

PRE-BID QUERIES - TECHNICAL (1st Set)						Date :	29.06.2020
						Venue :	Via Email dt. 25.03.20,30.04.20 & 211.05.20
Sl. No.	Section No. of Bid Doc.	Page No.	Clause No.	Article, Paragraph No.	Requirement	Pre-bid Queries	FACT/FEDO Reply
<b>Sub :</b>		<b>NEW 1,650 TPD NPK PLANT FOR FACT-CD, AMBALAMEDU ON LSTK BASIS</b>					
<b>A</b>	<b>Bidder:</b>	<b>thyssenkrupp Industrial Solutions (India)</b>					
<b>A</b>	<b>PROCESS:</b>						
1	32647-11-PS-001-DP_R2, Project Description	5 of 7	3.3	ii	"Plant shall be capable of producing DAP 18:46:0 equivalent to 75 TPH NP 20:20:0:13"	Bidder understands that, Equivalent quantity of DAP as specified by Technology Supplier shall be final & binding. Owner to confirm.	Tender conditions shall prevail.
2	32647-11-PS-001-DP_R2, Project Description	5 of 7	3.3	iii	"Bidder shall carry out the design, detailed engineering of plant to produce different grades of NPKs such as 10:26:26 using Ammonia, Phosphoric Acid, Sulphuric acid, Muriate of Potash, Urea etc."	As per clause 7.2 of design basis. Bidder understands that, Plant shall be designed for production of NP (20:20:0:13S), DAP (18:46:0) and NPK (10:26:26) only. Owner to confirm.	Tender conditions shall prevail.
3	32647-11-PS-001-DP_R2, Project Description	5 of 7	3.3	iii	"Supply of equipment's, erection etc. for the Muriate of Potash storage & handling are EXCLUDED from the scope of BIDDER. However, the engineering documents /deliverables for using Muriate of Potash and associated facilities required in the ISBL shall be furnished by the BIDDER."	Bidder understands the following: i) Belt Conveyor for transporting Urea, Filler and Offspec material to the process building shall be sized for intake of Murate of Potash (MOP) considering NPK (10:26:26) production rate equivalent to 75 MTPH of 20:20:0:13S. ii) Provision shall be kept in the Rotary Diverter for feeding Potash to Potash bin in future. iii) Only space and cut out on floors shall be provided for installation of Potash bin, in future. Owner to confirm.	Bidder's understanding is correct.
4	32647-11-PS-001-DB_R2, Design Basis	11 of 29	4.5		"Crushing Strength of NPK Granules : Minimum 1.50 kg/cm2g (to be guaranteed)"	Crushing strength is influenced, among other factors, by source of Phosphoric acid and micro-impurities in it, effect of which cannot be fully addressed in design of the plant. Hence crushing strength of the product cannot be guaranteed.	Tender conditions shall prevail. Refer corrigendum No.6 point A.4 in this regard.
5	32647-11-PS-001-DB_R2, Design Basis	12 of 29	5.1		Steam quality is mentioned as 8 kgf/cm2 g and 168°C	Saturation temperature of steam at 8 kgf/cm2 g is 174°C. Wet steam is not suitable for pipe reactor flushing. Dry steam at min. 7 bar g pressure is required.	Noted. Bidder shall confirm the quantity required.
6	32647-11-PS-001-DB_R2, Design Basis	13 of 29	5.16		"BIDDER will ensure that sewerage /sanitary waste water is discharged to sanitary sewer septic tanks and soak pit as required in the existing plant facility."	Bidder proposes to provide septic tanks and soak pits within battery limit of proposed plant. Owner to confirm.	Bidder's understanding is correct.

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7	32647-11-PS-001-DB_R2, Design Basis	13 of 29	5.17		"Facilities associated with loading of final product onto Trucks/ Rail Wagons shall be in scope of BIDDER"	Bidder presumes, only bags carrying conveyors on bagging floor & discharge chutes up to railway platform is in Bidder's scope. Further distribution on platform / loading in to rail wagons is manual. For truck loading refer our query with serial no 15 of material handling below. Owner to confirm.	Clause no. 8.2.7 of doc. 32647-01-PS-001 PH2 (Design Philosophy Material Handling) is modified. Refer Corrigendum No. 6 point C.9 in this regard. Distribution conveyors on platform and mechanised loading in to rail wagons are not envisaged in bidder scope.
8	32647-11-PS-001-DB_R2, Design Basis	16 of 29	7.1		"BIDDER shall indicate their minimum achievable production capacity of each grade in the proposal."	As turndown capacity is already defined in clause 7.7, Bidder understands 'Minimum achievable capacity' mean minimum rated capacity of the plant. Owner to clarify.	Bidder's understanding is correct.
9	32647-11-PS-001-DB_R2, Design Basis	16 of 29 17 of 29	7.2 8.1.1	Para-3	"The plants shall be designed as per latest state of the art process technology Pre-Neutraliser + Pipe Reactor (PN+PR) of established Process Licensor"	Bidder shall provide PN and PR. However, use of PN or PR or both for production of any particular grade shall be as per Technology Supplier's recommendation.	Both PN+PR shall be used for production of all the specified product grades; only variation of the extent of usage of PN and PR for producing the particular grade shall be permitted.
10	32647-11-PS-001-DB_R2, Design Basis	16 of 29	7.5	Para-2	"All process pumps shall confirm to API 610 10th edition or higher."	Refer our query under Rotating serial number 3	Refer our reply under Rotating serial number 3.
11	32647-11-PS-001-DB_R2, Design Basis	17 of 29	8.1.6	Line-1	"Available fillers Sulphur muck/ gypsum shall be primarily considered for all NPK grades. "	Use of Sulphur Muck/Gypsum as filler, shall be considered based on Technology Supplier's recommendations.	Noted.
12	32647-11-PS-001-DB_R2, Design Basis	17 of 29	8.1.6	Line -2	"For sulphur muck addition from the common shed to plant suitable crushers shall be considered."	For selection of suitable crusher, Owner is requested to provide the following physical data for sulphur muck: i) Particle size distribution before crushing ii) Angle of repose iii) Bond Work Index	Sample will be provided to bidder's for analysis.
13	32647-11-PS-001-DB_R2, Design Basis	18 of 29	8.1.10	Line-3&4	"Granulator shall be provided with reversible motor"	Reversible motor shall be provided, if recommended by Technology Supplier.	Tender conditions shall prevail.
14	32647-11-PS-001-DB_R2, Design Basis	18 of 29	8.1.10	Line-4 & 5	"Granulation loop configuration shall be optimized to permit the manufacture of all NPK grades."	Bidder understands that, 'All NPK grades' means Grades mentioned in Design Basis i.e. NP (20:20:0:13s), DAP (18:46:0) and NPK (10:26:26). No other NPK grade shall be considered.	Noted.
15	32647-11-PS-001-DB_R2, Design Basis	18 of 29	8.1.15		"Auto start facility for Dry Circulation loop to be provided."	Does it mean automatic sequential start of equipment in Dry section? Owner to confirm.	Bidder's understanding is correct.

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16	32647-11-PS-001-DB_R2, Design Basis	20 of 29	8.2.1	b	"Phosphoric acid day tank – 2 No.s Considering 24 hrs peak demand"	Bidder wants to know the reason for having two Day tanks. Is one tank standby for the other? In that case, total two number of Phosphoric Acid Feed pumps common for both Day tanks, shall be considered. Owner to confirm	Bidder's understanding is correct.
17	32647-11-PS-001-DB_R2, Design Basis	20 of 29	8.2.1	Para-3 Bullet-4	"Dehumidification & Dedusting facility as required." – for Raw Material storage	Bidder feels, Dehumidification system for Raw Material storage shed will be capital intensive and is not necessary as the Raw Materials are intended to be processed in the NPK plant shortly. Hence, Bidder proposes not to consider the same. Owner to confirm acceptance.	Tender conditions shall prevail.
18	32647-11-PS-001-DB_R2, Design Basis	20 of 29	8.2.2	viii	"Dehumidification and De-dusting facility at the Urea godown and bagging plant as required."	Power and steam requirement for dehumidification system for Urea godown, will be very high and ultimately may prove uneconomical. Owner to re-confirm the requirement.	Tender conditions shall prevail.
19	32647-11-PS-001-DB_R2, Design Basis	21 of 29	8.2.2	vi	"Product from NPK plant shall be conveyed directly to the existing Urea bagging facility area via screen house utilizing existing Urea Gantry."	Bidder understands that, product from NPK plant will be taken to Urea Bagging plant area through screen house bypassing the screens (Actual screening is not required). Owner to confirm.	Actual screening is required along with bypassing facility whenever required., as indicated in SFD of Product handling facility.
20	32647-11-PS-001-DB_R2, Design Basis	25 of 29	9.1	vii; ix	Granulator MOC has been repeated. MOC of Shell/Venturi has been defined against Tail Gas Scrubber	Bidder understands that it is typographical error. Correct requirement is: viii. Granulator Scrubber: Shell/Venturi : SS 904L for bottom wetted part and top portion CSRL ix. Tail Gas Scrubber: MOC CSRL Owner to confirm	Noted . Clause Viii) deleted. Refer Corrigendum No.6 clause A.7 in this regard. ix)Tender conditions shall prevail
21	32647-11-PS-001-DB_R2, Design Basis	25 of 29	9.1	xi	Phosphoric acid / Circulating Pumps for Scrubbers Casing/impeller and all wetted parts : Sanicro-28 or equivalent	Bidder based on its past experience intends to use pumps of CD4MCuN MOC. Owner to confirm.	Tender conditions shall prevail.
22	32647-11-PS-001-DB_R2, Design Basis & 32647-11-PS-001-PH_R2, Design Philosophy – Process	13 of 29 18 of 29 27 of 29	5.15 8.1.12 11.1	Para-3	"Effluent from the plant in abnormal conditions shall be collected and pumped to existing ETP system in the FACT-CD."	Bidder understands, the effluent lines from NPK plant to existing ETP shall be terminated at battery limit i.e. at 1m distance from proposed NPK plant. Owner to confirm acceptance.	Tender conditions shall prevail.

