BHARAT HEAVY ELECTRICALS LIMITED
PROJECT ENGINEERING MANAGEMENT, NOIDA

Date-7-Jun-24

CORRIGENDUM- 03

PROJECT	**:**	**2 X 800 MW NTPC LARA STPS STAGE - II**
PACKAGE	**:**	**MILL REJECT SYSTEM (CONVEYOR TYPE)**
ENQUIRY NO	**:**	**PE/PG/LAR/E-7514/2024 dated-16.05.2024**
SUBJECT	**:**	**CHANGE OF TENDER ID, REVISED PRICE SCHEDULE and PRE-BID CLARIFICATION**

Type of Corrigendum			
Technical Corrigendum -	☑	Commercial Corrigendum -	☑

Bidders are requested to note that

1. The Tender ID of the subject NIT at https://eprocurebhel.co.in/nicgep/app: has been changed and the new Tender ID will be 2024_BHEL_35992_2 instead of 2024_BHEL_35992_1.
2. Price schedule has been revised. However, there is no change in the scope. Scope shall be same as per Technical Specification (PE-TS-508-160-A101).
3. Replies to pre-bid queries is enclosed for all bidders.
4. Due date & time of bid submission has been extended up to 14.06.2024 @ 11:00 AM. Bid opening shall be done at 04:00 PM on the due date.

All the other terms and conditions of the tender enquiry remain unchanged. All the bidders are requested to quote accordingly.

Yours faithfully,

For and on behalf of BHEL

Amit Kumar
Manager/BOP

	TITLE	SPECIFICATION NO. PE-TS-508-160-A101
	LARA STPP STAGE-II (2X800MW) MILL REJECT SYSTEM (CONVEYOR TYPE)	

PRE-BID CLARIFICATIONS

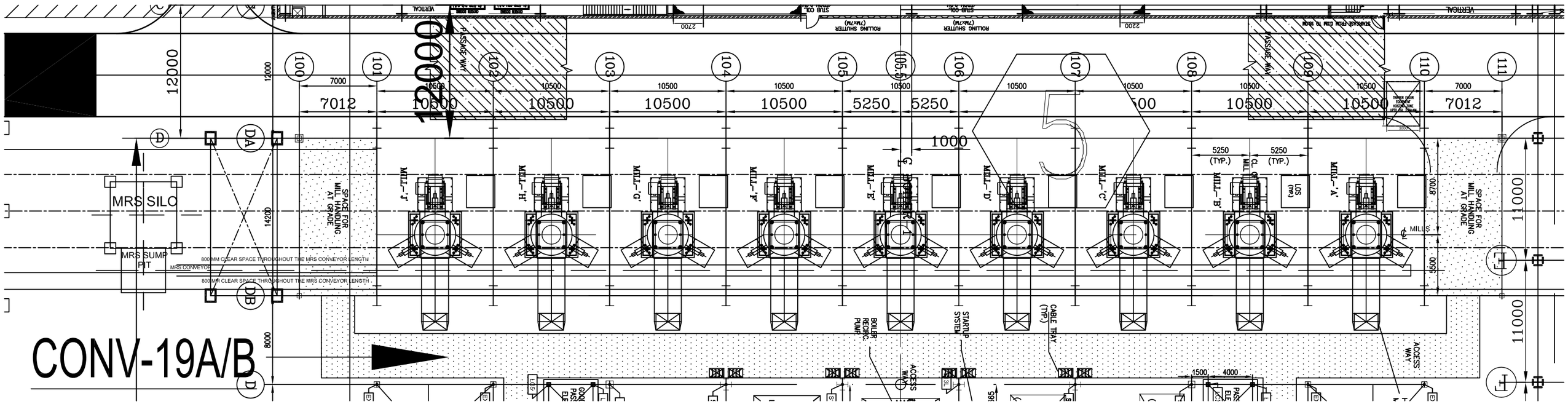
Sl. no.	Document / Specification no	Clause no.	Description	Clarifications	BHEL Reply
1	SPECIFICATION NO. PE-TS-508-160-A101	Page 4 of 12, SL no 1	Number of mills (Working + Standby) at 100% BMCR. 9 Nos. (9W + 1S)	We have considered 9 mills (8 working + 1 standby) as per the mill arrangement drawing shown in Tendernotice-7. Please clarify.	At 100% BMCR, all mills are working and there is zero standby. So please read it as - Number of mills (Working + Standby) at 100% BMCR. 9 Nos. (9W + **0**S)
2	SPECIFICATION NO. PE-TS-508-160-A101	Page 18 of 313, SL no c	(c) Mechanical feeder including Vibrating Feeder (if applicable) for mill rejects below each pyrite hopper for feeding at consistent rate to the mill reject conveyor.	Vibrating feeder is not applicable in our design, hence not considered.	Noted. But the same shall be discussed during detailed engineering with end customer-NTPC and shall be subject to their approval.
3	SPECIFICATION NO. PE-TS-508-160-A101	Page 10 of 313, SL no 4	Mill reject storage silos	Mill reject storage silos design & supply shall be in our scope. However, due to transportation issues the silo will be sent in transportable segments. There will be requirement of alignment & welding at site during erection which shall be taken care by BHEL. No site welding or erection activities are considered in our scope.	Please note that only bolted structure is allowed at site in Lara project. No welding is allowed. Kindly consider accordingly.
4	SPECIFICATION NO. PE-TS-508-160-A101	Page 13 of 313, SL no i	16.0 OTHER REQUIREMENTS i) Site Visit before submission of offer	We have understood that this is a Green field project, hence site visit is not required.	Yes, it is a green field project. Site visit is general and optional requirement in order for the bidder to familiarize themselves with general condition of site and in case the bidder feels that any input data is required for making the system complete.

