



BHARAT HEAVY ELECTRICALS LIMITED
PROJECT ENGINEERING MANAGEMENT

PROJECT : 1X800 MW TSGENCO KOTHAGUDAM TPP
PACKAGE : EFFLUENT TREATMENT PLANT

DATE: - 14.03.2016

Corrigenda/Addenda-6

Reference: i) Enquiry No. PE/PG/KG1/ E-5134/2015 Dtd. 18.12.2015
ii) Corrigenda/Addenda-1 Dtd. 13.01.2016
iii) Corrigenda/Addenda-2 Dtd. 27.01.2016
iv) Corrigenda/Addenda-3 Dtd. 09.02.2016
v) Corrigenda/Addenda-4 Dtd. 16.02.2016
vi) Corrigenda/Addenda-5 Dtd. 07.03.2016

Due Date : 22/03/2016 (02:00 PM)

Subject: Due date Extension and Pre Bid clarifications

1) All Pre Bid clarifications issued till date against Pre Bid queries are attached herewith. All bidders are advised to take cognizance of same & submit their bid/revised bid (as applicable) accordingly before due date & time.

1). Bid submission date against Tender Enquiry PE/PG/KG1/E-5134/2015 Dated 18.12.2015 is extended till **22.03.2016 (02.00 PM)**. The Techno-Commercial Bids shall be opened same day at **03.00 PM**.

All other terms and conditions shall remain unchanged.

Regards

Rajeev Kumar
Sr. Engineer
PG-II-2

PREBID CLARIFICATION BHEL TSGENCO KOTHAGUDAM

Tender specification no.PE-TS-410-164-A001 REV.01

VOLUME	SECTION	CLAUSE NO.	PAGE NO.	SPECIFICATION	CLARIFICATION	REASONS FOR CLARIFICATION	BHEL REPLY
VOLUME-IIB	Section –C1	12.0 INCLINED SURFACE SETTLER	93 of 592	Datasheet A for ETP	Based on the inlet parameters the surface loading can be increased upto 3-4 m3/hr/m2 to get the outlet quality.	Request you to confirm the same	Please follow technical specification.
VOLUME-IIB	Section –C1	2	98 of 592	Valves /CAST IRON BODY BUTTERFLY VALVES :/ p id	Please note that we have considered wafer end butterfly valves for all the transfer pump suction and discharge line in ETP system	Butterfly valves are economical & suitable option	Please follow technical specification.
VOLUME-IIIE	Section –D1	6.00.00	192 of 592	EXCAVATION AND BACKFILLING	Complete excavation and backfilling is excluded from our scope. ,the plot plan provided in the tender specs is not clear We have considered all the piping as mentioned in the clause as above ground	Request you to confirm the same & provide us the editable copy of plot plan	The excavation & backfilling of earth for buried pipes is in BHEL scope in line with Section C1, Cl. No. 2.67 at Page 16 of 592 in Technical Specification.
VOLUME-IIIC	Section –D1	4.03.00	209 of 592	DESIGN, MANUFACTURE, FABRICATION AND ERECTION	Please note that we have considered the MOC of ETP piping within battery limits as ERW MSEP Medium duty & MOC of chemical as UPVC	Request your confirmation on the same	Please follow technical specification.
VOLUME-IIIC	Section –S-IV	7.0.00	129 of 573	Operation of the Plant	We understand that RIO Panel operation for individual sump pits and final Interface with PLC for complete waste water treatment plant operation. Please confirm our understanding.		Please follow technical specification.
VOLUME-IIB	Section –C1	6	17 of 592	6.0 DESIGN CRITERIA AND TECHNICAL DETAILS	Please note that we have considered the motor rpm of sump pumps as 1500/2900 rpm	As per approved pump manufacturer standard the flow is very low and head is high, hence the pump selection is not suitable for 1500 rpm motor.Request your confirmation on the same.	Please follow technical specification.
VOLUME-IIB	Section –C1	6	20 of 592	SCOPE OF SERVICE/	civil work like chipping of foundation, grouting below base plate for all structures, equipment , grouting of anchor bolts wherever these are not placed in the foundation during casting of foundation itself, excavation & filling of earth for buried pipes is excluded from our scope	As it is the part of civil work, we are excluding it from our scope. Request your approval for the same	Please follow technical specification.
VOLUME-IIB	Section –C1	8.11/8.12	21 of 592	SCOPE OF SUPPLY civil	Complete civil design for the ETP system is excluded from our scope	We shall provide only the GA drawing of the equipments	Please follow technical specification.
VOLUME-IIB	Section –C1			SCOPE OF SUPPLY	All insert plates with lugs, angle, edge angle in shape as desired for edge protection of RCC Structures shall be excluded from OUR SCOPE	As it is the part of civil work, we are excluding it from our scope. Request your approval for the same	Please follow technical specification.
VOLUME-IIB	Section –C1	10	21 of 592	Exclusions	We have mentioned our list of exclusion in our proposed offer	Request you to confirm the same	Please follow technical specification.