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23	32647-11-PS-001-PH_R2, Design Philosophy – Process & 32647-11-PS-001-SW_R2, Scope of Work	10 of 12 13 of 16	14 14.2 5.5	Table-1: 2/3	Number of receivers defined as Two. Number of Receivers: Plant Air - 2 Instrument Air - 1	Owner to confirm number of receivers required.	Two Air Receivers required. Refer corrigendum No.6 Point A.8 in this regard	
24	32647-11-PS-001-PGT_R3, Performance Guarantee Test	4 of 12	1.3.2	b	“Product temperature at the outlet of final product cooler shall be less than or equal to 45oC.”	To achieve desired product temperature, air chilling by external means may be required. One of the option could be installation of a Vapour Absorption Machine (VAM) type chiller, for which LP steam would be required. Owner to confirm, if LP steam of adequate quantity could be made available for use in Air Chiller.	Bidder shall confirm the quantity & quality of LP steam required.	
25	32647-11-PS-001-PGT_R3, Performance Guarantee Test	5 of 12	1.4.2	Note-2	“Material balance calculations certified by the Process Licensor shall be furnished by the BIDDER in the bid “	It is not possible to provide Mass Balance at this stage. HMB will be provided during Basic Engineering stage after order. However, guaranteed consumption figures obtained from Licensor shall be provided.	Tender Conditions Shall Prevail	
26	32647-11-PS-001-PGT_R3, Performance Guarantee Test	5 of 12	1.4.2	Note-3	“Heat balance calculations certified by the Process Licensor shall be furnished by the BIDDER in the bid towards the guaranteed drying energy per MT of each product. “	It is not possible to provide Heat Balance at this stage of the project. HMB will be provided during Basic Engineering stage after order.	Tender Conditions Shall Prevail	
27	-	-	-	-	Condensate Recovery	LP steam used in air heaters will generate steam condensate. Is there a need for condensate recovery system? Owner to confirm. If yes, condensate will be provided in pipeline at 1m distance from the proposed plant battery limit.	Bidder to confirm the quantity & specification of condensate generated.	
28	-	-	-	-	Potable Water	Supply of Potable Water has not been defined in ITB. Potable Water is required for Safety Showers and drinking & sanitary purposes.Owner to provide the same at battery limit.	Bidder to confirm the quantity required.	
29	-	-	-	-	Cooling Water	Cooling water is required for Air dehumidification unit and air chilling unit in NPK plant. Owner to confirm whether cooling water will be made available at the NPK plant battery limit.	Only Raw water is available. Bidder can consider package cooling tower with water treatment facility if required.	

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<b>B</b>	<b>ROTATING EQUIPMENT:</b>						
1	DESIGN PHILOSOPHY (ROTATING EQUIPMENT) Doc # 32647-01-PS-001 PH1, Rev 1	6 of 16	2.1.3		All process pumps shall have Mechanical Seals	Slurry pumps in process service will be equipped with expeller and gland packing or static seals instead of mechanical seals. This is to avoid damage of mechanical seals by abrasive nature of slurry. Owner/ PMC to confirm.	Noted
2	DESIGN PHILOSOPHY (ROTATING EQUIPMENT) Doc # 32647-01-PS-001 PH1, Rev 1	8 of 16	2.4		The Screw Compressor (if any) shall be designed as per API 619 4th edition or above. If not, specifically mentioned the screw compressor may be manufacturer standard	Bidder request Owner /PMC to accept manufacturer's standard screw compressor package, as these compressors are available in standard OEM supply range of products meeting all process conditions. Owner /PMC to confirm.	The Screw Compressor (if any) shall be designed as per API 619 4th edition or above. Refer corrigendum-6 point C.1 in this regard.
3	DESIGN PHILOSOPHY (ROTATING EQUIPMENT) Doc # 32647-01-PS-001 PH1, Rev 1	8 of 16	2.5		The process pumps shall be designed as per API 610, latest 10th edition or above	For NPK plant main process pumps are slurry pumps and as per Bidder's experience slurry pumps do not conform to API 610 std. Slurry pumps are non API pumps conforming to manufacturer standard only. Please confirm.	Manufacturer's standard is acceptable for Slurry pumps , all other process pumps shall be designed as per API 610, latest 10th edition or above. Refer corrigendum-6 point C.2 in this regard.
4	DESIGN PHILOSOPHY (ROTATING EQUIPMENT) Doc # 32647-01-PS-001 PH1, Rev 1	9 of 16	2.5.1		All pumps shall have continuously rising head curve from any specified operating point to shut off point. Pumps running in parallel shall have equal head rise to shut off point	This requirement shall be adhered to for API pumps. For non-API pumps and slurry pumps shut off head may be dropping beyond minimum continuous stable flow (towards shut-off). Owner/PMC to confirm.	Tender conditions shall prevail.
5	DESIGN PHILOSOPHY (ROTATING EQUIPMENT) Doc # 32647-01-PS-001 PH1, Rev 1	9 of 16	2.5.12		Mechanical seal as per sub vendor list shall be used. Only cartridge type balanced mechanical seal shall be used	This requirement shall be complied with for API 610 pumps. For non-API pumps respective design standard requirements will govern. Owner/PMC to confirm.	Tender conditions shall prevail.

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6	DESIGN PHILOSOPHY (ROTATING EQUIPMENT) Doc # 32647-01-PS-001 PH1, Rev 1	11 of 16	2.8		Centrifugal fans shall be designed as per API 673, latest edition for critical services and for non-critical services AMCA / manufacturer's standard shall be applicable.	All fans including critical service fans shall be as per manufacturer standard. Bidder confirms based on past experience of DAP / NPK plants that, API 673 std. fans are not required for the applications in DAP / NPK plant. Owner/PMC to confirm.	Tender conditions shall prevail.	
7	SPECIAL REQUIREMENT OF THE PROJECT (INSTRUMENTATION), Doc # 32647-01-PS-001 SPL, Rev-R1	6 of 41	5.3.2		The instrument air compressor shall be provided with one PLC handling all the compressors.	Owner/ PMC to note that, due to OEM's standard manufacturing range of compressors, these compressors are having their standard microcontroller/ processor based local panels mounted on compressor skids with standard instrumentation. Hence bidder request Owner/ PMC to accept OEM's standard offering controller & instrumentation in place of distributed PLCs/ control unit. Owner/ PMC to confirm.	OEM microcontroller is acceptable. All the interlocks and monitoring for safe operation, start-up and shutdown in case of emergencies for compressor shall be possible by the controller. Repeat indications shall be made available to the main control room DCS for monitoring.	
<b>C</b>	<b>STATIC EQUIPMENT:</b>							
1	DESIGN PHILOSOPHY STATIC	5/34	1.3	Notes	Specifications of all critical equipment including those specified by the process licensor shall be furnished in the technical bid.	Only the equipment list with critical parameters like capacity, Numbers & MOC shall be submitted with bid. Owner / PMC to confirm.	Tender conditions shall prevail	
2	-	9/34	1.11.1	-	The minimum requirement of the materials shall be as per the plant equipment metallurgy covered under specific process design guidelines. However superior materials as per the recommendation of Process Licensor's may be selected which shall be indicated in the Bid by the LSTK Contractor.	Contractor shall select suitable material of construction during execution in case multiple choices are available in process licensor datasheet	Tender conditions shall prevail	
3	DESIGN PHILOSOPHY MATERIAL HANDLING	7/18	5.3 5.4		Granulator:  Dryer:  Design capacity shall be considered as min. 20% more than the rated capacity.	Operating and Design capacity of Granulator and Dryer shall be followed as per process licensor datasheet.	Refer corrigendum-6 point C.3 in this regard.	

