83
D-	Not Approved	98	3.53	160	16.33	18	8.49	35	4.57	3	0.69	11	2.95	87	24.51	0	0.00	412	6.99
E-	As Built	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
I-	Collect Stamped Document	191	6.88	2	0.20	11	5.19	30	3.92	41	9.47	103	27.61	0	0.00	0	0.00	378	6.41
F-	For Information	17	0.61	51	5.20	48	22.64	10	1.31	0	0.00	0	0.00	1	0.28	0	0.00	127	2.15
G-	Superseded	28	1.01	2	0.20	0	0.00	33	4.31	4	0.92	5	1.34	5	1.41	0	0.00	77	1.31
H-	See Remark	0	0.00	0	0.00	0	0.00	0	0.00	1	0.23	2	0.54	4	1.13	0	0.00	7	0.12
J-	Rejected	27	0.97	13	1.33	1	0.47	2	0.26	4	0.92	0	0.00	0	0.00	0	0.00	47	0.80
Total		2,775	100%	980	100%	212	100%	766	100%	433	100%	373	100%	355	100%	2	100%	5,896	100%

B.6 DETAILS FROM CEMS – PH9

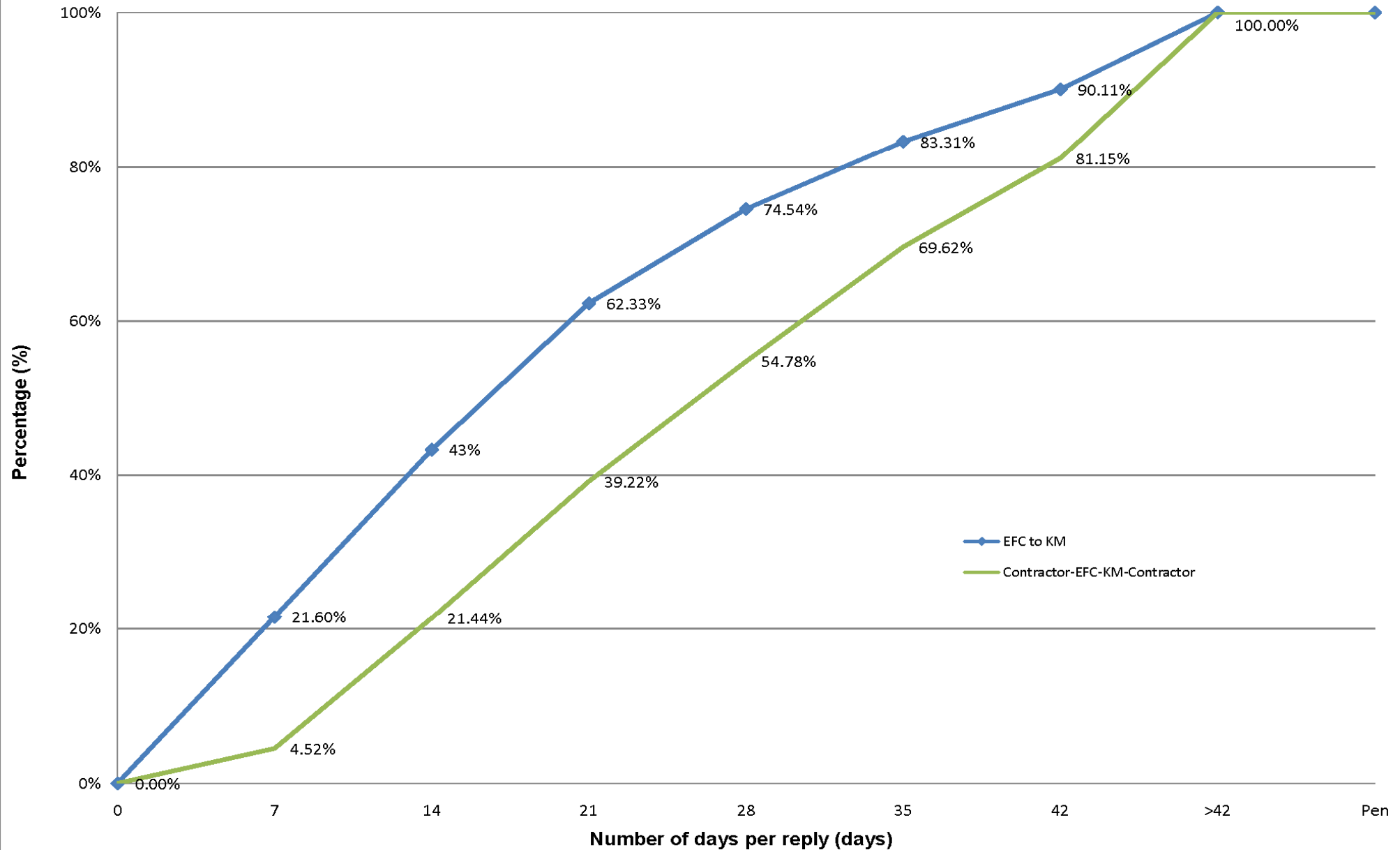
Phase IX - Revision Status of Received Documents period up to: Mid August, 2010