VOLUME-IIB	Section –C1	16.1	25 of 592	16.0 ADDITIONAL REQUIREMENT	Any statutory clearance required for the system is excluded from our scope	Request your approval for the same	Please follow technical specification.
VOLUME-IIB	Section –C1		61 of 592	_ Oil Water Separator	We have considered the inlet oil to oil water separator as free and floating oil	Request you to confirm the same	Please follow technical specification.
VOLUME-IIB	Section –C1	12	82 of 592	Datasheet A for ETP	As head of the pumps are not mentioned in specs, ,we have considered the head of all transfer pumps as 3.0 bar.	Request you to confirm the same & provide us the editable format of the layout.	Please follow technical specification.
VOLUME-IIIIC	Section –S-IV	7.0.00	129 of 573	2 Nos 67" LVS for local operation	Please clarify the location of LVS for the operation of the plant.		Please follow technical specification.
VOLUME-IIIIC				UPS for PLC	We understand that UPS for PLC are in bidder scope. Please confirm our understanding.		confirm
VOLUME-IIIIC		27	34 of 573	Sub Vendor list PLC Make	We shall provide system house PLC who are certified with as per list of vendor.		Please follow technical specification.
VOLUME-IIIIC		4.01.05	402 of 573	LT Motor efficiency	Please confirm which efficiency will consider for making load list.		Please follow technical specification.

Schedule For Pre-Bid Clarifications							
Volume	Section	Clause No.	Page No.	Specification Requirement	Clarification	Reasons For Clarifications	BHEL REPLY
NA	NA	NA	NA	NA	Layout for the entire treatment system required	To decide upon the head requirement for all the mentioned pumps.	Please follow technical specification.
II-B	C1	2.67	16 of 592	For estimation purpose, Bidder to consider entire yard piping between each sump & equipments/terminal points etc. as underground piping.	Whether inspection chamber (for buried piping) is required or not? If required, kindly mention the span distance.	As entire piping falls in bidder's scope, kindly confirm whether we need to consider the same or not.	Inspection chamber (for buried piping) is not applicable.

SCHEDULE OF PRE-BID CLARIFICATION

VOLUME	SECTION	CLAUSE NO.	PAGE NO.	SPECIFICATION REQUIREMENT	CLARIFICATION	REASONS FOR CLARIFICATION	BHEL REPLY
VOLUME II-B	SECTION –C1	Dwg. PE-DG-410-164-A001	page 110 of 592	Multiple stream of waste water / effluent is collected in the Central Monitoring Basin	But flow rates of the influent streams (from CPU area, DM area, Blow Down) are not indicated (might be periodic operation)	It would request BHEL to intimate the tentative flow rates of the said streams, though not the part of this tender. So that material balance can be calculated / checked in the Central Monitoring basin, upstream of Clarification unit	The same shall be furnished during detailed engineering stage.
VOLUME: II-B	SECTION: B	TABLE-3, EFFLUENT WATER QUALITY FOR ETP DESIGN PURPOSE,	page 9 of 592	Influent qualities of various streams are also indicated in the tender specification			

