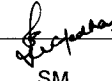
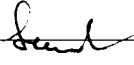


मानक गुणवत्ता आश्वासन योजना निर्माण प्रभाग (आइटम रेट संविदाएं)

STANDARD QUALITY ASSURANCE PLAN CONSTRUCTION DIVISION (ITEM RATE CONTRACTS)

2	26/02/2014	REVISED AND UPDATED	 SM	 RK	 RKD	 SC
1	23/05/2008	REVISED AND UPDATED	AS	RK	SCB	VC
0	05/12/2002	ISSUED FOR IMPLEMENTATION	AB	MPJ	RSG	GRR
Rev. No.	Date	Purpose	Prepared by	Checked by	Standards Committee Convenor	Standards Bureau Chairman
					Approved by	

Abbreviations :

CI	:	Cast Iron
EHT	:	Extra High Tension
EMCC	:	Emergency Motor Control Centre
EOT	:	Electrically Operated Traveling
GI	:	Galvanized Iron
HOT	:	Hand Operated Traveling
HT	:	High Tension
JB	:	Junction Box
M	:	Supervisor (Mechanical)
MCC	:	Motor Control Centre
PCC	:	Power Control Centre
QAP	:	Quality Assurance Plan
RCC	:	Reinforced Cement Concrete
VSD	:	Variable Speed Drives
WBM	:	Water Bound Macadam

Construction Standards Committee

Convenor: Sh. RK Das, ED (Construction)

Members : Sh. M Deshpande, GM (Construction)
Sh. M Natarajan, GM (C&P)
Sh. Rakesh Nanda, GM (Piping)
Sh. S Mukherjee, DGM (Construction)
Sh. Janak Kishore, DGM (Projects)
Sh. D Jana, AGM (Construction)

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4.	Quality Assurance Plan for Mechanical Works	6-82-6115 Rev. 2	26/02/2014	10
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7.	Quality Assurance Plan for General Works	6-82-6130 Rev. 2	26/02/2014	13

GENERAL NOTE

1. *These are only sample Quality Assurance Plans (QAPs). Contractor to prepare job specific QAP depending upon the contract specification, scope, technology, etc. and submit the same for approval of the Engineer-in-Charge well before commencement of the activity*
2. *Specifications mentioned under 'Code of conformance' column are only for the purpose of illustration. The applicable specification(s) shall be followed by the contractor.*

LEGEND

RE	:	Resident Engineer/Resident Construction Manager
SC	:	Engineer/Supervisor (Civil)
SE	:	Engineer/Supervisor (Electrical)
SI	:	Engineer/Supervisor (Instrumentation)
SM	:	Engineer/Supervisor (Mechanical)
SQ	:	Engineer/Supervisor (Quality)

QAP No. : 6101 REV. 2

QAP FOR GENERAL CIVIL WORKS

(Sheet 1 of 2)

ACTIVITY DESCRIPTION		PROCEDURE NO.	CODE OF CONFORMANCE	PERFORMER	CHECKER	APPROVER	RECORDS TO BE SUBMITTED
1.	Survey works	Contractor's Procedure	EIL Spec. No. 6-65-0002	SC	SQ	RE	Yes
2.	Earthwork for underground piping	- Do -	EIL Spec. No. 6-65-0006	SC	SQ	RE	Yes
3.	Compound wall	- Do -	EIL Spec. No. 6-65-0010	SC	SQ	RE	Yes
4.	Classification of soil for Earth Work in site grading	- Do -	EIL Spec. No. 6-65-0016	SC	SQ	RE	Yes
5.	Site grading & rock cutting for site grading	- Do -	EIL Spec. No. 6-65-0017	SC	SQ	RE	Yes
6.	Road & flexible pavements (upto WBM layer)	- Do -	EIL Spec. No. 6-65-0018	SC	SQ	RE	Yes
7.	Concrete Pavement	- Do -	EIL Spec. No. 6-65-0019	SC	SQ	RE	Yes
8.	Flexible pavements with bitumen premix carpet	- Do -	EIL Spec. No. 6-65-0020	SC	SQ	RE	Yes

Please refer Page 4 of 15 for General Notes and Legend

QAP No. : 6101 REV. 2

QAP FOR GENERAL CIVIL WORKS

(Sheet 2 of 2)

ACTIVITY DESCRIPTION		PROCEDURE NO.	CODE OF CONFORMANCE	PERFORMER	CHECKER	APPROVER	RECORDS TO BE SUBMITTED
9.	Tank Pads	Contractor's Procedure	EIL Spec. No. 6-65-0022	SC	SQ	RE	Yes
10.	Underground and above ground G.I. pipeline system (water services)	- Do -	EIL Spec. No. 6-65-0027	SC	SQ	RE	Yes
11.	Fabrication and laying of piping	- Do -	EIL Spec. No. 6-65-0030	SC/SM	SQ	RE	Yes
12.	Corrosion protection tape coating for underground steel piping	- Do -	EIL Spec. No. 6-79-0011	SC/SM	SQ	RE	Yes
13.	Underground C.I. piping system	- Do -	EIL Spec. No. 6-65-0036	SC	SQ	RE	Yes
14.	Underground sewer system - pre cast R.C.C. pipes	- Do -	EIL Spec. No. 6-65-0042	SC	SQ	RE	Yes
15.	Underground sewer system-HDPE Pipes	- Do -	EIL Spec. No. 6-65-0044	SC	SQ	RE	Yes
16.	Film lining covered with concrete lining for earthen reservoir	- Do -	EIL Spec. No. 6-65-0046	SC	SQ	RE	Yes
17.	Plumbing and building drainage	- Do -	EIL Spec. No. 6-65-0053	SC	SQ	RE	Yes

