Addendum-1

Name of Work: Hajipur Sewerage Treatment Plant and Sewerage Network Project.

NIT.No: BUIDCo/Yo-871/2017 (Part-3)-61, Dated-22.08.2019

Sl.	Section	Cond	ition as per Bid	Document		To b	e Read As	
No.	Reference							
1	Article 13, Design Services, 13.1.11, Design Responsibilities, a. 2.(page no-	The already proposed ACTIVATED SLUDGE PROCESS technology for the treatment of the sewage ensuring that the treated sewage meets with the stringent of the disposal standards prescribed by the MOEF / CPCB and in the contract as may be applicable. These standards are prescribed below:			The techn the tr stanc contr preso	The already proposed ACTIVATED SLUDGE PROCESS technology for the treatment of the sewage ensuring that the treated sewage meets with the stringent of the disposal standards prescribed by the MOEF / CPCB and in the contract as may be applicable. These standards are prescribed below:		
	206-207)	S. No	Parameters	Parameters Limit (Standards	Location	S. No	Parameters	Parameters Limit (Standards)
		-)		1	pH	5.5 - 9.0
		1	pH POD (m a/l)	6.5 – 9.0	Anywhere in the Country	2	BOD (mg/l)	Not more than 10
		2	BOD (mg/1)	then 20	of Arupachal Pradach Assam Manipur Maghalaya	3	COD (mg/l)	Not more than 50
				than 20	Mizoram Nagaland Tripura Sikkim Himachal	4	Total	Not more than 10
					Pradesh. Uttarakhand. Jammu & Kashmir. and	5	Nitrogen	Not more than 10
					Union Territory of Andaman and Nicobar Islands,	6	Total	Not more than 1
					Dadar and Nagar Haveli, Daman & Diu and	Ŭ	Phosphorous	
					Lakshadweep	7.	Fecal	Desirable -100, Permissible- Not
			BOD (mg/l)	Not more	Areas/regions other than mentioned above		Coliform	more than 230
				than 30			(MPN/100ml)	
		3	TSS (mg/l)	Not more than 50	Metro Cities*, all State Capitals except in the State of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura, Sikkim, Himachal Pradesh, Uttarakhand, Jammu & Kashmir, and Union Territory of Andaman and Nicobar Islands, Dadar and Nagar Haveli, Daman & Diu and Lakshadweep			
			TSS (mg/l)	Not more	Areas/regions other than mentioned above			
				than 100				
		4	Fecal	Less than	Anywhere in the country			
			Coliform	1000				
			(MPN/100ml)					

SI.	Section	Condition as per Bid Document	To be Read As
2	ReferenceArticle13,DsignServices,13.3,SewageTreatmentPlantLayoutandoperationsequence, f.(Page no-210)	Landscaping of plant area, internal roads with access to all units, illumination of the entire STP site, pathways, storm water drainage, compound wall all around & gates, administrative building including store house for tools and spares, laboratory with water supply and waste water disposal arrangements, access road of 7 m carriageway, O&M manual and as-built drawings for all civil, electrical & mechanical works. All units shall be provided with draining arrangements with suitable valves/gates with chambers.	Landscaping of plant area, internal roads with access to all units, illumination of the entire STP site, pathways, storm water drainage, compound wall all around & gates, administrative building including store house for tools and spares, laboratory with water supply and waste water disposal arrangements, access road of minimum road width of 3.75m carriageway, O&M manual and as-built drawings for all civil, electrical & mechanical works. All units shall be provided with draining arrangements with suitable valves/gates with chambers.
3.	Section 3: Civil works, clause 4 Orientation, 4.1 Buildings and structures, para no-8 (page no -313)	Building plinth shall be minimum 450 mm above average finished ground level around building or high flood level whichever is more.	Deleted
4.	Section 3: Civil works, clause 1.5, Water Retaining Structures (Page no-304- 305)	 Liquid retaining/conveying structures including the members covering the same (such as roof of a chamber, channel etc.) shall be designed by un cracked method of design as per BIS: 3370 and 6494. Basement RC walls and slabs below ground shall also be designed by un cracked method of design as liquid retaining structures. Shear shall be checked by working stress method as per BIS: 456. Minimum temperature and shrinkage reinforcement shall be 0.3% in each direction. All underground or partly underground liquid containing structures shall be designed for the following conditions: Liquid depth up to full height of wall: no relief due to soil pressure from outside to be considered. Structure empty (i.e. empty of liquid, any material, etc) full earth pressure including saturated condition and surcharge pressure wherever applicable to be considered. Structures shall be designed for uplift in empty conditions as per water table indicated in the geotechnical report or high flood level, whichever is maximum. No reduction factor for the uplift force shall be considered. The dead weight of the empty structures should provide a safety factor of not less than 1.2 against uplift pressures during construction and in service. Wall shall be designed under operating conditions to resist 	 Liquid retaining/conveying structures including the members covering the same (such as roof of a chamber, channel etc.) shall be designed by un cracked method of design as per BIS: 3370 and 6494. Basement RC walls and slabs below ground shall also be designed by un cracked method of design as liquid retaining structures. Shear shall be checked by working stress method as per BIS: 456. Minimum temperature and shrinkage reinforcement shall be 0.3% in each direction. All underground or partly underground liquid containing structures shall be designed for the following conditions: Liquid depth up to full height of wall: no relief due to soil pressure from outside to be considered. Structure empty (i.e. empty of liquid, any material, etc) full earth pressure including saturated condition and surcharge pressure wherever applicable to be considered. Structures shall be designed for uplift in empty conditions as per water table indicated in the geotechnical report or high flood level, whichever is maximum. No reduction factor for the uplift force shall be considered. The dead weight of the empty structures should provide a safety factor of not less than 1.2 against uplift pressures during construction and in service.

