MINUTES OF PRE-BID CONFERENCE HELD ON 18.06.2026

LIOC/ENG/GT/01/2026-27: 'SUPPLY, DELIVERY, INSTALLATION, TESTING OF ENERGY DISPERSIVE X-RAY FLUORESCENCE SPECTROMETER FOR LABORATORY AT LIOC TERMINAL TRINCOMALEE'

Those Present:

LIOC

1. *Mr. Sandeep Gupta, VP (Engg.),*
2. Mr. Buwaneka Abeysundera, Exec. (Engg),
3. Mr. C.I.Jenees, (Chemist).

Bidder's Representatives (Company Name):

1. Mr. Prasanth Hemsons,
2. Mr. Eshan Hemsons,
3. Mr. Chandran Spectro Ametek,
4. Mr. Sentil Kumar Anaytical Instruments,
5. Mr. Maduranga
6. Mr. Dimuthu Hemsons.

Online VC link (Zoom Platform)-
https://us06web.zoom.us/j/84648017213?pwd=fuwRbD8xJiC3s6mu2D3yFvq346fcxa.1

The following queries were raised by the bidders.

Point No.	Query	Response
1	1. Compliance with ASTM D5059: The bidder has stated that ASTM D5059 is a test method applicable to WDXRF and not specifically to EDXRF systems. Therefore, clarification has been requested regarding the requirement for compliance with ASTM D5059.	The requirement was included to ensure the capability of the instrument to analyze Lead (Pb) and Manganese (Mn) in gasoline in accordance with internationally recognized standards. Equivalent analytical capability using EDXRF technology may be considered, provided that the instrument can reliably perform the analysis with acceptable accuracy and precision. Therefore, bidders may propose suitable EDXRF-based solutions which capable enough to analyze Lead and Manganese with supporting technical documentation and method validation details.
1	2. Boron analysis: The bidder has requested amendment/removal of Boron (B) analysis from the EDXRF analytical scope, stating that Boron analysis cannot be performed using EDXRF technology and generally requires WDXRF technology for reliable determination.	The query raised by the bidder has been reviewed. Considering the technical limitations associated with Energy Dispersive X-Ray Fluorescence (EDXRF) for Boron, it is acknowledged that accurate and reliable Boron analysis is generally not feasible using conventional EDXRF systems and is more suitably performed using Wavelength Dispersive X-Ray Fluorescence (WDXRF) techniques. Accordingly, the requirement for Boron analysis shall be removed from the scope/specification of the EDXRF instrument.

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4	3. Operating Power of X-Ray Tube: The bidder has requested revising the specification from "Minimum 40 Watt or more" to "Minimum 10 Watt or more" considering their instrument design and smart excitation technology.	The minimum power requirement was specified considering analytical sensitivity and overall instrument performance requirements. However, alternative configurations with lower operating power may be considered provided the bidder demonstrates equivalent or superior analytical performance, detection capability, stability, and cooling efficiency suitable for the intended applications. Ultimately, the operating power of the X-ray tube should be capable of producing excitation energy above 2.5 keV suitable for the intended elemental analysis applications. Therefore, bidders may submit instruments with operating power below 40 Watts along with detailed technical justification and performance data.
7	4. Sample Spinner Requirement: The bidder has indicated that sample spinning is generally not recommended for liquid sample analysis and requested removal of the sample spinner requirement.	The sample spinner requirement was included to enhance sample homogeneity and analytical consistency where applicable. However, considering that the primary application involves liquid sample analysis, provision of a sample spinner shall be considered optional. Instruments without sample spinning capability may also be accepted provided the analytical performance requirements are satisfactorily met.
8	5. Optical Path Requirement: The bidder has requested modification of the specification from "Air path and Helium Path" to "Air path and/or Helium Path."	The intention of the specification is to ensure adequate analytical capability for the required elemental range and sample types. Therefore, instruments with Air path and or Helium path considered acceptable, demonstrates suitability of the proposed configuration for the intended analytical applications and required detection limits.
9	6. The bidder has pointed out that the detector intensity count mentioned in the specification as "1,500,000 million counts per second" appears to be a typographical error and requested clarification.	The observation is accepted. The value mentioned as "1,500,000 million counts per second" is a typographical error. The correct specification shall be read as: "X-Ray Detector: High resolution Silicon Drift Detector (SDD) should have a resolution minimum of 135 eV at Mn K alpha with a minimum intensity count of 1,500,000 counts per second (1.5 million counts per second)." The specification shall be amended accordingly.
16.H	7. The bidder has requested clarification on whether the requirement for data integrity and electronic signature refers specifically to compliance with	The requirement is not mandatory for compliance with 21 CFR Part 11. However, the supplied system/software shall

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	21 CFR (Title 21 of the Code of Federal Regulations)	incorporate reliable, secure and internationally accepted best practices for data integrity and electronic records management. This shall include appropriate features such as controlled user access, audit trail functionality, data security controls and electronic signature capability where applicable. Systems demonstrating equivalent internationally recognized standards or validated data integrity features will be considered acceptable, provided they ensure robustness, traceability and integrity of analytical data throughout the system lifecycle.

Exec. Engg: 19.06.2026

Exec. Chemist 19.06.2026

VP Engg: 19/06/26