



BHARAT HEAVY ELECTRICALS LIMITED
PROJECT ENGINEERING MANAGEMENT, NOIDA

Date-20-Jun-19

CORRIGENDUM- 01

PROJECT	:	1 x 660 MW Panki STPP
PACKAGE	:	D.M. PLANT
ENQUIRY NO	:	PE/PG/PKI/E-6217/2019 Dt. 03.06.2019

Type of Corrigendum			
Technical Corrigendum -	☒	Commercial Corrigendum -	☐

In reference to the above mentioned tender enquiry please note the following.

1. Reply of Pre-bid queries (attached below).

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

Vinit Kumar Verma
Dy. Manager

Sr. No.	Volume	PDF Page No.	Tender Page No.	Section	Existing Clause	Deviation / Comments / Remarks / Amended Clause	Reason for amendment (Vendor's Remarks)	BHEL REPLY
	Mechanical							
1	TECHNICAL SPECIFICATION PART 1 OF 4	5 Of 250	3 of 612	Appendix-I	Raw Water Analysis have Turbidity 500 NTU, TSS 250 ppm & Iron 1.5 ppm	Bidder has considered the clarified water analysis as mentioned in TECHNICAL SPECIFICATION PART 1 OF 4, Page No. 175 of 612 for designing of DM Plant.		Noted.
2	TECHNICAL SPECIFICATION PART 1 OF 4	16 Of 250	14 of 612	2.0 SCOPE OF SUPPLY (MECHANICAL) Sr. No. 43 & 44	One no. Acid dosing Tank for UF system along..... Two (02) numbers (1W+1S) acid dosing pumps for UF system.....	The same will be provided as per UF membrane manufacturer standard		Tender specification requirement is clear, bidder to follow the same.
3	TECHNICAL SPECIFICATION PART 1 OF 4	16 Of 250	14 of 612	2.0 SCOPE OF SUPPLY (MECHANICAL) Sr. No. 45 & 46	One no. hypo chlorite (NaOCl) dosing Tank for UF system along..... Two (02) numbers (1W+1S) hypo chlorite (NaOCl) dosing pumps for UF system.....	The same will be provided as per UF membrane manufacturer standard		Tender specification requirement is clear, bidder to follow the same.
4	TECHNICAL SPECIFICATION PART 1 OF 4	18 Of 250	16 of 612	2.0 SCOPE OF SUPPLY (MECHANICAL) Sr. No. 75	75) The Bidder's scope includes all the first fill and one year's topping, requirements of consumables such as oils, lubricants including grease, servo fluids, gases and essential chemicals etc.	As Per Technical Specifications Part 1 of 4 Page no. 21 of 612, Clause No. 10.4 & 10.9 Chemicals are excluded form the Bidder's Scope of supply.		Chemicals required for regeneration of Resins i.e. Acid (30-33%) and alkali (48%), chemicals required for UF cleaning i.e. Acid and alkali are excluded from bidder's scope. However, any other chemicals required for cleaning of UF system including Sodium hypochlorite (NaOCl) for six-month regular operation are in bidder's scope. Chemicals and reagent required for analysers for specified period in tender specification, are also in bidder's scope.
5	TECHNICAL SPECIFICATION PART 1 OF 4	20 Of 250	18 of 612	Piping	b. Piping from DM Plant Supply Pumps (located in clarified water storage tank) suction lines along with isolation valves, instruments & discharge line up to the DM plant Dual media filters along with isolation valves, instrumentation shall be in bidder's scope (Approximate distance of piping 800 m shall be considered by bidder in his scope).	Bidder requested to confirm whether piping will be above ground or Below Ground.		Pipe may be routed to pipe rack, buried and on pedestals and same shall be decided during detailed engineering.
6	TECHNICAL SPECIFICATION PART 1 OF 4	20 Of 250	18 of 612	Piping	h. Ultra filtration back flush tanks 1&2 inlet and outlet piping. Approximate distance of piping 250 m shall be considered by bidder in his scope.	Bidder requested to confirm whether piping will be above ground or Below Ground.		Pipe may be routed to pipe rack, buried and on pedestals and same shall be decided during detailed engineering.
