

PRE-BID CLARIFICATION SCHEDULE

S.No.	Section/Clause/ Page No.	Statement of the referred clause	Clarification required	BHEL REPLY
1	VOLUME II-B,(Clause No.1.1.0), Page 14 of 406	BTPN wagons are not equipped with heating facility. Hence, no heating of wagons is considered.	As per our understanding Unloading Wagons shall not be heated by bidder. However, HFO at ambient temperature is not possible to unload in cool days. Either the Wagons shall store oil in heated condition or steam for provided by existing Unloading system. In case Heating of Unloading Wagon is to be considered, the steam mass flow rate shall be change and accordingly electro pneumatic type PRDS shall be required over self-actuated type PRDS. Kindly Clarify & suggest.	Heating of wagons is not applicable. Self-actuated type PRDS as per specification to be provided. In case, self-actuated type PRS is not compatible with de-superheating station, PID controlled PRDS to be provided.
2	General	Design Velocity for drain, steam and condensate.	Kindly Provide the Maximum allowable velocity for designing drain, Steam and Condensate header	Bidder to refer page no. 50 of 406 for line velocity.
3	VOLUME II-B, Section-C(Clause No.1.4.0), Page 15 of 406	During rainy season, water from unloading area drain trench and from tank dyke area having very Little or no trace of oil shall be diverted to nearest plant drain without letting it go to the OWS facility. Two valves in catch pit will be provided. Opening one valve, water inside dyke area will be routed to Oil water separator pit and from other valve it will be channeled towards plant drain (rainy season). These valves shall be provided with limit switch for monitoring.	As per Specification pipe needs to be provide to bypass the storm water to Plant Drain Kindly provide a tentative drain layout to estimate the length of pipe.	Plant drain will run alongside the main road. Detailed drain layout shall be provided during detail engineering.
4	VOLUME II-B,(Clause No.7.0.0), layout requirements, Point G, Page 22 of 406	However, inside the pump house no pedestals / insert plate shall be provided for fixing. Bidder shall support the pipes using pipe supports and anchor fasteners inside the pump house.	As pedestals are not available pipe shall be supported by columns through steel structure. Kindly Confirm.	This shall be decided during detail engineering based on layout and equipment approachability.

5	General	Preparation of drawings/document /P&IDs in 3D modeling software & providing soft copy of same to BHEL	In general practice, we use AutoCAD software to develop piping layouts & PIDs. Kindly confirm	Bidder to follow specification.
6	Clause 7.0.0 layout requirements, Point J, Page 22 of 406	Oily water collected in storage tank area, oil unloading area will normally be collected in OWS pit by gravity either through trench (limited to a depth of 0.5 m) or through buried pipe (limited to a depth of 1.0 m) . However, in case depth of pipe between the pit and OWS pit exceeds 1 m or gravity flow is not possible due to layout constraints (which can be reviewed during detail engineering), the oily water waste shall be collected by pumping to OWS pit. Necessary pumps, valves, pipe supports, and instruments etc. for the same shall be included by bidder in their scope.	Please specify the capacity of pump in case it is required in dyke area. Also specify the capacity of these pumps & instruments (if required).	Bidder to consider min. pump capacity as 10 cum/hr., if required. Final capacity shall be decided during detail engineering. Instrument shall be same as provided for sump in pump house (P&ID, PE-DG-410-166-A001 (HFO)
7	Dwg. No. PE-DG-410-166-A005	As per the mentioned drawing, FGL for Pump house is (+) 0.500M.	In order to get sufficient NPSH for HFO and LDO pumps, The unloading area shall be at elevated level as compared to Inlet/Outlet of strainer height. Kindly Provide the FGL of unloading area.	FGL of Unloading area is 4.5m above FGL of unloading pump house. Please refer. Note no. 8 of PE-DG-410-166-A004, fuel oil handling system layout.
8.	Clause 2.3.0 and 2.04.00 GENERAL TECHNICAL REQUIREMENTS ,Page 293 of 406	Bidder shall provide redundant control valves for some services such as Main condensate flow control, Superheat at temperation control and Reheat at temperation control as a minimum for high availability. For other application, if the availability criteria for the plant cannot be met even with the best	As per Steam mass flow rate and P&ID it is indicated that Manual Isolating and By-pass valve shall be considered. Also, 2 X 60 % of PRDS is recommended for this system. However, Clause 2.3.0 and 2.04.00 for Control Valve Specification is contradictory, Kindly Clarify.	Bidder to provide PRDS as indicated in P&ID of Steam system.