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1	Gear operation philosophy for valves	11/40 & 19/40		2.11.18 clause (d and e) & General 5.5	Gear operation philosophy is indicated for Gate and Plug valves under clause 2.11.18 (d & e) and for valves under clause 5.5	Gear operation philosophy indicated under clause under clause 2.11.18 (d & e) and under clause 5.5 is not matching. We propose to follow tkIS India gear operation philosophy for valves :	Tender conditions shall prevail																																																																																																						
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2	FITTINGS END CONNECTIONS, FLANGE FACINGSAND GASKETS	12/40		2.13.1	In galvanized steel pipe - flanged in sizes 150NB and larger, threaded in smaller sizes	In Galv piping we propose to use threaded joints up to 100 NB. For connections above 100 NB will be butt welded and locally galvanized (externally).	Tender conditions shall prevail																																																																																																						
3		11/40		2.11.18	Gate valves shall be provided with pressure equalizing by-passes and by-pass valves of the minimum sizes and ratings listed in Table below when a differential pressure approximately equal to the pressure rating of the valve may exist across the closed valve (eg. 600 lb across a 600 lb valve).	We propose to follow tkIS India By-pass philosophy for gate valves as indicated below. ASME 150 Class on sizes 26" and above ASME 300 Class on sizes 16" and above ASME 600 Class on sizes 6" and above ASME 900 Class on sizes 4" and above ASME 1500 Class on sizes 4" and above ASME 2500 Class on sizes 3" and above	Tender conditions shall prevail																																																																																																						
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PRE-BID QUERIES - TECHNICAL (1st Set)						Date :	29.06.2020
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Sl. No.	Section No. of Bid Doc.	Page No.	Clause No.	Article, Paragraph No.	Requirement	Pre-bid Queries	FACT/FEDO Reply
<b>Sub :</b> NEW 1,650 TPD NPK PLANT FOR FACT-CD, AMBALAMEDU ON LSTK BASIS							
<b>A</b>	<b>Bidder:</b>	<b>thyssenkrupp Industrial Solutions (India)</b>					
4	IDENTIFICATION	18/40	-	1.2.0 (i)	i All piping larger than 50 NB shall be prefabricated. Pipes smaller than 50 NB shall be delivered in commercial lengths, properly marked with type and material.10% excess pipe shall be supplied for all sizes and materials.	As per our understanding this requirement is applicable only for packaged items.	As per tender spec. Contractor has to set up a prefabrication shop at site
5	Spares	NA	-	-	NA	Any spare requirement is not indicated for piping items, FACT/FEDO to indicate requirement for mandatory spares if any.	Tender conditions shall prevail
6	Special requirement- Piping	5 of 40	26		Plotter at site shall be decided in consultation with Owner	Plotter is not envisaged at site, hence not considered in Bidder's scope. Please confirm.	Tender conditions shall prevail
<b>E</b>	<b>MATERIAL HANDLING:</b>						
1.	32647-01-PS-001 PH2	4/18	2	Table 12 th row	European Materials Handling Federation (FEM) for design of Hoisting appliances	Applicable IS codes and standards shall be used instead of FEM for Hoists. Please confirm.	Noted.
2.	32647-01-PS-001 PH2	5/18	3	2 <sup>nd</sup> Para	Outside complex fertilizer plant bidder to avoid bucket elevator for the product handling.	Bidder proposes to use bucket elevator in screen house situated outside process plant. Please confirm.	Bucket Elevator may be used inside complex fertiliser plant, bulk product silo, screen house and raw material warehouse.
3.	32647-01-PS-001 PH2	6/18	3	2 <sup>nd</sup> para	There shall be two series of conveyor systems (1 Standby + 1 Working) from the complex fertilizer plant (From product cooler onwards) to bulk product silo including storing conveyor.	Bidder proposes to have <b>one series of product conveyors</b> instead of 1 working + 1 standby in order to reduce project cost and also conveyors are generally reliable and do not envisage standby requirement based on past experience. Please confirm	Tender conditions shall prevail
4.	32647-01-PS-001 PH2	6/18	4	4.1.4	Raw material shall be conveyed through two series of conveyor system with belt weigher to feed to the NPK process house (1 Working + 1 standby).	Bidder proposes to have <b>one series of raw material feeding conveyors</b> instead of 1 working + 1 standby in order to reduce project cost and also conveyors are generally reliable and do not envisage standby requirement based on past experience. Please confirm	Refer corrigendum-6 point C.4 in this regard
5.	32647-01-PS-001 PH2	6/18	4	4.1.6	Dehumidifier and de-dusting facility shall be provided in the raw material storage facility.	Refer our query @ sr no 17 of process section	Tender conditions shall prevail



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6.	32647-01-PS-001 PH2	6/18	4	4.1.7	Automatic bag slitting machines (Minimum two) shall be provided for bag cutting and completely emptying the raw material bags such as urea bags.	Bidder understands that Urea is received in raw material storage (by owner) in 50 Kgs bags. Kindly confirm.	Bidder understanding is correct. Urea bag shall be 45 kgs/50 kgs.
7.	32647-01-PS-001 PH2	8/18	5.5	5.5.7	Bucket shall be made of min. SS-304 material.	Bidder proposes to use bucket MOC as per Licensor recommendations. The same shall be extended to bucket elevators outside process plant. Client to confirm.	Refer Corrigendum-6 point C.6 in this regard.
8.	32647-01-PS-001 PH2	8/18	5.6	5.6.1	The Vibrating Screens shall be electro-mechanical, double deck type.	Bidder shall use the vibrating screens inside NPK process plant as per process Licensor's recommendation for screen type and MOC both. Please confirm.	Refer: Note - Page 17 of 18, of Tender document 32647-01-PS-001 PH2 (DESIGN PHILOSOPHY MATERIAL HANDLING)
9.	32647-01-PS-001 PH2	9/18	5.8	5.8.4	There shall be one series of conveyor of 120 TPH capacity to divert new 1,650 TPD complex fertilizer plant product to the existing 2 X 1,000 TPD NP plant product	Client shall provide the existing conveyor GA drawing, civil and structural drawings of existing NPK conveyors gantry for interface connection	Available drawings provided as annexures in Corrigendum-6
10.	32647-01-PS-001 PH2	11/18	5.9	5.9.2	Transfer Chutes: The chutes shall be fabricated from stainless steel plates (min. 6 mm thk.) conforming to SS 304 with mirror finished internal surface.	Bidder proposes to use all bulk material transfer chutes carbon steel instead of SS304 based on past experience and to reduce overall project cost. Please confirm.	Tender condition shall prevail
11.	32647-01-PS-001 PH2	11/18	6.2	6.2.1	Tripper Unit/Shuttle conveyor: <b>Bulk raw material silo</b> shall be fed by storing conveyor with travelling tripper unit/shuttle conveyor of adequate capacity. Rail mounted movable travelling Trippers/ shuttle conveyors (2 Nos. ie. 1 working + 1 stand by)	Bidder understands that "bulk raw material Silo" is a typo error as it is under NPK Silo section. It is to be read as "Bulk Product Material Silo". Please confirm.	Bidder's understanding is correct. Refer corrigendum-6 point C. 8 in this regard.
12.	32647-01-PS-001 PH2	11/18	6.2	6.2.5	Tripper and Shuttle Conveyor: Monorail & electric hoist shall be provided for lifting conveyor drum to floors. Monorail all along the tripper travel length to facilitate maintenance of tripper shall be provided.	1. Monorail and electric hoist shall be provided at drive end and extendable up to tripper parking location at drive end for tripper pulleys and components maintenance. Monorail and electric hoist all along the length of tripper is not normal practice and hence it is not envisaged. Please confirm.	Tender condition shall prevail

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13.	32647-01-PS-001 PH2	13/18	8	8.1/5	Total Bunker Capacity : Existing (6 nos.)	1. Bidder understands existing bunkers to be used. Client to provide the capacity of existing bunkers, number of outlets, MOC and its GA drawing. 2. Client to provide the Bagging building layout drawings of all floor plans and suitable elevations drawings.	Suitability of existing <u>concrete bunkers</u> for the service shall be verified by bidder, if not suitable alternate facility shall be provided by vendor. Any modification/ demolition in this regard shall be in bidder's scope. Available drawings provided as annexures in Corrigendum-6.
14.	32647-01-PS-001 PH2	13/18	8	8.1/9&10	Wagon Loading and Wagon loading platform: Existing	Bidder presumes, only bags carrying conveyors on bagging floor & discharge chutes up to railway platform is in Bidder's scope. Further distribution on platform / loading in to rail wagons is manual. For truck loading refer our query with serial no 15 below. Owner to confirm.	Refer corrigendum-6 point C.9 in this regard.
15.	32647-01-PS-001 PH2	13/18	8	8.1/11	Truck Loading: Approx. 20 MT per Truck, through fixed chute with portable conveyor arrangement, if required	Client to provide the existing truck loading philosophy, capacity and the relevant truck loading area drawings for understanding bidders scope and necessary inclusion.	Vendor may visit FACT CD for more clarity in this regard.
16.	32647-01-PS-001 PH2	13/18	8.2	8.2.7	Suitable provision shall be made for loading in closed wagon with side doors (42 wagons, BCNA/BCN type of approx. 2680 MT capacity in permitted time of 7 hrs.)	Refer our query with serial no 14 above	Refer our reply with serial no 14 above
17.	32647-01-PS-001 PH2	14/18	8.4	8.4.3	Feeding to bunkers shall be automatic with the help of two series of conveyors system (1 Working + 1 standby).	Incoming conveyor from new NPK bulkSilo (existing Urea Bulk silo) to bagging plant is only one series and hence 1 working + 1 standby series of conveyors above bunkers won't be required feeding to bunkers. Bidder proposes to use one series of conveyors feeding to bunkers. Please confirm.	Refer Corrigendum-6 point C.10 in this regard

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A Bidder:		thyssenkrupp Industrial Solutions (India)					
18.	32647-01-PS-001 PH2	14/18	8.3	8.3.2	Dismantling and shifting of (to the scrap yard or specific location within the company premises) discarded equipments such as conveyors, bucket elevators, diverters, bagging machines, stitching machines etc of the defunct urea silo, defunct urea conveyor gantry and defunct urea bagging plant shall be under the scope of vendor	<p>Client to provide following drawings to quantify the dismantling work of existing equipment and for the new proposed NPK Plant.</p> <ol style="list-style-type: none"> <li>1) Overall plot plan (ACAD File) with co-ordinates, North and prevailing wind direction.</li> <li>2) Contour survey Drawing of the proposed plot plan (various elevations of the proposed area required)</li> <li>3) Existing Urea Silo GA drawings-Plan and Sectional.</li> <li>4) Tripper conveyor GA drawing inside Urea Silo</li> <li>5) Transfer tower drawing-Plan and sectional (of Urea product conveyor entry and Tripper tail end)</li> <li>6) Existing Urea Product conveyor GA Drawing and Cross sectional drawing (the conveyor which is going from Urea Silo to Urea Bagging)</li> <li>7) Existing Urea Bagging Drawing (floor plans and elevation drawings)</li> <li>8) Railway platform drawing (plan and sectional)</li> <li>9) Existing NPK plant product conveyor GA and Cross section drawings for interface engineering.</li> <li>10) Foundation &amp; superstructure AS BUILT drawings of following existing structures: <ol style="list-style-type: none"> <li>1) Existing Urea godown</li> <li>2) Existing Urea bagging plant</li> <li>3) Existing product conveyer</li> <li>4) Existing NPK product conveyor drawing</li> </ol> </li> <li>11) All existing equipment (conveyors, bucket elevators, diverters, bagging m/c, conveyor gantry, bagging plant etc) to be dismantled GA drawing, dimensions, weight details.</li> <li>12) Existing empty bag handling area layout drawings (plan and elevations)</li> </ol>	Available drawings/documents provided as annexures in Corrigendum-6