7	TECHNICAL SPECIFICATION PART 1 OF 4	20 Of 250	18 of 612	Piping	n. Back wash waste transfer pump inlet and outlet piping. Further Back wash waste shall be transferred to stilling chamber of PT plant. This piping shall be in bidder scope. Approximate distance of piping 1000 m shall be considered by bidder in his scope.	Bidder requested to confirm whether piping will be above ground or Below Ground.		Pipe may be routed to pipe rack, buried and on pedestals and same shall be decided during detailed engineering.
8	TECHNICAL SPECIFICATION PART 1 OF 4	20 Of 250	18 of 612	Piping	t. Piping from DM plant N.pit to CMB of ETP of size 150 NB (MINIMUM). Approximate distance of piping 500 m shall be considered by bidder in his scope.	Bidder requested to confirm whether piping will be above ground or Below Ground.		Pipe may be routed to pipe rack, buried and on pedestals and same shall be decided during detailed engineering.
9	TECHNICAL SPECIFICATION PART 1 OF 4	20 Of 250	18 of 612	Piping	DMF outlet piping up to filter water O/H tank inlet, filter water O/H tank I/L	Bidder requested to kindly confirm the distance between DMF outlet piping up to filter water O/H tank inlet.		Filtered water storage tanks are in bidder's scope and shall be located in DM plant area only. Hence internal piping needs to consider by bidder in their scope as per Equipment layout preparation.
10	TECHNICAL SPECIFICATION PART 1 OF 4	28 Of 250	26 of 612	16.0 MISCELLANEOUS REQUIREMENT	vii. DM plant shall be housed in RCC building, Control panel & MCC and chemical laboratory for DM plant shall be housed shall be located in RCC building. RCC building shall have toilet blocks for ladies and gents.	As Per Technical Specifications Part 1 of 4 Page no. 21 of 612, Clause No. 10.1, all Civil work are excluded from Bidder's Scope. Hence Bidder understands that DM plant shall be housed in RCC building..... also excluded from bidder's Scope.		Bidder's understanding is correct. However mechanical input drawing shall be provided by bidder during detailed engineering in line with tender specification requirement.
11	TECHNICAL SPECIFICATION PART 1 OF 4	28 Of 250	26 of 612	16.0 MISCELLANEOUS REQUIREMENT	ix. Any statutory requirement / clearance required for the package from government / local body shall be in bidder's scope.	Bidder will provide necessary document required for statutory / clearance required for the package from government / local body , However approval of the same will be taken By M/s BHEL		Tender specification requirement is clear, bidder to follow the same.
12	TECHNICAL SPECIFICATION PART 1 OF 4	116 Of 250	114 of 612	Vendor list	UF membrane make	Out of five vendors mentioned in the list of UF make under sr. no.25 only one UF vendor manufactures 10 KD membrane hence we request you to approve atleast one more to have a fair competition.		Indicative sub vendor list has been included in tender specification. Additional suppliers shall be proposed by bidder during detailed engineering in line with tender specification requirement and same shall be BHEL/ customer approval during detailed engineering.
13	TECHNICAL SPECIFICATION PART 1 OF 4	136 Of 250	134 of 612	Functional guarantee	Anion exchanger outlet	Please not it is not possible to guarantee total electrolyte < 1 ppm at SBA outlet. This shall be measure in terms of conductivity.		Tender specification requirement is clear, bidder to follow the same.
14	TECHNICAL SPECIFICATION PART 1 OF 4	177 Of 250	175 of 612		ANNEXURE-I: CLARIFIED WATER ANALYSIS	Bidder has considered the same for designing of DM Plant.		Noted.

