सी एस आई आर-राष्ट्रीय पर्यावरण अभियांत्रिकी अनुसंधान संस्थान

CSIR- National Environmental Engineering Research Institute

नेहरु मार्ग, नागपुर ४४००२०, भारत

Nehru Marg, Nagpur – 440 020 (M.S.), India

टेलीफ़ोन Telephone 0712-2249992, 2249746, 2226705

ईमेल Email:- spo@neeri.res.in, st_pur@neeri.res.in

वैबसाइटWebsite: www.neeri.res.in

शीर्षक : **Supply, Installation and Commissioning of Multiwavelength Thermal/Optical Carbon Analyzer Analyzer के लिए ईओआई एवं मांगपत्र पूर्व सम्मेलन.**

TITLE: Expression of Interest and pre-indent conference for Supply, Installation and Commissioning of Multiwavelength Thermal/Optical Carbon Analyzer Analyzer

Supply, Installation and Commissioning of Multiwavelength Thermal/Optical Carbon Analyzer Analyzer उपकरण आपूर्ति के लिए, यह संस्थान एक्स्प्रेशन ऑफ इंटरेस्ट आमंत्रित करता है।

This Institute invites Expression of Interest (EOI) for **Supply, Installation and Commissioning of Multiwavelength Thermal/Optical Carbon Analyzer Analyzer**.

एक्स्प्रेशन ऑफ इंटरेस्ट दिनांक _____ तक इस संस्थान में पहुँच जाना चाहिए। राष्ट्रिय पर्यावरण अभियांत्रिकी अनुसंधान संस्थान, नेहरू मार्ग, नागपुर-440020 के समिति कक्ष में दिनांक_____ **सुबह** _____ बजे माँग पूर्व संमेलन आयोजित किया गया है।

The EOI must reach this Institute latest by date **09.01.2025**. A Pre-indent Conference has been scheduled to be held at **03.00 pm** on **13.01.2025** in the **Committee Room** of **National Environmental Engineering Research Institute, Nehru Marg, Nagpur-440 020. INDIA**

ईच्छुक पार्टियां अपने उत्पाद / मॉडल के तकनीकी प्रस्तुतीकरण तथा उसकी उपयोगिता, प्रौद्योगिकी, सुविधा, साहित्य, डिज़ाइन, तकनीकी पैरामीटर, ग्राहकी तथा अन्य संबधित मुद्दों पर तकनीकी समिति से चर्चा करने के लिए तकनीकी रूप से सक्षम प्रतिनिधि नियुक्त कर सकते है। तकनीकी समिति मांग पूर्व संमेलन में भाग लेने वाले कंपनी / विक्रेताओं के क्रेडेंशियल्स / तकनीकी क्षमताओं / वित्तीय स्थिति का मूल्यांकन करेगी।

Interested parties may depute their competent technical representatives to make presentation of their product/ model(s) and discuss with the Technical Committee on the aspects of utility, technology, feature, literature, design, technical parameters, clientele and other related issues of the equipment. The Technical Committee shall also evaluate the credentials/ technical capabilities/ financial standings with track record of the companies/ vendors attending PIC.

Process of EOI and PIC :

Last date of submission of EOI : 09.01.2025 .

PIC : on 13.01.2025 , Time 03.00 PM

1) OEM/Suppliers/ Agent must :

a) Send Expression of Interest to participate in pre-indent Conference latest by date **09.01.2025** through e-mail.

i) Send Printed technical Literature duly indicating point to point NEERI requirement and offered point to point technical compliance, as per Annexure-III.

2) Attend Pre-Indent Conference by fully Technical Competent personnel on : **13.01.2025** to present before CSIR-NEERI Technical Committee:

i) Specific Model and make : meeting CSIR-NEERI technical specifications.

ii) One printed copy of Supporting Technical Literature.

3) Tentative Technical Specification are as per **Annexure – I**

4) Qualification requirement are as per **Annexure-II**

मांग पूर्व संमेलन में भाग लेने के लिए तकनीकी रूप से सक्षम प्रतिनिधि को अधिकृत किया जाना चाहिए जो जगह पर निर्णय ले सकें तथा समिति द्वारा उठाए गए बिन्दुओं की पुष्टि कर सकें। तकनीकी प्रतिनिधि नीरी तकनीकी समिति द्वारा अंतिम रूप दिये गए तकनीकी विनिर्देशों पर हस्ताक्षर करने के लिए सक्षम होना चाहिए। Technically competent representative should be authorized for attending Pre-Indent Conference who can take on the spot decision and confirm on the points raised by Technical Committee. Technical representative should be able to sign the final technical specifications finalized by the NEERI Technical Committee.

