OIL INDIA LIMITED

(A Government of India Enterprise)
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Website: www.oil-india.com

Corrigendum No. 2 to IFB No. CPG2023P20

Engineering, Fabrication and Construction, Testing and Commissioning of Modular Field Gas Gathering Station at Baghjan, Assam

1. This Corrigendum is issued to notify the following:

a) Existing terms & conditions, specifications and schedules shall stand modified to the extent indicated here below under column "Modified Provisions" of **Annexure- I**

b) In view of queries received from bidders, the final EPMC/OIL's responses to the queries are generated. All the bidders are requested to refer to **Annexure- II** attached herewith.

c) Specifications of the Container Modules is attached herewith as **Attachment–1**

d) Extension of the Bid Closing/Technical Bid Opening Date and Last date for registration as under:-

i) Bid Closing Date & Time	**:** 12.09.2019, 11:00 hrs. IST.
ii) Technical Bid Opening Date & Time	**:** 12.09.2019, 14:00 hrs. IST.
iii) Last day for online registration	**:** 05.09.2019, 15:30 hrs. IST.

2. All other terms and conditions of the tender remain unaltered.

3. All the prospective bidders are requested to regularly visit OIL's Website: www.oil-india.com and e-procurement portal https://etender.srm.oilindia.in/irj/portal for further announcements/latest information related to this tender.

4. Bidder to submit this Corrigendum No. 02 along with **Annexure – I & II and Attachments 1** duly signed & stamped in all pages as token of acceptance and shall upload this document in the un-priced folder of the e- bid**.**

Annexure – I

Summary of modifications in existing terms & conditions, specifications and schedules

SL. NO	RFQ SECTION	CLAUSE	SUBJECT	TYPE	NEW CLAUSE / MODIFICATIONS/CHANGES/DELETIONS
1	Vol-I, Commercial	35.2	Independent External Monitors (IEM)	Modification	OIL has appointed Shri Rajiv Mathur, IPS(Retd.) and Shri Rudra Gangadharan, IAS(Retd.) and Shri Jagmohan Garg, EX-Vigilance Commissioner, CVC as Independent External Monitors(IEMs) for a period of 3(three) years to oversee implementation of Integrity Pact in OIL. Bidders may contact the Independent External Monitors (IEMs) for any matter relating to the IFB at the following addresses: i) SHRI RUDHRA GANGADHARAN, IAS (Retd.) Ex-Secretary, Ministry of Agriculture E-mail: rudhra.gangadharan@gmail.com ii) SHRI RAJIV MATHUR, IPS (Retd.,)Former Director, IB, Govt. of India, E-mail ID: rajivmathur23@gmail.com iii) SHRI JAGMOHAN GARG, Ex-Vigilance Commissioner, CVC E-mail ID : jagmohangarg@gmail.com

Annexure-II

OIL's/ EPMC's response to bidder's queries to various sections of tender documents.

Sl. No	File Name / Page No.	Tender Description	Tender Clause	Bidder's Queries	Consultant/OIL's Response
1	Vol II Technical	Page 12 of 23; DOC.NO.FGGS-BJN-PRO-DBM-1001- PROCESS DESIGN BASIS	Clause 11.2	The Bidder Requests confirmation on Alternate Source of water for FGGS, Baghjan facilities from Brahmaputra, river intake Pump house which is currently planned to be sourced from Tube Bore Wells to avoid higher TDS in Bore well water.	As indicated in the design basis and other Process documents, bore wells (total 4 nos -2 nos shallow & 2 nos deep wells) are the source. No alternate source of water is envisaged for FGGS, Baghjan facilities.
2	Vol II Technical	Page 12 of 23; DOC.NO.FGGS-BJN-PRO-DBM-1001- PROCESS DESIGN BASIS	Clause 11.4	The Bidder Requests confirmation on Capacity envisaged for Captive Power Plant. The client is requested to clarify also in light of the Total Fuel Gas consumption in Gas Engine Generators.	Power supply at FGGS Baghjan shall be arranged by four operating gas Gen. Gen sets. Running philosophy shall be 3W+1S and the maximum generation capacity as 1500 kWx 3W= 4500 kW. Fuel consumption of the gas engines have to be calculated at the bidders end based on selected generator.
3	Vol II Technical Page 85 of 2248	FGGS-BJN-PRO-PID-1001; PIPING AND INSTRUMENTATIO N DIAGRAM-ELECTRIC		The Bidder Proposes Alternate Material Selection (based on parent material SS316L) for all Sub-headers and Main Headers d/s of Depressurization Valve for HP Flare System based on Preliminary Depressurization Study	In OIL, the flare header/ sub header is generally of Carbon steel only. Safe Operating Procedure (SOP) is followed during operation, which ensures that depressuring is done safely. However, the EPC shall select material considering the design and safety