5	SPECIFICATION NO. PE-TS-508-160-A101	Page 14 of 313, SL no 4	SS tubing is to be provided for pneumatic connection / instrument air connection.	Flexible hose pipes shall be provided for pneumatic connection / instrument air connection.	Please follow specification. Since the Mill Reject area is prone to dusty environment, so SS tubing is preferred to arrest wear and tear.
6	SPECIFICATION NO. PE-TS-508-160-A101	Page 15 of 313, SL no. b) Effective Storage Capacity – 120 T	The mill rejects or pyrites, transferred from each coal mill are collected in a small pyrite hopper through inlet chute. The water filled volume of the pyrite hopper has been considered as 30 minutes of maximum specified mill reject collection (1TPH) whichever is maximum A bunker of effective storage capacity 16 hours of rejects generation rate shall be provided for each unit.	There is a discrepancy in Bunker (rejects storage silo) storage. In page no 15 of 313, says, conveyor continuous maximum operating capacity – 10 T/Hr per unit. In page no 18 of 313, says Mill reject storage silos, one (1) no for each row of mills in steel construction each having an effective storage capacity of sixteen (16) hours considering all the working mills. If we consider 16 hours operation considering maximum mill capacity (conveyor Continuous maximum operating capacity – 10 T/Hr. per unit) the storage capacity will be 160 tons. However, we have considered bunker effective storage capacity as 120 Tons as mentioned in page no. 15 of 313. Hence, BHEL to confirm.	NTPC has asked to consider at least 25% margin on normal operating capacity of conveyor. But no such margin is to be considered on Silo. Maximum mill rejects generation rate per mill (@ 1% of mill capacity) = 0.83 TPH per mill. Normal conveyor capacity = 0.83 x 9mills = 7.47 ~ 7.5TPH. With 25% margin, maximum operating capacity = 7.5 x 1.25 = 9.4 ~ 10TPH Mill reject storage silos, one (1) no for each row of mills each having an effective storage capacity of sixteen (16) hours considering all the working mills of the respective Mill bay in operation and rejecting @ of 1 % of mill capacity for the worst coal conditions. = 0.83 X 9mills x 16hours = 119.52 ~ 120T.
7	SPECIFICATION NO. PE-TS-508-160-A101	Page 21 of 313, SL no 12	Reliable and proven hydraulic/pneumatic auto take up arrangements, with facility of adjustment	We have considered Drag chain type mechanical conveyor system & considered Hydraulic take-up	Noted. But the same shall be discussed during detailed engineering with end customer-NTPC and

