EXPRESSION OF INTEREST (EOI) FOR SELECTION OF CONSULTING FIRM (INTERNATIONAL) FOR SETTING UP AN ISO/IEC 17025 (LATEST VERSION) ACCREDITED LABORATORY FOR TESTING AT EASTERN REFINERY LIMITED (ERL), NORTH PATENGA, CHATTOGRAM, BANGLADESH

Procuring Entity : Bangladesh Petroleum Corporation (BPC)
Executing Agency : Eastern Refinery Limited (ERL)

April, 2024

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(A subsidiary of Bangladesh Petroleum Corporation)
North Patenga, Chattogram

REQUEST FOR EXPRESSION OF INTEREST FOR SELECTION OF CONSULTING FIRM (INTERNATIONAL) FOR SETTING UP AN ISO/IEC 17025 (LATEST VERSION) ACCREDITED LABORATORY FOR TESTING AT ERL

1	Ministry/Division	Ministry of Power, Energy and Mineral Resources/ Energy and Mineral Resources Division
2	Agency	Bangladesh Petroleum Corporation (BPC)
3	Procuring Entity Name	Bangladesh Petroleum Corporation (BPC) Executing Agency: Eastern Refinery Limited (ERL)
4	Procuring Entity District	Chattogram
5	Expression of interest for selection of	Consulting firm (International) to provide Consultancy services for setting up an ISO/IEC 17025 (latest version) accredited Laboratory for Testing at ERL
6	EOI Ref. No.	ERL/QC/LABORATORY/2024
7	Date	25/04/2024
KEY INFORMATION		
8	Procurement Method	Quality and Cost Based Selection (QCBS)
FUNDING INFORMATION		
9	Budget and Source of Funds	Bangladesh Petroleum Corporation (BPC)
PARTICULAR INFORMATION		
10	EOI Closing Date, Time & Place	05 June, 2024 at 14:00 Hrs (BST), Place: General Manager (Planning & Development), Bangladesh Petroleum Corporation (BPC), BSC Bhaban, Saltgola Road, Chattogram-4100.
11	EOI Opening Date, Time & Place	05 June, 2024 at 14:30 Hrs (BST), Place: General Manager (Planning & Development), Bangladesh Petroleum Corporation (BPC), BSC Bhaban, Saltgola Road, Chattogram-4100.
INFORMATION FOR APPLICANT		
12	Brief Description of Assignment/Services	Eastern Refinery Ltd. (ERL), a Subsidiary of Bangladesh Petroleum Corporation (BPC) under the administrative control of Energy and Mineral Resources Division of the Ministry of Power, Energy and Mineral Resources, Government of the Peoples Republic of Bangladesh. ERL is engaged in producing petroleum products through processing of Crude Oil. ERL intends to appoint a Consulting Firm (International) to provide Consultancy Services for setting up an ISO/IEC 17025 (latest version) accredited laboratory for Testing at ERL. The objectives of the consultancy services are included but not limited to the following: a) Feasibility study including cost estimation for the laboratory based on the information mentioned in the Terms of Reference (ToR).The ToR will be available in BPC's (www.bpc.gov.bd) and ERL's website (www.erl.gov.bd). b) Preparation of design and drawings for construction of the laboratory building with ancillaries based on ToR. c) Preparation of a guideline for ensuring ISO/IEC 17025 (latest version) accreditation for testing mentioning conditions and requirements (general, structural, resource, process, management system, metrological traceability etc. related). d) Preparation of tender document in congruence with PPA 2006 and PPR 2008 for invitation of tender for construction of the laboratory building with ancillaries conforming design and drawings as well as considering requirements for accreditation. e) Evaluation of tenders (technical & financial) submitted by the bidders based on the requirements and conditions mentioned in the tender document for selection of a competent contractor. f) Perform contract management as per contract between the successful bidder and ERL till issuance of completion certificate of the laboratory building constructed for ISO/IEC 17025 (latest version) accreditation. g) Provide necessary assistance to get ISO/IEC 17025 (latest version) accreditation of the laboratory for testing.