Sr. No.	Volume	PDF Page No.	Tender Page No.	Section	Existing Clause	Deviation / Comments / Remarks / Amended Clause	Reason for amendment (Vendor's Remarks)	BHEL REPLY
15	TECHNICAL SPECIFICATION PART 1 OF 4	44 Of 80 66 Of 80	292 of 612 308 Of 612	8 WAC 35 UF Skid	WAC : Output per stream between two consecutive regenerations - Nett - 1300 m3 / Gross (1300 + regeneration requirement downstream) m3 UF Skid : Capacity Net Of Each Unit, m3/Day Each Stream Should Deliver 1176 m3 / Day of Treated Water	As per specification there is a difference between OBR of DM Plant (1300 m3/day) V/s Capacity of UF Skid (1176 m3/day). Bidder requested to kindly confirm following. Working hours of DM Plant. OBR Of DM Plant along with MB. Capacity Of UF Skid m3/day.		Tender specification requirement is clear, bidder to follow the same.
16	TECHNICAL SPECIFICATION PART 2 OF 4	46 Of 80	294 of 612		DEGASSED WATER STORAGE TANK (RCC tank having 3 mm thick joint less solvent free epoxy lining/PPG lining)	As Per Technical Specifications Part 1 of 4 Page no. 21 of 612, Clause No. 10.1, all Civil work are excluded from Bidder's Scope. Hence Bidder understands that DEGASSED WATER STORAGE TANK (RCC tank having 3 mm thick joint less solvent free epoxy lining/PPG lining) excluded from bidder's Scope.		Civil design and construction work are excluded from bidder's scope.
17	TECHNICAL SPECIFICATION PART 2 OF 4	46 Of 80	294 of 612		Degasser air blower MOC/RPM	As the pressure required for degasser blower is less , centrifugla type air blower need to consider and this comes with MSEP MOC. So it can be given either in MSEP/MS FRP lined or in FRP MOC but not possible in CI. So please confirm.RPM of blower shall be as per mfg. standard.		Tender specification requirement is clear, bidder to follow the same.
18	TECHNICAL SPECIFICATION PART 2 OF 4	55 Of 80	303 of 612		Hot water tank capacity	Please confirm the capacity of hot water tank required is for either 1 bed volume of WBA/SBA+MB +20% margin or for only the regeneration DM water required for 1 WBA/SBA +MB during the injection+20% margin.		Hot water tank capacity shall be 120% of water required for regeneration of one (1) bed volume of (1 SBA & 1 WBA +1 MB unit) at 40°C
19	TECHNICAL SPECIFICATION PART 2 OF 4	56 Of 80	304 of 612		One (1) no. with twin compartment (MOC: RCC by BHEL) with acid/alkali proof PPG lining.	As Per Technical Specifications Part 1 of 4 Page no. 21 of 612, Clause No. 10.1, all Civil work are excluded from Bidder's Scope. Hence Bidder understands that One (1) no. with twin compartment (MOC: RCC by BHEL) with acid/alkali proof PPG lining. excluded from bidder's Scope.		Civil design and construction work are excluded from bidder's scope.
20	TECHNICAL SPECIFICATION PART 2 OF 4	60 Of 80	308 of 612		DM /UF Plant Capacity	As per the UF datasheet cl. No. 35.5,UF treated water flow required is 1176 m3/day ie.49 m3/hr on 24 hour basis. So considering 90% recovery of UF , MB treated water flow required is 54.45 m3/hr. However the else where mentioned capacity of DM plant as 65 m3/hr. So please confirm the correct flow required at UF outlet in m3/hr, m3/day & accordingly downstream units capacity shall be finalized.		Tender specification requirement is clear, bidder to follow the same.
21	TECHNICAL SPECIFICATION PART 2 OF 4	62 Of 80	310, 311 of 612		ACID DOSING & HYPO CHLORITE DOSING	The same will be provided as per UF membrane manufacturer standard		Tender specification requirement is clear, bidder to follow the same.
22	TECHNICAL SPECIFICATION PART 2 OF 4	64 Of 80	312 of 612		CARTRIDGE FILTER FOR CLEANING OF ULTRA FILTRATION UNITS	The same will be provided if required.		Tender specification requirement is clear, bidder to follow the same.
23	TECHNICAL SPECIFICATION PART 3 OF 4	47 Of 220	375 of 612		m. The uniformity co-efficient of resins shall be less than 1.2.	Bidder Understands that for, WAC : Resin will be gel type with particle size 0.3 to 1.2 mm & Uniformity co-efficient will be 1.7, maximum SAC : uniformity co-efficient of resins shall be less than 1.2 WBA : Resin will be gel type with particle size 0.3 to 1.2 mm & Uniformity co-efficient will be 1.7, maximum SBA : uniformity co-efficient of resins shall be less than 1.2		Tender specification requirement is clear, bidder to follow the same.
24	TECHNICAL SPECIFICATION PART 3 OF 4	47 Of 220	375 of 612		j. The resin shall be unaffected by acids, alkalis or common solvents. The resin shall be able to withstand a temperature of 60 Deg C. (minimum) continuously.	As Per resin manufacturer standard, The resin shall be able to withstand a temperature of 60 Deg C. (maximum) continuously.		Tender specification requirement is clear, bidder to follow the same.
25	TECHNICAL SPECIFICATION PART 3 OF 4	56 Of 220			WAC : Cross linked polyacrylic matrix with carboxylic acid as functional group (gel type with particle size 0.3 to 1.2 mm) SAC: Strongly Acidic Polystyrene Resin with DBV crosslinking WBA : Macroporous cross linked polystyrene matrix with tertiary amine (minimum 90%) as functional group. (gel type with particle size 0.3 to 1.2 mm). SBA: High capacity strongly basic Type- I polystyrene resin with DBV crosslinking and quaternary ammonium functional group.	Bidder Understands that for, WAC : Resin will be gel type with particle size 0.3 to 1.2 mm & Uniformity co-efficient will be 1.7, maximum SAC : uniformity co-efficient of resins shall be less than 1.2 WBA : Resin will be gel type with particle size 0.3 to 1.2 mm & Uniformity co-efficient will be 1.7, maximum SBA : uniformity co-efficient of resins shall be less than 1.2		Tender specification requirement is clear, bidder to follow the same.
Electrical & Instrumentation								
26	TECHNICAL SPECIFICATION PART 1 OF 4	164/250	492 of 612	Mandatory spares	Ultrasonic Level transmitter	We shall provide 1 No or 10% of total quantity of total value which are higher.		Tender specification requirement is clear, bidder to follow the same.