			of tension. The tension assembly shall be designed to absorb any momentary shock loading.	arrangement as per our SPSIPL design. The hydraulic take-up arrangement components shall be as per SPSIPL approved vendors.	shall be subject to their approval.
8	SPECIFICATION NO. PE-TS-508-160-A101	Page 21 of 313, SL no 13	800 mm walkway along both sides of conveyor for Maintenance shall be provided.	We have considered only short supports with required anchor fasteners & walkway at inclined portion of our Drag chain conveyor.	Noted. But the same shall be discussed during detailed engineering with end customer-NTPC and shall be subject to their approval.
9	SPECIFICATION NO. PE-TS-508-160-A101	Page 21 of 313, SL no 14	Suitable clean (if applicable) out conveyor shall be provided for removal of spillage/fines.	We have considered Drag chain type mechanical conveyor system, hence clean out conveyor not applicable.	Noted. But the same shall be discussed during detailed engineering with end customer-NTPC and shall be subject to their approval.
10	SPECIFICATION NO. PE-TS-508-160-A101	Page 30 of 313, SL no D-1-12€	Annexure-(E) CRITERIA FOR EARTHQUAKE RESISTANT DESIGN OF STRUCTURES AND EQUIPMENT	We have considered relevant hazard proneness of the project area is seismic zone II & Wind speed 47 m/s as per the VAI (Vulnerability Atlas of India) prepared by BMT&PC. BHEL to confirm.	Please refer Annexure- (D), ANNEXURE-I, Annexure-(E), APPENDIX – I from Page 28 of 313 to Page 37 of 313.
11	Tendernotice_7 1		Input Drawings	We request customer to furnish the Auto CAD layout drawings or Legible copies to understand the pyrite hopper, bucket elevator terminals w.r.t Mill layout showing the location of the storage silo. However, we have prepared proposal drawing referring the drawings given in Tendernotice_7 1. Hence BHEL to check & confirm.	AutoCAD layout drawings shall be shared during detailed engineering. We have extracted copies of that portion again and attached with this reply for reference.

12	Tendernotice_71	Annexure II SL no. Clause 2.7, a, i	Efficiency class. up to 50KW	We have considered motor with efficiency class IE-3 only as per the past executed NTPC projects. BHEL to confirm.	Please follow specification. As per NTPC requirement in Lara project, IE4 efficiency class is required for motors upto 50KW.

CONV-19A/B


100
101
102
103
104
105
105.5
106
107
108
109
110
111
7012
10500
5250
7000
12000
1000
5250 (TYP.)
MRS SILO
MRS SUMP PIT
MRS CONVEYOR
800 MM CLEAR SPACE THROUGHOUT THE MRS CONVEYOR LENGTH
800MM CLEAR SPACE THROUGHOUT THE MRS CONVEYOR LENGTH
SPACE FOR MILL HANDLING AT GRADE
MILL 'J'
MILL 'H'
MILL 'G'
MILL 'F'
MILL 'E'
MILL 'D'
MILL 'C'
MILL 'B'
MILL 'A'
MILLS
LOS (TYP.)
ROLLING SHUTTER (7MX7M)
PASSAGE WAY
VERTICAL
STAIRCASE FROM EL 0.00 TO EL 18.00
BOILER RECIRC. PUMP
STARTUP SYSTEM
CABLE TRAY (TYP.)
ACCESS WAY
1500
4000
11000
14200
8000
DA
DB
D