PRE BID CLARIFICATION

S.No.	VOLUME	SECTION	CLAUSE NO.	PAGENO.	SPECIFICATIONREQUIREMENT	CLARIFICATION	REASONS FORCLARIFICATION	BHEL REPLY
1	II B	Section C1		Page No. 110 & 111	As per P&ID	We have not found the Distance between boiler area wash water pit to TG area wash water pit (P & ID sheet 1)	Not clear	Bidder to please refer plot plan attached in Technical specification at Page No. 581 of 592.
2	II B	Section C1		Page No. 110 & 111	As per P&ID	We have not found the Location of land filling tanks -4 nos.	Not clear	Please follow technical specification.
3	II B	Section C1		Page No. 111	Camra in P&ID	Scop of CCTV Camera not clear indicated in P & ID sheet 2. Kindly clear.	Not clear	CCTV camera is also in Bidder's scope. Bidder to please follow technical specification.
4	II B	Section C1	Clause No.12Clause No. 2.19	Page No. 93Page No. 13	Suitable to hold sludge generated fromtwo(2) numbers Inclined surface Settlers atrated condition for 1 hr.	Tube settler capacity not clear and contradictory in datasheet A (page 93) and Scope of supply (page 13,). Kindly clarify.	contradiction	Please follow technical specification.
5	II B	Section C1	Clause No.11.(ii), 12 (ii)	Page No. 92 & 93	INCLINED SURFACE SETTLER : Normally, all two (2) Flash Mixers willoperate in under-load condition.However, in case anyone Flash Mixer istaken out for maintenance, the other oneFlash Mixer with 20 % overload will be ableto cater for the total water requirement.However each Flash Mixer shall bedesigned not less than 150	Datasheet A sl. no. 11.(ii), 12 (ii) indicate effective capacity of flash mixer not for tube settler and flocculation tank.	Not clear	Please follow technical specification.
1	II B	Section C2Section C3	Cl. no. 3Cl. no. 2	Page No. 116 & 122	Power cables, controls cables & screened control cables for a) Both end equipment in BHEL's scopea) Both end equipment in vendor scopea) Both end equipment in vendor scopeAll fields cabling for instruments/motor/pump/blower to JB is in bidder scope.	As per Electrical scope between BHEL & Vendor : scope of supply for cables in BHEL scope for both end equipment in vendor scope. However, in section C3 for Cable between equipments to JB is in vendor scope. Both clauses are contradictory. Please clarify.	contradiction	Cable supply is in BHEL Scope but erection is in Vendor scope b/w instruments/pump/motors/blowers and JB.
2	II B	Section C1	Cl. no. 2.64	Page No. 15	All consumables, bulk chemicals like hydrochloric acid, sodium hydroxide, alum etc., Required for pre commissioning, trial run, PG test till handover of the plant	Provide period between PG test & Handover	Kindly clear	Bidder to note that all consumables, bulk chemicals like hydrochloric acid, sodium hydroxide, alum etc., required for pre commissioning, trial run, PG test of the plant is in Bidder's scope. Bidder to also refer Amendment No. # 1.

All clarification from the Technical Specification shall be filled in by the BIDDER clause by clause in this format only.