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27	TECHNICAL SPECIFICATION PART 1 OF 4	164/250	492 of 612	Mandatory spares	Any other instruments are not indicated in P & ID as per process requirements which are supplied by bidder as per controlling and requirements	We confirm that as per process whatever instruments are required same shall be provided i.e shown in Tender P & ID only.		Tender specification requirement is clear, bidder to follow the same.
28	TECHNICAL SPECIFICATION PART 1 OF 4	165/250	493 of 612	Mandatory spares	Complete electronic PCB and power supply card for transmitters, switch & flow meter	We have not considered separately for these instruments.		Tender specification requirement is clear, bidder to follow the same.
29	TECHNICAL SPECIFICATION PART 2 OF 4	38/80	286 of 612		Tender P & ID PE-DG-163-A001	Request to provide legible format of P & ID drawing.		Legible P & ID has already been attached with tender specification. Bidder to take print out on A0 for better visibility.
30	TECHNICAL SPECIFICATION PART 2 OF 4	38/80	286 of 612		Chemical seal instruments	We have considered chemical seal instruments only for chemical and corrosive application only.		Tender specification requirement is clear, bidder to follow the same.
31	TECHNICAL SPECIFICATION PART 2 OF 4	38/80	286 of 612		Tender P & ID PE-DG-426-163-A001 Notes - all analyzers shall panel shall be mounted	We confirm to provide panel mounted liquid analyzers for Silica and sodium only.		Tender specification requirement is clear, bidder to follow the same.
32	TECHNICAL SPECIFICATION PART 3 OF 4	35 of 220	363 of 612	Scope of technical requirements: C & I	Starter Panel along with local start/stop monitoring	We don't envisage any separate requirement of local starter panel.		Tender specification requirement is clear, bidder to follow the same.
33	TECHNICAL SPECIFICATION PART 3 OF 4	38 of 220	366 of 612	Scope of technical requirements: C & I	All transmitters/instruments shall be rack mounted along with prototyping walkway.	We have not considered any separate walkway for rack mounted instruments/transmitters.		Tender specification requirement is clear, bidder to follow the same.
34	TECHNICAL SPECIFICATION PART 3 OF 4	39 of 220	367 of 612	Scope of technical requirements: C & I	Canopy for all instruments	We shall provide canopy only for outdoor instruments only.		Tender specification requirement is clear, bidder to follow the same.
35	TECHNICAL SPECIFICATION PART 3 OF 4	189 of 220	517 of 612	Scope of technical requirements: C & I	Hand held configurator	We shall provide 1 No hand held configurator for complete plant. Please confirm our understanding.		Tender specification requirement is clear, bidder to follow the same.
36	TECHNICAL SPECIFICATION PART 3 OF 4	193 of 220	521 of 612	Scope of technical requirements: C & I	Type of Level transmitter	We shall provide ultrasonic type LT instead of radar for acid/alkali and any corrosive application. Please confirm our understanding.		Tender specification requirement is clear, bidder to follow the same.
37	TECHNICAL SPECIFICATION PART 3 OF 4			Electrical & instruments selection - area classification	General	We have considered area classification as safe (Non-hazardous).		Tender specification requirement is clear, bidder to follow the same.
38	TECHNICAL SPECIFICATION PART 3 OF 4	202/220	530 of 612	Digital transmission for analyzers	pH and conductivity with HART	We have considered 4-20 mA output for pH and conductivity analyzers without HART. As per process we will arrange separate buffer solution during calibration of liquid analyzers to meet procurement. Please confirm our understanding.		Tender specification requirement is clear, bidder to follow the same.
39	TECHNICAL SPECIFICATION PART 4 OF 4	64 of 64	612 of 612		DG water pump qty.	As per P&ID and datasheet the no. of DG water transfer pumps are 2 nos. (1W+1S) but as per format for power guarantee the no. of this pumps are 3 nos. (1W+2S). So please confirm the correct one.		Two number Degassed water transfer pumps (1W+1S) are required.
Commercial								
40	Volume-1, GCC-Rev-6		20 Of 66	6	Prices shall remain Firm (or with PVC as specified in NIT) for any increase or decrease in the Order/ Contract value (Ex-works) upto plus or minus 30% (for any amendment) within 2 years from the date of original PO unless specified otherwise in NIT. The Purchaser shall have the right to increase or decrease quantities and scope upto the above extent of value and Seller/ Contractor shall be bound to accept the same at the contracted prices without any escalation.	Prices shall remain Firm (or with PVC as specified in NIT) for any increase or decrease in the Order/ Contract value (Ex-works) upto plus or minus 5% (for any amendment) within 2 years from the date of original PO unless specified otherwise in NIT. The Purchaser shall have the right to increase or decrease quantities and scope upto the above extent of value and Seller/ Contractor shall be bound to accept the same at the contracted prices without any escalation.	5%, It is already clarified and provided in NIT. The related clause 26.2 of GCC Rev-6 will be changed accordingly.	REFER CL NO 20 OF NIT.
41	Volume-1, GCC-Rev-6		24 Of 66	9.11	No interest shall be payable by the Purchaser on the security amount, bank guarantee amount or balance payment or any money which may become due owing to difference or misunderstanding or any dispute between the Purchaser and the Contractor, or any delay on the part of Purchaser in making periodical or final payment or any other aspects incidental thereto.	No interest shall be payable by the Purchaser on the security amount, bank guarantee amount or balance payment or any money which may become due owing to difference or misunderstanding or any dispute between the Purchaser and the Contractor.	The same has been deleted from existing clause. Delay in regular/periodical payment shall attract the interest.	PLEASE FOLLOW TENDER DOCUMENTS ONLY
42	Volume-1, GCC-Rev-6		25 Of 66	11.5	Purchaser reserves the right to encash the bank guarantee in fulfillment of performance of the Order/ Contract.	Purchaser reserves the right to encash the bank guarantee in fulfillment of performance of the Order/ Contract. Provided that, the said encashment shall be initiated after failure of the contractor to justify its defaults on opportunity given to him vide as per the procedure.	The same has been added in existing clause.	PLEASE FOLLOW TENDER DOCUMENTS ONLY
43	Volume-1, GCC-Rev-6		28 Of 66	15.3	Seller/ Contractor shall not dispatch any material before issue of MDCC by Purchaser/ Owner.	Seller/ Contractor shall not dispatch any material before issue of MDCC by Purchaser/ Owner. However, the issuance of the MDCC shall not be delayed unnecessarily in order to avoid delay in supply schedule or preventing Seller/Contractor from discharging its contractual obligations.	The contents are added in the clause.	PLEASE FOLLOW TENDER DOCUMENTS ONLY