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19	32647-01-PS-001 PH2					Client to clarify following points related to material handling: 1) As existing Silo shall be used for product storage, capacity shall be with in available space after leaving space for pay loader movement, reclaim conveyor and screen house. 2) Client to provide the existing system description and drawings of existing urea storage and reclaiming facility including screen house (if any) to check whether the scheme/space can be utilized.	Available drawings/documents provided as annexures in Corrigendum-6
20.	Design Philosophy of Material handling :32647:01:PS-001 PH2	8	5.6	5.6.1	Vibrating screens shall be Electro-Mechanical, double deck type.	Vibrating screens with in process plant shall be unbalance motor vibrator type as per the latest technology. No. of Decks shall be as per Licensor's specification.	Refer: Note - Page 17 of 18, of Tender document 32647-01-PS-001 PH2 (DESIGN PHILOSOPHY MATERIAL HANDLING)
21.				5.6.2	The deck of vibrating screening feeder shall have continuous solid deck section in the impact zone under direct material fall and remaining deck shall be fitted with perforated assembly	Vibrating feeder shall have continuous solid deck section / plate in the impact zone under direct material fall, however no perforated assembly for remaining section.	Vendor shall clarify query
22.				5.6.3	Vibrating screens feeder shall be mounted on floor-----	Vibrating screen feeders shall be mounted directly on the inlet of vibrating screens.	Noted
23.				5.6.4	Vibrator bearings shall be grease lubricated---	Vibrator motor bearings are sealed for life long bearings.	Noted
24.				5.6.5	Suitable sealing arrangement shall be provided between vibrating structure-----	The Structure is not vibrating only screen cloth vibrates.	Tender condition shall prevail.
25.				5.6.6	Proper arrangement to avoid dust ingress in to lubricant of eccentric shaft-----	There is no eccentric shaft mechanism in screens & feeders recommended by Licensor.	Refer: Note - Page 17 of 18, of Tender document 32647-01-PS-001 PH2 (DESIGN PHILOSOPHY MATERIAL HANDLING)

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26.		8	5.7		Lump Crusher: Material of construction of all the contact parts of complex fertilizer shall be min. SS 304. Casing of the lump crushers should be of thickness not less than 20 mm of carbon steel in the case of chain type crushers.	Based on Bidders past experience, this is critical equipment hence following configuration for Lump crusher is proposed. Owner to confirm. Dual rotor type chain mill. Housing impact area thickness: 16 mm in Carbon steel and other areas 13 mm in carbon steel.Chain MOC: Alloy steel Impact liner: 50 mm thick Rubber. Non-impact liner shall be 5 mm thick. SS 304. Rotor: Carbon steel	Refer Corrigendum-6 point C 7 in this regard
<b>F</b>	<b>CIVIL &amp; STRUCTURAL:</b>						
1	DESIGN PHILOSOPHY- CIVIL & STRUCTURAL WORKS 32647-12-PS-001-DP	4 OF 20	-	BROAD PLANT DESCRIPTION	TENTATIVE LIST OF BUILDINGS -	Bidder understands that tentative list of buildings is for general information and the Scope of structures is as per scope mentioned under process document which mainly consists of following: 1) New NPK process plant 2) New Raw material storage shed (5000 MT) 3) New Conveyer gantry from raw material storage shed to NPK Plant 4) New Conveyer gantry from NPK Plant to existing Urea Bulk Silo. 5) New Conveyer gantry from NPK Plant to existing NP conveyer gantry. 6) Supporting structural arrangements for new material handling equipment inside existing Urea Godown. 7) Supporting structural arrangements for new material handling equipment inside existing Urea Bagging.	Structures/buildings not specified but implied necessary for the successful operation of the 1650 MTPD NPK plant shall be in the scope of the Contractor.
2	32647-12-PS-001-DP	4 OF 20	-	BROAD PLANT DESCRIPTION	TYPE OF BUILDING -MOC	Whether type / MOC of NPK plant process structure can be a combination of RCC + structural steel?	Bidder can consider Building as RCC & Structural steels for intermediate platform, roof structure & side claddings.
3	32647-12-PS-001-DP	7 OF 20	-	BALANCE OF PLANTS	Landscaping in plant area and development of Green Belt all around/inside the Plant as per MOEF requirements.	Please clarify exact scope of landscaping / development of Green Belt in line with present LSTK scope.	Green belt and Landscaping have been removed from the scope of Bidder. Refer Corrigendum- 6 point -B.2 in this regard.

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4	32647-12-PS-001-DP	8 OF 20	1.2	Site Grading	Site Grading	Bidder proposes that graded site including cutting of trees will be made available to LSTK Contractor.	Tender condition prevails No graded site will be provided. The LSTK bidder has to plan the layout of plant to minimise the cutting and filling of the area. Refer doc. 32647-03-AP-00001 R0 for contour details.
5	32647-12-PS-001-DP	14 OF 20	1.12	Structures, buildings etc.	Provision for one more storey in addition to the required no. of storeys	Bidder understands that provision for one more storey in design, is not applicable for buildings / structures in present scope such as NPK process building (control room & substation is part of process building), common raw material storage shed.	All process buildings whichever is planned in RCC with RCC roof slab shall have provision for one more storey in addition to the required no. of storeys.
6	DESIGN BASIS- CIVIL & STRUCTURAL WORKS32647-12-PS-001-DB	11 OF 35, 28 OF 35	4.1.1, 6	STRUCTURAL CONCRETE, ANALYSIS OF RCC STRUCTURES	Concrete Grade-M35 for Sub-structures / Pilecap & Pedestal	Bidders proposes that Concrete grade of substructures/ pilecap & Pedestal will be considered as M30 based on environmental exposure condition and soil type as per confirmatory soil investigation.	Tender condition prevails
7	32647-12-PS-001-DB	11 OF 35, 30 OF 35	4.1.2 7.1.6	FOUNDATION S LEAN CONCRETE FOUNDATION S	80 mm thickness of Lean concrete, PCC levelling course	Bidder proposes that thickness of Lean concrete / PCC levelling course will be considered as 50mm in general, and 75 mm for liquid retaining structures.	Tender condition prevails
8	32647-12-PS-001-DB	PAGE 29 OF 35	7.1.1	Minimum cover for reinforcement	Foundations – 75mm	This mismatches with covers mentioned in Cl. 4.1.5 CONCRETE COVER (PAGE 12 OF 35). Clear cover values (50 mm) as mentioned in Cl 4.1.5 will be followed, please confirm.	Please consider the foundation cover of 75mm. Refer corrigendum-6 point no. B. 4 in this regard.
9	32647-12-PS-001-DP	PAGE 10 OF 20	1.6	Surface Drainage	Storm Water Drains connection to the existing drainage system by suitable tie-in points	Bidder considers new storm water drainage system to be connected to the nearest existing drain.	Bidder's understanding is correct.
10	32647-12-PS-001-DP	PAGE 11 OF 20	1.9	Sewage Disposal Scheme	Sanitary sewer shall be led into STP leading to waste water treatment plant (WWTP)	Refer our query serial no 6 of process.	Separate septic tank and soak pit shall be constructed by the LSTK bidder within the ISBL.

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11	DESIGN PHILOSOPHY-CIVIL & STRUCTURAL WORKS. 32647-12-PS-001-DP	3 of 20		General, 3	Construction Power and Construction water scope-shall be arranged by LSTK Contractor	As per Special Condition of Contract clause 5.8 (page33 of 45), Construction water and power shall be provided, free of cost, by OWNER at a single location within battery limit of new NPK Plant.Please confirm.	Special Condition of Contract prevails. This clause shall be read in conjunction with article 18 of G.C.C. Refer corrigendum-6 point B.1 in this regard.
12		7 of 20	1.1.5	Detailed Scope	Underground obstructions and utilities like old pipelines, cables, concrete, structures, etc. removal as per requirement along with required labour and equipment shall be in the scope of CONTRACTOR.	Kindly provide the drawings of the existing underground and above ground facilities which needs to be dismantled / rerouted. Bidder will conduct underground scanning during execution and submit the report to the owner. If any dismantling / rerouting is required, same shall be carried out by owner OR it is a change order for the Bidder.	Underground obstructions and utilities like old pipelines, cables, concrete, structures, etc. removal shall be carried out by the OWNER before issue of Notice to Proceed. Refer corrigendum-6 B.3 in this regard
13			1.3		Disposal of surplus earth:  The CONTRACTOR shall dispose-off all surplus and unserviceable earth (if any), outside the plant or point earmarked by owner, at his own cost with the consent of OWNER.....	Bidder propose to dispose the surplus earth at the area provided by FACT within the FACT plant boundary limit. No approvals have been considered in bidders scope.	Bidders understanding is correct
14		8 of 20	1.4		<b>Site cleaning</b> During construction and on completion of construction (inclusive all internal and external finishes), cleaning all the debris, waste materials scattered in and around the site and disposal of the same shall be in the scope of the CONTRACTOR.	Bidder propose to dispose the construction waste, debris etc. at the area provided by FACT within the FACT plant boundary limit. No approvals has been considered in bidders scope.	Bidders understanding is correct