REVISION STATUS	Contracts																	
	GTC-240A		GTC-240B		GTC-240C		GTC-240D		GTC-241A		GTC-241B		GTC-242		GTC-239B		TOTAL	
	SIEMENS		HYOSUNG		AREVA		SIEMENS QATAR		SIEMENS		MITSUBISHI		NCC		EPE			
	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
R0	2,164	77.98	767	78.27	127	59.91	555	72.45	221	51.04	178	47.72	167	47.04	2	100.00	4,181	70.91
R1	236	8.50	173	17.65	63	29.72	123	16.06	87	20.09	46	12.33	86	24.23	0	0.00	814	13.81
R2	20	0.72	27	2.76	8	3.77	19	2.48	15	3.46	10	2.68	57	16.06	0	0.00	156	2.65
R3	0	0.00	7	0.71	1	0.47	3	0.39	4	0.92	1	0.27	31	8.73	0	0.00	47	0.80
R4	0	0.00	4	0.41	0	0.00	2	0.26	0	0.00	0	0.00	10	2.82	0	0.00	16	0.27
R5	0	0.00	0	0.00	0	0.00	1	0.13	0	0.00	0	0.00	2	0.56	0	0.00	3	0.05
R6	0	0.00	0	0.00	0	0.00	1	0.13	0	0.00	0	0.00	2	0.56	0	0.00	3	0.05
A	339	12.22	2	0.20	13	6.13	54	7.05	84	19.40	117	31.37	0	0.00	0	0.00	609	10.33
B	16	0.58	0	0.00	0	0.00	8	1.04	22	5.08	21	5.63	0	0.00	0	0.00	67	1.14
Total	2,775	100%	980	100%	212	100%	766	100%	433	100%	373	100%	355	100%	2	100%	5,896	100%

For Approval	2,420	87.21	978	99.80	199	93.87	704	91.91	327	75.52	235	63.00	355	100.00	2	100.00	5,220	88.53
For Construct	355	12.79	2	0.20	13	6.13	62	8.09	106	24.48	138	37.00	0	0.00	0	0.00	676	11.47
As Built	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Total	2,775	100%	980	100%	212	100%	766	100%	433	100%	373	100%	355	100%	2	100%	5,896	100%