100
101
102
103
104
105
105.5
106
107
108
109
110
111
7000
10500
7012
5250
1000
5250 (TYP.)
MILL 'J'
MILL 'H'
MILL 'G'
MILL 'F'
MILL 'E'
MILL 'D'
MILL 'C'
MILL 'B'
MILL 'A'
LOS (typ.)
SPACE FOR MILL HANDLING AT GRADE
MILLS
MRS SILO
MRS SUMP PIT
MRS CONVEYOR
800 MM CLEAR SPACE THROUGHOUT THE MRS CONVEYOR LENGTH
BOILER RECIRC. PUMP
STARTUP SYSTEM
CABLE TRAY (TYP.)
1500
4000
12000
14200
8000
5500
8700
961.31W

MAIN PRICE FORMAT

NAME OF PROJECT:	**LARA SUPER THERMAL POWER PROJECT STAGE-II (2X800 MW)**	**Vendor Name**	
NAME OF PACKAGE:	**MILL REJECT SYSTEM (CONVEYOR TYPE)**	**Enquiry No**	
TECHNICAL SPECIFICATION:	**PE-TS-508-160-A101**		

S. No.	DESCRIPTION	UNIT	QTY	Supply			Services	Total Price including Freight (INR)	Total Price including Freight (INR) Prices in corresponding 'words'
				Total Ex-Works Price (INR)	Freight %	Freight in INR	Total Price (INR)		
1.0	Total lump sum prices for **SUPPLY PART, SERVICE PART & MANDATORY SPARES** comprising of design (i.e.preparation and submission of drawing /documents including "As Built" drawings and O&M manuals), engineering, manufacture, fabrication, assembly, inspection / testing at vendor's & sub-vendor's works, painting, maintenance tools & tackles, fill of lubricants & consumables, mandatory spares alongwith spares for erection, startup and commissioning, forwarding, proper packing, shipment and delivery at site, supervision services during "erection & commissioning, trial run, performance guarantee tests at site, training of customer/ client O&M staff, trouble shooting & final handing over to end customer in flawless condition" for project and package specified above complete with all accessories for the total scope defined as per BHEL NIT & tender technical specification, amendment & agreements till placement of order.	Lot	1					₹ -	
2.0	**MAJOR BREAK-UP OF PRICES GIVEN IN 1.0 ABOVE.**								
2.1	Total lump sum prices for **SUPPLY** part comprising of manufacture, fabrication, assembly, inspection / testing at vendor's & sub-vendor's works, painting, maintenance tools & tackles, fill of lubricants & consumables alongwith spares for erection,startup and commissioning spares,forwarding, proper packing, shipment and delivery at site for project and package specified above complete with all accessories for the total scope defined as per BHEL NIT & tender technical specification, amendment & agreements till placement of order. **(Break-up as per Annexure-I)**	Lot	1						
2.2	Total lumpsum firm prices for the **SERVICES** part comprising of Supervision during "E&C, initial operation/ trial run, performance guarantee tests at site, training of customer/ client O&M staff, trouble shooting & final handing over to end customer in flawless condition for project and package specified above complete with all accessories for the total scope defined as per BHEL NIT & tender technical specification, amendment & agreements till placement of order. **(Break-up as per Annexure-II)**	Lot	1						
2.3	Total lumpsum prices for **MANDATORY SPARES** comprising of manufacture, fabrication, assembly, inspection / testing at vendor's & sub-vendor's works, painting, forwarding, proper packing, shipment, delivery at site & guarantee as per tender technical specification above, amendment & agreements till placement of order. **(Break-up as per Annexure-III).**	Lot	1						
2.4	Total lumpsum prices for **DESIGN/ ENGINEERING CHARGES** (i.e. preparation, submission and approval of drawing /documents including O&M manuals) for the scope defined as per tender technical specification above, amendment & agreements till placement of order.	Lot	1						

Note:
1) Please note that the complete engineering of the package is in the scope of bidder as per the tender requirement. However, for the payment purpose bidder to note that 50% of price as per sl. no. 2.4 shall be made against basic engineering (i.e. Preparation, submission & approval of basic drawing/ documents as indicated in tender specification) and the remaining payment shall be made for the balance engineering part on pro-rata basis.
2) Bidder to quote the Prices in 'figures' along with corresponding 'words'.