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						Venue :	Via Email dt. 25.03.20,30.04.20 & 211.05.20
Sub :	NEW 1,650 TPD NPK PLANT FOR FACT-CD, AMBALAMEDU ON LSTK BASIS						
Sl. No.	Section No. of Bid Doc.	Page No.	Clause No.	Article, Paragraph No.	Requirement	Pre-bid Queries	FACT/FEDO Reply
<b>A</b>	<b>Bidder:</b>	<b>thyssenkrupp Industrial Solutions (India)</b>					
<b>G</b>	<b>ELECTRICAL:</b>						
1	32647-13-PS-001-DP	2 of 16	1	-	Electrical workshop with 5T EOT crane...	Is separate building for electrical workshop required? Please clarify. If yes, then it is requested to provide size and arrangement plan.	Workshop building can be either separate or attached to the substation building. Sufficient space should be available for the overhauling of the HT motors and storage of the spare LT motors of the plant. Also separate rest rooms and office room should also be there inside the building. The vendor shall design the layout suitably, incorporating these requirements.
2	32647-13-PS-001-DP	7 of 16	6	-	Ventilation/Pressurisation requirement of sub-station building	It is requested to specify ventilation and Pressurisation requirement of substation building for cellar as well as switchgear room and battery room	Ventilation is required for the building. Pressurisation is not required.
3	32647-13-PS-001-DP	8 of 16	6	-	DG set shall be installed outside.....	ITB specifies Portal frame with roofing sheet for DG set. Since DG set will be with acoustic enclosure, roofing sheet may not be required. DG set in enclosure is suitable for outdoor installation. It is requested to check and review requirement of Portal frame with roofing sheet.	Portal frame with roofing sheet for DG set shall be provided as per the ITB.
4	32647-13-PS-001-DP	7 of 16	6	-	Transformer room/bays	Bidder understands that transformer room/bay is open to sky type of construction and there is no roof over transformer bay. Please confirm whether bidder understanding is correct.	RCC roof shall be provided for transformer room/bay
5	32647-13-PS-001-DP	8 of 16, 9 of 16	7.0, 7.1, 7.3	-	Control & Monitoring, Protection, metering & Recording system,	ITB specifies 3.3kV feeders & critical 0.415 kV feeders shall have facilities for remote control. Further ITB specifies all relays and meters..... Power management system/SCADA Bidder understands that only provision has to be made for control and communication with remote device/PMS/SCADA. Engineering and supply of PMS/SCADA is not in scope of bidder. Please confirm with bidder understanding.	Engineering and supply of PMS/SCADA is not in scope of bidder. But the provisions for the interface with the remote device/PMS/SCADA shall be provided.



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<b>A</b>	<b>Bidder:</b>	<b>thyssenkrupp Industrial Solutions (India)</b>					
6	32647-13-PS-001-DP	11 of 16	8.2	-	MV switchboard/MCC	ITB specifies meters shall be suitable for communication with LMS system.  Bidder understands that only provision for communication with LMS shall be made and engineering and supply of LMS system is not in bidder's scope. Please confirm with bidders understanding	Engineering and supply of LMS system is not in bidder's scope. But the meters should have the facility for communication with EMS.
7	32647-13-PS-001-DP	10 of 16	8.2	-	MV switchboard/MCC	It is requested to clarify whether a) Switchboard is with double front/single front construction! b) Components of starter module for various rating of motor ( whether switch fuse or MCCB/MPCB, thermal overload relay/ motor protection device, ammeter, contactor etc.)	a) Switchboard can either be double front or single front construction type based on Vendors design criterion of the substation switchgear. b)The details of motor starter feeder components are provided in data sheet 32647-13-DA-92401.
8	32647-13-PS-001-DP	7 of 16	6	-	Layout of substation- Cable gallery shall have a minimum clear height of 2.2 M ( i.e lowest cable tray shall run at a height of 2.2 metre from finished floor)	Generally, cable trays are arranged on both sides and walkway is provided with clear height of 2 metre for movement. With the arrangement proposed in ITB it will increase height of cable cellar and in turn height of building which is not required. It is requested to review this requirement as it has impact on size of building.	Clear height of 2M is acceptable.
<b>H</b>	<b>INSTRUMENTATION:</b>						
1	32647-01-PS-001 (INST)	SPL 3 of 41	5.1.1		Bidder's technical proposal shall include the bill of material of the major items considered in the control room with minimal details such as make, model, quantity etc.	Major item in control room will be indicated in proposal, however details such as make, model, quantity etc. will be indicated after award of contract & order placement.	Accepted
2	32647-14-PS-001 INST	SPR 7 of 8	16		VIBRATION MONITORING SYSTEM	Vibration Monitoring is not applicable.	Vibration monitoring as applicable as per 32647-01-PS-001 PH1 shall be provided.
3	32647-14-PS-0001 INST	SV 7 of 12			CONTROL/ ON-OFF VALVES  (BALL) indicates Metso Automation	Vendor list indicates parent company name, considering Merger & Acquisition by parent company order can be placed on acquired company. E.g. RMEBS by Metso.	Noted

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<b>A</b>	<b>Bidder:</b>	<b>thyssenkrupp Industrial Solutions (India)</b>						
4	14ES008/15- FIELD INSTRUMENT ERECTION SPECIFICATION	18 of 30	22.1.0		MATERIAL RECONCILIATION/ WASTE ALLOWANCE	Since project is on LSTK basis clause is Not applicable	Bidder's understanding is correct.	
5	32647-01-PS-001 SPL (INST)	18 of 41	9.15.5		All similar instruments shall be supplied from the same sub-vendor and to the extent possible the number of sub-vendors shall be kept to a minimum.	Since packages may be supplied with instruments, make for similar type of instruments may be different.	Noted	
6	14ES010/15 GENERAL SPECIFICATION FOR FIELD INSTRUMENTATION	8 of 12	8.3.1		TANK FARM MANAGEMENT SYSTEM	TFMS is not envisaged for NPK project. Owner to confirm.	TFMS Not required.	
7	14ES006 ES for programmable logic controller	1 of 6				Datasheet do not indicate SIL certified PLC system. Hence standard PLC will be considered for all package PLCs.	Bidder's understanding is correct.	
8	32647-14-PS-001 SPR INST	1 of 8			Spares for various item shall be as given	Whether this is mandatory spares or 2 years operational spares or commissioning spares?	Mandatory Spares.  Refer 32647-01-PS-001 SPL (INST) clause 12.0 for details on spares.	
9	14ES010/15 GENERAL SPECIFICATION FOR FIELD INSTRUMENTATION	2 of 12	2.1.1 and 2.1.2		Explosion Certification	Only Ex-d certification will be considered. (Local panels if any will not be certified and located in safe area).	Bidder is requested to follow the requirements in 32647-01-PS-001 SPL (INST) clauses 10.3 & 6.0	
10	14ES010/15 GENERAL INSTRUMENTATIONSPECIFICATION FOR FIELD GENERAL SPECIFICATION FOR FIELD INSTRUMENTATION	7 of 12	8.2.1		Radar type level transmitters are preferred because of its high reliability and SIL-2 certification ...	SIL certification will be considered only if required.	Bidder's understanding is correct.	

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<b>Sub :</b>		<b>NEW 1,650 TPD NPK PLANT FOR FACT-CD, AMBALAMEDU ON LSTK BASIS</b>					
<b>A</b>	<b>Bidder:</b>	<b>thyssenkrupp Industrial Solutions (India)</b>					
<b>I</b>	<b>INSPECTION:</b>						
1	Design Philosophy – static Inspection and testing .32647–02–PS–001 PH	13 of 34	2.2.1		1) “All equipment & bought -out items shall be inspected during various stages of manufacturing starting from identification of materials to final completion as per agreed QAP which shall be prepared by LSTK Bidder and shall duly approved by Owner or their authorized representative.  2) In case of site fabricated/ assembled equipment same inspection agency shall be responsible for inspection and testing at site	1) Project inspection and test plan (PITP) for shop inspections consisting of Indicative Inspection and test plans (IITP) for static equipment, packages and material handling shall be submitted to owner for approval. These will be the basis for vendors to prepare their equipment specific QAP which will be approved only by tkIS and same can be submitted for information to owner.  For standard piping bulk items project specific QAPs covering all the requirements shall be prepared by tkIS and submitted for owner for approval. This approved QAPs will be followed by vendors. For non standard items, QAP submitted by vendor shall be approved by tkIS and same shall be submitted to owner for information.  2) In case of site fabricated / assembled equipment, tkIS shall appoint TPI approved by owner as per clause 4.2.9.3 of “special condition of contact 32647/25/SCC/001 “However the appointed TPI need not be same TPI for shop and site inspection. The TPI at various locations are likely to change.	1) Tender conditions shall prevail.  2) Noted.
2	Design Philosophy- Static Inspection and testing 32647–02–PS–001 PH	14 of 34	2.2.9		1) All raw materials shall be inspected at source	2) Equipment manufacturer will be purchasing the raw material like plates, flanges, pipes, fittings, tubes, forgings etc from reputed manufacturers and will be identified at equipment manufacturers shop by tkIS for quality checks like visual, dimension, test certificate review etc. The stages will be reflected in our project inspection and test plan (PITP).	Tender conditions shall prevail.

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<b>A Bidder:</b>		<b>thyssenkrupp Industrial Solutions (India)</b>					
3	Design Philosophy- Static, Rotating, Fire fighting	30 of 34, 14 of 16 etc	6, 6, 13 of static. Rotating, Material handling, Fire fighting etc respectively		1)All equipment shall be procured / fabricated as per approved vendor list (Doc. No. 32647-02-PS-001 VL, 32647-01-PS-001 VL1,32647-01-PS-001 VL2 etc ).	1) Package Units -Equipment and Bought out items (such as Plates, Tubes, Valves, Pipes, flanges, fittings, Fasteners, Gaskets etc.) within the Package will be procured by the Package vendor from their approved vendors. 2) Static Equipment - Bought out items for the equipment (example- Plates, Pipes, Tubes, Flanges, fittings, Fasteners Gaskets etc.,) will be procured by the vendor from their approved vendors.	(1) Noted.  (2) Tender conditions shall prevail.
<b>J CONSTRUCTION:</b>							
1	Commercial questionnaire	33/205	18	Commercial questionnaire	Confirmation on Proposed list of construction equipment to be considered - Induction pipe bending machine	Bidder do not see any requirement of induction pipe bending machine in this project and therefore not considered. Owner/PMC to confirm understanding of bidder.	Bidder's understanding is correct
2	Site facilities	132/205	1&2	Site facilities	Construction water & Construction power	Bidder understood that construction water & power will be provided by owner at one location free of cost. Further distribution to be done by bidder.Owner/PMC to confirm location of single point for construction power and water in the plot plan.	POWER:500 KVA , 600 A at about 1 km (cable length) away will be available for construction purpose.