Sr. No.	Volume	PDF Page No.	Tender Page No.	Section	Existing Clause	Deviation / Comments / Remarks / Amended Clause	Reason for amendment (Vendor's Remarks)	BHEL REPLY
44	Volume-1, GCC-Rev-6		29 Of 66	16.2.1	Purchaser reserves the right to recover from the Seller/ Contractor, as agreed liquidated damages and not by way of penalty, a sum equivalent to half (½) percent of the total contract price per week or part thereof, subject to a maximum of ten (10) percent of the total contract price excluding elements of taxes, duties and freight, if the Seller/ Contractor fails to deliver any part of the ordered stores within the period stipulated in the Order/ Contract. For Turnkey packages (Supply and E&C in vendor's scope), Liquidated Damages shall be levied on the total contract value of both Supply and E&C orders (excluding taxes, duties and freight) if E&C completion of the package is delayed beyond the contractual completion date or extension thereof. Liquidated Damages will not be withheld from supply payment.	Purchaser reserves the right to recover from the Seller/ Contractor, as agreed liquidated damages and not by way of penalty, a sum equivalent to half (½) percent of the total contract price on undelivered portion per week or part thereof, subject to a maximum of ten (10) percent of the total quoted price of undelivered items excluding elements of taxes, duties and freight, if the Seller/ Contractor fails to deliver any part of the ordered stores within the period stipulated in the Order/ Contract. For Turnkey packages (Supply and E&C in vendor's scope), Liquidated Damages shall be levied on the value of E&C orders (excluding taxes, duties and freight) if E&C completion of the package is delayed beyond the contractual completion date or extension thereof. Liquidated Damages will not be withheld from supply payment.	For delay in E&C, the LD will be levied only on value of E&C scope. Hence, yellow highlighted contents are deleted from existing clause.	PLEASE FOLLOW TENDER DOCUMENTS ONLY
45	Volume-1, GCC-Rev-6		29 Of 66	16.2.2 & 16.2.3			Risk purchase - 5%, It is already clarified and provided in NIT. The related clause 26.2 of GCC Rev-6 will be changed accordingly. already	REFER CL NO 20 OF NIT.
46	Volume-1, GCC-Rev-6		33 Of 66	26.2 (a)	Excess of new purchase cost over old purchase cost, where the total value of new PO is more than total value of old PO.	Excess of new purchase cost over old purchase cost, where the total value of new PO is more than total value of old PO or 5% over the old PO value of that particular item, whichever is lesser.	Risk purchase cannot exceed 5% of the price quoted for particular item in old PO. Hence, yellow highlighted part has been added to existing clause.	PLEASE FOLLOW TENDER DOCUMENTS ONLY
47	Volume-1, GCC-Rev-6		33 Of 66	26.2 (b)	Additional 30% overheads as departmental charges on the ex-works value of new PO*.	Additional 5 % overheads as departmental charges on the ex-works value of new PO*.	5% already clarified and confirmed in NIT.	REFER CL NO 20 OF NIT.
48	GCC GST related Corrigendum to GCC Rev 06		6	9.0 Terms of payment	9.3.1 Payment of basic price of materials supplied, as per approved billing schedule, along with freight, taxes and duties (as applicable), shall be paid against receipt of material at site on pro-rata basis. 15% of basic price of materials supplied will be retained as security deposit which will be released on pro –rata basis as details below: a) 5% will be released on pro-rata basis after submission of Material Receipt Certificate (MRC) from project site engineer of owner/purchaser. Collection of Material Receipt Certificate from site/owner and its submission for claiming the payment shall be the responsibility of the Seller/Contractor. b) 10% will be released after i) submission of all final documents as per Technical Specifications and ii) successful completion of Performance Guarantee (PG)/ Demonstration Test and handing over of the system/ package, if applicable, as per Order/ Contract	For Supply – 30% Advance against Pro-forma Invoice. 60% Against Pro-forma Invoice along with 100% Taxes and Duties prior dispatch of material. 10% against successful commissioning and submission of PBG for equivalent amount valid upto defect liability period.		PAYMENT TERMS SHALL BE AS PER TENDER DOCUMENTS ONLY
49	GCC GST related Corrigendum to GCC Rev 06		6	9.4 Erection & Comm. Payment	9.4.1 Eighty percent (80%) payment on prorata basis for the work completed, as per proved billing schedule, shall be released by Site authorities/ Region on submission of protocols, duly signed by BHEL Site/ Owner. 9.4.2 Ten percent (10%) of the total value shall be released by Site authorities/ Region on successful commissioning of the complete system/ package. 9.4.3 Ten percent (10%) of the total value shall be released by Site authorities/ Region on successful completion of PG/ Demonstration test(s) and handing over system/ package to the Owner, as applicable.	For Erection & Commissioning – 20% Mobilization advance. 70% pro-rata basis against erection work. 10% against commissioning and handover of plant.		PAYMENT TERMS SHALL BE AS PER TENDER DOCUMENTS ONLY
50	GCC GST related Corrigendum to GCC Rev 06		7	9.6	9.6 Vendors shall submit documents for payment directly to BHEL. Payment will be released within 60 days after receipt of complete documents as per order/contract (45 days for vendors qualified and registered as Micro or Small as per MSMED Act).	Differential Payments applicable for Supply - Within 30 days for Non MSE vendors		PAYMENT TERMS SHALL BE AS PER TENDER DOCUMENTS ONLY