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13	Experience, Resources and Delivery Capacity Required	**The Applicant(s) shall meet the following eligibility criteria and shall furnish the documentary evidence in support of their eligibility criteria:** a) The minimum number of years of general experience in consultancy service as Prime Consultant shall be 15 years; years counting backward from the date of publication of EOI. b) The consulting firm(s) as Prime Consultant shall have experience in consultancy service to set up minimum 2 (two) ISO/IEC 17025 accredited laboratory for testing during the last 10 years; years counting backward from the date of publication of EOI. c) At least 01 (one) key professional must have the ISO/IEC 17025 Understanding and relevant Assessor course certification. d) Submit a summary of consultancy services of similar nature completed in last 10 (ten) years. Completion certificate of the same shall be submitted. e) All Certificates of consultancy services shall be in client's letter head pad having address, telephone & fax numbers and e-mail of the clients and shall include name, location, description and duration of services as well as contract amount. f) Applicant(s) shall have updated Trade License, VAT registration certificate, Income Tax certificate, Trade and organizational enrollment/certificate of incorporation and legal capacity to perform the service. g) The consulting firm(s) shall have requisite number of appropriate and experienced key professionals as mentioned in the ToR. A list of key professionals and their signed CV's with photograph & copy of all relevant certificates shall be submitted. h) The consulting firm(s) shall submit Audit Report for last 3 (three) years. i) The consulting firm(s) shall submit a Bank Solvency Certificate. j) Others as detailed in ToR.			
14	Other Details	**Other information are as follows:** a) The applicant of EOI shall submit the letter of application, basic data sheet, key professional staff and general & specific experience in prescribed format attached with ToR. b) The firm(s) may form Joint venture or association. Total number of firms including their associates will be maximum 2 (two). c) In case of Joint Venture (JV), an appropriate Declaration of Intent to work as a JV in the event of award of contract, signed by all JV partners mentioning the name of the lead partner and the name of authorized signatory. d) The EOI shall be submitted in 2 sets (one original & one copy) on or before the specified date, time and place. The applications will be opened on the specified date, time and place in presence of the representatives of the EOI applicants (if any). e) The EOI shall be submitted in sealed envelope and clearly marked with name of the assignment to the office of the inviting official. f) Information about consulting firm including brochure shall be submitted. g) Short list of consulting firm(s) will be made based on evaluation of application of EOI(s) submitted. Request for Proposal (RFP) will be sent to those short-listed firm(s) and proposal(s) will be evaluated on Quality and Cost Based Selection (QCBS) method. h) Interested applicants may obtain further information from the official inviting tender.			
15	Association with foreign firm is	Encouraged.			
16	Phasing of Services		Location	Indicative Start Date	Indicative Completion Date
	01	Feasibility study including cost estimation, submission of design and drawing and preparation of tender document.	ERL, North Patenga, Chattogram.	Within 7 (seven) days of signing contract.	Within 270 (two hundred seventy) days from signing of contract.
		Evaluation of tenders (technical & financial) and recommendation to the purchaser for selection of a competent contractor.	Do	Within 7 (seven) days after submission of tender.	Within 60 (sixty) days from submission of tender.
	02	Contract management for construction of ISO/IEC 17025 (latest version) accredited laboratory.	Do	After handover of construction site.	Within 720 (seven hundred twenty) days from the start date.

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	03	Assistance for ISO/IEC 17025 (latest version) accreditation for testing.	Do	After issuance of completion certificate of the laboratory building construction.	Within 720 (seven hundred twenty) days from the start date.

PROCURING ENTITY DETAILS		
17	Name of Official Inviting Expressions of Interest.	Mohammad Shamiul Islam
18	Designation of Official Inviting Expressions of Interest	Assistant General Manager (Quality Control)
19	Address of Official Inviting Expressions of Interest	Eastern Refinery Limited, North Patenga, Chattogram-4204, Bangladesh.
20	Contact Details of Official Inviting Expressions of Interest	Telephone No.: +88-02-3333-01261-70, Ext-280. Fax: +88-02-3333-01269. Mobile No.: +88-01321149028. E-mail: agmqc@erl.com.bd, md-office@erl.com.bd
21	The procuring entity reserves the right to accept or reject any or all EOI(s) without assigning any reason. If any false declaration, incorrect or forged certificates/papers are found with an EOI, the EOI shall be declared non-responsive.	
22	If EOI(s) can't be received/opened on the date of schedule due to any unavoidable circumstances, the same will be received/opened on the next working day at the same time and same place.	

(Mohammad Shamiul Islam)
Assistant General Manager (QC)
Eastern Refinery Limited
North Patenga, Chattogram

Md. Shamiul Islam
Assistant General Manager
Quality Control Department
Eastern Refinery Limited
North Patenga, Chattogram.

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Terms of Reference (TOR)

Introduction:
The Terms of Reference (TOR) is the key document in the Request for Proposal (RFP). It consists of the following sections:

1.0 Background
2.0 Objectives
3.0 Scope of services
4.0 Staffing
5.0 Time schedule for consultancy services
6.0 Payment to the consultant (Payment schedule)
7.0 Others
8.0 Annexure
Annexure-1: List of test/method for petroleum products presently available at ERL.
Annexure-2: List of new test/method required in future.
Annexure-3: List of petroleum test/method for ISO/IEC 17025 (latest version) Accreditation.