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A	Bidder:	thyssenkrupp Industrial Solutions (India)					
K	<b>GENERAL:</b>						
1	Special Conditions of Contract	21 of 45	4.2.26		<b>SPARES :-</b> Bidder shall quote for insurance spares, commissioning/pre-commissioning spares and cost towards the procurement efforts by LSTK contractor for operational spares and other requirements for spares as per Spare Parts Requirements in the Technical Specification attached.	Bidders understanding regarding spares are as follows:- Insurance spares not to be considered by BIDDER. BIDDER has to consider cost towards Commissioning/pre-commissioning spares in its Lumpsum price. . Mandatory spares has to be considered by BIDDER as per list provided in respective technical documentation. . 2 years recommended and operational spares are not in Bidder's scope. List & price shall be provided by the BIDDER during detailed engineering after finalization of vendor.	Read Clause No. as 4.2.26.1 GENERAL CLAUSE IS GIVEN IN SCC. Insurance spares not to be considered by BIDDER. BIDDER has to consider cost towards Commissioning/pre-commissioning spares in its Lumpsum price. Mandatory spares has to be considered by BIDDER as per list provided in respective technical documentation, cost shall be included in the Lumpsum Price. BIDDER shall provide List & price for 2 years recommended and operational spares during detailed engineering after finalization of vendor. The quoted price shall be valid for two years as per tender. OWNER may place order for such spares any time during this period.
2	-	-	-	-	Disposal of hydro tested water	Hydro tested water shall be disposed of through the nearest drain. Please confirm.	Confirmed

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<b>B</b>	<b>Bidder:</b>	M/s Furnace Fabrica India Ltd					
<b>A</b>	<b>PROCESS:</b>						
1	32647-11-PS-001-DP_R2 Project Description	4 of 7	2.2	Meterological Data	Design temperature of atm. air for rotary air cooler system to be considered for design.	Refer site condition provided in the 32647-11-PS-001-DB Design basis.	
2	32647-11-PS-001-DP_R2 Project Description	5 of 7	3.3	NPK PLANT (I)	Urea and filler are required for production of 18:46:0 and 20:20:0:13. (filler material mention is missing to be included)	Specifications given are minimum requirements. Any other raw material or utilities as required for the production of NP 20:20:0:13 & DAP shall be consider by the Bidder.	
3	32647-11-PS-001-DP_R2 Project Description	5 of 7	3.3	(iii) K FACILITY	We would like to discuss. (inclusion of DCS, Transfer System, MCC, RMS Handling System etc.)	Bidder to Elaborate	
4	32647-11-PS-001-DP_R2 Project Description	6 of 7	(e)	Others	Please explain the use of ammonium sulphate in the process.	Ammonium sulphate shall be ignored. Refer corrigendum-6 Point No. A.1	
5	32647-11-PS-001-DB_R2 Design Basis	3 of 29	1.3	Ambient Condition	Design temperature of atm air for rotary air cooler system to be considered for design.	Refer site condition provided in the 32647-11-PS-001-DB Design basis.	
6	32647-11-PS-001-DB_R2 Design Basis	6 of 29	2.2	Phosphoric acid	DAP & 20:20:0:13 will be produced using urea and filler based on phosphoric acid analysis.	Noted	
7	32647-11-PS-001-DB_R2 Design Basis	8 of 29	B C	Sulphur Muck Gypsum	We would like to discuss the use of these items.	Bidder to consider these material as filler material. First priority of fillers to be sulphur muck/Gypsum.	
8	32647-11-PS-001-DB_R2 Design Basis	9 of 29	2.9	Defoamer	Kindly confirm that no heating system is required for defoamer system.	The defoamer system requirement shall be as per recommendation of process licensor	
9	32647-11-PS-001-DB_R2 Design Basis	9 of 29	3.2	Raw Water supply at 3.0 kg/cm2.g pressure.	Required pressure for raw water at B/L point min. 6 kg/cm <sup>2</sup> .g	Raw water pressure 6 kg/cm <sup>2</sup> .g is available in the plant area. Refer corrigendum-6 point A.3 in this regard	

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<b>B</b>	<b>Bidder:</b>	<b>M/s Furnace Fabrica India Ltd</b>					
10	32647-11-PS-001-DB_R2 Design Basis	10 of 29	3.3	Other utilities	We require following utilities: A) Steam B) Potable Water C) Fire Water	Quantities & required conditions at the Battey Limit shall be mentioned by the bidder.	
11	32647-11-PS-001-DB_R2 Design Basis	11 of 29	4.4	Product Temperature 45°C	Design temperature of atm. air for rotary air cooler system to be considered for design.	Tender condition shall prevails	
12	32647-11-PS-001-DB_R2 Design Basis	11 of 29	4.5	Product Crushing Strength	It will be 1.5 kg and not 1.5 kg/cm <sup>2</sup> .g	Read as kg/granule of product. Refer corrigendum-6 point A.4 in this regard	
13	32647-11-PS-001-DB_R2 Design Basis	11 of 29	5.0	Battery Limits	We would like to know the following: <ul style="list-style-type: none"> <li>· Filling rate of Phosphoric Acid to the tank.</li> <li>· Sulphuric Acid filling rate.</li> <li>· Any flow measurement for all liquids.</li> <li>· Raw materials at battery limits.</li> </ul>	Bidder to confirm the required filling rate for PA & SA.  Flow measurements for all liquid raw materials,RLNG & effluent discharge shall be provided  Refer clause 5.0 of 32647-11-PS-001-DP & 32647-11-PS-001-DB	
14	32647-11-PS-001-DB_R2 Design Basis	12 of 29	5.4	Muriate of Potash	We would like to discuss the scheme.		
15	32647-11-PS-001-DB_R2 Design Basis	12 of 29	5.4	Muriate of Potash	We request Client that MOP be made available at plant battery limit through tilting trucks/dumpers for unloading into common storage shed.	Tender conditions shall prevail.	
16	32647-11-PS-001-DB_R2 Design Basis	12 of 29	5.6	Raw Water	Required pressure for raw water at B/L point min. 6 kg/cm <sup>2</sup> .g	Raw water pressure 6 kg/cm <sup>2</sup> .g is available in the plant area. Refer corrigendum-6 point A.3 in this regard	
17	32647-11-PS-001-DB_R2 Design Basis	16 of 29	7.5	Design Margin	Would like to discuss the margins on plant capacity and equipment capacities.		

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<b>B</b>	<b>Bidder:</b>	<b>M/s Furnace Fabrica India Ltd</b>					
18	32647-11-PS-001-DB_R2 Design Basis	17 of 29	8.1.3		We are not clear on the statement that "however, plant shall be capable of ... without pipe reactor."Please elaborate.	Incase of any long term maintance on PR, the plant shall be capable of producing DAP and 20-20-0-13 perhaps at reduced loads, higher recycle etc.	
19	32647-11-PS-001-DB_R2 Design Basis	17 of 29	8.1.6		We would like to discuss.		
20	32647-11-PS-001-DB_R2 Design Basis	18 of 29	8.1.12		Piping routing required up to existing ETP for discharging of effluent from NPK plant.	Bidder's understanding is correct	
21	32647-11-PS-001-DB_R2 Design Basis	18 of 29	8.1.15		We are not clear about the requirement.	Auto start facility means Auto sequential start of equipments in dry section	
22	32647-11-PS-001-DB_R2 Design Basis	19 of 29	8.1.24		We would like to discuss regarding the solid raw material system.		
23	32647-11-PS-001-DB_R2 Design Basis	20 of 29	8.2.1	Raw Material Storage & Handling	Each phosphoric acid storage tank will be designed for one day storage of phosphoric acid for NP production? Please clarify.	PA storge design capacity shall be based on the 24 hrs peak demand consumption quantities among the product grades. One PA storage will be standby for the other. Bidder shall consider PA Feed pump common for both Day tanks.	
24	32647-11-PS-001-DB_R2 Design Basis	20 of 29	8.2.1	Raw Material Storage & Handling	We would like to discuss the requirement of:  Dehumidification for RMS.  Potash storage & handling system.	Bidder to Elaborate	
25	32647-11-PS-001-DB_R2 Design Basis	20 of 29	8.2.1	Raw Material Storage & Handling	For raw material storage we presume Common storage shed to be constructed new which shall be covered and have capacity of 5000 MT (Urea/Filler/Off spec.)-The provision shall be made to extend the common storage shed for storing 15000 MT of MOP & associated facilities in future. Scheme logic to be discussed.	Bidder to Elaborate	



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<b>B</b>	<b>Bidder:</b>	<b>M/s Furnace Fabrica India Ltd</b>					
26	32647-11-PS-001-DB_R2 Design Basis	20 of 29	8.2.2	Product Storage & Handling	1. The scheme will be discussed in the meeting and site visit. 2. We require drawings, data of existing system. 3. Details of dehumidification system, urea godown and bagging plant.	Available drawings provided as annexures in Corrigendum-6	
27	32647-11-PS-001-DB_R2 Design Basis	20 of 29	8.2.2	Product Storage & Handling	Bulk and product in Mechanical and Process-Should we presume bulk means 'raw material' and product means complex fertilizer after processing?	The term Bulk materials in material handling design basis/ Mechanical, indicates those dry materials which are powdery, granular or lumpy in nature, and are generally stored in heaps.	
28	32647-11-PS-001-DB_R2 Design Basis	21 of 29	8.2.3	Utility/Off Sites	Vii). We would like to discussed requirement of laboratory.	Bidder to Elaborate	
29	32647-11-PS-001-DB_R2 Design Basis	23 of 29	(d)	Drying	The moisture at the outlet of dryer will be 1.0-2.5 depend on the grade.	Noted. Shall be as specified for the product grade.	
30	32647-11-PS-001-DB_R2 Design Basis	23 of 29	(f)	Final Product Conditioning	We are not clear about ethylene glycol system. Please elaborate.	Ethylene glycol system for dehumidication of atmospheric air and for Ammonia vapourisation	
31	32647-11-PS-001-DB_R2 Design Basis	24 of 29	-		Coating required for 10:26:26 grade? Please clarify.	Coater to be provided as per recommendation of process licensor.	
					Is polishing screen single deck or double deck? Please clarify.	Double deck.	
32	32647-11-PS-001-DB_R2 Design Basis	25 of 29	9.0	Metallurgy of Critical Equipments	(ii) Why MOC for ammonia sparger in SS 904 L? SS 316 L should be ok.	Tender conditions shall prevvail.	
					(iv) Screen cloth MOC 316 L better will be SS 304 L.	Tender conditions shall prevvail.	
		26 of 29			(xi, xii) Pumps can be in SS 904 L.	Tender conditions shall prevvail.	
					(xiv) Scrubber circulation tanks- MOC can be SS 904 L or CSRL.	Tender conditions shall prevvail.	
33	32647-11-PS-001-DB_R2 Design Basis	27 of 29	11.1	Liquid Effluent	Piping routing required up to existing ETP for discharging of effluent from NPK plant.	Bidder,s understanding is correct	