		 earthquake forces from earth pressure mobilization and dynamic water loads; Underground or partially underground structures shall be checked against stresses developed due to any combination of full and empty compartments with appropriate ground/uplift pressures from below to base slab The walls and base slabs shall be designed for saturated earth/water pressure corresponding to high flood level or finished plot level whichever is higher. For design purpose, sub soil water level is to be considered as 2 meter below the average natural ground level. (Uplift pressure on the foundation shall be considered as per water table at site, in the rainy season. However, for design purpose ,minimum water table shall be considered at 2 m below the average ground level 	 Wall shall be designed under operating conditions to resist earthquake forces from earth pressure mobilization and dynamic water loads; Underground or partially underground structures shall be checked against stresses developed due to any combination of full and empty compartments with appropriate ground/uplift pressures from below to base slab The walls and base slabs shall be designed for saturated earth/water pressure corresponding to high flood level or finished plot level whichever is higher.
5.	Section 3: Civil works, clause 1.4, Joints (Page no-304)	Movement joints such as expansion joints, complete contraction joints, partial contraction joints and sliding joints shall be designed to suit the structure as per relevant IS code provisions. Expansion joints of suitable gap at intervals not more than 30 m shall be provided in walls, floors and roof slabs of water retaining structures. Construction joints shall be provided at right angles to the general direction of the member. The locations of construction joints shall be decided on convenience of construction. To avoid segregation of concrete in walls, horizontal construction joints are normally to be provided at every 2 m height, GI 18 guage/PVC water stops of suitable type and minimum 230 mm width, 6 m thick shall be used for walls and base slabs.	Movement joints such as expansion joints, complete contraction joints, partial contraction joints and sliding joints shall be designed to suit the structure as per relevant IS code provisions. Expansion joints of suitable gap at intervals not more than 30 m shall be provided in walls, floors and roof slabs of water retaining structures. Construction joints shall be provided at right angles to the general direction of the member. The locations of construction joints shall be decided on convenience of construction. To avoid segregation of concrete in walls, horizontal construction joints are normally to be provided at every 2 m height, GI 18 guage/PVC water stops of suitable type and minimum 230 mm width, 6 mm thick shall be used for walls and base slabs.
6.	General Points	Typical Drawing for House Service connection	Attached as annexure-A
7.	Section 3: Technical specifications, Clause 32.1.1 House service connection to Manholes (Page no-396)	The Location of House service connections directly to manholes shall be as decided by the Engineer In-charge. The work involves placing of required number of 110/160mm PVC Pipes, of length 200mm more than the shaft wall thickness on both sides, at time of construction of manholes, at a depth of about 1m below ground level or as directed by the Engineer In-charge including providing and laying granite or basalt or trap jelly cement concrete of proportion 1:2:4 for bed and surround of PVC pipe in wall shaft and making the joint water tight. After completion of the manhole construction, and for providing House service connection up to the property boundary 110mm dia 6 ksc PVC pipes or 160mm dia 6 ksc PVC pipes are to be laid and jointed with required slope, after excavation from property boundary to outside of	The Location of House service connections directly to manholes shall be as decided by the Engineer In-charge. The work involves placing of required number of 110 mm PVC Pipes, of length 200mm more than the shaft wall thickness on both sides, at time of construction of manholes, at a depth of about 1m below ground level or as directed by the Engineer In-charge including providing and laying granite or basalt or trap jelly cement concrete of proportion 1:2:4 for bed and surround of PVC pipe in wall shaft and making the joint water tight. After completion of the manhole construction, and for providing House service connection up to the property boundary 110mm