1.0 Background:

The Quality Control Department of Eastern Refinery Limited has been playing a vital role in ensuring the Quality of Petroleum Products. It performs various fuel and non-fuel tests of ERL's own as well as different imported and locally produced petroleum products through internationally recognized ASTM, IP and UOP testing methods. Currently ERL covers a whole range of around 150 petroleum related tests. It also meets the quality test required by various government bodies as well as private organizations of Bangladesh.

Since its inception, ERL's laboratory has been performing the task of ensuring petroleum product's quality. Hence, ERL always puts emphasis to maintain quality of the test & standards with up-to-date equipment and newer test methods. In recent past, Bangladesh Standards and Testing Institute (BSTI) has recommended increasing number of tests to meet specifications of the petroleum products in addition to large number of samples from various Government and private organizations. As a result, the activities of Laboratory have highly increased. Moreover, it has become a dire necessity to establish a separate wing for Lube oil and bitumen testing facilities due to a significantly increased number of test samples from BPC and Customs.

Furthermore, in order to ensure international acceptance of the test quality of petroleum products, it is required ISO/IEC 17025 accreditation for various tests. As per the guidelines of ISO/IEC 17025 accreditation, the several infrastructure facilities have to be ensured in the laboratory such as access control system, sufficient space for accommodation of equipment, workstation for officer and staff, record room, documentation room, firefighting system, qualified manpower, conference room, guest room. The consultant should consider

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vibration, contamination and humidity control etc. To fulfill the requirements, a new laboratory building is required conforming the required infrastructure and facilities for getting ISO/IEC 17025 accreditation for testing.

2.0 Objectives

The objectives of the consultancy services for setting up an ISO/IEC 17025 (latest version) Accredited Laboratory for Testing at Eastern Refinery Limited (ERL) are included but not limited to the following:

A. Feasibility study including cost estimation for the laboratory.
B. Preparation of design and drawings for construction of ISO/IEC 17025 (latest version) accredited laboratory.
C. Preparation of a guideline for ensuring ISO/IEC 17025 (latest version) accreditation for testing mentioning conditions and requirements (general, structural, resource, process, management system, metrological traceability etc. related).
D. Preparation of tender document in congruence with PPA 2006 and PPR 2008 for invitation of tender for construction of the laboratory building with ancillaries conforming design and drawings as well as considering requirements for accreditation.
E. Evaluation of tenders (technical & financial) submitted by the bidders based on the requirements and conditions mentioned in the tender document for selection of a competent contractor.
F. Assistance for gaining approval of design and drawings etc. for construction of the ISO/IEC 17025 (latest version) accredited laboratory from Department of Environment (DOE).
G. Perform contract management as per contract between the successful bidder and ERL/Purchaser till issuance of completion certificate of the laboratory building constructed for ISO/IEC 17025 (latest version) accreditation.
H. Provide necessary assistance to get ISO/IEC 17025 (latest version) accreditation of the laboratory for testing.

3.0 Scope of services

The consulting firm(s) may form Joint venture or association. Total number of firms including their associates shall be maximum 2 (two). The scope of consultancy services is detailed below:

A. Feasibility study including cost estimation:
   a) General feasibility study:
      The laboratory building must be designed to accommodate new apparatus required for petroleum test/method listed in Annexure-2 as well as the existing apparatus listed in Annexure-1. Moreover, office and other rooms as mentioned in this ToR will be accommodated.

      The general feasibility study includes the followings but not limited to-

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i) Site investigation, Topographic survey, GPR (Ground-penetrating radar) survey, Geotechnical investigation/Soil test, Site selection etc.
ii) Detailed social, technological, environmental and legal analysis.
iii) Perform the Environmental Impact Assessment (EIA) and Initial Environmental Examination (IEE).

b) Cost estimation:
Cost estimate will include all the cost involve to set up the ISO/IEC 17025 (latest version) accredited laboratory for testing, such as construction cost of the laboratory and any other expenses/fees required to achieve ISO/IEC 17025 (latest version) for testing accreditation. Construction cost of the laboratory will be based on design and drawing prepared by the Consultant.

c) Economic feasibility:
Economic feasibility should be done by the consulting firm if purchaser demands after the cost estimation.