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<b>B</b>	<b>Bidder:</b>	<b>M/s Furnace Fabrica India Ltd</b>				
34	32647-11-PS-001-DB_R2 Design Basis	28 of 29	11.4	Gaseous Emission	Scope of work with respect to CPCB system on line monitoring? Please explain.	Tender conditions shall prevail.
35	32647-11-PS-001-PH_R2 Design Philosophy – Process	3 of 12	1.0	General	Plant design 50-110% or 50-105%	50-110%.
36	32647-11-PS-001-PH_R2 Design Philosophy – Process	9 of 12	10.0	Bagging Plant	We would like to discuss the scheme and scope of work, dehumidification system for silo and bagging plant.	Bidder to Elaborate
37	32647-11-PS-001-PH_R2 Design Philosophy	11 of 12	15.3 15.4 15.5 15.6		We would like discuss the work requirement.	Bidder to Elaborate
38	32647-11-PS-001-PH_R2 Design Philosophy – Process	11 of 12	16.2	Effluent	Piping routing required up to existing ETP for discharging of effluent from NPK plant.	Bidder's understanding is correct
39	32647-11-PS-001-SW_R2 Scope of Work	3 of 16	1.0 (ii)	Scope of Work TPI	Scope of work for TPI agency to be clarified.	Refer clause 19.0 of doc. 32647-01-PS-001 PH2
40	32647-11-PS-001-SW_R2 Scope of Work	4 of 16	(viii)		Following scope of work would like to discuss: 4. Soil survey and geological studies. 5. Site clearing and cleaning. 6. Environmental related approval. 12. Construction of tempo. facilities. 18. TPI scope of work.	Bidder to Elaborate
41	32647-11-PS-001-SW_R2 Scope of Work	5 of 16	43	Other Insurance	FACT-CD will take insurance of the existing property. Please confirm.	Insurance of the existing property shall be as per FACT rules
42	32647-11-PS-001-SW_R2 Scope of Work	6 of 16	2.0	Process License & Know How.	Process capabilities will be shown during GTR & not agree for annual guarantee.	Tender conditions shall prevail

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43	32647-11-PS-001-SW_R2 Scope of Work	11 of 16	5.3	Solid Raw Material Storage and Handling System.	We would like to discuss the requirement of: <ul style="list-style-type: none"> <li>Dehumidification for RMS.</li> <li>Potash storage &amp; handling system.</li> </ul>	Bidder to Elaborate	
44	32647-11-PS-001-SW_R2 Scope of Work	15 of 16	7.2	Commissioning	We would like discuss regarding "adequate commissioning labor" requirement.	Bidder to Elaborate	
45	32647-11-PS-001-PGT_R3 Performance Guarantee Test	4 of 12	1.3.2	Quality of the Product - 45°C	The product temperature will depend up on atmospheric temperature.  Kindly confirm the ambient Air temperature for design.	Tender conditions shall prevail.  Bidder shall suitably take to meet required specifications mentioned in the tender	
47	32647-11-PS-001-PGT_R3 Performance Guarantee Test	9 of 12	2.2	Sustained Load Test	We would like to discuss the duration of SLT, PGR test & for both grades.	Bidder to Elaborate	
<b>B</b>	<b>MATERIAL HANDLING:</b>						
1	DESIGN PHILOSOPHY MATERIAL HANDLING	5 of 18	3	BRIEF SYSTEM DESCRIPTION	"Outside complex fertilizer plant bidder to avoid bucket elevator for product handling"- please clarify the statement and oblige.	Bucket Elevator may be used inside complex fertiliser plant, bulk product silo, screen house and raw material warehouse.	
2	DESIGN PHILOSOPHY MATERIAL HANDLING	5 of 18	3	BRIEF SYSTEM DESCRIPTION	Fertilizer plant product to the existing 2 X 1,000 TPD NP plant product streams in equal proportions for further conveyance to NP bulk godown/ existing NP bagging plant. - Please clarify the statement and oblige.	Bidder may visit at site for more clarity, with prior permission from FACT CD.	
3	DESIGN PHILOSOPHY MATERIAL HANDLING	5 of 18	4	RAW MATERIAL STORAGE & HANDLING	Would like to discuss the scheme for: <ul style="list-style-type: none"> <li>RMS</li> <li>Dehumidification system for RMS.</li> </ul>	Bidder may visit at site for more clarity, with prior permission from FACT CD.	
4	DESIGN PHILOSOPHY MATERIAL HANDLING	6 of 18	5.1.3		Please note that load cell will not work vibrators on the hopper.	Refer Corrigendum-6 point C.5 in this regard.	
5	DESIGN PHILOSOPHY MATERIAL HANDLING	7 of 18	5.3 5.3.2	GRANULATOR	We would like to discuss the requirement of 20% higher capacity over rated capacity.	Refer Corrigendum-6 point C.3 in this regard.	
6	DESIGN PHILOSOPHY MATERIAL HANDLING	7 of 18	5.4	DRYER	We would like to discuss the requirement of 20% higher capacity over rated capacity.	Refer Corrigendum-6 point C.3 in this regard.	

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7	DESIGN PHILOSOPHY MATERIAL HANDLING	8 of 18	5.5	BUCKET ELEVATOR	Why MOC of bucket considered as SS 304? Please explain.	Refer Corrigendum-6 point C.6 in this regard.	
			5.5.7				
8	DESIGN PHILOSOPHY MATERIAL HANDLING	8 of 18	5.5.9		To discuss design margin 20% more for bucket elevator.	Refer Corrigendum-6 point C.3 in this regard.	
9	DESIGN PHILOSOPHY MATERIAL HANDLING	8 of 18	5.6	VIB. SCREEN	To discuss design margin 20% more	Refer Corrigendum-6 point C.3 in this regard.	
			5.6.1				
10	DESIGN PHILOSOPHY MATERIAL HANDLING	8 of 18	5.6.1		Please confirm the MOC for mesh SS 304 L or 316 L.	Tender condition shall prevail. Refer: Note - Page 17 of 18, of Tender document 32647-01-PS-001 PH2 (DESIGN PHILOSOPHY MATERIAL HANDLING)	
11	DESIGN PHILOSOPHY MATERIAL HANDLING	11 of 18	6.0	BULK NPK SILO & RECLAIMING FACILITY	<ol style="list-style-type: none"> <li>We would like discuss the scheme.</li> <li>We require all the drawing, data of existing system.</li> <li>Suitability of existing building for new equipment installation.</li> <li>Battery limits for power and utilities.</li> </ol>	Bidder may visit at site for more clarity, with prior permission from FACT CD.	
12	DESIGN PHILOSOPHY MATERIAL HANDLING	12 of 18	6.3.1	COMPLEX FERTILIZER SCREEN HOUSE	The scheme for recycle of fines and o/s from screen house to be elaborated.	Tender condition shall prevail. Refer Note 1 of Drawing 32647-11-SF-001 (SFD of product handling facility) with the Tender.	
13	DESIGN PHILOSOPHY MATERIAL HANDLING	12 of 18	6.3.3		We are not sure about the type of screen "linear motion polishing screen".	Tender conditions shall prevail.	
14	DESIGN PHILOSOPHY MATERIAL HANDLING	12 of 18	8.0	COMPLEX FERTILIZER BAGGING PLANT	<ol style="list-style-type: none"> <li>We would like to discuss the scheme.</li> <li>The data, drawing of existing bagging plant to be provided.</li> <li>Drawing of product conveyor required.</li> <li>Suitability of existing building for new load.</li> </ol>	<p>Bidder may visit at site for more clarity, with prior permission from FACT CD.</p> <p>Available drawings/documents provided as annexures in Corrigendum-6.</p> <p>Available drawings/documents provided as annexures in Corrigendum-6.</p> <p>Available drawings/documents provided as annexures in Corrigendum-6.</p>	

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<b>B</b>	<b>Bidder:</b>	<b>M/s Furnace Fabrica India Ltd</b>					
15	DESIGN PHILOSOPHY MATERIAL HANDLING	15 of 18	9.0	DUST EXTRACTION SYSTEM	We presume that all the dust would be transported to NPK plant manually. Kindly confirm the same.	Dust from the bagging plant may be transported to NPK plant manually.	
16	DESIGN PHILOSOPHY MATERIAL HANDLING	15 of 18	10.0	DEHUMIDIFYING SYSTEM	Would like to discuss system for RMS, bulk silo, & bagging plant.	Bidder to Elaborate	
17	DESIGN PHILOSOPHY MATERIAL HANDLING	17 of 18		SCOPE OF WORK & BATTERY LIMIT	1. B/L for off sites, electrical system, utilities, handling of dry dust system.	Tender condition shall prevail. Refer 32647-11-PS-001-DB, Design Basis	
					2. Bleed of scrubbing system.	Tender condition shall prevail. Refer clause 16 of 32647-11-PS-001-PH, Design Philosophy Process	
					3. TPI scope of work.	Tender condition shall prevail. Refer clause 19.0 of doc. 32647-01-PS-001 PH2	
18	DESIGN PHILOSOPHY MATERIAL HANDLING	17 of 18		VENDOR LIST	Additional vendors for fabrication of mechanical equipment (vessels. Tanks. Storage tanks, heat exchangers, pressure vessels etc.) – Furnace Fabrica (I) Ltd., a bidder for this package shall be considered as fabricator of various fabricated equipment's and shall be in the approved of vendor for fabricated equipment.	Refer corrigendum-6 Annexure -(SV list) in this regard.	
<b>C</b>	<b>GENERAL QUERIES:</b>						
1					Overall Plant Layout drawing.	Available drawings/documents provided as annexures in Corrigendum-6.	
2					Existing defunct urea silo Drawings (design if available) with all cross-sectional views and other details to check feasibility of using and extent of modification required.	Available drawings/documents provided as annexures in Corrigendum-6.	
3					Existing defunct Urea Storage bunkers Drawings (design if available) with all cross-sectional views and other details to check feasibility of using and extent of modification required.	Available drawings/documents provided as annexures in Corrigendum-6.	
4					Existing defunct urea Conveyor gantry Design and drawings with all cross-sectional views and other details to check feasibility of using and extent of modification required	Available drawings/documents provided as annexures in Corrigendum-6.	