		HEATERS (H-1001 A01~A10)		done & requests confirmation on the same	guidelines for both the sub-headers and main header
4	Vol II Technical Page 85 of 2248	FGGS-BJN-PRO-PID-1001; PIPING AND INSTRUMENTATION DIAGRAM-ELECTRIC HEATERS (H-1001 A01~A10)		The Bidder requests confirmation on whether the maximum arrival pressure from Well Head shall be kept below 350 KSC(g) with the help of Well Head Sub Surface safety systems available u/s of Christmas Tree so that no u/s PSV/Relief system is required in the event of possible over pressurization.	Confirmed that arrival pressure will be below 350 KSC.
5	Vol II Technical Page 89 of 2248	FGGS-BJN-PRO-PID-1102; PIPING AND INSTRUMENTATION DIAGRAM-GAS & INLET MANIFOLD (E-1001 A01~A08)	Sectionalizing Isolation Valves on Headers, 8"-PG-1101-G01 & 10"-PG-1116-G01; Test & Production Manifold-B	The Bidder requests provision of one additional Sectionalizing Block Valve (each) on 8"-PG-1101-G01 & 10"-PG-1116-G01 respectively for Test & Production Manifold-B to maintain consistency with Note-1 on the P&ID which states that Manifold between two Isolatable Sections caters to Well Fluid from Four Wells.	One sectionalising valve in the test header 8"-PG-1101-G01 to be relocated after well 12 connection and the valve after the well 22 to be relocated to upstream the connection of well 21. For Production header 10"-PG-1116-G01, one sectionalising valve to be added downstream the connection of well 14. Valve downstream the well 16connection to be relocated to downstream the well 18 connection.
6	Vol II Technical Page 91/92/93/94 of 2248	FGGS-BJN-PRO-PID-1202/1203/1204/1205; PIPING AND INSTRUMENTATION DIAGRAM-PRODUCTION SEPARATORS (V-	Sectionalizing Isolation Valves on Headers, 4"-PC-1214-B12 & 4"-PC-1221-A01; Condensate	The Bidder requests confirmation on the requirement of provision of one additional Sectionalizing Block Valve on Headers, 4"-PC-1214-B12 & 4"-PC-1221-A01 for Condensate to CBD Vessel. It is also proposed to shift the B12/A01 Spec. Break from 4"-PC-1214-B12 & 4"-PC-1221-A01 to Globe Valves on 3"-PC1220/1216/12171209-B12 respectively.	Confirmed. One sectionalising valve to be added.

		1201A/B/C), HP SEPARATOR (V-1203)	to CBD Vessel		
7	Vol II Technical Page 97 of 2248	FGGS-BJN-PRO-PID-2302; PIPING AND INSTRUMENTATION DIAGRAM-FUEL GAS HEADER AND DISTRIBUTION	Fuel Gas Supply Header, 10"-FG-2320-A01; Gas Engine Generators	The Bidder requests confirmation on the Fuel Gas Supply Pressure for Gas Engine Generators for Captive Power Plant and with respect to same proposes shifting of tapping point of 10"-FG-2320-A01 on 16"-FG-2205-A01 from u/s of PV-2303 to d/s of FE-2305 which shall also allow Flow totalizing of GEG fuel gas supply through FQI-2305. Also PV-2303 letdown pressure to be changed from 3.5 to 1.5 KSC.	GEG supply pressure is 3.5 KSC and FG consumption to GEG to be measured within the GEG package. FG supply to other consumers is at 1 KSC to 1.5KSC and total consumption of the other consumers will be measured at FE-2305.
8	Vol II Technical	FGGS-BJN-PRO-PID-2302; PIPING AND INSTRUMENTATION DIAGRAM-FUEL GAS HEADER AND DISTRIBUTION	Fuel Gas / Purge Gas Supply (Capacity Requirement) to Dehydration Facility, 8"-FG-2325-A01; Dehydration Facility	The Bidder requests confirmation on Capacity Requirement for Fuel Gas / Purge Gas Supply to Dehydration Facility and the Basis of Sizing and provision of 8"-FG-2325-A01, header for the same purpose. The client is requested to clarify the same in light of the confirmation for Total Fuel Gas Package Size which is assumed as 1.5 MMSCMD.	As rightly indicated, total fuel gas is assumed as 1.5 MMSCMD in Basic Engineering, which has to be fine tuned during EPC phase when data of FG consumption for CPP and other requirement for Water Bath Heaters, internal consumption of GDU, purging requirement etc are clearly known. Actual requirement will be well below the assumed figure.
10	Vol II Technical		Vendor List	Bidder request for Approved/ Recommended Vendor List from OIL or JPEC for project.	EIL vendor list may be followed.

11	Vol II Technical		Line List	Bidder request for the Preliminary Line List required.	Bidders to use the P&IDs.
12	Vol II Technical		Dew Point Correction	Bidder request for the Dew Point Correction PFD / P&ID required.	Bidder to provide as this is included with the GDU package.
13	Vol II Technical Page 88/89 of 2248	FGGS - BJN - PRO -PID–1101; FGGS - BJN - PRO - PID - 1102	Production & Test Manifold	Bidder request for the confirmation for Production & Test Manifold have G12 rating of Line and Valve. As we DBBV followed by PSV in downstream of respective heater(s). We can have B12 rating of Lines and Valves.	G12 has been provided upto the ESDV, which shall be retained.
14	Vol II Technical Page 91/92/93 of 2248	FGGS-BJN-PRO-DST-1201	Production Separator (V-1201 A /B / C)	Please arrange the Production Separator (V-1201 A /B / C) internal Details.	Please refer process datasheet page no. 148 of 2248 and mechanical datasheet for production separator, page no. 717 of 2248 of the volume-II technical document of tender.
15	Vol II Technical	FGGS-BJN-PRO-DST-1203	HP SEPARATOR (V-1203)	Bidder request for the HP SEPARATOR (V-1203) internal Details.	Please refer process datasheet page no. 158 of 2248 and mechanical datasheet for HP separator, page no. 765 of 2248 of the volume-II technical document of tender.
16	Vol II Technical Page 1871 of 2248	FGGS-BJN-INT-DST-7005	PSV Data Sheet	Bidder request for PSV - 1011 - PSV - 1020 in P&ID No. FGGS-BJN-PRO-PID-1002 are not available. Please arrange the same.	The P&ID no. FGGS-BJN-PRO-PID-1002 shows two PSVs with Tag numbers PSV-1011/1012 (PSV-1020 is not in the referred P&ID). These two Tag numbers are within the Bath Heater package.

