

EPC PACKAGE FOR LARA SUPER THERMAL POWER PROJECT, STAGE-II (2x800 MW)
Amendment No. 05 to Technical Specifications Section-VI of Bidding Document No.: CS-9587-001R-2

S. No.	SPECIFICATION REFERENCE				Instead of	Read as
	Section / Part	Sub-Section	Clause No.	Page No.		
C&I-3-01	VI/A	IIC	3.01.00	10/18	<p>Special C&I systems shall be provided by bidder including but not limited to the following as a minimum. The detail specification shall be as per QSGM's / QSTGM's / Bidder's standard and proven practice. All these systems shall be connected to respective DDCMIS system for control and monitoring purpose.</p> <p>Acoustic Steam Leak Detection System (Thirty number of sensors per boiler), Mill & Air heater Fire Detection System.</p>	<p>Special C&I systems shall be provided by bidder including but not limited to the following as a minimum. The detail specification shall be as per QSGM's / QSTGM's / Bidder's standard and proven practice. All these systems shall be connected to respective DDCMIS system for control and monitoring purpose.</p> <p>Acoustic Steam Leak Detection System (Fifty number of sensors per boiler), Mill & Air heater Fire Detection System.</p>
SG1-42	VI/A	SUB-SECTION-VI CHAPTER -01 SG & AUXILIARIES	-	38 OF 38	-	<p>General note added at the end of the table at page no. 38 of 38-</p> <p>General Note:</p> <p>"Wherever quantity has been specified as percentage (%), it shall mean percentage (%) of the total population of the item in the station (project), unless specified otherwise and the fraction will be rounded off to the next higher whole number. "</p>

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WS4-01	VI/A	IIA-11	1.02.00	2 OF 3	Cooling Towers – one (1) no/unit. Type of tower indicated elsewhere in the specification	Cooling Towers- one (1) no/unit or Two (2) nos/unit (to be decided by bidder). Type of tower indicated elsewhere in the specification
WS4-02	VI/B	A-15	3.3	11 of 43	Bidder shall provide spare cells (Minimum four (4) per tower) in the cooling tower to facilitate maintenance without affecting the tower performance.	Bidder shall provide spare cells (Minimum four (4) per tower) for one (1) no. tower/unit configuration and minimum two (2) numbers per tower for Two (2) nos tower/unit configuration) in the cooling tower to facilitate maintenance without affecting the tower performance.
WS4-03	VI/B	A-15	3.9	11 of 43	The length of the cooling tower shall be decided based on GLP drawing. However, the maximum length of the tower excluding space required for staircases at both ends shall not exceed 300m for cooling towers.	The length of the cooling tower shall be decided based on Plant Layout to be optimized by the bidder.
WS4-04	VI/B	A-01	3.02.00 a)	57 OF 101	Number of Cooling Towers: Two (2) numbers (One Number / Unit)	Number of Cooling Towers: Two (2) numbers (One Number / Unit) or Four (4) numbers (Two Numbers / Unit) as per configuration
WS4-05	VI/E	-	-	-	Tender Drawing “Scheme of Circulating Water System Rev A”	Tender drawing replaced with revised “Scheme of Circulating Water System Rev B”

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WS4-06	VI/B	A-15	3.01	11 of 43	Each cooling tower shall be complete with tower, basin, foundations and mechanical equipment as described below. The tower shall be of single inlet, cross flow or counter flow type	Each cooling tower shall be complete with tower, basin, foundations and mechanical equipment as described below. The tower shall be of single inlet or double inlet , cross flow or counter flow type
WS4-07	Amendment no. WS1-17				Excess AWRS water, if any after use in Ash Handling System, shall be suitably treated for recycle and re-use in Service water/ CHP dust suppression etc. to ensure ZLD.	Clause deleted.
MH-50	Amendment No. 02 to Technical Specifications: MH-23				i) Decanted water shall be pumped from owners' pumping system located at ash dyke. There shall be one no. working AWRS Pump of 600 m3/hr flow rate (owners' pumping system), is envisaged. Hence, maximum recovery water received inside plant shall be 600 m3/hr , accordingly pipeline of 400NB diameter within plant boundary upto terminal point shall be in Bidders scope.	Decanted water shall be pumped from owners' pumping system located at ash dyke. There shall be one no. working AWRS Pump of 300 m3/hr flow rate (owners' pumping system), is envisaged. Hence, maximum recovery water received inside plant shall be 300 m3/hr , accordingly pipeline of 300NB diameter within plant boundary upto terminal point shall be in Bidders scope. Decanted water from ash pond shall be reused in Ash Handling System.

