

PRE-BID QUERIES DATED 05.04.2019 FROM HAMON SHRIRAM COTTRELL PVT. LIMITED

CLIENT	ASSAM BIO REFINERY PVT. LTD. AT NUMALIGARH, ASSAM.
BIDDING DOCUMENT NO.	ABR/B215-000-PB-TN-8700/1002
TENDER RELEASE DATE	27.03.2019
PROJECT	COOLING TOWER AND COOLING WATER TREATMENT PLANT PACKAGE

SR.NO.	DOCUMENT NO.	PDF PAGE NO.	PAGE NO. / CLAUSE	DESCRIPTION	QUERIES BY HAMAON SHRIRAM COTTRELL PVT. LTD. DATED 05.04.2019.	EIL REPLY
I.	TECHNICAL - TENDER DOC_8700_1					
1	Part A Section A-3 Subsection A-3.0 215-603-86-41- SP-20 Rev.0	17 of 1500	Project Execution Plan	CONTRACTOR shall relocate / remove, clear or demolish obstacles above ground and underground facilities within the SITE, wherever required and with prior approval of OWNER/ PMC and without any time and commercial implications to the OWNER.	Since the graded site is handed over to us, we are excluding demolishing of aboveground obstacles in our scope	Agreed
2	Geo Technical Report (B215- 000-81-41-GTD- 0012 Rev.0)	612 of 1500	3 of 6	SBC recommendation	Recommended SBC in Geotech report is only for 3.5 m depth from NGL/FGL. If bottom level of Sump is less than 3.5 m then which value of SBC shall be considered?	Bidder to follow clause 1.0. of Doc. No. B215-000-81-41-GTD-0012 REV.0
3	Doc.no. B215-79- 41-PDB-001 Rev.D	669 of 1500	Basic engineering design basis	The total make up water quantity shall be 556 m3/hr.	The make up water quantity depends on the evaporation loss (which is dependent on design relative humidity) and cycle of	There are other losses in addition to evaporation losses. Quantity of 556 m3/h given in tender is correct. Vendor to follow the

					concentration. Kindly clarify.	same.
4	Engineering Design basis (Civil, Structural & Architectural)	697 of 1500	B.4.2.2. Concrete	The minimum grade of reinforced cement concrete to be used for super-structure & substructure (in case otherwise specified in Geotechnical Recommendations, higher grade shall be followed for sub-structure) shall be M30 (design mix) as per IS:456 based on Severe exposure condition.	As there was no specific mentioning of grade of reinforced cement concrete in Geotechnical recommendations, we are considering M 30 grade of concrete. Kindly confirm the grade of concrete to be considered.	Confirmed
5	Scope of work (Instrumentation(B215-000-16-51-SOW-8700 Rev.A.	838 of 1500	Scope of work		Kindly confirm the scope of supply of Flame arrestors. If it is included in bidder's scope, then kindly furnish the vendor list and technical data sheet.	In case the instruments indicated by the bidder are a part of the final approved P&ID, the scope of supply and specification for these instruments shall be as defined in instrumentation documents.
6	Document No. B215-000-16-50-SP-8700 Rev. A	877 of 1500	Job specification - Electrical / 7.2	Area classification	We understand that Fan drive motors shall be non-sparking type (type Ex- n). Please confirm. Kindly provide the area classification for circulating water pump drive motors.	In line with Cl. 7.1 of Job specification B215-000-16-50-SP-8700 Rev. A, Detailed area classification drawing for the complete CT package (including CT, CWTP, Sump Pump House, etc) shall be prepared by the Package vendor. Accordingly, type of drives shall be as per the area classification drawing being prepared by contractor.
7	Job specification -	907 of 1500 and		PLC	As per instrumentation job	Scope of Supply and works of

	Instrumentation B215-000-16-51- SP-8700 Rev.B	1313 of 1500			specification,2.2,note-1,All control and operation as well as interlocks and shutdown (including dosing system) shall be executed in PLC system furnished by vendor located in Operator cum PLC Room. Package PLC shall be serially interfaced to Plant DCS via redundant. However as per exclusions DCS/PLC based system for the cooling tower package in satellite rack room/Control room(except for the PLC of ClO2 generation system, which shall be supplied by contractor). Kindly clarify.	bidder includes supply , installation and commissioning of package PLC system for control and operation as well as interlock and shutdown (including dosing system, clo2 generation) as specified in the instrumentation scope of works and job specification (instrumentation). Package PLC to be located in the operator cum PLC room.
8	Job specification – Instrumentation B215-000-16-51- SP-8700 Rev.B	915 of 1500 / 2.29		Vibration transmitter	Cooling tower fans to be equipped with vibration transmitter with 4-20 mA. However in the brief description & scope of work and Technical requirement of cooling tower, it is mentioned as Vibration cut off switch Please confirm the requirement.	Vibration transmitters with 4-20 mA output shall be provided.
9	Job specification – Instrumentation B215-000-16-51- SP-8700 Rev.B	921 of 1500		Make of vibration probe and transmitter	Vibration Probe and Transmitter make mentioned as M/S GE industrial ltd. Request to provide at least 2 or 3 makes for the same.	Vibration probe + transmitter shall be GE Industrial Ltd (Model: METRIX/ ST5484E-121-0-32-0-0) or equivalent.
10	P&ID No. B215-79-41-801-167-61111 Rev.1	987 of 1500		Sulphuric acid dosing, formulation dosing, Polymeric dispersant dosing, Biocide dosing, Oil dispersant dosing	Please furnish detailed P&ID for the chemical dosing packages.	Vendor to develop the P&ID for chemical dosing packages
11	Doc. no B215-167-79-DS-1901 Rev.0	1033 of 1500	Note 3	Flow weir in side stream filter back flush lines	Please elaborate this requirement. Moreover, this requirement is neither specified	This line (Flow weir in side stream filter back flush lines) in note-3 of side stream filter