VOLUME	COMMERCIAL QUERIES						
	SECTION	CLAUSE NO.	PAGE NO.	SPECIFICATION REQUIREMENT	CLARIFICATION	REASONS FOR CLARIFICATION	BHEL REPLY
COMMERCIAL QUERIES:							
GENERAL	-	-	-	-	Kindly confirm whether separate orders are issued for Supply & Service Part.	For bidder's confirmation	Yes
GENERAL	-	-	-	-	Kindly confirm whether Road permits & Way bills for materials purchased outside Telangana shall be provided by BHEL.	For bidder's confirmation	Yes subject to timely furnish the inputs by vendor/supplier as per customer requirement
GENERAL	-	-	-	-	Kindly clarify whether Service Tax applicable on Services part would be paid extra . Also kindly clarify where the Service tax amount on Service Part is to be indicated in the Price Bid Format.	For bidder's confirmation	Please refer GCC Rev06 and SCC Rev.01 of project. Service Tax shall be indicated clearly in Price bid.
GENERAL	-	-	-	-	Kindly clarify if Form C shall be issued by BHEL on Quarterly basis before the end of subsequent Quarter.	For bidder's confirmation	Please refer GCC Rev06
GENERAL	-	-	-	-	Kindly provide us BHEL VAT registration number for Telangana.	For bidder's confirmation	Please refer SCC Rev01
GENERAL	-	-	-	-	For Imports purchases kindly let us know whether BHEL would sign High Sea Sales agreement and also to provide applicable certificate , Import & Export registration codes.	For bidder's confirmation	CIF is not available for this package.
GENERAL	-	-	-	-	Kindly confirm Insurance coverage during transit, storage, erection & commissioning is under the scope of BHEL and hence Insurance premium costs would not be in the Scope of Contractor.	For bidder's confirmation	Please refer GCC Rev06 & SCC Rev01
GENERAL	-	-	-	-	Kindly clarify if any concessions / Benefits /Exemptions on Taxes & Duties would be available for this job.	For bidder's confirmation	Please refer SCC Rev01 & NIT
GENERAL	-	-	-	-	Kindly clarify if all civil works are excluded.	For bidder's confirmation	Please follow technical specification.
GENERAL	-	-	-	-	Kindly inform us whether Service Tax (Reverse Charge) applicable on freight would be reimbursed or it should be loaded in the Price Bid.	For bidder's confirmation	Freight to be quoted inclusive of service tax (refer price schdule).Freight shall be considered in evaluation (refer scc rev.01)
GENERAL	-	-	-	-	Kindly clarify, if two separate orders are issued for Supply & Services, TDS under Telangana VAT would not be applicable. For supply part Tax invoice would be submitted and for Service Part , Service Tax invoice would be submitted.	For bidder's confirmation	Please refer GCC Rev06 & SCC Rev01
GENERAL	-	-	-	-	VAT registration under Telangana would not be required for Contractor since supply invoice would be submitted using Tamil Nadu VAT/CST registration since all the materials would be purchased outside the state of Telangana. Kindly clarify.	For bidder's confirmation	As per NIT ,SCC and GCC Rev.06
GENERAL	-	-	-	-	Kindly clarify whether the Billing Schedule of the order should be jointly signed by Owner and Contractor for the contract price.	For bidder's confirmation	Yes
GENERAL	-	-	-	-	Kindly clarify whether Octroi and Entry Tax are applicable in the state of Telangana. If applicable, whether the same would be reimbursed by BHEL.	For bidder's confirmation	Please refer SCC Rev01
PROCESS QUERIES							
Technical Specification for Effluent Treatment Plant	SUGGESTIVE PRICE SCHEDULE	4.00	PRICE SCHEDULE - PRICED (As per sheet titled PRICE SCH - MAIN)	Break-up (%) of prices given at SI No-2.01 above (To be used during contract execution for payment).	Please confirm whether we can give the percentage breakup according to our estimated cost. Since most of the percentage are not matching to our estimation.	For bidder's confirmation	Please follow technical specification.
Technical Specification for Effluent Treatment Plant	SPECIFICATION NO.PE-TS-410-164 A-A001/ Volume - IIB	3.05.00	130 OF 592	The oily waste run off.....to collect oily waste from power house area (TG area and lub oil area)	Please confirm us that all input for Retention Pit (transformer yard, fuel oil storage area, power house area), wash water pit (boiler area, TG area), Side stream filtration backwash pit shall be in the scope of BHEL	For bidder's confirmation	Please follow technical specification.
Technical Specification for Effluent Treatment Plant	SPECIFICATION NO.PE-TS-410-164 A-A001/ Volume - IIB	3.05.00	130 OF 592	The oily waste run off.....to collect oily waste from power house area (TG area and lub oil area)	Please confirm us the flow rate in m3/hr of all input for Retention Pit (transformer yard, fuel oil storage area, power house area), wash water pit (boiler area, TG area), Side stream filtration backwash pit	For bidder's information	Please follow technical specification.
Technical Specification for Effluent Treatment Plant	SPECIFICATION NO.PE-TS-410-164 A-A001/ Volume - IIB	7.00.00	146 OF 592	The pit is provided with three numbers Boiler / TG Area Wash Water Transfer Pumps with 2 working 1 standby philosophy....	Please confirm the no. of pumps required. As per the datasheet and technical specification Two nos. (1W+1S) has been mentioned at each area	For bidder's clarification/confirmation	Bidder to please follow number of pumps as indicated in Datasheet A (Section CL, Page no. 82 of 592 to 107 of 592).