Kindly note that post EOI & PIC, OTE/GTE shall be floated under two bid system and participation in the same shall not be restricted to participated bidders of EOI.

Interested parties may submit EOI regarding Supply, Installation and Commissioning of Multiwavelength Thermal/Optical Carbon Analyzer Analyzer, addressed to the Director, CSIR-NEERI, Nehru Marg, Nagpur- 440 020 by email on st_pur@neeri.res.in, spo@neeri.res.in, n_kamal@neeri.res.in .

भंडार एवं क्रय अधिकारी /Stores & Purchase Officer
CSIR-NEERI, Nagpur

Tentative Specifications / requirement (Annexure- I)

Supply, Installation and Commissioning of Multiwavelength Thermal/Optical Carbon Analyzer Analyzer

Specification

Name of Analyser: "Multiwavelength Thermal/Optical Carbon Analyzer"

Brief Description of Analyser: The analyser is intended to measure elemental carbon (EC), organic carbon (OC), brown carbon (BrC) and black carbon (BC) in particulate matter collected on quartz filter media from different air pollution source and environment. The measurement should be carried out using thermal / optical, transmittance / reflection principle using minimum seven different wavelengths covering the range from 405nm to 980nm. All these features should be housed in a single compact unit.

Specifications:

1) The optical monitoring that accounts for OC charring with reflected (R) and transmitted (T) intensities at seven different wavelengths covering the range from 405nm to 980nm..
2) The optical information is used to estimate multiwavelength light absorption of the sampled particles, infer the concentration of brown carbon (BrC) in each sample.
3) Thermal/optical carbon analysis is based on the preferential oxidation of OC and EC materials under different temperatures and atmospheres.
4) Seven modulated diode lasers measure the reflectance from, and transmittance through each filter at wavelengths from 405 to 980 nm.
5) Measurement Range: 0.1 to 1000 µg carbon/cm^2 (depending on carbonaceous composition).
6) Minimum Detection Limit (MDL): Total OC: 0.43 µg/cm^2
   i. Total EC: 0.12 µg/cm^2
   ii. Total Carbon: 0.49 µg/cm^2
7) Data Reporting Interval: 1 second. minimum.
8) Compatible with the IMPROVE_A carbon analysis protocol, the non-urban Interagency Monitoring of Protected Visual Environments (IMPROVE) Network, and long-term networks in other countries.
9) Nondispersive infrared (NDIR) CO2 detection eliminates need andmaintenance for Methanator and hydrogen gas used with flame ionization detector (FID).
10) Mass flow controllers provide more precise throughput measurements.
11) Power Requirements: 240 VAC, 50/60 Hz (±5%).
12) The vendor should own complete responsibility for delivery, installation and commissioning of instrument to the satisfaction of NEERI Nagpur.
13) Comprehensive 3 years warranty with spares from the date of installation of the instrument should be covered. Warranty will start from the date of the complete installation.
14) Autoloader for 50 samples. Minimum.
15) Consumables all related to this equipment:
16) UPS of minimum 3 KVA capacity with 1hr backup with the instrument.
17) One desktop computer compatible with this instrument with latest configuration.

Annexure – II

Qualification Requirement

S.No.	Qualification requirement	Complied/ Agreed/ Accepted/Submitted
1.	Vendor should submit list of clients to whom they have supplied the equipment and provided maintenance	
2.	Details of research paper published in SCI journals using the data generated by this equipment	

Agreed & Submitted with Seal & Sign:- ----------

Seal & Signature of the Principal / Indian Agent

Annexure – III

तकनीकी विनिर्देश अनुपालन एवं विचलन प्रपत्र

Technical Specification Compliance cum Deviation Form

नीरी निविदा सं के अनुसार तकनीकी अनुपालन / Technical Compliance against NEERI Tender No.

_____

Sr. No.	NEERI's Technical Specifications	Vendor Quoted Specification	In case of Compliance, supporting printed technical literature mentioning page no. Column & line has also to be highlighted	Deviations to NEERI specifications if any,	Reasons for deviations	Special Remarks if any,
1.	2.	3.	4.	5.	6.	7.

स्थान / Place:

तारीख / Date:

निर्माता / बोलीदाता के हस्ताक्षर एवं सील

Signature and Seal of the Manufacturer/Bidder