



Forest Survey of India

Ministry of Environment, Forest & Climate Change, Government of India

Kaulagarh Road, P.O. – IPE, Dehradun - 248195

CORRIGENDUM – 01

Dated: 13th June 2019

Refer Tender No: 14-1-2019 –CRMD, Dated: 28th May, 2019

1. In page 3, clause 1.1 describing the ‘Brief Details of Tender’, S. No. (v); The interested bidders will have to deposit the amount of 1000/- (non-refundable) towards tender fee either through bharat kosh (<https://bharatkosh.gov.in>) or through the demand draft drawn in favour of ‘Assistant Director (Accounts), Forest Survey of India, Kaulagarh Road, PO - IPE, Dehradun – 248195’.
2. In page 36, under section-III, the ‘Price Schedule’ mentioned under BOQ should be presented in totality as a price of a ‘Single Unit’. No, price split will be entertained.
3. The ‘Technical and Financial’ bid should be submitted together and its last date of submission remains unchanged i.e. 19th June 2019 upto 17:30 Hrs {refer page 4, clause 1.2, S. No. (vii)}. The ‘Financial Bid’ will be opened only for the technically qualified vendor(s).
4. In page 29, under section-II (Terms and Conditions of Contract), the clause 15.0 should be read as 19.0 (Pre-Qualification Criteria for Bidders).and the S.No. 4 should be treated as:

S. No.	DESCRIPTION	Parameters	Points	Compliance (Y/N)
4	Fully Windows based PC controlled TC analyser for measurement of TOC and TC for solid samples. Solid samples include leaves, part of stem, part of root etc. automatically.	Complied	20	

5. In Part II (Technical Specification and Details), at point number 2, in page 40 and 41 (About the Procurement);
Total Organic Carbon (TOC) Analyzer for the determination of organically and inorganically bound carbon in solids. General features of Total Organic Carbon (TOC) Analyser for solid samples are as follows.

- **Measurement modes:** Fully PC controlled TOC analyser for measurement of TOC as well as TC and Direct determination of TOC or as difference from TC/TIC measurements should be possible.
- **Oxidation method:** High temperature combustion at min. 900°C and above to ensure complete combustion of all type of samples.
- **Measuring range:** Wide detection range of 0-100 %
- **Detection range:** Minimum 0.5 mcg
- **Automatic calibration** from just one stock solution by means of different injection volumes.
- **Wide range NDIR or TCD detector** with extreme linearity over the whole working range.
- Instrument control and data collection through windows based software with LIMS possibility.
- Sufficient consumables to analyze 1000 sample in solid mode.
- Matrix separation system for long, uninterrupted operation even with difficult samples. Maintenance-free, 3-step condensing system for effective gas drying.
- Integrated maintenance software with free selectable cleaning cycles, automatic leak test, sleep/wakeup function, real-time control of all instrument parameters like pressure, temperature, gas flow, Advanced mathematical post processing functions like statistical evaluation, automatic or manual peak integration, direct data export to MS Excel.
- Nominal voltage: 230 / 110 VAC, 50/60 Hz.
- Vendor should quote for Synthetic Air Gas Cylinder of 99.99% purity with regulator- 1 No.
- Prices should be quoted for FSI, Dehradun in Indian Rupees.

6. In Part II (Technical Specification and Details), at point number 4, in page 41 and 42; out of 29 features highlighted in original tender (No: 14-1-2019 –CRMD, dated 28th May 2019), 3 features have been deleted and presently 26 features have been presented, with few technical modifications.

Minimum Technical Specification of the TOC Analyzer:

(This compliance document duly filled in must be submitted by the bidder with the technical bid. Put page number from your technical bid document against each specification column in support to the compliance for verification)

S. No.	Features	Specification	Compliance (Y/N)
A	Analyzer		
1.	Concentration analysis of	TOC and TC	
2.	Operating modes	Solids	
3.	Design	Compact benchtop with	

S. No.	Features	Specification	Compliance (Y/N)
		single power supply	
4.	Sample introduction	Stepper-motor controlled auto-sampler	
5.	Furnace design	High temperature furnace, 10 years warranty	
6.	Detector type	Wide-range IR detection (CO ₂) / TCD	
7.	System control	Fully digital via external PC (no additional control panel required)	
B	Sample Introduction		
8.	Solid sampling system	Solid sampling system : automatic with 60 or more positions	
C	Furnace		
9.	Type	Resistive heater element with 900 °C and above	
10.	Control	Automatic power output adjustment (no hardware change required)	
11.	Combustion reactor	Quartz tube long life design with separated combustion and reduction tube	
12.	Ash removal	Quartz easy removal ash finger	
13.	Reactor Stability	No need for cooling down during routine maintenance	
14.	Carrier gas	Synthetic air or oxygen	
15.	Connections	Quick swap clamp connections for fast changing with no tools required	
16.	Recovery rate	100 % according to high combustion temperature	
D.	Detectors / electronics		
17.	Type	IR Detector / TCD for wide measuring range	
18.	Calibration	Multipoint, multi-range, matrix-independent calibration, unlimited number of calibration sets	
19.	Analysis time	~ 3/4 min per parameter, self-	

S. No.	Features	Specification	Compliance (Y/N)
		optimizing according to element content and sample weight	
20.	Electronics	Fully digital, fully integrated in unit, no external control panels	
21.	Security norms	EU machinery directive 2006/42/EG	
E.	Software		
22.	Operating system	Windows® 10, Windows® 8, Windows® 7, minimum XP, other systems upon request	
23.	Analyzer Software	Software by the manufacturer	
24.	Features	<ul style="list-style-type: none"> • Automatic leak finding software • Error indicator • Auto sleep and wake-up • Statistical calculations • Indication service cycle • LIMS integration • 21 CFR part 11 compliant • Comprehensive documentation for fast part identification 	
25.	Data Storage	Non manipulated storage of experimental raw data and peak graphics	
26.	Warranty	Calibration Certificate and 3 Years Comprehensive Warranty	

All other terms and conditions remain unaltered.