		established product, redundant control valves shall be provided. Control valves shall be located near floor or platform for ease of access and with adequate clearances for maintenance and lay-down and shall be placed as station with upstream motorized isolating valve, downstream motorized isolating valve, inching duty motorized bypass valve and manual drain valves. Each redundant control valve shall have its upstream motorized and downstream motorized isolating valves.		
9.	Clause 2.5.0 GENERAL TECHNICAL REQUIREMENTS ,Page 293 of 406	Wherever, steam conditioning calls for, Pressure reducing & de-superheating, combined PRDS type valves shall be offered.	Both the Statements are a contradictory. Kindly Clarify.	Requirement mentioned in the specification and PID is same. Bidder to provide combined Pressure reducing and de-superheating station and same is represented in PID.
	P & ID	As per P & ID, separate PRV Skid and a De-superheater is indicated.		
	Electrical, C&I			
1.	Clause No: 2.00.00, Page No- 210 of 406	Hand held calibrators (5 nos. for each type) shall be provided for adjustment/ calibration/ maintenance of the HART compatible transmitters. The hand held calibrator shall be suitable for all types of transmitters supplied in the package. If one type of hand held type calibrator is not suitable for communicating with all types of transmitters then separate hand held calibrator will be provided.	Kindly clarify the requirement of Hand Held Calibrator for transmitter.	Not in bidders scope.
2.	Sec:C, Specific	BHEL shall provide 230 VAC UPS	We understand that 230 VAC UPS power supply	Confirmed.

	Technical Requirements (C&I), Clause No:7.0, page No:179 of 406	supply feeder at a single point. Further, distribution to various instruments shall be in Bidder's scope. Bidder to include necessary power distribution board in his scope. Any power supply other than the above, if required by any instrument/device, has to be derived by the Bidder and all necessary hardware/software for the same shall be in bidder's scope. Bidder to furnish UPS power requirement along with the bid.	and 24V DC supply for instruments shall be supplied by BHEL, kindly confirm.	
3.	Sec:C1, 4.0.0_Exclusion, Clause No: E	Control I/O panel for Fuel Oil pump houses	As There is contradiction between both statement, one as per mentioned in "Exclusion" and other as mentioned in Section:C1, Instrumentation & Control, 2.0.0, Point No: 2, "Local control panel (without any control system) shall be provided by vendor and shall have provision for hardwired annunciation facia, push button lamps, colored_ mimics etc. Bidder shall connect the same up to terminal box (panel itself). Further cabling with DCS panel shall be in BHEL scope". Kindly clarify the scope.	Local control panel as specified under clause no. Section: C1, Instrumentation & Control, 2.0.0, Point No: 2 is in bidder scope.
4.	P&ID PE-DG-410-166-A001 (HFO) PE-DG-410-166-A002 (LDO) PE-DG-410-166-A003 (STEAM)	As per P& ID, Qty of Instruments for HFO, LDO & also for steam.	Kindly specify the requirement of three nos. of Radar type level transmitter in a single tank. As the one or more output (analog signal) can be taken from same instrument for controlling purpose. And also clarify requirement about the PT, TE and others instruments in two or three Nos. qty on same line or tank.	Bidder to follow specification.
5.	P&ID PE-DG-410-166-A001 (HFO)	Gravity type Oil WATER SEPERATOR (Please refer DM ETP)	DM ETP scope is missing from the specification. Kindly specify the scope of instruments. Kindly also specify the scope of control valve station.	Pumps and instruments in water pit of gravity type OWS is not in bidder scope. No control valve for heating is

				required. Only manual isolation valves to be provided in the steam line for heating water pit.
6.	P&ID PE-DG-410-166- A001 (HFO)	Temperature element with Temperature Controller.	We understand that the Temperature element with temperature transmitter shall be use instead of Temperature controller. Kindly Confirm.	Temperature element with temperature transmitter to be provided.
7.	Sec:C1, Page No:16 of 406	Sump pumps in unloading pump house, Oil pit of OWS shall start manually on generating alarm for high level or if the level is visually found high.	As per P&ID, Radar type Level transmitter is mentioned for controlling in Sump pumps in unloading pump house, Oil pit of OWS. Level Indicator is not shown for local visually. Kindly Clarify.	Level indicator in sumps is not required.
8.	General	Scope of supply for cables	As per scope matrix, we understand that all Power, control & instrumentation cables required for system shall be supplied by BHEL. Kindly confirm	As per point no. 3 of electrical scope matrix, page no. 129 of 406, power, control and instrumentation cables are in BHEL scope.