B. Preparation of design and drawings for construction of ISO/IEC 17025 (latest version) accredited laboratory:
The consultant will prepare design and drawings for construction of the laboratory with ancillaries considering necessary requirements and conditions for ISO/IEC 17025 (latest version) accreditation for testing. The final design and drawing shall require approval from ERL/Purchaser.

Design and drawings will be prepared according to the following requirements but not limited to-

i) General requirements: It requires Architectural & Structural design and drawing, detailed 3-D design and model of the building including the surroundings, layout plan and working drawing, Floor plan including lab & office furniture and equipment layout for each room etc. The design and drawing must include apparatus existing at present in ERL laboratory mentioned in annexure-1 and Accommodation for new apparatus required for petroleum test/method listed in Annexure-2. The layout plan should include provision for the rooms and facilities listed below but not limited to-

- **Lab Room:**
  - Work stations for Lab Tester, Helper, and Casual labor.

- **Office and other rooms:**
  - Office Rooms for QC, Process and Utility Departments' personnel (DGM, AGM, Manager, Assistant manager, Officer, Staff, casual labor etc.)
  - Store room for chemical.
  - Store room for spares.
  - Record room.

- Documentation room.
- Sample blending room.
- Sample preservation room.
- Locker room.
- Dining Room.
- Shift in Charge Room.

- **Guest & Conference Room:**
  - Addressing System, Interactive Digital Display etc.
  - False ceiling.

- **Toilets:**
  - Common toilets and separate toilets for guest and conference room.
  - Necessary fittings.

- **Gas cylinder Room:**
  For Nitrogen, Helium, Oxygen, CO_2, Hydrogen etc.
  - All ancillaries will be as per relevant NFPA code.

ii) Detail architectural and Structural design as well as working drawing should include-

a) Electrical, Mechanical and Communication systems design.
b) Plumbing, Sanitary and Sewerage system including surface and underground rainy-water and oily-water drainage systems.
c) Dehumidifier, Fume hoods and gaseous exhaust systems for lab room.
d) Fire protection and fire & smoke detection system as per relevant code of NFPA.
e) Access control system, CCTV.
f) All utility and auxiliary services (Air, Nitrogen, Helium, Oxygen, CO_2, Hydrogen, Raw Water, WASA Water, Hot Water etc. pipe lines).
g) Water Preserver: Raw water, WASA Water, De-mineralized Water.
h) Necessary Furniture & Fixture for each room, HVAC/VRF/Ceiling AC/Split AC.
i) Rain Water Harvesting System.
j) Emergency lighting system.
k) MCC Panel, Transformer (if required), Cables, Electrical Fittings (Hazards Class for A, B, C & D), lighting conductor, Earthing system and Thunder arrestor etc. as per IEC standard and requirement, Power Source: 380 VAC; 3 phase, 220 VAC; single phase, 50 Hz.
l) Computer system, Ethernet and Internet connection and PABX system.

The above-mentioned rooms and facilities are only for guideline. The consultant can increase/decrease the same as per requirement in consultation with ERL as and when required.

C. Preparation of a guideline:

The consultant shall prepare a guideline for ensuring ISO/IEC 17025 (latest version) accreditation for testing mentioning conditions and requirements (general, structural, resource, process, management system, metrological traceability etc. related). In case of human resources, required educational qualifications, trainings, certification, experiences etc. should be mentioned.

D. Preparation of tender document:

Preparation of tender document in congruence with PPA 2006 and PPR 2008 for invitation of tenders from bidders for construction of the laboratory building with ancillaries conforming design and drawings as well as considering requirements for accreditation. During preparation of tender document, the consultant can discuss with ERL if necessary. Before finalization of tender document, the consultant will submit a draft to ERL for Comments.

E. Evaluation and selection of contractor for construction of laboratory building with ancillaries:

The consultant shall-

i) Evaluate all tenders (technical & financial) submitted by the bidders based on the requirements and conditions mentioned in the tender document. Commercial offer will be opened and evaluated after approval of technical offer approved by ERL/Purchaser.
ii) Recommend to the purchaser for selection of a competent Contractor to set up the laboratory building.

F. Assistance for gaining approval of design and drawings etc. for construction of ISO/IEC 17025 (latest version) accredited laboratory from Department of Environment (DOE):

This scope includes the followings but not limited to-

i) Submission of required documents on behalf of the ERL/ purchaser.
ii) Presentation at DOE for the approval on behalf of the ERL/purchaser.
iii) Required modification in the documents if needed to get the approval.
iv) Getting the Final approval of DOE on behalf of the ERL/purchaser.