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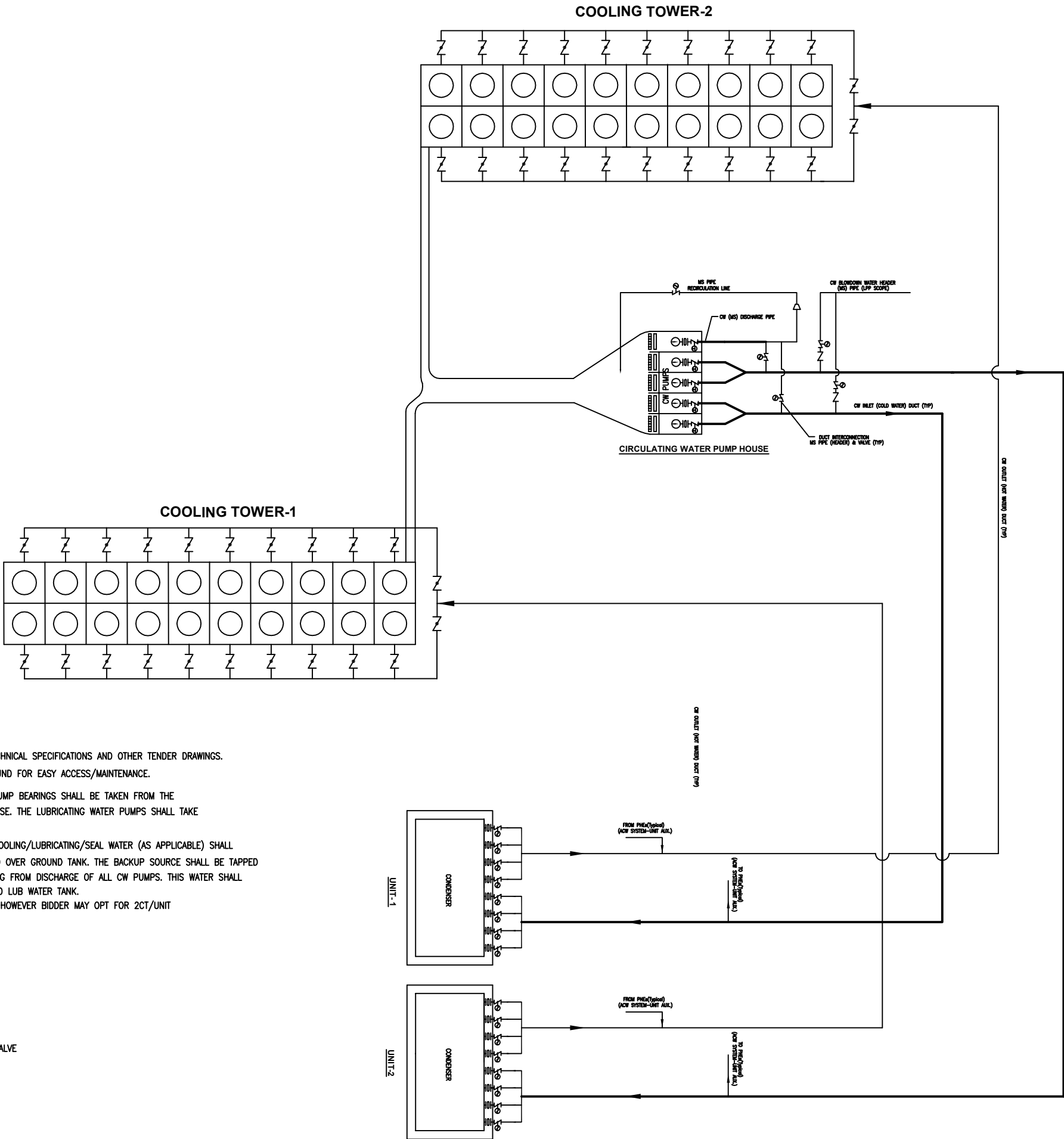
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MH-51	Amendment No. 02 to Technical Specifications: MH-7				<p>Two numbers (2 Nos) of Mechanical Extractor & Biomass Feeder below each Biomass storage silos with drives, dust hoods (for Feeder), all mechanical, electrical accessories and supporting structures etc to feed the Biomass to downstream conveyors. Mechanical extractor also known as Silo extractor/Rotary extractor, is a machine for efficiently extracting materials having poor natural flowing properties such as fibrous, wet materials prone to blockage. Bidder to provide Silo extractor/Rotary extractor consists of rotating chute, extractor blade/sweeper arm/paddle wheel, slewing arrangement etc.</p>	<p>One number (1 No) of Mechanical Extractor & Biomass Feeder below each Biomass storage silos with drives, dust hoods (for Feeder), all mechanical, electrical accessories and supporting structures etc to feed the Biomass to downstream conveyors. Mechanical extractor also known as Silo extractor/Rotary extractor, is a machine for efficiently extracting materials having poor natural flowing properties such as fibrous, wet materials prone to blockage. Bidder to provide Silo extractor/Rotary extractor consists of rotating chute, extractor blade/sweeper arm/paddle wheel, slewing arrangement etc.</p>
Elect1-14	VI/PART -A	SUB SECTION- IIB – ELECTRIC AL EQUIPMENTS/SYSTEMS	1.16.09	14 OF 20	Addition of new clause	In Stage-I switchyard area, the existing gantry structures for main bus extension may be used subjected to meeting the requirements of short circuit force design calculation of gantry structures with fault level of 63KA. Also, in Lara stage-I Switchyard area due to space constraint, the bidder may design considering the bay width of <27mtr for 400KV Level subjected to meet the statutory electrical