Technical Specification for Effluent Treatment Plant	Drawing no. PE-DG-410-164-A001	-	Sheet 1 of 2	-	Kindly confirm whether the distance between retention pit for treated water from oil water separator and central monitoring basin is 1550 meters. As per the layout the retention pit for treated water from oil water separator and central monitoring basin seems to be closer. Kindly confirm the distance.	For bidder's clarification/confirmation	Please follow technical specification.
Technical Specification for Effluent Treatment Plant	Drawing no. PE-DG-410-164-A001	-	Sheet 1 of 2	-	Kindly confirm the distance between retention pit for treated water from oil water separator and central monitoring basin is 1550 meters. If so kindly confirm the distance between central monitoring basin and flash mixer	For bidder's clarification/confirmation	Please follow technical specification.
Technical Specification for Effluent Treatment Plant	Drawing no. PE-DG-410-164-A001	-	Sheet 1 of 2	-	Kindly confirm the distance between Boiler area wash water pit and central monitoring basin	For bidder's clarification/confirmation	Please follow technical specification.
Technical Specification for Effluent Treatment Plant	Drawing no. PE-DG-410-164-A001	-	Sheet 1 of 2	-	Kindly confirm whether the boiler area effluents & TG area effluents has to be blended & transferred to guard pond Or it should be transferred through separate pipe routing to central monitoring basin	For bidder's clarification/confirmation	Please follow technical specification.
Technical Specification for Effluent Treatment Plant	SPECIFICATION NO.PE-TS-410-164 A-A001/ Volume - IIB	3.27	Sheet 1 of 2	-	Kindly confirm (1) distance between CPI sludge pit and land filling tank (2) distance between Tube settler sludge pit and land filling tank (3) scope of disposal of the sludge from land filling tanks is in BHEL's scope	For bidder's clarification/confirmation	(1) Bidder to decide. (2) Bidder to decide. (3) Scope of disposal of the sludge from land filling tanks is in Customer's scope
Technical Specification for Effluent Treatment Plant	SPECIFICATION NO.PE-TS-410-164 A-A001/ Volume - IIB	3.23	Sheet 1 of 2	-	Kindly provide the distance between tube settler to clear water transfer pumps.	For bidder's clarification/confirmation	Please follow technical specification.
General	-	-	-	-	Please confirm whether chain pulley block and electric hoist is required for each Effluent sumps or only to the sump inside the ETP area.	For bidder's confirmation	This is general clarification. In line with tender technical specification General pre bid clarification will not be considered. Bidder to ask pre bid indicating reference with respect to tender technical specification.
General	-	-	-	-	Please clarify whether buried pipes are required. If so, kindly clarify the area of the piping to be buried along with the corresponding pipe lengths.	For bidder's confirmation	This is general clarification. In line with tender technical specification General pre bid clarification will not be considered. Bidder to ask pre bid indicating reference with respect to tender technical specification.
General	-	-	-	-	Kindly highlight the routing of the piping from the various areas to the various retention pits and to the central monitoring basin as the location of the retention pits are not shown in the layout.	For bidder's information	This is general clarification. In line with tender technical specification General pre bid clarification will not be considered. Bidder to ask pre bid indicating reference with respect to tender technical specification.
General	-	-	135 OF 592	One (1) number single storied Chemical House to accommodate storage space for chemicals, Chemical Solution Preparation Tanks, Dosing Pumps etc.	Kindly clarify whether Construction of chemical house & Excavation and Backfilling is in BHEL's scope	For bidder's information	Chemical house of Pre treatment plant is in BHEL scope. Excavation & backfilling of earth for buried pipes is in BHEL scope.
Technical Specification for Effluent Treatment Plant	Drawing no. PE-DG-410-164-A001	-	Sheet 1 of 2	-	Kindly confirm whether the distance between retention pit for treated water from oil water separator and central monitoring basin is 1550 meters. If so kindly confirm the distance between central monitoring basin and flash mixer	For bidder's clarification/confirmation	Please follow technical specification.
Technical Specification for Effluent Treatment Plant	Drawing no. PE-DG-410-164-A001	-	Sheet 1 of 2	-	Kindly confirm whether the 1500 m distance from clear water transfer pump to coal handling area is in BHEL scope or not.	For bidder's clarification/confirmation	In additional to other piping this piping is also in Bidder's scope in line with technical specification. Bidder to please follow technical specification.
Technical Specification for Effluent Treatment Plant	Drawing no. PE-DG-410-164-A001	-	Sheet 1 of 2	-	Kindly confirm whether the 1600 m distance from clear water transfer pump to green belt development near CHP area is in BHEL scope or not.	For bidder's clarification/confirmation	In additional to other piping this piping is also in Bidder's scope in line with technical specification. Bidder to please follow technical specification.
Technical Specification for Effluent Treatment Plant	Drawing no. PE-DG-410-164-A001	-	Sheet 1 of 2	-	Kindly confirm the location of pre-oil water separator collection pit in the layout. We are unable to locate the same.	For bidder's clarification/confirmation	Location of pre oil water separator pit has been indicated in the plot plan attached in technical specification (Page no. 581 of 592.)
ELECTRICAL QUERIES:							