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5					Existing urea silo and gantry foundation details	Available drawings/documents provided as annexures in Corrigendum-6.	
6					Existing defunct urea bagging plant layout with all cross-sectional views and other details to check feasibility of using and extent of modification required.	Available drawings/documents provided as annexures in Corrigendum-6.	
7					Existing Railway platform layout, No. of rails, width & length of platforms with drawings in AutoCAD format.	Available drawings/documents provided as annexures in Corrigendum-6.	
8					Truck details for bagged cargo for truck loading-Truck width and length	Available drawings/documents provided as annexures in Corrigendum-6.	
9					Storage capacity required for bagged cargo on the platforms for wagon loading and truck loading.	Available drawings/documents provided as annexures in Corrigendum-6.	
10					Method of Loading of bags into wagons-manual / through wagon loader	Manual. Refer Corrigendum point C.9 in this regard.	
11					Existing NP Bulk Godown Drawings with all cross-sectional views and other details	Available drawings/documents provided as annexures in Corrigendum-6.	
12					Existing NP bagging plant layout Drawing in with cross sectional views,	Available drawings/documents provided as annexures in Corrigendum-6.	
13					Details and drawings of mechanical equipment and system (conveyor, bagging machines, stitching machine) available and in operation in the bagging plant and which can be used for new plant.	No mechanical equipment available in the bagging plant which can be used for new plant. However dismantling and transporting of defunct equipments are in bidder scope. Refer Tender clause no. 8.3.2 of doc 32647-01-PS-001 PH2	
14					No. of screens envisaged at raw material and after process with their locations and Feed Analysis for each type of raw material.	As per recommendation of process licensor	
15					No. of crushers envisaged, their locations and Feed analysis for crusher for each type of raw material and product.	As per recommendation of process licensor	

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<b>B</b>	<b>Bidder:</b>	<b>M/s Furnace Fabrica India Ltd</b>					
16					Output product size required from screens and crushers	As per recommendation of process licensor	
17					Capacity of screens	As per recommendation of process licensor	
18					Capacity of crushers	As per recommendation of process licensor	
19					We presume silo, go-down, warehouse and storage shed have same meaning for storage??	<p>Storage facility available for the product storage (NP, DAP or NPK) is Defunct Horizontal Urea Silo.</p> <p>Existing NP bulk godown of presently functioning NP Plant (2 x 1000 TPD) is also envisaged to receive NP product from the proposed 1650 TPD complex fertiliser plant while producing NP.</p> <p>Bidder may visit at site for more clarity regarding the existing condition of the available storage facility, with prior permission from FACT CD.</p> <p>Raw material storage for the proposed 1650 TPD complex fertiliser plant is envisaged in a new storage facility, and shall be facilitated by LSTK contractor, which can either be a silo or ware house.</p>	
20					All existing plants and facilities to be used for new plant PURCHASER should provide all drawings.	Available drawings/documents provided as annexures in Corrigendum-6.	
21					From the layout we understand the rake is split into two equal no. of wagons and placed on both sides of common platform i.e. rail lines '2 & 3' or '4 & 5'. Client to confirm time taken for splitting the rake and whether 7 hrs. to be considered for loading maximum 42 wagons after splitting & placement of wagons at platform??	Clause no. 8.2.7 of doc. 32647-01-PS-001 PH2 (Design Philosophy Material Handling) is modified. Refer corrigendum No.6 point C.9 in this regard.	

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<b>C</b>	<b>Bidder:</b>	<b>Complant China + KNL Mumbai</b>				
<b>A</b>	<b>PROCESS:</b>					
1	32647-11-PS-001-DB, Design Basis	17 of 29	8.1.4	It should be economical both with regards to capital cost as well as operating/maintenance costs.	Does it mean, the CONTRATCOR has to provide economic calculation and submit it to client? OWNER / CONSULTANT to confirm / elaborate.	Not Required.
2	32647-11-PS-001-SW, Scope of Work	5 of 16	1.0	viii) 41.0	CONTRACTOR shall carry out Hazop Study for the existing facility also limited to Phase 2, however, close out followup and their implementation of the recommendations arries out from the study of exisitng facility shall not be in the scope of CONTRACTOR	Tender conditions prevail. Implementation of the hazop recommendation in the battery limit shall be under the scope of the bidder
3	32647-11-PS-001-SPL, Special Requirements	3 of 5	1.4.1	Training at Equipment Manufacturer's Shops	CONTRACTOR shall arrange for Training to the operating personnel at Vendor's shop for the major equipment & Systems, however expenses toward the personnel travels and their the stay at Vendor place shall be in the scope of OWNER	Noted
4	32647-12-PS-001-DP DESIGN PHILOSOPHY-CIVIL & STRUCTURAL WORKS	4 of 20		BROAD PLANT DESCRIPTION	Quote: The tentative site area have been provided in the Plot Plan of Plant Area Drawing No.32647-11-OP-001 .....Unquote However for the Area No 3 marked as a Proposed NPK Site does not mentioned the size, OWNER / CONSULTANT to provide the plot area for the proposed site.	Refer Corrigendum point A.2 , D.1 & Doc. 32647-03-AP-00001 R0 given as annexure 4 in this regard. Bidder to locate all the facilities in the available area in an optimum way during detailed engineering.
5	32647-11-PS-001-DP, PROJECT DESCRIPTION	7 of 7		Drawing 32647-11-OP-001 Plot plan	New Common Shed not idetified in Plot Plant, OWNER / CONSULTANT to provide updated Plot Plan	Refer Corrigendum point A.2 , D.1 & Doc. 32647-03-AP-00001 R0 given as annexure 4 in this regard. Bidder to locate all the facilities in the available area in an optimum way during detailed engineering.



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<b>C</b>	<b>Bidder:</b>	<b>Complant China + KNL Mumbai</b>				
6	32647-11-PS-001-DP, PROJECT DESCRIPTION	7 of 7		Drawing 32647-11-OP-001 Plot plan	Recommneded / Proposed site for Common Shed storage for Solid Storage like MOP, Filler, Urea etc is far away from Proposed Plant Site , OWNER / CONSULTANT to confirm the relocation of this place closer to Proposed Plant.	Refer Corrigendum point A.2 , D.1 & Doc. 32647-03-AP-00001 R0 given as annexure 4 in this regard. Bidder to locate all the facilities in the available area in an optimum way during detailed engineering.
7	32647-11-PS-001-DP, PROJECT DESCRIPTION	7 of 7		Drawing 32647-11-OP-001 Plot plan	There is an existing structure between Proposed Site and NP Bulk Godown, which is likely to hinder in the construction of facility for transfer of finished product to NP Bulk Godown. What is the CONTRACTOR's scope with this existng facility, OWNER / CONSULTANT to clarify.	Refer Corrigendum point A.2 , D.1 & Doc. 32647-03-AP-00001 R0 given as annexure 4 in this regard. Bidder to locate all the facilities in the available area in an optimum way during detailed engineering.
8	32647-11-PS-001-DB, Design Basis	7 of 29	2.6	A. Bentonite / Clay	Screen Size: +16 mm :: 1% max, -60 mm :: 40% max which is much coarser than the finished product size of 1-4 mm < 90% OWNER to provide finer material, please confirm	Tender conditions shall prevail
9	32647-11-PS-001-DB, Design Basis	9 of 29	3.2	Raw Water	OWNER / CONSULTANT to provide Raw Water composition	Raw water Composition provided as Annexure-1.
10	32647-11-PS-001-DB, Design Basis	13 of 29	5.15	BIDDER to ensure that effluent water, if generated any, shall collected in a pit and shall be reused in the plant. However, facility for pumping to existing ETP shall be provided.	<p>1. Since the plant is designed for zero liquid effluents under normal operating conditions. There is a sump tank shall be provided where the possible scrubbing liquid spillages will be collected in order to later reintroduced into the process. Hence no facility of Effluent pumping to existng ETP shall be provided by the CONTRACTOR (Ref Point No 5.15).</p> <p>2. If OWNER still wants the Effluent pumping facility to existng ETP, OWNER / CONSULTANT to confirm nearest tie-in point with the existng facility.</p>	Tender conditions shall prevail.

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<b>C</b>	<b>Bidder:</b>	<b>Complant China + KNL Mumbai</b>				
11	32647-11-PS-001-PH, Design Philosophy	9 OF 12	10	BAGGING PLANT	BIDDER understand that there is no bagging facility at Exisitng Urea Bagging Area, and Hence CONTRACTOR has to provide 400 TPD Bagging Facility. Also BIDDER would like to know the facility available at Exisitng Urea Bagging Area. OWNER / CONSULTANT to confirm BIDDER's understanding.	No mechanical equipment available in the bagging plant which can be used for new plant. However dismantling and transporting of defunct equipments are in bidder scope. Refer Tender clause no. 8.3.2 of doc 32647-01-PS-001 PH2