Sr. No.	Volume	PDF Page No.	Tender Page No.	Section	Existing Clause	Deviation / Comments / Remarks / Amended Clause	Reason for amendment (Vendor's Remarks)	BHEL REPLY
51	GCC GST related Corrigendum to GCC Rev 06		11	Clause 16.0 of GCTC- Liquidated damages	Purchaser reserves the right to recover from the Seller/ Contractor, as agreed liquidated damages and not by way of penalty, a sum equivalent to half (½) percent plus applicable GST of the total contract price per week or part thereof, subject to a maximum of ten (10) percent of the total contract price. excluding elements of taxes, duties and freight, if the Seller/ Contractor fails to deliver any part of the ordered stores within the period stipulated in the Order/ Contract. For Turnkey packages (Supply and E&C in vendor's scope), Liquidated Damages shall be levied on the total contract value of both supply and E&C orders (excluding taxes, duties and freight) if E&C completion of the package is delayed beyond the contractual completion date or extension thereof. Liquidated Damages will not be withheld from supply payment.	LD for delay in delivery solely attributable to the Supplier will be 0.1 % per week of undelivered portion on a pro rata basis to maximum 5% of Contract value. GST Charges shall not apply on LD charges, if applicable.		PLEASE FOLLOW TENDER DOCUMENTS ONLY
52	Formats		91	BANK GUARANTEE (BG) FOR PERFORMANCE SECURITY	BG to be submitted in the format issued by BHEL.	Bank Guarantee formats to be mutually agreed upon		SAME SHALL BE AS PER NIT.