Volume II-B	General Technical Requirement-Operational and control Philosophy	7.00.00	105 OF 592		According to Tender Specs, the Bidder will provide the Local Control Panel to monitor the following areas: 1) LCP-1: Central Monitoring Basin and dosing pumps, Inclined Surface Settler 2) LCP-2: Side Stream Filtration Backwash Pit 3) LCP-3: TG Area Wash Water Transfer Pumps, Boiler area wash water Pit, Retention Pit for Oily Waste from Power House area (TG and Lube Oil Area), Retention Pit for Oily Waste from Transformer Yard Area 4) LCP-4: Retention Pit for Oily waste from Fuel Oil storage area, Pre Oil Water Separator Collection Pit, Oil Water Separator, Slop Oil Tank, CPI Sludge Pit, Retention Pit for Treated water from Oil water Separator.	For bidder's confirmation	Please follow technical specification.
Volume II-B	Section C3-Technical Req C&I		2 122 OF 592	All fields cabling for instruments/motor/pump/blower to JB is in bidder's scope and details are given elsewhere in this spec. JB to PLC shall be provided by BHEL	The Bidder will provide Cables and Trays from Field Instruments upto JB. JB to LCP is under Bhel's Scope	For bidder's confirmation	Supply of Cables & Trays shall be as per Electrical Scope Between BHEL & Vendor indicated at Section C2 Page No. 115 of 592 to 117 of 592.
Volume II-B	-	-	-	Power Supply System for LCP	Power Supply Cables and Trays for all the Local Control Panels is under BHEL's scope. Please confirm.	For bidder's confirmation	Supply of Cables & Trays shall be as per Electrical Scope Between BHEL & Vendor indicated at Section C2 Page No. 115 of 592 to 117 of 592.
Volume II-B	Section C1	7.3	19 OF 592	The PLC of Effluent treatment plant and Pre treatment plant shall be housed on ground floor of chemical house in a common PLC room.	The Bidder will provide one main PLC and OWS in the Chemical Room in ETP Area.	For bidder's confirmation	Please follow technical specification.
Volume II-B	Section D3 PLC Specification	2.11.00	463 OF 592	Each PLC proprietary Control Systems shall be interfaced to common DDCMIS network with bidirectional OPC network. The link shall be redundant	The communication cable from main PLC (Chemical House) to DDCMIS is also under BHEL's scope as per PLC Configuration (PE- DM-410-145-1900). Please confirm.	For bidder's confirmation	Communication cable b/w DDCMIS and PLC is in BHEL Scope of supply.
Volume II-B	General Technical Requirements	4.03.00	136 OF 592	All sump pits must have redundant level switches.	Redundant Level switches are not indicated in the P&ID. Should the Bidder consider the same?	For bidder's confirmation	Please follow technical specification.
Volume II-B	-	-	-	-	The main UPS (redundant) will be located near the main PLC Panel in ETP Area (Chemical House)	For bidder's confirmation	Confirmed

PRE BID CLARIFICATION

S.No.	VOLUME	SECTION	CLAUSE NO.	PAGENO.	SPECIFICATIONREQUIREMENT	CLARIFICATION	REASONS FORCLARIFICATION	BHEL REPLY	CLARIFICATION	BHEL REPLY
1	II B	Section C1		Page No. 110 & 111	As per P&ID	We have not found the Distance between boiler area wash water pit to TG area wash water pit (P & ID sheet 1)	Not clear	Bidder to please refer plot plan attached in Technical specification at Page No. 581 of 592.	Boiler area wash water pit and TG area wash water pits are located in plot plan. Please provide distance.	Bidder to consider 25 meter piping distance.
5	II B	Section C1	Clause No.11.(ii), 12 (ii)	Page No. 92 & 93	INCLINED SURFACE SETTLER : Normally, all two (2) Flash Mixers will operate in under-load condition. However, in case anyone Flash Mixer is taken out for maintenance, the other one Flash Mixer with 20 % overload will be able to cater for the total water requirement. However each Flash Mixer shall be designed not less than 150	Datasheet A sl. no. 11.(ii), 12 (ii) indicate effective capacity of flash mixer not for tube settler and flocculation tank.	Not clear	Please follow technical specification.	Datasheet A sl. No. 12 B (ii) talks about flash mixer not for inclined surface settler. Please clarify.	Bidder to please refer Amendment # 2.

SCHEDULE OF PRE-BID CLARIFICATION

ETP FOR 1X800 MW TSGENCO KOTHGUDEM TPS, STAGE-VII, PALONCHA

VOL.	SEC.	CL. NO.	PAGE NO.	SPECIFICATION REQUIREMENT	CLARIFICATION	REASONS FOR CLARIFICATION	BHEL REPLY
IIB	C-1	2.63	15	Two nos Travelling Trolley	Please advise the capacity and location and type (whether manual or electrical)		Please note that Travelling trolleys are excluded from Bidder's scope. Bidder to also refer Amendment No. # 1.
IIB	C-1	2.64	15	All consumablesof the Plant	a) As the handing over of Plant is dependent on various factors beyond Bidder's control , Supply of Chemicals as required till handing over of the Plant including Pre-commissioning period , Trial Run period and PG test period shall cause ambiguity in quantity of chemicals required to be supplied . We request supply of consumable Chemicals be kept out of Bidders scope . Actual quantity consumed should be supplied by BHEL or indicate the absolute quantity of chemicals required to be considered by Bidder . b) Although Spec. specifies supply of Chemicals (Alum / Alkali / Acid) as required but no provision of Bulk Storage tanks and Transfer pumps have been specified . Please clarify		Bidder to note that all consumables, bulk chemicals like hydrochloric acid, sodium hydroxide, alum etc., required for pre commissioning, trial run, PG test of the plant is in Bidder's scope. Bidder to also refer Amendment No. # 1.
IIB	c-1	2.67.2	16	Inlet and Outlet2 of 2)	If there is variation in actual distance Vs distance given, How the adjustment in piping cost will be made, it is not clear. Unit rates have not been called in Price Bid Document.		Please follow technical specification.
IIB	C-1	7.2 (xx)	18	The plant from a relay logic base Panelthe system	Under cl 7.2 (xx) system is to be designed for Relay based Panel but under Sec . C-3 (C & I) it is stated that Plant is to be PLC controlled . Please clarify		Bidder to note that for local operation the Oil Water Separator system shall also be operated from a relay logic based

							panel with all safety interlocks, alarms and annunciators built into the system. This local control panel shall have interfaced with the main Effluent treatment plant PLC also. Bidder to please follow technical specification.
IIB	C-1	7.3 2 nd para	19	Chemical dosing tanksin the Technical specification	a) Spec. specifies that Alum tanks shall be located at PT Plant Chemical House in a designated space of 18 x8 M . In view of this please clarify whether separate space for Alum storage has been earmarked in Chemical House. If area is separate then separate Hoist to lift the Alum to First Floor is required. Please clarify b) Where is the space located for Bulk storage of Acid and Alkali in Tanks . Please also specify the storage capacity of Tanks. . Please clarify		a) Please follow technical specification. b) Please follow technical specification.
IIB	C-1	16.19	25	All the vertical pumps shall be considered as self-lubricating type unless specifically mentioned.	For self lubricating type pump liquid to be pumped should be clear water but in case of ETP application pumping liquid will be contaminated with oil and high level of impurities. Such water is not suitable for self lubricating type of pumps. Please review & clarify.		Please follow technical specification.
IIB	C-1	a) 16.34 ; b) 2.30	26; 14	a) All the pumpsmaintenance b) Electric..... Specification	Does this mean that for each sump ,we have to provide/ install monorail hoist permanently for maintenance or we have to provide Hoist if specifically indicated in Technical Data Sheet .		Please follow technical specification.