17	Vol II Technical Page 86 of 2248	FGGS - BJN - PRO - PID - 1002	Note: "Well head in OIL Scope. Tie -in point is at outlet flange at the Christmas Tree.	Please confirm that no pipeline is envisaged in the scope. Scope is start from outlet flange of insulating joint (TP-1011).	Confirmed that no pipeline is envisaged in the scope.
18	Vol II Technical		PSV By-Pass Arrangement	Please confirm By-Pass Arrangement, Valve required.	Confirmed.
19	Vol II Technical	Page 10 of 42 ; DOC.NO.FGGS-BJN-PRO-PHL-1001- OPERATING CONTROL & SAFE GUARDING PHILOSOPHY	Clause 4.8 Ground Flare System	The Bidder Requests detail of existing Flare system shall be provided for the understanding, FGGS is non associated gas well, SIL proposed elevated stalk mounted flare system to reduce the sterile area and safe operation of the facility.	Flare is an Enclosed ground flare. For details please refer to the Flare data sheet FGGS-BJN-PRO-DST-2409 and Mechanical design basis FGGS-BJN-MEQ-DBM-4000(page no. 540 of 2248)
20	Vol II Technical	Page 16 of 23 ; DOC.NO.FGGS-BJN-PRO-DBM-1001- PROCESS DESIGN BASIS	Clause 24.1 Water bath heater in Phase -II	10 Nos of Electric heaters (H-1001 A01 to A10) are provided in Phase I but in Phase II Water Bath heaters are provided. Confirm this requirement as Feed Well Fluid is same; why Electric bath heater considered for Phase II, as maintenance cost and operational handling issues for the Water Bath heaters will be on higher sides ?	As informed clearly in the Pre-bid meeting, tender conditions shall be adhered to.

21	Vol II Technical Page 85 of 2248	FGGS-BJN-PRO-PID-1001	Scope Clarification B31.8/B31.8 (TP-1001 to TP-1010)	Bidder understands that only piping section (B 31.3) is part of FGGS scope. Confirm the same.	Confirmed.
22	Vol II Technical Page 85 of 2248	FGGS-BJN-PRO-PID-1001	Piping Class at the downstream of Choke valve.	Pressure at the downstream ok choke valve is 25 KCS,but the piping class considered for this is G12 which 2500 # rating, Confirm why this is on higher side ?, Downstream piping can be considered as B12 as per the 300#.	G12 has been provided upto the ESDV and shall be retained.
23	Vol II Technical Page 86 of 2248	FGGS-BJN-PRO-PID-1002	Drain valve Requirement between ball valve and SDVs for all the well head supply lines.	SIL understands that as this is high pressure line drain valve is not provided as per the safe isolation philosophy. Kindly confirm the same.	Confirmed. The valves are expected to be close (flange to flange).
24	Vol II Technical Page 88 of 2248	FGGS-BJN-PRO-PID-1101	Piping class of test manifold and Production manifold	As per P&ID Piping class is G12(2500# and 3 mm Corrosion Allowance) but for the manifold Piping class is considered as G01 (2500 # with corrosion allowance 1.5 mm).Why manifold and associated piping till ESDV is in G01 class when fluid handling is same ? Clarify. Bidder request for the confirmation for Production & Test Manifold have G12 rating of Line and Valve.As we DBBV followed by PSV in downstream of respective heater(s). We can	Piping class is considered as G01 (2500 # with corrosion allowance 1.5 mm) due to non-availability of G12 in the standard manufacturing range for the sizes required. Bidder to see reply given under point 22.

				have B12 rating of Lines and Valves.	
25	Vol II Technical	Page 19 of 23; Clause 25.0 of Document Number; DOC.NO.FGGS-BJN-PRO-DBM-1001- PROCESS DESIGN BASIS	Fire water hydrant system layout; Fire Fighting & Protection Facilities	The Bidder Requests confirmation on Availability of initial Proposed "Fire water hydrant system Layout" for facilities at FGGS, Baghjan Assam & requests client to provide same.	Fire water hydrant system Layout for facilities at FGGS, Baghjan, Assam is to be prepared by the EPC contractor.
26	Vol II Technical	Page 19 of 23; Clause 25.0 of Document Number; DOC.NO.FGGS-BJN-PRO-DBM-1001- PROCESS DESIGN BASIS	Fire water spray system drawings; Fire Fighting & Protection Facilities	The Bidder Requests confirmation on Availability of initial Proposed "Fire water spray system drawings" for facilities at FGGS, Baghjan Assam & requests client to provide same.	As indicated in the tender document, Fire water spray system drawings for facilities at FGGS, Baghjan is to be prepared by the EPC Contractor.
27	Vol II Technical	Page 19 of 23; Clause 25.0 of Document Number; DOC.NO.FGGS-BJN-PRO-DBM-1001- PROCESS DESIGN BASIS	Fire water demand calculation notes; Fire Fighting & Protection Facilities	The Bidder requests client to provide initial Proposed "Fire water demand calculation notes" for facilities at FGGS, Baghjan Assam.	As indicated in the tender document, Bidder to estimate. It may be noted that the Fire Water pump data sheet (FGGS-BJN-PRO-DST-3402)
28	Vol II Technical	HSE & FF	Fire Fighting layout	"bidder request for Preliminary Fire Fighting and F & G Detector Layout required	The F & G Detector layout and Fire and gas Mapping study is in the scope of EPC Contractor. Please refer F & G Datasheet Doc no: FGGS-