		manhole, and a 90° Bend with cleaning eye and capis fixed for the pipe, inside the manhole as per specifications and drawings. The items shall include all labour, lead and lifts and handling charges as per Bill of Quantities PVC pipe joints are to be made with suitable solvents as per relevant IS Code.	dia 6 ksc PVC pipes are to be laid and jointed with required slope, after excavation from property boundary to outside of manhole, and a 90^{0} Bend with cleaning eye and capis fixed for the pipe, inside the manhole as per specifications and drawings. The items shall include all labour, lead and lifts and handling charges as per Bill of Quantities PVC pipe joints are to be made with suitable solvents as per relevant IS Code.
8.	Section 3: Technical specifications, Clause 31.2 Manholes (Page no-391)	Manholes shall be built at every change of alignment, gradient or diameter, at the head of all sewers and branches, at every junction of two or more sewers as shown on the drawings complying to IS: 4111 Part1-1967 and latest revisions and as per specifications in this section or as directed by Engineer. Sulphate resisting cement confirming to IS: 12330 shall be used for all the items of works for manholes. The shape of the manholes generally is circular with conical shape at top for Brick manholes, unless specifically stated as on drawings. The Operator shall be wholly responsible for giving suitable connections at the junctions of sewer lines with the manholes. The minimum depth of manhole shall be one meter or as in construction drawings or as directed by Engineer. For House service connections directly to manholes, 110/160mm PVC pipes shall be placed during construction of manholes as per specifications in this section and items in BOQ, if the provisional pipes for House service connections are not placed due to the negligence of the Operator, the Operator has to redo the total work of dismantling of manhole shaft and placing of the pipes etc. at his own cost. The Manholes have been divided into different categories based on depth, diameter and material of construction. Any manholes required to be provided extra, at the locations shown by the Engineer, shall be provided by the Operator, for which payment shall be made at the quoted rates.	Manholes shall be built at every change of alignment, gradient or diameter, at the head of all sewers and branches, at every junction of two or more sewers as shown on the drawings complying to IS: 4111 Part1-1967 and latest revisions and as per specifications in this section or as directed by Engineer. Sulphate resisting cement confirming to IS: 12330 shall be used for all the items of works for manholes. The shape of the manholes generally is circular with conical shape at top for Brick manholes, unless specifically stated as on drawings. The Operator shall be wholly responsible for giving suitable connections at the junctions of sewer lines with the manholes. The minimum depth of manhole shall be one meter or as in construction drawings or as directed by Engineer. For House service connections directly to manholes, 110 mm PVC pipes shall be placed during construction of manholes as per specifications in this section and items in BOQ, if the provisional pipes for House service connections are not placed due to the negligence of the Operator, the Operator has to redo the total work of dismantling of manhole shaft and placing of the pipes etc. at his own cost. The Manholes have been divided into different categories based on depth, diameter and material of construction. Any manholes required to be provided extra, at the locations shown by the Engineer, shall be provided by the Operator, for which payment shall be made at the gueted rates.
9.	Section 1, Qualification Criteria , 1.1 General b. 2	A joint venture of up to a maximum of 3 partners	A joint venture of up to a maximum of 4 partners