1X660 MW PANKI TPS EXT.PROJ. UTTAR PRADESH RAJYA VIDYUT UTPADAN NIGAM LIMITED

PRE BID CLARIFICATION SCHEDULE FOR DM PLANT (2X65 m3/hr)

S.N	VOLUME	SECTION	CLAUSE No	PAGE No	SPECIFICAT ION	REQUIREMENT	CLARIFICATION REASONS FOR	CLARIFICATION	BHEL REPLY
1	Volume III, Technical Specification Part 3 of 4	Sub-Section IIA, General Technical Requirements (Mechanical)	8.0, DM Plant	372 of 612	8.0, DM Plant	DM Water Storage Tank	Sl. No. 8.1, The scope of supply for DM Plant shall include two (2) DM streams each of net capacity 65 cum/hr. Complete with regeneration facilities, chemical storage and handling equipments, two (2) nos. DM Water storage tanks of capacity 1000 cum each, waste neutralizing facilities with interconnecting pipings, valves and other accessories as detailed in data sheets and drawings.	Sl. No 8.1 shows DM Water Storage Tank is comes in the scope of Bidder, However Sl.No. 8.2, u) shows DM Water Storage Tank is not in Bidder Scope. Kindly confirm whether DM water Storage tank is in Bidder scope?	DM water Storage tanks are not in bidder's scope.
			8.0, DM Plant	373 of 612	8.0, DM Plant	DM Water Storage Tank	Sl. No. 8.2, u) Two (2) nos. Demineralised water storage tanks complete with all accessories.		
2	Part 1 of 4	GUARANTEE UNDER CATEGORY –III	4.00, b.	133 of 612	4.00, b.	ACF filter Outlet NTU	iv. Turbidity in the effluent water shall be less than 0.5 NTU.	We would like to highlight that the ACF Unit will only remove the FRC and odour. So the bidder will not guarantee the Turbidity at the outlet of ACF. Please confirm.	Tender specification requirement is clear, bidder to follow the same.
3	Part 1 of 4	2.0 Scope of Supply (Mechanical)	2.0, 90)	17 of 612	2.0, 90)	DCS Scope	DCS based control system (BHEL Scope) for DM plant package.	There is some Contradiction between the two clauses about scope of DCS. Kindly confirm whether the DCS is in Bidder scope?	Control system (DCS/ DDCMIS) is in BHEL scope.
	Volume III, Technical Specification Part 3 of 4	8.3.3 Control Philosophy	8.3.3, b)	377 of 612	8.3.3, b)		Plant water system DDCMIS shall be provided with one (1) No. operator work station cum engineering station and three (3) Nos. operating work stations each with 24" LED monitor, key board and mouse and one number A3/A4 size Colour Laser Printer & one (1) no. A3 size DMP. Three (3) No. 80" LVS with display controller. Redundant softlink shall be provided from the Plant water DDCMIS to main plant DDCMIS for monitoring of complete water system plant at Central Control Room. Remote I/O panel and GIU shall also be provided by bidder as per requirement. Furniture for OS, printers and chair for operating personnel shall also be provided. (BHEL Scope)		

Project: DM Plant For 1X660 MW UPRVUNL PANKI TPS EXT
Tender No.: PE/PG/PA1/E-6217/2019 dated JUNE 03, 2019
Doc. Title: **Pre-Bid Queries (Technical)**

Sr. No.	Section	Clause No.	Page No.	Specification Requirement	Clarification	Reason for Bidder's Clarification / Assumption	BHEL REPLY
1.	I	2.0	13 of 612	26) One no. UF cleaning solution preparation tank.... 27) Two nos. (2X100%) UF cleaning solution pumps for UF system,.... 28) Three nos. cartridge filter for cleaning of ultra-filtration units.... 30) Two nos. (2X100%) UF fast flush Pumps.....	The complete UF system including UF cleaning system, UF chemical dosing system & UF Fast flush requirement shall be provided as per recommendation of UF membrane manufacturer. Please confirm.	UF backwash/fast flush, chemical dosing and cleaning operation philosophy to be followed as per UF manufacture recommendation.	Tender specification requirement is clear, bidder to follow the same.
	I	2.0	14 of 612	41) One no. Acid dosing Tank for UF system... 42) Two (02) numbers (1W+1S) acid dosing pumps for UF system... 43) One no. Alkali dosing Tank for UF system... 44) Two (02) numbers (1W+1S) alkali dosing pumps for UF system... 45) One no. hypo chlorite (NaOCl) dosing Tank for UF system... 46) Two (02) numbers (1W+1S) hypo chlorite (NaOCl) dosing pumps for UF system....			Tender specification requirement is clear, bidder to follow the same.

Project: DM Plant For 1X660 MW UPRVUNL PANKI TPS EXT
Tender No.: PE/PG/PA1/E-6217/2019 dated JUNE 03, 2019
Doc. Title: **Pre-Bid Queries (Technical)**