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						clearances etc. and the same shall be finalized during the detailed engineering stage. Isolators for the above may be used of HCB/Double break.
Elect1-15	VI/Part -B	B-04/ TRANSFORMERS AND ASSOCIATED MAINTENANCE, MONITORING & TESTING EQUIPMENTS	1.11.0 4 Note: -	24 of 38	Addition of new clause	(vii) For GT, ST and UT: dynamic short circuit withstand test shall be conducted on one unit of each type and rating of transformers, to validate the design and quality, unless such test has been successfully conducted as per Indian Standard 2026 part 5 within last ten years on transformer of similar design. Criteria for similar design shall be as per Annexure J of Central Electricity Authority's "Standard Specifications and Technical Parameters for Transformers and Reactors (66kV and above)", in line with latest "Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022"















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NOTES :

1. THIS DRG. SHOULD BE READ IN CONJUNCTION WITH TECHNICAL SPECIFICATIONS AND OTHER TENDER DRAWINGS.
2. ALL THE VALVES SHALL PREFERABLY BE LAID OVERGROUND FOR EASY ACCESS/MAINTENANCE.
3. THE LUBRICATING / SEAL WATER REQUIRED FOR THE PUMP BEARINGS SHALL BE TAKEN FROM THE STORAGE TANKS TO BE PROVIDED NEAR THE PUMP HOUSE. THE LUBRICATING WATER PUMPS SHALL TAKE SUCTION FROM OVERGROUND STORAGE TANK.
4. DURING INITIAL FILLING AND NORMAL OPERATION, THE COOLING/LUBRICATING/SEAL WATER (AS APPLICABLE) SHALL BE TAPPED FROM NEAREST WATER SOURCE AND FED TO OVER GROUND TANK. THE BACKUP SOURCE SHALL BE TAPPED FROM A COMMON HEADER FORMED BY TAKING A TAPPING FROM DISCHARGE OF ALL CW PUMPS. THIS WATER SHALL PASS THROUGH 2 X 100% DUPLEX FILTERS AND FED TO LUB WATER TANK.
5. THIS DRG IS INDICATIVE FOR 1CT/UNIT CONFIGURATION, HOWEVER BIDDER MAY OPT FOR 2CT/UNIT CONFIGURATION AS SPECIFIED ELSEWHERE.

LEGEND :

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|---|--|
|  | PUMPS |
|  | ELECTRICALLY ACTUATED BUTTERFLY VALVE |
|  | ELECTRO HYDRAULICALLY ACTUATED BUTTERFLY VALVE |
|  | MANUALLY ACTUATED BUTTERFLY VALVE |
|  | NON-RETURN (CHECK) VALVE |
|  | EXPANSION JOINT |
|  | ISOLATION VALVE |
|  | WATER TREATMENT PACKAGE |
|  | COOLING TOWER PACKAGE |
|  | EMPLOYER'S SCOPE |
|  | CW SYSTEM CIVIL WORK PACKAGE |
|  | EQUIPMENT PACKAGE |
|  | CW CHANNEL |
|  | CW DUCT |

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FOR TENDER PURPOSE ONLY

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NTPC

NTPC Limited
(A GOVT. OF INDIA ENTERPRISE)
ENGINEERING DIVISION

PROJECT	LARA SUPER THERMAL POWER PROJECT STAGE-II (2 X 800MW)
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TITLE	SCHEME OF CIRCULATING WATER SYSTEM
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SIZE	SCALE	DRG.NO.	REV.
A1	--	9587-999-POM-A-059	B