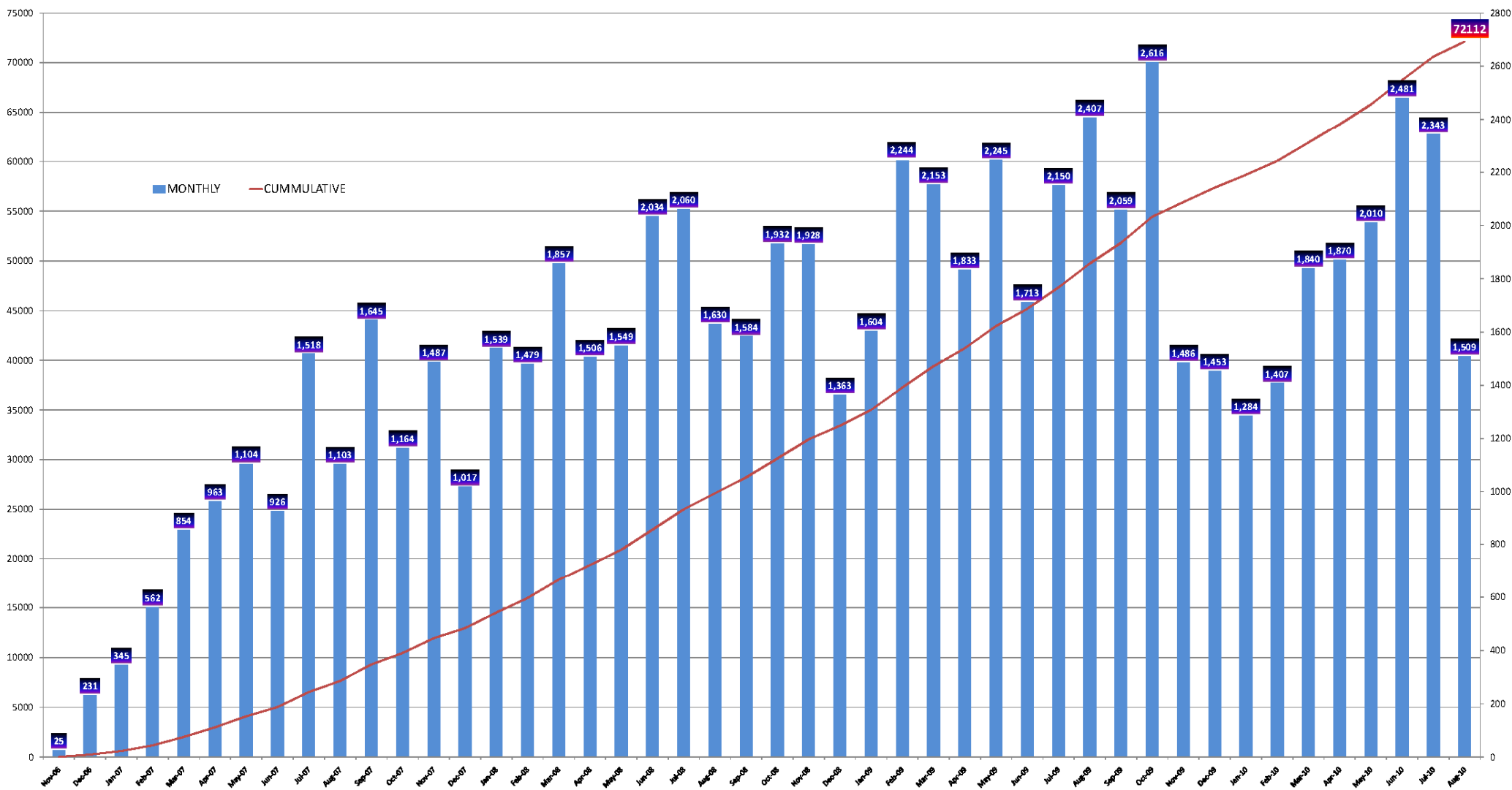
B.6 DETAILS FROM CEMS – PH9

PHASE IX - REPLAY DAYS ANALYSIS



B.6 DETAILS FROM CEMS

PH VII , PH VIII & PH IX, TOTAL NUMBER OF DOCUMENTS PROCESSED
PERIOD: from NOV/2006 to AUG/2010



B.6 DETAILS FROM CEMS

PH VI, PH VII, PH VIII & PH IX, NUMBER OF DOCUMENTS
DOCUMENT STATUS PER EPC CONTRACT

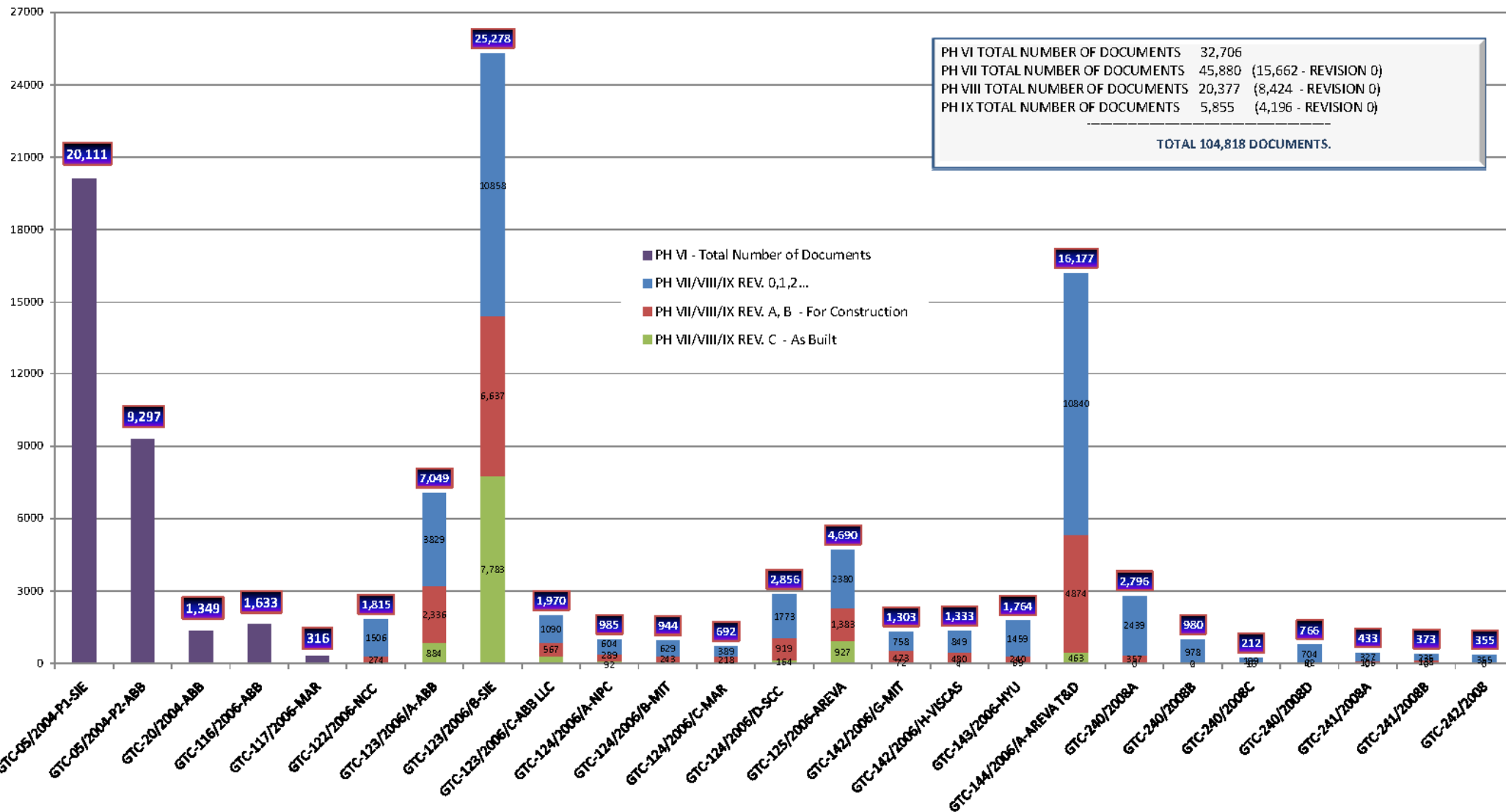


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C.4 CONSULTANT'S PERMANENT SELF-IMPROVEMENT

C.1 PROCEDURES

New procedures are imposed to increase efficiency, accuracy and traceability of EPE activities and avoid any kind of accidents. This includes new forms, check lists and additional internal control. New procedures are imposed in the following areas:

- Project Certification (ECC, NOSP, COO, TOC)**
- Test after Installation / Test on Completion**
- Site Notes**

C.2 IMPROVEMENTS OF SITE SUPERVISION

Instruction to site personal

- General meeting was held followed by a letter to all EPE staff to introduce new internal procedures, site supervision issues, organization and discuss possible improvements in site supervision.
- Tool Box meetings with supervision staff are frequently held on site.
- Frequency of reporting has been increased (regular daily reports are mandatory).

C.2 IMPROVEMENTS OF SITE SUPERVISION

Instruction to site personal

- **Correctness of the relevant documents and verification of the Red Marked Up drawings shall be done during witnessing of the tests after installations and reported to HO.**
- **Quality of installation works of all primary equipment shall be rechecked before signing NOSP by Internal Control Group (senior engineers). Site inspection shall be carried out in line with KM commissioning requirements.**
- **All check lists shall be verified by responsible engineers before signing NOSP.**

C.2 IMPROVEMENTS OF SITE SUPERVISION

Instruction to site personal

- **All comments issued during inspection/testing to be recorded in the Site Note Register.**
- **EPE shall establish the effective system for control and follow up of the site notes. This will enable easy update and fast access by all involved supervision staff and shall result in faster clearance.**
- **All site notes and respective status (cleared / not cleared / comments) to be available in office by Thursday with Lead Discipline Engineers who shall advise Project Manager by Saturday which site notes are to be sent to Contractor by a letter.**
- **PM along with Lead Discipline Engineers shall prepare and send Weekly Reports.**
- **Originator and Site Leader shall do the necessary follow up of these site notes with the Contractor.**

C.2 IMPROVEMENTS OF SITE SUPERVISION

Instruction to site personal

- **Upon completion of Tests after Installation, Erection Completion Certificate shall be signed, and no erection/installation/testing shall be allowed without permission from the EPE. In case of S/Ss rooms shall be locked. EPE shall inform all relevant KM departments (Protection, S/S, General Service, HSE etc...) that ECC is signed.**
- **No relaxation to the procedures without KM instructions confirmed by PM**

C.3 SAFETY

- Additional Staff

EPE shall increase number of Safety staff starting from mid September

- Monthly Safety Review Meetings

Will be held on monthly basis, officially recorded and signed by the Contractors including Consultant & responsible engineer from KM HSE DEPT.

- Comprehensive Safety Report

Shall be prepared by EPE Safety Team and submitted to KM officially from this month onwards. “Comprehensive Safety Report” will include all the SAFETY related MOM’s, including HSE Inspection reports which are issued to Contractors from time to time (related to discrepancies in SAFETY at site), HSE closed out Reports, Weekly Contractor’s safety meetings, our recommendations to improve safety at site etc.

C.4 CONSULTANT'S PERMANENT SELF-IMPROVEMENT

Beside regular annual Internal Quality Control the following QA parameters shall be continuously monitored by Head Office:

- 1. Permanent Internal Control to Maintain Quality / Technical Performances as per ISO Standards**
- 1. Schedule Performance to Met Milestone Due Date**
- 2. Business Relations Performance:**
 - Response to Customer Needs**
 - Conducted Business in a Professional Manner**
 - Provided Effective Verbal and Written Communication**

THANK YOU