					BJN-INT-DST-7014. (Note-10)
29	Vol II Technical	'Page 19 of 23 ; Clause 24.10 of Document Number; DOC.NO.FGGS-BJN-PRO-DBM-1001- PROCESS DESIGN BASIS	Nitrogen Generation Package	Nitrogen Generation Package is not considered for the facility. Confirm the requirement of Nitrogen tanks for the facility for unloading the Nitrogen Tanker.	OIL Confirmed that Nitrogen package is not required for FGGS facility. Nitrogen cylinders shall be used for start-up and maintenance requirements.
30	Vol II Technical	'Page 17 of 23 ; Clause 24.10 of Document Number; DOC.NO.FGGS-BJN-PRO-DBM-1001- PROCESS DESIGN BASIS	Gas Dehydration Unit design capacity	Dehydration unit is design for 2.5 MMSCMD. Each well maximum design flow rate is 0.3 MMSCMD, Confirm that 1train Dehydration unit should be design for 3 MMSCMD as per the total 10wells (0.3 MMSCMD X10).	Confirmed as below: Dehydration unit design capacity shall be based on NAG from Baghjan and AG from existing EPS facility. During phase I, 3MMSCMD NAG from 10wells at Baghjan and 0.5MMSCMD AG from EPS facility shall be routed to GDU for further treatment process. However, fuel gas for power requirement shall be taken from GDU package. The preliminary required capacity of fuel gas is estimated as 1.5MMSCMD considering total GDU actual capacity 6.5MMSCMD (3+3+0.5, Phase I & II). The fuel gas capacity shall be confirmed during detail engineering by the EPC contractor. Based on the above, each GDU package shall be designed for 2.5MMSCMD ((6.5-1.5)/2) capacity.

31	Volume I, Commercial, Page No. 92 of 278	IFB No. CPG2023P20	3–Execution Methodology, Phase – IV - PGTR	Bidder understands that there shall be successful PGTR of the Plant for 72 hours by Contractor with commissioning assistance from EPMC. Kindly confirm.	3 months for Pre–commissioning / commissioning and PGTR which includes, PGTR for 1 month (30 days). Commissioning is in the scope of EPC. Commissioning supervision will be by EPMC.
32	Volume II, Technical, Page No. 98 of 2248	P&ID – Flare System FGGS-BJN-PRO-PID-2401		LP flare system capacity = 2.5 MMSCMD, HP flare system capacity = 3.5 MMSCMD is mentioned. Bidder is envisaging single flare stack for the package. Request client to confirm the requirement of any standby flare stack as per OISD-106.	Single Enclosed Ground Flare accommodating dedicated flaring for both LP and HP Flare requirements have been envisaged. OISD -106 section 8.3.11 requires standby flare in case the facility cannot be shut down for flare inspection & maintenance. No standby flare is envisaged.
33	Volume II, Technical, Page No. 98 of 2248	P&ID – Flare System FGGS-BJN-PRO-PID-2401		As per above mentioned query, if each 2 nos. of flare stacks need to be provided, then as per OISD norms for distances between flare systems there is a space constraint on plot plan. Client to clarify.	Refer point no. 32 above
34	Volume II, Technical, Page No. 98 of 2248	P&ID – Flare System FGGS-BJN-PRO-PID-2401		LP flare system capacity = 2.5 MMSCMD, HP flare system capacity = 3.5 MMSCMD is mentioned. However total system capacity is 5 MMSCMD considering 2 trains of 2.5 MMSCMD. Additionally, 2.5 MMSCMD to be considered for future. The material balance is not matching. Client to clarify. Moreover as existing flare system also to be demolished Client to clarify whether above mentioned flare system capacities is considering with existing flare system load.	Flare capacity of 3.5 MMSCMD of HP flare gas and 2.5 MMSCMD of LP flare gas includes the requirement for the existing facility as well. Double jeopardy is not envisaged in flare design. It may also be noted that preliminary estimate for Fuel Gas requirement for the project is 1.5 MMSCMD which will be consumed within the plant.

35	Volume II, Technical, Page No. 254 of 2248	Data sheet of fire water pump FGGS-BJN-PRO-DST-3402	Note 7	The note states that, the pumps shall take suction from the above ground firewater tanks. Suction from Ground water reservoir using individual foot valve for each of the pumps shall also to be provided. Suction lift of minimum 4 m shall be considered. Client to confirm that the same pumps will be used for positive suction for firewater tanks and negative suction lift for ground water reservoir.	Bidder understanding is correct. Same pump is to be used for taking suction from the ground water reservoir which is a manual operation.
36	Volume II, Technical, Page No. 158 of 2248	Process datasheets of HP Separator FGGS-BJN PRO-DST 1203	Note 4	Bidder understands that Anodic protection is not required for HP separator (V-1203). Please clarify	Bidder understanding is correct. Anodic protection is not required. Note 4 in Page 2 of the PDS (FGGS-BJN PRO-DST 1203) stands deleted.
37	Volume II, Technical, Page No. 211 of 2248	Process datasheets of Closed Blow down Vessel FGGS-BJN-PRO-DST-3201	Note 5	Please clarify which type Anodic protection Sacrificial or impressed to be provide for CBD Vessel,	Sacrificial type anodic protection is envisaged.
38	Volume II, Technical, Page No. 85 of 2248	P&ID – Electric Heaters FGGS-BJN-PRO-PID-1001		P&ID of electric heaters shows heat duty of 491 kW for each heater. Client to confirm the same as heat duty seems to be very high.	Heat duty is indicative. This has to be obtained from & finalized with inputs from the vendor of the electric heaters.
39	Volume II, Technical, Page No. 1551 of 2248	FGGS-BJN-ELC-DIA-6000	Single Line Diagram (Phase -1)	Heater load given as 491 kw each of 10 heaters, which means 4910 Kw overall load from Electric heaters only excluding process load, whereas power rating for three working gas genset is given as 1500 kW each (4500Kw	Power supply at Baghjan FGGS shall be arranged by four operating gas Gen. Gen sets. Running philosophy shall be 3W+1S and the maximum generation capacity as 1500 kW x 3 W = 4500 kW. Please refer the preliminary load list (FGGS-BJN-ELC-SCH-

				total). Kindly confirm the exact power requirement and No. of Gas genset	6000) provided in Corrigendum -I
40	Volume II, Technical	General	Electrical	Kindly provide the Electrical load list.	The preliminary load list (FGGS-BJN-ELC-SCH-6000) is provided in Corrigendum -I.
41	Volume II, Technical, Page No. 2096 of 2248	Scope of Work Civil FGGS-BJN-CIV-SOW-8000	2.5 Diversion of canal	Bidder understand that the land provided for diversion of canal in plot plan is already owned by client. Kindly confirmed.	Confirmed.
42	Volume II, Technical, Page No. 2096 of 2248	Scope of Work Civil FGGS-BJN-CIV-SOW-8000	2.5 Diversion of canal	Outer Ring Road outside the boundary wall is not part of Scope of work. Please confirm.	Outer Ring Road outside the boundary wall is not in the scope of work of EPC Contractor. Damage to the road during diversion of the canal shall be repaired.
43	Volume II, Technical, Page No. 43 of 2248	Process design basis FGGS-BJN-PRO-DBM-1001	11.4 Power	Clause states that," Gen set Running philosophy shall be 100% running with minimum 100% standby." Whereas bidder understands that, this clause is not applicable and three Working one Standby power genset is to be provided. Please confirm.	Bidder understanding is correct. Confirmed.
44	Volume II, Technical, Page No. 2152 of 2248	FGGS-BJN-CIV-DBM-8000 Design basis	3.5 Architectural /Civil/Structural Design basis	Please clarify RCC road, Design Parameter Finish: Bituminous carpet is required or not.	Road is RCC. Bituminous carpet is not required.

45	Volume II, Technical, Page No. 2142 of 2248	FGGS-BJN-CIV-DBM-8000 Design basis	2.3.3 Architectural /Civil/Structural Design basis	Please provide construction specification and drawings for Containerized for various Buildings , shed etc.	Specifications for containerized building units are attached as ANNEXURE-I.
46	Volume II, Technical	Civil scope of work		Bidder understands that the Gas genset and DG set is to supply in container and no cover shed is required. Please confirm.	Gas genset and DG set are to be supplied in containers. Common shed is required to cover as many containerized units as possible. Please refer clause 2.3.3.3 of Architectural/structural/civil design basis.
47	Volume II, Technical	Civil scope of work		Kindly provide the exact construction distance from existing flare to new flare area	Location of new flare shown in Overall plot plan is indicative only. EPC Contractor shall locate the flare to suit at site as per statutory norms.
48	Volume II, Technical	Civil scope of work		Bidder understands that the construction of boundary wall is not in bidder's scope. Kindly confirm.	Boundary wall is existing. Not in contractor's scope of work. New main entrance gate, emergency exit gate and associated civil works is in the scope of the EPC contractor. Refer civil design basis clause 3.1
49	Volume II, Technical, Page No. 1472 of 2248	Specification for Cathodic Protection Materials FGGS-BJN-ELC-SPC-6015	2.0 Purpose	We Understand that Type of Steel pile is not required for foundations. Please confirm.	Bidder understanding is correct.

50	Volume II, Technical, Page No. 1472 of 2248	Specification for Cathodic Protection Materials FGGS-BJN-ELC-SPC-6015	2.0 Purpose	Bidder understands that no cathodic protection is required for Bored cast in-situ piling works. Please confirm	Bidder understanding is correct.
51	Volume II, Technical	Civil scope of work		As per contour details attached, it is proposed to provide different FGL in plant area and flare area. Please confirm.	Different FGL in plant area and flare area is not acceptable. The lowest FGL shall be 100.5m.
52	Volume II, Technical	Grid Map 5X5 OF EGL FGGS-BJN-CIV-DWG-8002		Kindly provide the soft AutoCAD copy of drawing FGGS-BJN-CIV-DWG-8002.	Soft AutoCAD copy of drawing FGGS-BJN-CIV-DWG-8002 will be provided to successful bidder.
53	Volume II, Technical	Civil scope of work		Kindly provide the specification and details of landscaping.	It is part of detailed engineering and is in the scope of EPC Contractor.
54	Volume II, Technical	Overall Plot Plan FGGS-BJN-PIP-LAY-5000		Office building, Car Parking, Ware house, Bunkers is given in the plot plan whereas it is not mention in the civil scope of work as well as space provision in plot plan also not indicated. Kindly clarify the scope.	Admin. Building indicated in the scope of work and the office building indicated in the plot plan are the same. Space requirement is indicated in the plot plan.
55	Volume II, Technical, Page No. 805 of 2248	Piping scope of work		Please provide the routing of existing flare header, Whether it passing through proposed plot or not?	Existing flare lines are passing through the proposed plot. EPC contractor shall carry out necessary survey to establish the routing of existing flare lines. Existing flare lines shall not be disturbed till the commissioning of the new flare system.

56	Volume II, Technical, Page No. 805 of 2248	Piping scope of work		Please provide the requirement of Deluge sprinkler and foam system for process facilities.	It is part of detailed engineering and is in the scope of EPC Contractor. It shall be as per the OISD stipulations.
57	Volume II, Technical, Page No. 805 of 2248	Piping scope of work		Please provide the scope of pipe support Sleepers for lines going to EPS, Whether there is a space in existing rack, sleeper to accommodate these lines. Kindly confirm.	Ref. para 2.1 (Tie-in Points) page 808 of 2248
58	Volume II, Technical, Page No. 805 of 2248	Piping scope of work		Please provide the type and datasheet of chemical injection quill.	To be decided by EPC contractor during detailed engineering.
59	Volume II, Technical, Page No. 1550 of 2248	FGGS-BJN-ELC-DIA-6000	Single Line Diagram (Phase -1)	PMCC-1 feeder tag number and rating is same as in PMCC-2. Please clarify.	Bidder to note that as per process equipment list (FGGS-BJN-PRO-SCH-1003) some packages has been divided in to 2 trains. Hence, train 1 & 2 will feed from PMCC-6001 & PMCC-6002 respectively. Please refer the preliminary load list (FGGS-BJN-ELC-SCH-6000) provided in corrigendum -I.
60	Volume II, Technical, Page No. 1542 of 2248	Data sheet for Electric Heater & Control Panel	Note no: 15	As discussed with electric heaters' vendors, we came to understand that the electrical heater's vessel will be of relatively of small diameter with heavy wall thickness in line with the design pressure of 350 kg/cm2g. The flange / nozzle ratings will be of 2500# for these vessels. As per API / ASME standard flange size is limited 12" for 2500 # class ratings. Hence the higher diameter flanges and fittings will be manufactured as per vendor's manufacturing standard. Kindly review and confirm the use of manufacturer's standard for manufacturing flanges and fittings for which API/ ASME standards are not available.	Flanges greater than 12" for electric heaters shall be WN RTJ non-standard designed as per ASME SEC. VIII, DIV 2. Moreover, bidders are requested to go through page no 1542 of 2248, note no: 15 in the technical part of the tender document

61	Volume II, Technical,	IFB No. CPG2023P20	C3 – Execution Methodology, Phase – IV – PGTR Corrigendum No. 1, Annexure – I, Sr. No. 6	As per Corrigendum No. 1, Annexure – I, Sr. No. 6 received on 21.08.2019, Bidder once again reiterate that it is not possible to have one month interruption free continuous operation of plant as there may always be minor trips/breakdown which may affect the desire output for that particular period of time. As per industry practice for all process plant PGTR period is 72 hours, accordingly we would like to consider the same and with regards to equipment and packages their performance is as per approved datasheet and same will be part of this 72 hours PGTR. For PGTR protocol acceptance criteria along with mutually agreed damages for any variation may kindly also be defined during pre-bid stage so as bidder can follow accordingly.	Tender conditions remain the same.

DETAILS OF CONTAINERS ENVISAGED IN FGGS BAGHJAN PROJECT

SL. NO	ITEM	APPROX. SIZE	STANDARD SIZE	FLOORING	WALLS	WINDOWS	DOORS
1	Control room	20000(L)X 12000 (W)	Standard size of the containers are 40' x 8' x 8.6'&20'x8'x8 .6'.No of containers to be decided by the EPC Contractor.	1.The container floor structure to be a sandwich type flooring on top of the container skid beams, composed of a 2 mm thick bottom steel skin plate (enclosure) and with a 2 mm thick top steel skin plate with 40 mm thick rock wool insulation to achieve 1-hour fire rating. 2. Floor finish to be 25 mm thick anti vermin treated marine plywood with 2 mm thick , heavy duty anti-static PVC tiles, bonded to the surface. The thickness specified is a minimum; however, Vendor shall design higher thickness, sufficient to take the applied floor loads. Equipment within the container has bottom cable entry. For equipment, provision for removable individual floor plates shall be made for access / cable entries. Any wood work in container shall be treated against termite attack.	The outside wall structure of the container shall be sandwich type wall composed of 50mm thick rock wool insulation with 2 mm thick external and internal plain steel sheet. Vendor must provide cable/pipe entry openings and all seals in the walls wherever required. Vendor shall ensure that any openings, where the service lines are passing shall be sealed gas tight.	High quality Aluminium anodized extruded section, with MS decorative grill, metallic mosquito net.	Higher grade Aluminium extruded section fully insulated with minimum thickness of 40mm for making heat proof.

2	Ware house	12200(L)X 4900(W)	Standard size of the containers are 40' x 8' x 8.6' &20'x8'x8.6'. No of containers to be decided by the EPC Contractor.	1.The container floor structure to be a sandwich type flooring on top of the container skid beams, composed of a 2 mm thick bottom steel skin plate (enclosure) and with a 2 mm thick top steel skin plate with 40 mm thick rock wool insulation to achieve 1-hour fire rating. 2. Floor finish to be 25 mm thick anti vermin treated marine plywood with 2 mm thick (acid resistant floor finish may use for chemical storage room), heavy duty anti-static PVC tiles, bonded to the surface. The thickness specified is a minimum; however, Vendor shall design higher thickness, sufficient to take the applied floor loads. Equipment within the container has bottom cable entry. For equipment, provision for removable individual floor plates shall be made for access / cable entries. Any wood work in container shall be treated against termite attack.	The outside wall structure of the container shall be sandwich type wall composed of 50mm thick rock wool insulation with 2 mm thick external and internal plain steel sheet. Vendor must provide cable/pipe entry openings and all seals in the walls wherever required. Vendor shall ensure that any openings, where the service lines are passing shall be sealed gas tight.	High quality Aluminium anodized extruded section, with MS decorative grill, metallic mosquito net.	Higher grade Aluminium extruded section fully insulated with minimum thickness of 40mm for making heat proof
3	Worksh	12200(L)X	Standard size	1.The container floor structure to	The outside wall	High quality	Higher

	op	4900(W)	of the containers are 40' x 8' x 8.6' &20'x8'x8.6'. No of containers to be decided by the EPC Contractor.	be a sandwich type flooring on top of the container skid beams, composed of a 2 mm thick bottom steel skin plate (enclosure) and with a 2 mm thick top steel skin plate with 40 mm thick rock wool insulation to achieve 1-hour fire rating. 2. Floor finish to be 25 mm thick anti vermin treated marine plywood with 2 mm thick , heavy duty anti-static PVC tiles, bonded to the surface. The thickness specified is a minimum; however, Vendor shall design higher thickness, sufficient to take the applied floor loads. Equipment within the container has bottom cable entry. For equipment, provision for removable individual floor plates shall be made for access / cable entries. Any wood work in container shall be treated against termite attack.	structure of the container shall be sandwich type wall composed of 50mm thick rock wool insulation with 2 mm thick external and internal plain steel sheet. Vendor must provide cable/pipe entry openings and all seals in the walls wherever required. Vendor shall ensure that any openings, where the service lines are passing shall be sealed gas tight.	Aluminium anodized extruded section, with MS decorative grill, metallic mosquito net.	grade Aluminium extruded section fully insulated withminimum thickness of 40mm for making heat proof.
4	Gate cabin	9158(L)X2438(W)	Standard size of the containers are 40' x 8' x 8.6'	1.The container floor structure to be a sandwich type flooring on top of the container skid beams, composed of a 2 mm thick bottom steel skin plate	The outside wall structure of the container shall be sandwich type wall composed of 50mm	High quality Aluminium anodized extruded section,	higher grade Aluminium extruded section

			&20'x8'x8.6'. No of containers to be decided by the EPC Contractor.	(enclosure) and with a 2 mm thick top steel skin plate with 40 mm thick rock wool insulation to achieve 1-hour fire rating. 2. Floor finish to be 25 mm thick anti vermin treated marine plywood with 2 mm thick , heavy duty anti-static PVC tiles, bonded to the surface. The thickness specified is a minimum; however, Vendor shall design higher thickness, sufficient to take the applied floor loads. Equipment within the container has bottom cable entry. For equipment, provision for removable individual floor plates shall be made for access / cable entries. Any wood work in container shall be treated against termite attack.	thick rock wool insulation with 2 mm thick external and internal plain steel sheet. Vendor must provide cable/pipe entry openings and all seals in the walls wherever required. Vendor shall ensure that any openings, where the service lines are passing shall be sealed gas tight.	with MS decorative grill, metallic mosquito net.	fully insulated with thickness for making heat proof
5	Bunkers(3 Nos)	6100(L)X2500(W)	Standard size of the containers are 40' x 8' x 8.6' &20'x8'x8.6'. No of containers to be decided by the EPC	1.The container floor structure to be a sandwich type flooring on top of the container skid beams, composed of a 2 mm thick bottom steel skin plate (enclosure) and with a 2 mm thick top steel skin plate with 40 mm thick rock wool insulation to achieve 1-hour fire rating.	The outside wall structure of the container shall be sandwich type wall composed of 50mm thick rock wool insulation with 2 mm thick external and internal plain steel sheet. Vendor	High quality Aluminium anodized extruded section, with MS decorative grill, metallic mosquito	higher grade Aluminium extruded section fully insulated with thickness for making

			Contractor.	2. Floor finish to be 25 mm thick anti vermin treated marine plywood with 2 mm thick , heavy duty anti-static PVC tiles, bonded to the surface. The thickness specified is a minimum; however, Vendor shall design higher thickness, sufficient to take the applied floor loads. Equipment within the container has bottom cable entry. For equipment, provision for removable individual floor plates shall be made for access / cable entries. Any wood work in container shall be treated against termite attack.	must provide cable/pipe entry openings and all seals in the walls wherever required. Vendor shall ensure that any openings, where the service lines are passing shall be sealed gas tight.	net.	heat proof
6	Electrical substation	28800(L)X 14750(W)	Standard size of the containers are 40' x 8' x 8.6' &20'x8'x8.6'. No of containers to be decided by the EPC Contractor.(Approximate - 8 nos(40'8'x8.6'))	1. The container floor structure to be a sandwich type flooring on top of the container skid beams, composed of a 2 mm thick bottom steel skin plate (enclosure) and with a 2 mm thick top steel skin plate with 40 mm thick rock wool insulation to achieve 1-hour fire rating. 2. Floor finish to be 25 mm thick anti vermin treated marine plywood with 2 mm thick , heavy duty anti-static PVC tiles, bonded to the surface. The	The outside wall structure of the container shall be sandwich type wall composed of 50mm thick rock wool insulation with 2 mm thick external and internal plain steel sheet. Vendor must provide cable/pipe entry openings and all seals in the walls wherever required.	High quality Aluminium anodized extruded section, with MS decorative grill, metallic mosquito net.	higher grade Aluminium extruded section fully insulated with thickness for making heat proof

				thickness specified is a minimum; however, Vendor shall design higher thickness, sufficient to take the applied floor loads. Equipment within the container has bottom cable entry. For equipment, provision for removable individual floor plates shall be made for access / cable entries. Any wood work in container shall be treated against termite attack.	Vendor shall ensure that any openings, where the service lines are passing shall be sealed gas tight.		
7	Heater control Panel room	14750(L)X 11000(W)	Standard size of the containers are 40' x 8' x 8.6' &20'x8'x8.6'. No of containers to be decided by the EPC Contractor.(Approximate - 4 Nos(40'8'x8.6'))	1. The container floor structure to be a sandwich type flooring on top of the container skid beams, composed of a 2 mm thick bottom steel skin plate (enclosure) and with a 2 mm thick top steel skin plate with 40 mm thick rock wool insulation to achieve 1-hour fire rating. 2. Floor finish to be 25 mm thick anti vermin treated marine plywood with 2 mm thick , heavy duty anti-static PVC tiles, bonded to the surface. The thickness specified is a minimum; however, Vendor shall design higher thickness, sufficient to take the applied	The outside wall structure of the container shall be sandwich type wall composed of 50mm thick rock wool insulation with 2 mm thick external and internal plain steel sheet. Vendor must provide cable/pipe entry openings and all seals in the walls wherever required. Vendor shall ensure that any openings, where the service lines are passing	High quality Aluminium anodized extruded section, with MS decorative grill, metallic mosquito net.	Higher grade Aluminium extruded section fully insulated with minimum thickness of 40 mm for making heat proof.