					in P&ID nor in the Instrumentation job specification. So please specify the back flush line size and type of Flow measurement, specification and approved vendors recommended for this application. Also furnish the pressure of plant air available at site.	datasheet stands deleted. For pressure of plant air, refer note-4 of SSF datasheet.
12	Arrangement drawing	1205&1208 of 1500		Piping layout	Pipe routing with over ground and underground portion is not mentioned in scope drawing.	Bidder to refer Scope drawing (Section A-A and section B-B) attached with bid document
13	Scope drawing no. B215-000-1744-06030 Rev.C	1206 of 1500		Bottom of basin & basin depth	Kindly furnish the bottom of basin (basin invert+ basin slab thickness) to be considered from FGL and bottom of cold water sump. Also kindly confirm the following, a) Basin curb(basin top) to Overflow water level = 300 mm (free board) b)Over flow to High water level = 150 mm c)High to Normal = 150 mm d)Normal to low = 10 mins. holdup (basin & channel) e)Low to minimum level = 150 mm e)Min. to basin invert = 150 mm/300 mm/not required, Please specify.	Detailed engineering is in contractor's scope and bidder to follow bid requirements
14	Arrangement drawing	1206 of 1500		FGL & HPP	In arrangement drg. FGL & HPP both are shown at same level as 101(nowhere it is mentioned that corresponds RL or EL). But in Page no 611, RL of FGL is mentioned as 101.0. In page no	FGL and HPP shall be considered as 101.0

					676/1500 EL of FGL is mentioned as 99.1 & HPP as 99.5 respectively. RL of EL 100.0 is 90.4 as per page no 676/1500. Also, in page no 828/1500 RL of FGL is mentioned as 100.5. Also, there is no mention of NGL. Please clarify	
15	Scope drawing no. B215-000-1744-06030 Rev.C	1208 of 1500		Terminal Point of CW supply and return line	Terminal point of CW Supply (line no. 68"-WCS-167-1113-A91A) and CW return (line no. 68"-WCR-167-1101-A91A) lines are not available. Please furnish the same.	Scope limit has already been marked in the Scope drawing. Bidder to follow the bid requirements
16	Scope drawing no. B215-000-1744-06030 Rev.C	1208 of 1500		CW supply and return line	It is mentioned as A3A in page no.1208 of 1500 and A91A in page n0.1206 of 1500. Being an under ground pipes, this should be of PMS-A91A and kindly confirm. For above ground pipes, we shall consider PMS A3A.	Bidder to follow bid requirements.
17	Scope drawing no. B215-000-1744-06030 Rev.C	1208 of 1500		CW return line	1) We intend to consider the water velocity of 2.5 m./sec. on design water flow for reducing header diameters from 68" dia of main header to end cell to fix the reduction. 2) We intend to consider the water velocity of 2.5 m./sec. on design water flow for sizing hot water riser pipe of each cell and hot water riser pipe	1) Confirmed 2) Confirmed

					isolation valve of each cell. Kindly confirm the above.	
18	Scope drawing no. B215-000-1744-06030 Rev.C	1208 of 1500		Plan & sectional drawing of CW pump house & CWTP building	We didn't find the section drawing of CW pump house and CWTP building and request you to furnish the same.	CW Pump house and CWTP building is in cooling tower contractor's scope. Contractor shall prepare drawing during detailed engineering as per bid requirements
19	Scope drawing no. B215-000-1744-06030 Rev.C	1208 of 1500		Cable trenches / overhead electrical rack	Kindly confirm whether we need to consider cable trench or overhead electrical rack within the bidder's battery limit	In line with Note-3 of Document B215-000-16-50-OD-8701, Cable shall be laid overhead on pipe rack or dedicated overhead electrical rack to the extent possible. Overhead electrical rack shall be at a height decided during detailed engineering based on vehicular/crane movement, constructional requirement, obstruction etc. Wherever pipe rack or overhead electrical rack is not possible cable shall be laid in RCC cable trenches.
20	Standard specification No. 6-65-0091 REV. 1	1311 of 1500 / 2.7.iv.		PLC system for Chlorine dioxide generation system	Please note that whether Chlorine dioxide generation system and its PLC system for the same is only in the scope of CT vendor.	Bidder to note that Chlorine dioxide generation system and its PLC system is not envisaged in this tender and hence not required.
21	Standard specification No. 6-65-0091 REV. 1	1314 of 1500 and 838 of 1500			As per the Scope of work(instrumentation) Cooling tower package, the scope of supply of Gas detectors (along with calibration gas cylinders, Calibration Kit),with beacons, hooters and reset push buttons is in CT vendor scope, However in	supply of Gas detectors (along with calibration gas cylinders, Calibration Kit),with beacons, hooters and reset push buttons is in CT vendor scope