	(page no-69)		
10.	Bid Data Sheet ITB 1.2.1 (page no-44)	The number of members of a JV bidder shall be limited to 3	The number of members of a JV bidder shall be limited to 4
11.	Section 3, Preparation of Bids, 3.3, Technical Section – Part I – Technical and Staffing Information, for STP a.	The Owner shall make available the right of way and the land area allocated for this facility for setting up of Sewage Treatment Plant. The Owner shall also make available the right of way to the facilities to be set up under the contract, for making arrangements in connection with reuse of treated effluent from STP as specified in the contract. The bidders will be free to offer STP based on a technology of their choice and indicate in their bid the actual land requirement for setting up treatment facility as offered by them. The status of availability and ownership of the land is specified in the Bid Data Sheet .	The Owner shall make available the right of way and the land area allocated for this facility for setting up of Sewage Treatment Plant. The Owner shall also make available the right of way to the facilities to be set up under the contract, for making arrangements in connection with reuse of treated effluent from STP as specified in the contract. The bidders will be "ASP technology" and " Activated Sludge Process" and free to offer STP based on a technology of their choice to meet the desired effluent standards utilizing the STP infrastructure already created and existing at site" and indicate in their bid the actual land requirement for setting up treatment facility as offered by them. The status of availability and ownership of the land is specified in the Bid Data Sheet.
12.	Bid Data Sheet ITB 3.3 (f) (2) (ii) (b)	 Works to be specified in Site plan for STP: 1. Intake arrangement for receiving the raw sewage into the STP, 2. Main Pumping Station (MPS) 3. Initial screening; 4. Various components of primary, and secondary Sewage Treatment processes; 5. Sludge treatment and reuse of sludge in power generation for operation of STP (if any) 6. Sludge disposal arrangements 7. Arrangements for reuse of the specified minimum quantity of treated effluent 8. Arrangements for disposal of treated effluent left over after taking out the quantity intended for reuse 9. Onsite testing facility for parameters mentioned in SCC 10. Staff Quarters and Campus Development Works 11. Any other facility as required to conform to effluent standards 	 Works to be specified in Site plan for STP: 1. Intake arrangement for receiving the raw sewage into the STP, 2. Main Pumping Station (MPS) 3. Initial screening; 4. Various components of primary, and secondary Sewage Treatment processes; 5. Sludge treatment and reuse of sludge in power generation for operation of STP (if any) 6. Sludge disposal arrangements 7. Arrangements for reuse of the specified minimum quantity of treated effluent 8. Arrangements for disposal of treated effluent left over after taking out the quantity intended for reuse 9. Onsite testing facility for parameters mentioned in SCC 10. Staff Quarters and Campus Development Works 11. Any other facility as required to conform to effluent standards 12. CCTV surveillance for the plant is required at STP and all IPS.
13.	General Point	Format of Power of Attorney for single bidder.	Format Attached as an annexure-B

14.	General Point Financial Sheet, Bill of Quantities for Sewerage Network works, S.No- B, 7	Providing at the site, lowering and laying in trenches, aligning and jointing of RCC pipes NP2, NP3 & NP4 class (with s/s ends) as per IS 458-2003 (amended upto date) at all depth with Rubber gaskets (EPDM/SBR) for sewer lines as per IS : 5382 (including cost of rubber gaskets, lubricants) as per drawing, sectional testing of the sewer pipe line (including cost of conveyance of water of site) etc. Complete as per specification and or as directed by Engineer.	Providing at the site, lowering and laying in trenches, aligning and jointing of RCC pipes NP2, NP3 & NP4 class (with s/s ends) as per IS 458-2003 (amended upto date) at all depth with Rubber gaskets (EPDM/SBR) with internal coating as per bid specification for sewer lines as per IS : 5382 (including cost of rubber gaskets, lubricants) as per drawing, sectional testing of the sewer pipe line (including cost of conveyance of water of site) etc. Complete as per specification and or as directed by Engineer. • Revised Financial Sheet Unloaded
15.	General Point Financial Sheet, Bill of Quantities for Sewerage Network works, S.No- B, 7 a	Supplying and laying of DWC class SN 8 Pipes, bailing out/ dewatering (by pumps or otherwise) water in trenches, lowering the same into the trench, aligning and jointing the pipes to prescribed gradient, depth and alignment; fixing making connection to new manholes and checking the' as laid' pipe with joints etc, as per the drawings, specification and direction of the Engineer. (The rate shall include all cost of materials and labour for pipes, jointing with manhole, aggregate packing, dewatering, cleaning the inside surfaces of pipe after laying, bonning rods, sight rails, levelling instruments etc. as required for the above mentioned works).(Hydraulic testing shall be paid separately)	Supplying and laying of DWC class SN 8 Pipes, bailing out/ dewatering (by pumps or otherwise) water in trenches, lowering the same into the trench, aligning and jointing the pipes to prescribed gradient, depth and alignment; fixing making connection to new manholes and checking the' as laid' pipe with joints etc, as per the drawings, specification and direction of the Engineer. (The rate shall include all cost of materials and labour for pipes, jointing with manhole, aggregate packing, dewatering, cleaning the inside surfaces of pipe after laying, bonning rods, sight rails, levelling instruments etc. as required for the above mentioned works). • Revised Financial Sheet Uploaded
16	Section 3	Prior to excevation the Operator shall contact all concerned	Prior to excavation, the Operator shall contact all concerned
	Technical Specification, Clause 32 House service connections (HSC) and existing sewerage system survey, 32.2, Location and Protection of Existing Public and Private Utilities	authorities such as Power distribution companies, ULB, police, telecommunications, forest department, etc and householders in roads where work is to take place and inform them of the nature of the work and its likely duration. Information should be obtained from utilities companies about the location of their utilities, preferably in the form of record drawings, and the Operator should carry out utilities tracing using electronic equipment to verify the positions of utilities. Trial excavations should also be carried by hand to further confirm locations of utilities. The Engineer will only permit trench excavation to proceed when he is satisfied that adequate efforts have been made to establish the alignments and depths of existing utilities Any damage to water supply utility connections, even after taking all necessary precautions by the Operator shall be paid as per rates quoted for the specified item indicated in Bill of Quantities. The damaged water supply house connections shall be restored with	authorities such as Power distribution companies, ULB, police, telecommunications, forest department, etc and householders in roads where work is to take place and inform them of the nature of the work and its likely duration. Information should be obtained from utilities companies about the location of their utilities, preferably in the form of record drawings, and the Operator should carry out utilities tracing using electronic equipment to verify the positions of utilities. Trial excavations should also be carried by hand to further confirm locations of utilities. The Engineer will only permit trench excavation to proceed when he is satisfied that adequate efforts have been made to establish the alignments and depths of existing utilities Any damage to water supply utility connections which may occur during execution of House service connections, even after taking all necessary precautions by the Operator shall not be paid.