Please refer Page 4 of 15 for General Notes and Legend

QAP No. : 6105 REV. 2

QAP FOR STRUCTURAL WORKS

(Sheet 1 of 2)

ACTIVITY DESCRIPTION		PROCEDURE NO.	CODE OF CONFORMANCE	PERFORMER	CHECKER	APPROVER	RECORDS TO BE SUBMITTED
1.	Civil & structural works – materials	Contractor's Procedure	EIL Spec. No. 6-68-0002	SC	SQ	RE	Yes
2.	Earth work	- Do -	EIL Spec. No. 6-68-0003	SC	SQ	RE	Yes
3.	Plain & reinforced cement concrete	- Do -	EIL Spec. No. 6-68-0004	SC	SQ	RE	Yes
4.	Reinforced cement concrete in liquid retaining structures	- Do -	EIL Spec. No. 6-68-0005	SC	SQ	RE	Yes
5.	Structural steel works	- Do -	EIL Spec. No. 6-68-0006	SC/SM	SQ	RE	Yes
6.	Structural steel works (tubular/ hollow sections)	- Do -	EIL Spec. No. 6-68-0007	SC/SM	SQ	RE	Yes
7.	Miscellaneous steel works	- Do -	EIL Spec. No. 6-68-0008	SC/SM	SQ	RE	Yes
8.	Brick masonry	- Do -	EIL Spec. No. 6-68-0009	SC	SQ	RE	Yes

Please refer Page 4 of 15 for General Notes and Legend

QAP No. : 6105 REV. 2

QAP FOR STRUCTURAL WORKS

(Sheet 2 of 2)

ACTIVITY DESCRIPTION		PROCEDURE NO.	CODE OF CONFORMANCE	PERFORMER	CHECKER	APPROVER	RECORDS TO BE SUBMITTED
9.	Demolition and dismantling	Contractor's Procedure	EIL Spec. No. 6-68-0012	SC	SQ	RE	Yes
10.	Miscellaneous items (like Anti-termite treatment)	- Do -	EIL Spec. No. 6-68-0013	SC	SQ	RE	Yes
11.	Fire proofing of steel structures	- Do -	EIL Spec. No. 6-68-0033	SC	SQ	RE	Yes
12.	Shotcreting (guniting)	- Do -	EIL Spec. No. 6-68-0055	SC	SQ	RE	Yes
13.	Vacuum dewatering concrete system	- Do -	EIL Spec. No. 6-68-0062	SC	SQ	RE	Yes
14.	Materials for reinforced concrete piles	- Do -	EIL Spec. No. 6-74-0006	SC	SQ	RE	Yes
15.	Construction and installation of driven cast-in-situ piles	- Do -	EIL Spec. No. 6-74-0010	SC	SQ	RE	Yes
16.	Testing of concrete piles	- Do -	EIL Spec. No. 6-74-0013	SC	SQ	RE	Yes

Please refer Page 4 of 15 for General Notes and Legend

QAP No. : 6110 REV. 2

QAP FOR ARCHITECTURAL WORKS

ACTIVITY DESCRIPTION		PROCEDURE NO.	CODE OF CONFORMANCE	PERFORMER	CHECKER	APPROVER	RECORDS TO BE SUBMITTED
1.	Floor finishing	Contractor's Procedure	EIL Spec. No. 6-75-0002	SC	SQ	RE	Yes
2.	Steel/Aluminium Doors, Windows and Ventilators	- Do -	EIL Spec. No. 6-75-0004	SC	SQ	RE	Yes
3.	Plastering and pointing	- Do -	EIL Spec. No. 6-75-0005	SC	SQ	RE	Yes
4.	Roofing Treatment	- Do -	EIL Spec. No. 6-75-0006	SC	SQ	RE	Yes
5.	Whitewashing, Colour Washing Distempering, Painting and Polishing	- Do -	EIL Spec. No. 6-75-0007	SC	SQ	RE	Yes
6.	Roofing	- Do -	EIL Spec. No. 6-75-0008	SC	SQ	RE	Yes
7.	Sanitary Fittings and Fixtures	- Do -	EIL Spec. No. 6-75-0009	SC	SQ	RE	Yes
8.	False Ceiling, False Flooring Under deck Insulation & Partitioning	- Do -	EIL Spec. No. 6-75-0010	SC	SQ	RE	Yes

Please refer Page 4 of 15 for General Notes and Legend

QAP No. : 6115 REV. 2

QAP FOR MECHANICAL WORKS

ACTIVITY DESCRIPTION		PROCEDURE NO.	CODE OF CONFORMANCE	PERFORMER	CHECKER	APPROVER	RECORDS TO BE SUBMITTED
1.	Above Ground & Underground Piping	Contractor's/ Vendor's Procedure	EIL Spec. Nos. 6-44-0005, 0012,0013, 0016	SM	SQ	RE	Yes
2.	Column Internals	- Do -	EIL Spec. No. 6-14-0016	SM	SQ	RE	Yes
3.	Fired Heaters	- Do -	EIL Spec. No. 6-17-0001	SM	SQ	RE	Yes
4.	Refractory & Insulation Works-Fired Heaters	- Do -	EIL Spec. No. 6-17-0001, 6-79-0001	SM	SQ	RE	Yes
5.	Equipment Erection(Static)	- Do -	EIL Spec. No. 6-76-0001	SM	SQ	RE	Yes
6.	Equipment Erection(Rotary)	- Do -	EIL Spec. No. 6-76-0001	SM	SQ	RE	Yes
7.	Crane(EOT/HOT)	- Do -	EIL Spec. No. 6-48-0002, 0003	SM	SQ	RE	Yes
8.	Storage Tanks	- Do -	EIL Spec. No. 6-13-0053	SM	SQ	RE	Yes

Please refer Page 4 of 15 for General Notes and Legend

QAP No. : 6120 REV. 2

QAP FOR ELECTRICAL WORKS

ACTIVITY DESCRIPTION		PROCEDURE NO.	CODE OF CONFORMANCE	PERFORMER	CHECKER	APPROVER	RECORDS TO BE SUBMITTED
1.	Transformer (Power/Distribution/Lighting)	Contractor's/Vendor's Procedure	EIL Spec. No. 6-51-0081	SE	SQ	RE	Yes
2.	Motor (HT/LT)	- Do -	EIL Spec. No. 6-51-0081	SE	SQ	RE	Yes
3.	Generator	- Do -	EIL Spec. No. 6-51-0035, 0040, 6-51-0081	SE	SQ	RE	Yes
4.	Switch Gears (HV/MV)/ VSD	- Do -	EIL Spec. No. 6-51-0081	SE	SQ	RE	Yes
5.	EHT/HT Main Bus & Allied Equip.	- Do -	EIL Spec. No. 6-51-0081	SE	SQ	RE	Yes
6.	Cable Laying	- Do -	EIL Spec. No. 6-51-0082	SE	SQ	RE	Yes
7.	Lighting	- Do -	EIL Spec. No. 6-51-0083	SE	SQ	RE	Yes
8.	Earthing	- Do -	EIL Spec. No. 6-51-0084	SE	SQ	RE	Yes
9.	Field inspection, testing and commissioning of electrical installations	- Do -	EIL Spec. No. 6-51-0087	SE	SQ	RE	Yes

Please refer Page 4 of 15 for General Notes and Legend

QAP No. : 6125 REV. 2

QAP FOR INSTRUMENTATION WORKS (FIELD)

ACTIVITY DESCRIPTION		PROCEDURE NO.	CODE OF CONFORMANCE	PERFORMER	CHECKER	APPROVER	RECORDS TO BE SUBMITTED
1.	Installation of field instruments including calibration	Contractor's Procedure	EIL Spec. No. 6-52-0060	SI	SQ	RE	Yes
2.	Cable works	- Do -	EIL Spec. No. 6-52-0060	SI	SQ	RE	Yes
3.	Impulse piping/tubing works	- Do -	EIL Spec. No. 6-52-0060	SI	SQ	RE	Yes
4.	Panel/Console works including DCS/PLC works	- Do -	EIL Spec. Nos. 6-52-0049, 6-52-0060	SI	SQ	RE	Yes

Please refer Page 4 of 15 for General Notes and Legend

QAP No. : 6130 REV. 2

QAP FOR GENERAL WORKS

ACTIVITY DESCRIPTION		PROCEDURE NO.	CODE OF CONFORMANCE	PERFORMER	CHECKER	APPROVER	RECORDS TO BE SUBMITTED
1.	Painting	Contractor's/Vendor's Procedure	EIL Spec. No. 6-79-0021	SC/SM	SQ	RE	Yes
2.	Insulation	- Do -	EIL Spec. Nos. 6-44-0002, 0003	SC/ SM	SQ	RE	Yes
3.	Refractory Lining	- Do -	EIL Spec. No. 6-79-0001	SC/SM	SQ	RE	Yes
4.	Ceramic Fibre Lining	- Do -	EIL Spec. No. 6-79-0005	SC/SM	SQ	RE	Yes
5.	Incoming material Inspection	- Do -	EIL Spec. No. 6-82-1010	SC/SM/SI/SE	SQ	RE	Yes

Please refer Page 4 of 15 for General Notes and Legend