				floor loads. Equipment within the container has bottom cable entry. For equipment, provision for removable individual floor plates shall be made for access / cable entries. Any wood work in container shall be treated against termite attack.	shall be sealed gas tight.		
8	Instrument air compressor(Except receiver vessels)	12200(L)x 4900(W)	Standard size of the containers are 40' x 8' x 8.6' &20'x8'x8.6'. No of containers to be decided by the EPC Contractor.	1. The container floor structure to be a sandwich type flooring on top of the container skid beams, composed of a 2 mm thick bottom steel skin plate (enclosure) and with a 2 mm thick top steel skin plate with 40 mm thick rock wool insulation to achieve 1-hour fire rating. 2. Floor finish to be 25 mm thick anti vermin treated marine plywood with 2 mm thick , heavy duty anti-static PVC tiles, bonded to the surface. The thickness specified is a minimum; however, Vendor shall design higher thickness, sufficient to take the applied floor loads. Equipment within the container has bottom cable entry. For equipment, provision for removable individual floor plates shall be made for access /	The outside wall structure of the container shall be sandwich type wall composed of 50mm thick rock wool insulation with 2 mm thick external and internal plain steel sheet. Vendor must provide cable/pipe entry openings and all seals in the walls wherever required. Vendor shall ensure that any openings, where the service lines are passing shall be sealed gas tight.	High quality Aluminium anodized extruded section, with MS decorative grill.	Higher grade Aluminium extruded section fully insulated with minimum thickness of 40mm for making heat proof.

				cable entries. Any wood work in container shall be treated against termite attack.			
9	Fire water pump house(with diesel engine) & jockey pump	9500(L)x4000(W)	Standard size of the containers are 40' x 8' x 8.6' &20'x8'x8.6'. No of containers to be decided by the EPC Contractor.	1.The container floor structure to be a sandwich type flooring on top of the container skid beams, composed of a 2 mm thick bottom steel skin plate (enclosure) and with a 2 mm thick top steel skin plate with 40 mm thick rock wool insulation to achieve 1-hour fire rating. 2. Floor finish to be 25 mm thick anti vermin treated marine plywood with 2 mm thick , heavy duty anti-static PVC tiles, bonded to the surface. The thickness specified is a minimum; however, Vendor shall design higher thickness, sufficient to take the applied floor loads. Equipment within the container has bottom cable entry. For equipment, provision for removable individual floor plates shall be made for access / cable entries. Any wood work in container shall be treated against termite attack.	The outside wall structure of the container shall be sandwich type wall composed of 50mm thick rock wool insulation with 2 mm thick external and internal plain steel sheet. Vendor must provide cable/pipe entry openings and all seals in the walls wherever required. Vendor shall ensure that any openings, where the service lines are passing shall be sealed gas tight.	High quality Aluminium anodized extruded section, with MS decorative grill.	Higher grade Aluminium extruded section fully insulated with minimum thickness of 40mm for making heat proof.

10	Water Treatment package (Except large tanks)	15000(L)x 8400(W)	Standard size of the containers are 40' x 8' x 8.6' &20'x8'x8.6'. No of containers to be decided by the EPC Contractor.	1. The container floor structure to be a sandwich type flooring on top of the container skid beams, composed of a 2 mm thick bottom steel skin plate (enclosure) and with a 2 mm thick top steel skin plate with 40 mm thick rock wool insulation to achieve 1-hour fire rating. 2. Floor finish to be 25 mm thick anti vermin treated marine plywood with 2 mm thick , heavy duty anti-static PVC tiles, bonded to the surface. The thickness specified is a minimum; however, Vendor shall design higher thickness, sufficient to take the applied floor loads. Equipment within the container has bottom cable entry. For equipment, provision for removable individual floor plates shall be made for access / cable entries. Any wood work in container shall be treated against termite attack.	The outside wall structure of the container shall be sandwich type wall composed of 50mm thick rock wool insulation with 2 mm thick external and internal plain steel sheet. Vendor must provide cable/pipe entry openings and all seals in the walls wherever required. Vendor shall ensure that any openings, where the service lines are passing shall be sealed gas tight.	High quality Aluminium anodized extruded section, with MS decorative grill.	Higher grade Aluminium extruded section fully insulated with minimum thickness of 40mm for making heat proof.
11	Effluent Treatment Plant (Excluding Raw	30000(L)x 2000(W)	Standard size of the containers are 40' x 8' x 8.6'	1. The container floor structure to be a sandwich type flooring on top of the container skid beams, composed of a 2 mm thick bottom steel skin plate	The outside wall structure of the container shall be sandwich type wall composed of 50mm	High quality Aluminium anodized extruded section,	Higher grade Aluminium extruded section

	water storage tanks, Treated water storage Tanks and water disposal pumps)		&20'x8'x8.6'. No of containers to be decided by the EPC Contractor.	(enclosure) and with a 2 mm thick top steel skin plate with 40 mm thick rock wool insulation to achieve 1-hour fire rating. 2. Floor finish to be 25 mm thick anti vermin treated marine plywood with 2 mm thick , heavy duty anti-static PVC tiles, bonded to the surface. The thickness specified is a minimum; however, Vendor shall design higher thickness, sufficient to take the applied floor loads. Equipment within the container has bottom cable entry. For equipment, provision for removable individual floor plates shall be made for access / cable entries. Any wood work in container shall be treated against termite attack.	thick rock wool insulation with 2 mm thick external and internal plain steel sheet. Vendor must provide cable/pipe entry openings and all seals in the walls wherever required. Vendor shall ensure that any openings, where the service lines are passing shall be sealed gas tight.	with MS decorative grill.	fully insulated with minimum thickness of 40mm for making heat proof.