					Exclusions at Standard specifications for cooling tower and CWTP package the flammable and toxic gas detectors are free issue to CT vendor. Kindly confirm.	
22	Annexure 1	1493 of 1500	Broad scope matrix	Sump Cooling Water Recirculation Pumps and PumpHouse	The scope of sump, pumps and pump house are mentioned in others scope, whereas as per the details mentioned in other areas, it is mentioned in cooling tower bidder's scope. Kindly confirm whether these scope are included in the cooling tower bidders scope or not ?	Bidder to refer document B215-000-17-44-SOW-8700 attached with bid document wherein the scope of pumps, sumps and pump house is in cooling tower contractor's scope.
23	Annexure 1	1493 of 1500	Broad scope matrix	Motor Control Centres	As per job specifications mentioned in some other clauses, motor rating above 55 KW are not included in cooling tower bidder's scope. Kindly confirm / clarify.	In line with Cl. 2.1 of Job Spec B215-000-16-50-SP-8700, MCC shall be provided by the contractor for feeding all the MV loads (motor rated up to and including 55 kW) of this Package. MCC shall be located in the Contractor's MCC room. And in line with Cl. 2.4 of Job Spec B215-000-16-50-SP-8700, All Emergency loads and motors rated more than 55 kW & up to 160KW shall directly be fed from owner's MV switchboards (415V) located in Owner substation. Motors rated more than 160 KW shall be fed from owner's HV switch board located in Owner's Substation
24	Annexure 1	1493 of 1500	Broad scope matrix	Complete cable work (including supply ,layingtermination of	Kindly confirm LT & HT cables from fan drive electric motor & circulating water pump drive	In line with Cl.1.0 (Pt. 4.0 & 5.0) of Scope of Work Document (B215-000-16-50-SOW-8700),

				cables at both sending and receiving ends from PCC To MCC and from MCC to package battery limit loads), cable trench / above ground cable trays, supports, racks within the package battery limit, however cable trench / trays from sub-station to package battery limit will be provided by owner for laying cable by the contractor. (For distance from substation to plant battery limit refer jobspec)	motor respectively are included in bidder's scope or not. If it is included then kindly furnish the cabling distance to be considered ?	Power & control cables for the loads being fed from contractors MCC/ASB are in contractor scope of supply. In line with Cl.2.0(Pt. 7.0) of Scope of Work Document (B215-000-16-50-SOW-8700), Power & control cables for the loads being fed from owner's PCC/HV switchboard are in Owner's scope.
25			General		Please clarify the scope of materials like cable tray, cables and field JB required for installation of free issue materials.	For scope of electrical items, refer Scope of work document (B215-000-16-50-SOW-8700) attached with tender.
26			General	VFD	Whether VFD is required for fan drive electric motor and pump drive electric motors or not ? If it is required, whether VFDs are included in bidder's scope or not ?	VFD is not required.
II	COMMERCIAL					
27	GCC	54 of 85	5.26	Period of liability from the date of issue of completion certificate	We intend to consider the defect liability period as 12 months from the date of mechanical completion of cooling tower (as heat load & water load is dependent on readiness of other	Bidder to follow the provisions of bidding document.

					equipments and in the control of owner) commissioning or 18 months from the date of last major shipment, whichever is earlier.	
28	Special conditions of contract (SCC)	Annexure X / 5 of 11	Terms of payment	Last 5% against each head of payment - 05% on completion of all works in all respects and issuance of completion certificate.	Last 5% payment against each head should be released against provisional acceptance certificate. In case Performance Guarantee Test is not done within 6 months from the date of mechanical completion, for reasons not attributable to the bidder, 100% payment towards PG test shall be released against submission of Bank Guarantee of equivalent amount valid for a period of 6 months. In the event Performance Guarantee Test is not carried out even during this period of 6 months, for reasons not attributable to the bidder, the System will be deemed to have accepted. Please confirm.	Bidder to follow the provisions of bidding document.
29	Special conditions of contract (SCC)	Annexure X / Page 6 of 11	Terms of payment	10% (ten percent) on completion of piling works on pro-rata basis as per the approved Schedule of Activities against the CONTRACTOR's certified Running Account Bill(s).	There was no specific mentioning of piling work in the Geotechnical data under sl.no.6 and we are not considering piling in our scope of work. We intend to consider the release of this 10% payment as against completion of shallow foundation. Kindly confirm	This 10% payment breakup is for completion of all Civil works for this package

30				Editable copy of price schedule	We request you to furnish the same.	Editable copy cannot be furnished
31				Statutory variations	All statutory variations as well as any new statutory levies applicable to the work within and even beyond the contractual completion period will be to Purchaser's account.	Please follow bidding document.