		MDPE pipes including Encasing the MDPE Pipe with 40mm dia., MDPE Pipe at sewer crossings etc, The cost includes encasing the MDPE Pipe with 40mm dia. MDPE Pipe with all works complete as directed by the Engineer In-charge for items under heading "Miscellaneous works" in bill of quantities. The decision in this matter made by the Engineer in charge of work / concerned Engineer of OWNER shall be final and binding upon the Operator. For damaged soak pits and not to cause inconvenience to the public, the soak pits damaged during excavation shall be restored as per items in bill of quantities. However for any damage to other service utilities, the Operator shall make good the same at his own cost. No extra payment towards this will be made.	The damaged water supply house connections shall be restored with MDPE pipes including Encasing the MDPE Pipe with 40mm dia., MDPE Pipe at sewer crossings etc, The cost includes encasing the MDPE Pipe with 40mm dia. MDPE Pipe with all works complete as directed by the Engineer In-charge for items under heading "Miscellaneous works" in bill of quantities. The decision in this matter made by the Engineer in charge of work / concerned Engineer of OWNER shall be final and binding upon the Operator. For damaged soak pits and not to cause inconvenience to the public, the soak pits damaged during excavation shall be restored as per items in bill of quantities. However for any damage to other service utilities, the Operator shall make good the same at his own cost. No extra payment towards this will be made.
17.	General Point Financial Sheet, Bill of Quantities for Intermediate Pumping Station works, C, Pipe works, S.No-31	Providing and laying of D.I. Pipe of class K-9 confirming to IS : 8329-	 Providing and laying of D.I. Pipe of class K-7 confirming to IS : 8329- Revised Financial Sheet Uploaded
18.	Article 4: Obligations of the Owner 14. Clause 4.2 – Access to the Site and Project Facility, Point no-2	If the Operator requests for additional land for setting up the STP facility over the above the requirement indicated by him in his bid, he shall furnish a justification for the same. The Owner will examine the request from feasibility angle as also the supporting justification. Based on the justification, if the Owner decides to allocate additional land, such allocation will be subject to the Operator bearing and depositing with the Owner, the cost of additional land worked out at twice the rate specified in the BDS ITB 3.3 (c), namely twice the rate of INR per square metre[<i>EA should insert</i> <i>the same rate as given in the BDS</i>] or a higher rate at the option of the Owner, in case the Owner incurs higher cost for acquiring the additional land.	If the Operator requests for additional land for setting up the STP facility over the above the requirement indicated by him in his bid, he shall furnish a justification for the same. The Owner will examine the request from feasibility angle as also the supporting justification. Based on the justification, if the Owner decides to allocate additional land, such allocation will be subject to the Operator bearing and depositing with the Owner, the cost of additional land worked out at twice the rate specified in the BDS ITB 3.3 (c), namely twice the rate of INR 5143/- per square metre or a higher rate at the option of the Owner, in case the Owner incurs higher cost for acquiring the additional land.