Sr. No.	Section	Clause No.	Page No.	Specification Requirement	Clarification	Reason for Bidder's Clarification / Assumption	BHEL REPLY
2.	I	2.0	16 of 612	75) The Bidder's scope includes all the first fill and one year's topping, requirements of consumables such as oils, lubricants including grease, servo fluids, gases and essential chemicals etc.	Please confirm the scope of chemicals is not bidder's scope.	Contradictory in specification.	Chemicals required for regeneration of Resins i.e. Acid (30-33%) and alkali (48%), chemicals required for UF cleaning i.e. Acid and alkali are excluded from bidder's scope. However, any other chemicals required for cleaning of UF system including Sodium hypochlorite (NaOCL) for six-month regular operation are in bidder's scope. Chemicals and reagent required for analysers for specified period in tender specification, are also in bidder's scope.
	I	2.0	21 of 612	10. Exclusion 10.9 Chemicals			
	Vol III	8.3.4	376 of 612	8.3.4 Bidder shall supply first charge of filter media, resin, degasser tower packings, lubricating oil, inhibitor of oil & all the consumables including chemicals till the Trial Run Operation of the plant and additional chemicals of one (1) month requirement.			
3.	I	1)	18 of 612	DMF outlet piping up to filter water O/H tank inlet, filter water O/H tank I/L and O/L piping and DMF back wash water pump piping for DMF backwash	Please confirm the location of O/H tank.	Location of O/H tank is not specified in tender.	Filtered water storage tank shall be located in DM plant area at ground level.

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Sr. No.	Section	Clause No.	Page No.	Specification Requirement	Clarification	Reason for Bidder's Clarification / Assumption	BHEL REPLY
4.	I	1)	18 of 612	l. Back wash waste from DMF streams shall be brought in back wash waste collection sump through piping. This piping shall be in bidder's scope. m. Back wash waste from UF streams shall be brought in back wash waste collection sump through piping. This piping shall be in bidder's scope.	Backwash waste generated from DMF and UF shall be routed to Backwash waste collection sump through trench only. Please confirm.		Tender specification requirement is clear, bidder to follow the same.
5.	I	10.0	21 of 612	DM plant feed line, Back wash outlet line shall be routed through main pipe trestles (provided by BHEL),...	Please clarify the routing of piping from N-Pit to CMB through pedestal or pipe trestles (provided by BHEL).		Pipe may be routed to pipe rack, buried and on pedestals and same shall be decided during detailed engineering.
6.	I	Annexure III	134 of 612	b. ACTIVATED CARBON FILTERS: iv. Turbidity in the effluent water shall be less than 0.5 NTU.	Please clarify the guaranteed value of Turbidity at outlet of ACF.	Contradictory in specification.	Turbidity in the effluent water shall be less than 0.5 NTU for ACTIVATED CARBON FILTERS.
	I	Datasheet A	289 of 612	4.0 ACTIVATED CARBON FILTER c) of 4.28 Turbidity <1 NTU			

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Sr. No.	Section	Clause No.	Page No.	Specification Requirement	Clarification	Reason for Bidder's Clarification / Assumption	BHEL REPLY
7.	I	Annexure III	134 of 612	I of C) Net output from each cation –anion unit between two regenerations shall be not less than 1300 m3/hr (min.) and for mixed bed 9100 m3/hr (min.) of treated water.	Please correct the unit of Net output from each cation –anion unit. It shall be m3 instead of m3/hr.		Bidder to note that Each ion exchange unit shall be Guaranteed for a design flow (net) 65m3/hr (min.) after meeting the water requirement for various regeneration steps. Net output from each cation – anion unit between two regenerations shall not be less than 1300m3 (min.) and for mixed bed 9100 m3(min.) of treated water.
8.	I	Annexure III	134 of 612	d. ULTRA FILTRATION PLANT: a) Colloidal Silica as SiO2 - less than 1 ppb. b) Total Silica as SiO2- less than 10 ppb.	Guarantee from UF plant outlet shall be: a) Colloidal Silica as SiO2 - ≤10 ppb b) Total Silica as SiO2- ≤20 ppb i.e. 10 ppb of colloidal silica + 10 ppb of reactive silica		Tender specification requirement is clear, bidder to follow the same.
9.	I	Datasheet A	293 of 612	9.0 DEGASSER TOWER 10.3 Normal flow rate per tower (net) - 130 m3/hr.	The capacity of Degasser tower shall be 65 m3/hr instead of 130 m3/hr. Please confirm.	The capacity of DM plant (one working and one stand by stream) shall be of 65 m3/hr (net output).	Tender specification requirement is clear, bidder to follow the same.

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10.	I	Datasheet A	308 of 612	35 UF SYSTEM 35.5 Capacity Net Of Each Unit, M3/Day – Each Stream Should Deliver 1176 m3 / Day of Treated Water	Please clarify the operating hours of UF plant.		Operating hours of UF shall be decided by bidder as per net OBR criteria mentioned in the tender specification.
11.	I	Datasheet A	308 of 612	-	Please provide the technical data sheet of Pre-filters of UF system.		Pre filter details shall be considered by bidder as per membrane supplier recommendation.
12.	I	P&ID	386 of 612	At discharge terminal of Neutralized effluent disposal pump, two nos. of discharge headers [To ETP (CMB)] have been shown.	Please clarify the nos. of pipes to be laid between N-pit to ETP (CMB), single header or two headers.		Bidder to provide single header up to CMB, from where two separate pipe shall be connected to each compartment of CMB.