

	PE&SD, BHEL.R.C. Puram, Hyderabad	Dt: 07.01.2021
PE&SD	NIT no.: TOATX00061, NIT_56540 in (www.bhel.com), dated 31.12.2021 Tender ID.: 2020_BHEL_913_1, in (https://eprocurebhel.co.in)	Rev 0 Page 1 of 1

Corrigendum 1

Name of the Work: GEOTECHNICAL INVESTIGATION & TOPOGRAPHICAL SURVEY FOR IOCL Paradip- SRU (525TPD) Projects.

Tender No.: TOATX00061, NIT_56450 in (www.bhel.com), dated 31.11.2020.

Tender ID.: 2020_BHEL_913_1, in (<https://eprocurebhel.co.in>)

With reference to above tender, following corrigendum –1 is released.

Sl. No.	Document No./Title/ Reference	As Published	Should be read as/Amended to
1.	Un-priced bid format - BOQ of NIT	Un-priced bid format -BOQ TOATX00061, NIT_56540 in (www.bhel.com), This document stands null and void	Un-Price bid Format (BOQ) Rev 1.0 dated:07.01.2021 shall be applicable for this tender

Note:

1. All other terms & conditions of the tender will remain unchanged.
2. Bidders are requested to submit a copy of this corrigendum (as part of technical bid) duly signed by the authorized signatory & stamped with official seal as a token of Bidder's unqualified acceptance to this corrigendum.
3. Bidders who have already submitted their offers are required to resubmit both techno-commercial as well as Price Bid offers.

Sd/-

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Un-Price bid Format (BOQ) Rev 1.0 dated:07.01.2021

**GEOTECHNICAL INVESTIGATION & TOPOGRAPHICAL SURVEY FOR IOCL Paradip- SRU (525TPD) Projects.
BHEL Enquiry No.T0ATX00061**

SUMMARY OF PRICES

SL NO	DESCRIPTION	UOM	Qty	AMOUNT (Rs)	WEIGHTAGE	Reference
1.0	PRICE FOR TOPOGRAPHICAL SURVEY. (PART - A)	LS	1		0.0493645	Part-A
2.0	PRICE FOR GEOTECHNICAL INVESTIGATION (PART - B)	LS	1		0.8536640	Part-B
3.0	PRICE FOR UNDERGROUND SCANNING SURVEY (PART - C)	LS	1		0.0969715	Part-C
4.0	GRAND TOTAL (Excluding Taxes GST)			Bidder no need to quote here	1.0000000	

Note	
a)	Bidder no need to quote the price here, lumsum Price quoted by bidder in (excel sheet) price bid format shall be cosidered as the total price of this tender BOQ. Rate and amount against each line item shall be derived from the corresponding weightage assigned against each line item of the BOQ.
b)	The rate and amount are inclusive of all applicable taxes, except for the GST. For details of taxes, clause no. 13.0 of the SCC will be applicable.
c)	Details of BOQ items shall be read in conjunction with the corresponding specifications, drawings and other tender terms.

GEOTECHNICAL INVESTIGATION & TOPOGRAPHICAL SURVEY FOR IOCL Paradip- SRU (525TPD) Projects.
BHEL Enquiry No.T0ATX00061

TOPOGRAPHICAL SURVEY (PART - A) Rev 1.0 dated 07.01.2021

SL.N O	ITEM	UNIT	QTY.	UNIT RATE (INR)	AMOUNT (INR)	WEIGHTAGE
1	Carrying out bench mark from the nearest GTS bench mark or any other available source as approved by the engineer-in-charge to different locations in the project area including clearing of jungles and/or cutting trees and any other works required for completion of the said item etc all complete as per specification and instructions of the engineer-in-charge. (Construction of bench mark pillar to be paid separately)	km	2			0.1800703
2	Carrying out topographical survey of plant and allied areas showing all permanent & general features. Locating (coordinates, plan dimensions, object name etc) existing building, structure, roads, drains, manhole, poles, cable trenches, pipe trenches etc and detailed contour survey by taking spot levels at 10m interval, carrying out cross section of canal/nallah by taking spot levels at 5m interval or less including clearance of jungles and cutting of trees etc which are interfering with the survey works and any other field works necessary for the completion of the said item, preparation and submission of all plans (maps), reports, CDs and originals etc all complete as per specification and instructions of the engineer-in-charge.	SQM	10050			0.0506718
3	Construction of bench mark pillar/ reference pillar/ grid pillar etc with concrete at different locations including clearing of jungles, excavation, supply of materials, pillar marking, backfilling, white washing, painting on MS plate etc all complete as per specification, drawings and instructions of the engineer-in-charge. For construction of pillars only following quantities shall be measured for payment.					
a)	RCC (M25 grade as per DSR-2018 item no. 5.33.1)	CUM	6			0.5973246
b)	Formwork (as per DSR-2018 item no. 5.9.1)	SQM	30			0.1063784
C)	Reinforcement (as per DSR-2018 item no. 5.22.6)	kg	50			0.0519723
d)	Earth work (as per DSR-2018 item no. 2.6.1)	CUM	6			0.0135825
TOTAL (PART -A)						1.0000000