PRICE FORMAT
ANNEXURE-I

NAME OF PROJECT:	**LARA SUPER THERMAL POWER PROJECT STAGE-II (2X800 MW)**
NAME OF PACKAGE:	**MILL REJECT SYSTEM (CONVEYOR TYPE)**
TECHNICAL SPECIFICATION:	**PE-TS-508-160-A101**

S. No.	Description	QTY- UNIT 1	QTY- UNIT 2	AMOUNT (Total Ex-Works price for both the units)
	BREAK-UP OF SUPPLY PRICES GIVEN IN 2.1 OF MAIN SHEET.			
2.1	Break up of Prices inclusive for **SUPPLY** part comprising of manufacture, fabrication, assembly, inspection / testing at vendor's & sub-vendor's works, painting, maintenance tools & tackles, fill of lubricants & consumables alongwith spares for erection,startup and commissioning spares as required, forwarding, proper packing, shipment and delivery at site for project and package specified above complete with all accessories for the total scope defined as per BHEL NIT & tender technical specification, amendment & agreements till placement of order.	1 Lot	1 Lot	
2.1.1	Conveyor(s) along with its drives and accessories	1 set	1 set	
2.1.2	Pneumatic/ Hydraulic tensioning arrangement along with its drives and accessories for Conveyor	1 set	1 set	
2.1.3	Bucket elevator along with with its drives and accessories	1 set	1 set	
2.1.4	Pyrite hoppers with rupture disc, mill outlet adaptor, metallic expansion bellow, feeders below pyrite hopper (if applicable) supporting structure etc	9 Nos.	9 Nos.	
2.1.5	Pneumatic panel / Solenoid box with accessories	9 Sets	9 Sets	
2.1.6	Bag filters with vent fan with accessories	1 Lot	1 Lot	
2.1.7	Instrument air & service water pipelines, valves and piping	1 Lot	1 Lot	
2.1.8	Pneumatically operated knife gate valves with limit switches and impulse tubing alongwith manual override handwheel	27 Nos.	27 Nos.	
2.1.9	Complete instrumentation, cable glands & lugs as per scope	1 Lot	1 Lot	
2.1.10	Storage bunkers (including bunker plate, liner, foundation bolts, staircase and supporting structure), pressure relief valves, bunker discharge gate, lifting equipment with accessories	1 Lot	1 Lot	
2.1.11	Maintenance Tools & tackles	1 Set		

PRICE FORMAT
ANNEXURE-II

NAME OF PROJECT:	**LARA SUPER THERMAL POWER PROJECT STAGE-II (2X800 MW)**
NAME OF PACKAGE:	**MILL REJECT SYSTEM (CONVEYOR TYPE)**
TECHNICAL SPECIFICATION:	**PE-TS-508-160-A101**

S. No.	Description	UNIT	QTY	AMOUNT (Ex-Works)
	BREAK-UP OF SUPPLY PRICES GIVEN IN 2.2 OF MAIN SHEET.			
2.2	Total lumpsum firm prices for the SERVICES part comprising of supervision during "E&C, initial operation/ trial run, performance guarantee tests at site, training of customer/ client O&M staff, trouble shooting & final handing over to end customer in flawless condition for project and package specified above complete with all accessories for the total scope defined as per BHEL NIT & tender technical specification, amendment & agreements till placement of order	Lot	1	
2.2.1	Lumpsum firm prices for 'To' & 'fro' travel expenses only for total 4 visits (2 visits per unit, One visit for E&C, One visit for trial operation) for supervision service excluding performance guarantee tests	no. of visits	4	
2.2.2	Lumpsum firm prices for boarding, lodging, local transportation etc.during stay at site for supervision services excluding performance guarantee tests	no. of man-days	180	
2.2.3	Lumpsum firm prices for performance guarantee tests at site including expenses for travel to site and stay at site	for each unit	2	
Note	1) Unit prices arrived from quoted prices at S.No.2.2.1 & 2.2.2 shall be used for any variation related to no. of visits / stay duration at site, as per site requirement.			