SCHEDULE OF PRE-BID CLARIFICATION (15T-916)

ETP FOR 1X800 MW TSGENCO KOTHGUDEM TPS, STAGE-VII, PALONCHA

VO L.	SEC.	CL. NO.	PAG E NO.	SPECIFICATION REQUIREMENT	CLARIFICATION	BHEL Reply
IIB	D-4	P&ID sheet 1 of 2	-	LT	We find that Level Transmitters on all the field pits have been shown with Impulse lines leading to control panel with Low level/high level alarm & pump trip signal. But Level Transmitters at CMB compartment A & B and Level Transmitters at land Filling tanks & Slop oil tank and at few other locations have been shown without any impulse lines. Please clarify if any signal /action is desired from these LTs apart from local indication of level. For local indication of level LI/LG is already provided separately.	Bidder to note that impulse line from all the Level Transmitters are required for low and high level alarms, interlocks and indication purpose.
IIB	D-4	P&ID sheet 2 of 2	-	LT	Level Transmitters on sludge sump and Clear water reservoir have been shown with Impulse lines leading to control panel with Low level/high level alarm & pump trip signal. But Level Transmitters at compartment A & B of clear water reservoir and Level Transmitters at land Filling tanks & Flocculator tanks are shown without any impulse lines. Please clarify if any signal /action is desired from these LTs apart from local indication of level. For local indication of level LI/LG is already provided separately	Bidder to note that impulse line from all the Level Transmitters are required for low and high level alarms, interlocks and indication purpose.
IIB	c-3	4	122	All Manual valves at pump discharge shall be provided with Open and close Limit switches	It is observed from P&ID drg that OC-LS provision is marked at the discharge valves of metering pumps for acid /alkali dosing only. Please clarify whether provision of OC-LS is required at other pumps discharge valves also as the same is not shown in P&ID.	Please note that all the manual valves at pump discharge shall be provided with Open and close Limit switches.
IIB	D-4	P&ID	-	LG at CMB	Level Gauge(LG) provision has been envisaged for Compartment A & B of CMB unit, which is intended to be constructed underground.	The type of level gauge for underground pits shall be

					LGs provision can not be made in underground structure. Further since LT's provision is also envisaged, LG provision is not required and amounts to duplication.	decided during detailed engineering stage.
IIB	D-4	P&ID	-	Provision of LT & LI on Land filling tank & slop oil tank	2M³ Capacity Land filling tanks and slop oil storage tank are required with LT (Level Transmitter)&LI(Level Indicator) provision. LTs with digital indicator provision has been specified in Technical specification and therefore provision of LI amounts to duplication. Please clarify. In our opinion, it shall take 6 to 8 months to fill 2M³ slop oil tank and as a result it will solidifying tank making it difficult to dispose. Current practice is to provide 220 litre Barrels in which oil is collected. When filled, Barrel is disposed off nearby. We request you to review provision envisaged. If requested, we could attend your office to clarify our views.	Please follow technical specification.
IIB	C-1	Data sheet - A-clause 3.13	89	Land filling tank	Land filling tank configuration as specification calls for 'vertical cylindrical' Carbon steel Tanks for disposal of Sludge. How a vertical cylindrical stationary tank will function. In our view 5 Tonne MF type Hydraulic Rear Tipping Trailer with telescopic arrangement (photograph attached) to carry 2Cu M sludge (approx 4 Tonne)is required for disposal of sludge to remote location. Further a tractor is required to move Trolley. Please review & advice.	Please follow technical specification.
IIB	D-4	P&ID	-	Plug valves	Plug Valves have been specified on sludge drain lines of inclined surface settler. In field these valves shall be located much below ground level in Manholes / sludge valve pit. Plug valves are operated through wrench / lever to which extended operating arrangement can not be fixed. In our view these valves should be Gate Valves with extended spindle provision. Please review & advice.	Please follow technical specification.