GEOTECHNICAL INVESTIGATION & TOPOGRAPHICAL SURVEY FOR IOCL Paradip- SRU (525TPD) Projects.
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GEOTECHNICAL INVESTIGATION (PART - B) Rev 1.0 dated 07.01.2021

SL. NO.	DESCRIPTION OF ITEM	UNIT	QTY.	UNIT RATE (INR)	AMOUNT (INR)	WEIGHTAGE
1	Mobilisation of necessary equipments, men and materials to the project site for carrying out the geotechnical investigation and demobilisation of the same after completion of all the field works etc all complete as per specification, drawings and as directed by the engineer-in-charge.	LS	1			0.3019731
2	Making 150mm nominal diameter bore hole up to a maximum depth of 40 m below ground level at various locations in all types of soil including laterite using suitable approved method of boring including chiselling, cleaning, providing casing pipes as required or as directed; performing standard penetration test at every 1 m interval alternate to collection of undisturbed soil samples up to 10 m depth below ground level and at every 1.5 m interval alternate to collection of undisturbed soil samples beyond 10 m depth, at change of strata and at depths wherever undisturbed soil samples could not be collected; collection of undisturbed sample (UDS) at every 1 m interval alternate to conducting standard penetration test up to 10 m depth below ground level and at every 1.5 m interval alternate to conducting standard penetration test beyond 10 m depth; collection of disturbed soil samples and water samples, sealing and packing of samples, observation such as ground water table etc; transportation of all the collected samples to the laboratory and back filling of boreholes with sand on completion of the same etc all complete as per specification and as directed by the engineer-in-charge for depth below ground level.	RM	300	<i>l to quote here</i>		0.2030509

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SL. NO.	DESCRIPTION OF ITEM	UNIT	QTY.	UNIT RATE (INR)	AMOUNT (INR)	WEIGHTAGE
3	Core drilling (Nx size) in rock using hydraulic feed rotary drill and double tube core barrel with diamond bit including collection of core samples, performing SPT at locations where core recovery is less than 20%, maintaining continuous record of core recovery and RQD, keeping the cores in wooden core boxes, transporting the cores to laboratory, back filling the holes with 1 part of cement : 3 part of sand grout on completion of the same etc all complete as per specification, drawings and as directed by the engineer-in-charge.	RM	5	<i>Bidder no need</i>	<i>Bidder no need</i>	0.0104129
4	Excavating trial pit of size 3m x 3m at various locations upto a maximum depth of 2.5m below ground level in all types of soil/rock which can be excavated with pick axe/crow bar etc including sheeting or shoring the sides for the purpose of stability, dewatering and maintaining the pit dry at all times, collecting disturbed/undisturbed samples and conducting field density test at 1m interval, starting from 1m depth below ground level and transporting all the collected samples to the laboratory; backfilling of the pit with excavated material etc all complete as per specification and as directed by the engineer-in-charge.	CuM	45			0.0060915
5	Conducting plate load test in various locations at specified depth complete as per specification, drawings and as directed by the engineer-in-charge. Payment for making the pit of suitable size, maintaining it dry and backfilling etc shall be paid separately as per item no.4.	NO	2			0.0364450
6	Conducting cross hole shear wave test in bore hole in all types of strata at 2m, 4m, 6m, 8m, 10m, 12m, 15m, 18m and 25m depth below ground level including drilling and preparation of required number of bore holes, providing PVC liner, grouting and backfilling with sand after completion of the test etc all complete as per specification, drawings and as directed by the engineer-in-charge.	NO	2			0.2436611

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SL. NO.	DESCRIPTION OF ITEM	UNIT	QTY.	UNIT RATE (INR)	AMOUNT (INR)	WEIGHTAGE
7	Conducting field vane shear test in various locations at specified depth including collection of disturbed soil sample etc. all complete as per specification, drawings and as directed by the engineer-in-charge.	EACH	2	<i>Bidder no need to quote here</i>	0.0108656	
8	Conducting electrical resistivity test at various locations complete as per specification, drawings and as directed by the engineer-in-charge.	NO	8			0.0208257
9	Performing static cone penetration test at various locations complete as per specification, drawings and as directed by the engineer-in-charge.	EACH	2			0.0166606
10	Conducting field CBR test in various locations at specified depth below ground level complete as per specification, drawings and as directed by engineer-in-charge.	Each	2			0.0072890
11	Conducting laboratory test on soil samples at an approved laboratory including preparation of soil samples to determine the following properties etc all complete as per specification.					0.0000000
a)	Natural moisture content	NO	25			0.0010413
b)	Sieve analysis	NO	25			0.0026032
c)	Hydrometer analysis	NO	10			0.0010413
d)	Liquid limit, plastic limit, Shrinkage limit and Plasticity Index	NO	20			0.0020826
e)	Bulk & Dry density and	NO	20			0.0012495
f)	Specific gravity & Void Ratio	NO	20			0.0020826
g)	Unconfined compressive strength	NO	20			0.0031239

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SL. NO.	DESCRIPTION OF ITEM	UNIT	QTY.	UNIT RATE (INR)	AMOUNT (INR)	WEIGHTAGE
h)	Triaxial shear test					0.0000000
	(i) Undrained test	NO	10			0.0013537
	(ii) Drained test	NO	10			0.0013537
i)	Direct shear test	NO	10			0.0018222
j)	consolidation test (Odometer)	NO	5			0.0015619
k)	Differential free swell index	NO	10			0.0015619
l)	CBR test					0.0000000
	(i) Soaked Condition	NO	2			0.0010413
	(ii) unsoaked Condition	NO	2			0.0010413
12	Conducting laboratory test on rock samples including preparation of the samples to determine the following properties etc all complete as per specification.					0.0000000
a)	Specific gravity	NO	25			0.0022127
b)	Crushing strength					0.0000000
	(i) Soaked Condition	NO	2			0.0007289
	(ii) Unsoaked Condition	NO	2			0.0007289
13	Chemical analysis for					0.0000000
a)	Soil	NO	8			0.0083303
b)	Subsoil Water	NO	8			0.0083303
14	Submitting Preparation and submission of draft report in 4 copies and final report in 5 hard copies and 2 soft copies on CD after the approval of draft report including all field records, laboratory test results, graphs, analysis of test results and recommendation etc all complete as per specification.	LS	1			0.0937158
15	Conducting laboratory test on soil samples at an approved laboratory including preparation of soil samples to determine the following properties etc all complete as per specification.					
a)	Conducting Modified Proctor Compaction test on soil samples as per IS 2720 Part 8	Nos	4			0.0057173
TOTAL (Excluding taxes)						1.0000000

**GEOTECHNICAL INVESTIGATION & TOPOGRAPHICAL SURVEY FOR IOCL Paradip- SRU (525TPD)
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UNDERGROUND SCANNING SURVEY (PART - C) Rev 1.0 dated 07.01.2021

SL. NO	ITEM	UNIT	QTY.	UNIT RATE	AMOUNT (INR)	Weightage
1	Conducting underground survey including establishment of base line for defining the co-ordinates of the various areas, mapping of location, elevation, properties, and size of underground pipeline/ piping, found electrical and instrumentation cables, civil and structural foundations, piles, manholes, tunnels and other utilities (metallic and non-metallic) including, locating the change in direction of the facility using Ground Penetration Radar (GPR), preparation of surveys maps, preparation of two dimensional (2-D)/ three dimensional (3-D) AutoCAD file for the underground services all complete as per specification and instructions of the engineer-in-charge.	SQM	3300	Bidder no need to quote here	Bidder no need to quote here	1.00
TOTAL (PART -C)						1.00