PRICE FORMAT
ANNEXURE-III
LIST OF MANDATORY SPARES

NAME OF PROJECT:		**LARA SUPER THERMAL POWER PROJECT STAGE-II (2X800 MW)**	
NAME OF PACKAGE:		**MILL REJECT SYSTEM (CONVEYOR TYPE)**	
TECHNICAL SPECIFICATION:		**PE-TS-508-160-A101**	
Sl. No.	**DESCRIPTION**	**Unit /Quantity (Nos./SET/%)**	**AMOUNT (Ex-Works)**
2.3.1	**Drag Chain Conveyors / Metallic Conveyor**		
2.3.1.1	Chain link with Flight assy (if applicable)	20 Nos each type	
2.3.1.2	Metallic Pan assy (Meshed with Belt) (if applicable)	1 Set each type	
2.3.1.3	Chain Pin & Circlip (if applicable)	20 Nos each type	
2.3.1.4	Sprocket (if applicable)	1 No each type	
2.3.1.5	Drive & Non-drive Pulleys (if applicable)	1 No each type	
2.3.1.6	Carrying and return Idler assy (if applicable)	5 Nos each type	
2.3.1.7	Bearings	2 Nos each type	
2.3.1.8	Conveyor Geared Motor/Gear Box	1 No each type	
2.3.1.9	Shear Pin of Conveyor (if applicable)	10 Nos each type	
2.3.1.10	Coupling (if applicable)	1 No each type	
2.3.2	**Vibrating Feeder assy (if applicable)**	2 Nos	
2.3.3	**Bucket Elevator**		
2.3.3.1	Chain link	10 Nos	
2.3.3.2	Shackle	10 Nos	
2.3.3.3	Bearings	2 Nos of each type	
2.3.3.4	Elevator Geared Motor/Gear box	1 No	
2.3.3.5	Coupling (If applicable)	1 No of each type	
2.3.3.6	Buckets	5 Nos	
2.3.4	**Other Items**		
2.3.4.1	Complete assembly of Valves at Pyrite Hopper inlet, outlet, emergency outlet	2 No of each type, size and rating	
2.3.4.2	Rupture Disc	5 Nos	
2.3.4.3	Metallic Expansion Bellow	5 Nos.	
	Total		

Note:

1) Wherever quantity is specified both as a percentage and a value, the Bidder has to supply the higher quantity

2) In case specified spares are not applicable to a particular design offered by the bidder, functionally equivalent applicable spares pertaining to the offered design shall be provided in quantities as per specified spares.

3) Set for the particular equipment, would include all components required to replace the item, for example a set of bearing shall include all hardware normally required while replacing the bearings. It is further, intended that the assembly / sub-assembly which have different orientation (like left hand or right hand, top or bottom), different direction of rotation or mirror image positioning or any other reasons which result in maintaining two different sets of the spares to be used for the subject assembly / sub-assembly, these shall be considered as different types of assembly/sub-assembly.

4) Wherever bidder has indicated an item as not applicable, the same will have to be supplied free of cost, in case it is found applicable during detail engineering.

ANNEXURE-II DEVIATION SHEET (COST OF WITHDRAWAL)									
PROJECT:-						LARA SUPER THERMAL POWER PROJECT STAGE-II (2 X 800 MW)			
PACKAGE :-						MILL REJECT SYSTEM (CONVEYOR TYPE)			
TENDER ENQUIRY :-									
NAME OF THE BIDDER									
Sl. No.	Volume/Section	Page No.	Clause No.	Technical Specification/Tender Document No	Complete Description of Deviation	Cost of withdrawal of deviation to be entered by the bidder in	Reference of price Schedule of which Cost of Withdrawal of Deviation is applicable	Nature of cost of withdrawal of deviation (Positive/Negative)	Reasons for quoting deviation
1	**TECHNICAL DEVIATION**								
1.01									
1.02									
1.03									
1.04									
1.05									
1.06									
1.07									
1.08									
2	**COMMERCIAL DEVIATION**								
2.01									
2.02									
2.03									
2.04									
2.05									
2.06									
2.07									
2.08									

NOTES: