

**Design, Build and Commissioning of 7 MLD
Common Effluent Treatment Plant (CETP) and
0.5 MLD Package Sewage Treatment Plant (STP)
at DPIA on EPC basis with 4 years Operation and
Maintenance - Package B**

VOLUME 4

PART 2 TECHNICAL SCHEDULES

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**Managing Director
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1. PROCESS UNIT DESCRIPTION

1.1 STP Process Unit Description

S. No.	Name of process unit	Description

1.2 CETP Process Unit Description

S. No.	Name of process unit	Description

Note: Bidder to provide a list and details for each process unit as per his proposed design. Bidder to provide a brief description of each process unit considered, as per his design, in a maximum of 200 words per unit.

2. CIVIL UNIT

2.1 List of Civil Units for STP

S. No.	Description	Qty	Size of Units, m
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		(W+S)	L/Dia.	W	LD/SWD	FB

2.2 List of Civil Units for CETP

S. No.	Description	Qty (W+S)	Size of Units, m			
			L/Dia.	W	LD/SWD	FB

2.3 List of Buildings

S. No.	Description/Building Name	Nos. of Floors	Plinth Area	Type of Structure	Comment

Note: Bidder to provide a list of all the civil structures and units considered as per his design.

3. MECHANICAL EQUIPMENT LIST

3.1 List of Mechanical Equipment for STP

S. No.	Name of Equipment/Unit	Unit	Qty (W+S)	Capacity and Type	MOC

3.2 List of Mechanical Equipment for CETP

S. No.	Name of Equipment/Unit	Unit	Qty (W+S)	Capacity and Type	MOC

Note: Bidder to provide a list and details as per his proposed design.

4. ELECTRICAL LOAD LIST

4.1 List of Electrical Equipment's for STP

S. No.	Load Description	Voltage (kV)	Total Installed	Max Operating	BkW	Unit Power (kW)	RPM	Running hrs / day

4.2 List of Electrical Equipment for CETP

S. No.	Load Description	Voltage (kV)	Total Installed	Max Operating	BkW	Unit Power (kW)	RPM	Running hrs / day

Note: Bidder to provide a list and details for all electrical drives as per his proposed design.

5. INSTRUMENT LIST & I/O COUNTS

5.1 List of Instruments for STP

S. No.	Area	Instrument	UOM	Type	Qty.
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1.					
2.					
3.					
4.					
5.					
6.					
7.					

5.2 List of Instruments for CETP

S. No.	Area	Instrument	UOM	Type	Qty.
1.					
2.					
3.					
4.					
5.					
6.					
7.					

5.3 I/O List Summary

		AI	AIR	AO	AOR	DI	DO	AI-MCC	AO-MCC	DI-MCC	DO-MCC
SCADA / PLC	I/O Count										
	20% Spare										
	Total										
	I/O Count										
	20% Spare										
	Total										
	I/O Count										
	20% Spare										
	Total										

Note: Bidder to provide a list and details for all instruments as per his proposed design.

6. CONTROL AND OPERATION PHILOSOPHY

6.1 Control Philosophy for Sewage Treatment Plant

6.2 Control Philosophy for Common Effluent Treatment Plant

7. FOUR YEARS NORMAL OPERATIONAL SPARES

7.1 List of Operational Spares for STP

S. No.	Name of Unit	Name of Spares	Qty.	Type	Make

7.2 List of Operational Spares for CETP

S. No..	Name of Unit	Name of Spares	Qty.	Type	Make

Note: Bidder to provide a list and details for all spares as per his proposed design.

8. LIST OF MANDATORY SPARES

8.1 List of Mandatory Spares for STP

S. No.	Name of Unit	Name of Spares	Qty.	Type	Make
1.					
2.					
3.					
4.					

8.2 List of Mandatory Spares for CETP

S. No.	Name of Unit	Name of Spares	Qty.	Type	Make
5.					
6.					
7.					
8.					

Note: Bidder to provide a list and details for all spares as per his proposed design.

9. BASIS OF CHEMICAL DOSE RATES

9.1 Chemical Dosing Rate for STP

S. No.	Name of Unit	Chemical	Dosing Rate	Qty

9.2 Chemical Dosing Rate for CETP

S. No.	Name of Unit	Chemical	Dosing Rate	Qty

Note: Bidder to provide a list of chemicals and details as per his proposed design.

10. LIST OF CONSUMABLES

10.1 List of Consumables for STP

S. No.	Name of Consumable	Qty	Life of consumable

10.2 List of Consumables for CETP

S. No.	Name of Consumable	Qty	Life of consumable

Note: Bidder to provide a list and details for all consumables required as per his proposed design.

11. OPERATION AND MAINTENANCE

11.1 Proposed Manpower for Operation and Maintenance of STP

S. No.	Position	Nos. per shift	Total Nos. for three shifts (including reliever)
1.	Plant Manager		
2.	Operators		
3.	Chemist		
4.	Electrician		
5.	Mechanical Technician		
6.	Instrument Technician		
7.	Helpers		
8.	Other (specify)		

11.2 Proposed Manpower for Operation and Maintenance of CETP

S. No.	Position	Nos. per shift	Total Nos. for three shifts (including reliever)
1.	Plant Manager		
2.	Operators		
3.	Chemist		
4.	Electrician		
5.	Mechanical Technician		
6.	Instrument Technician		
7.	Helpers		
8.	Other (Specify)		

Note: Bidder to provide a comprehensive list of proposed manpower for the Operation and Maintenance.

12. TECHNICAL COMMENTS, ASSUMPTIONS AND EXCLUSIONS

12.1 Technical Comments, Assumptions and Exclusions (if any)

S. No.	Tender Reference	Tender Condition	Bidder's assumption, Comment