G. Contract management as per contract between the successful bidder and ERL/Purchaser till issuance of completion certificate of the laboratory building constructed for ISO/IEC 17025 (latest version) accreditation:

This scope includes the followings but not limited to-

i) Full time supervision of construction work, i.e., QA/QC of the project.
ii) Checking the construction work as per contract as well as any correction (if necessary) and modification accordingly.
iii) HSE (Health, Safety and Environment) supervision.

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iv) Checking bills and certify for payment.
v) Submission of project completion report with as built drawings.

H. Assistance for ISO/IEC 17025 (latest version) accreditation of the laboratory for testing:

The scope includes the followings but not limited to-

i) Assistance for smooth transfer and setting up the existing apparatus as listed in Annexure-1.
ii) Preparation of all necessary documents for application process and provides full assistance to achieve ISO/IEC 17025 (latest version) accreditation for testing of petroleum test/method as listed in Annexure-3. Recommendation should be provided if any new/latest apparatus required for the accreditation.

N.B.:
As an expert, if the consultant thinks appropriate should perform other services necessary to get the ISO/IEC 17025 (latest version) accreditation for testing of the laboratory including the scope of services mentioned above.

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4.0 STAFFING:

The field of expertise and minimum number & qualification required for the professional in the consultancy services are as follows:

SN	Position/ Designation	No. of Person	Qualification and experience of professional
1	Team Leader/ Project Manager	1	Graduate in Civil/Electrical/Mechanical/Chemical Engineering /Architecture/Chemistry with min. 15 years professional experience in coordinating and managing all works necessary to setup such an ISO accredited building complex as well as to achieve ISO certification.
2	Civil Engineer	1	Graduate in Civil Engineering with min. 10 years professional experience specialized in structural design & drawing of high rise RCC structured buildings.
3	Electrical/ Mechanical Engineer	1	Graduate in Electrical/Mechanical Engineering with min. 10 years professional experience specialized for electrical and mechanical design & drawing of high rise RCC structured buildings.
4	Supervisory Engineer/ Field Supervisor	2	Graduate in Civil/ Electrical/Mechanical Engineering with min. 10 years professional experience or Diploma in Civil/Electrical/Mechanical Engineering with min. 15 years professional experience specialized in supervision of civil, electrical, mechanical, plumbing, interior & other necessary works as per design & drawing of high rise RCC structured building.
5	Estimator	1	Diploma in Civil/Mechanical/Electrical Engineering with min. 10 years professional experience specialized in estimation of civil, electrical, mechanical, plumbing, interior & other necessary works with as per design & drawing of high rise RCC structured building.
N.B.: At least 01 (one) key professional (out of Sl. No. 1-3) must have the ISO/IEC 17025 Understanding and relevant Assessor course certification.			

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5.0 Time Schedule for Consultancy Services

The following time schedule shall be followed in carrying out the consultancy services:

Phase	Description	Duration (Days)
1	**Feasibility study including cost estimation phase:** a) General Feasibility study. b) Cost estimation based on design and drawing. c) Economic Feasibility study if Purchaser demands. d) Preparation of design and drawing for construction of the ISO/IEC 17025 (latest version) accredited laboratory. e) Preparation of a guideline for ensuring ISO/IEC 17025 (latest version) accreditation for testing mentioning conditions and requirements. f) Preparation of tender document in congruence with PPA 2006 and PPR 2008 for invitation of tenders from bidders for construction of the ISO/IEC 17025 (latest version) accredited laboratory. g) Assistance for gaining approval of design and drawings etc. for construction of the ISO/IEC 17025 (latest version) accredited laboratory from Department of Environment (DOE). N.B.: The consultant can perform the above-mentioned jobs (a-g) in parallel.	**270 (two hundred seventy) (from signing of contract)**
2	**Evaluation phase:** Evaluation of tenders (technical & financial) submitted by the bidders based on the requirements and conditions mentioned in the tender document and recommendation to the purchaser for selection of a competent contractor.	**60 (sixty) (from submission of tenders)**
3	**Construction Phase:** a) Full time supervision of construction work. b) Checking the construction work as per contract as well as any correction (if necessary) and modification accordingly. c) HSE (Health, Safety and Environment) supervision. d) Checking bills and certify for payment. e) Submission of project completion report with as built drawings.	**720 (seven hundred twenty) (after handover of construction site)**

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4	**Accreditation Phase:** a) Assistance for smooth transfer and setting up the existing apparatus as listed in Annexure-1. b) Preparation of all necessary documents for application process and provides full assistance to achieve ISO/IEC 17025 (latest version) accreditation for testing of petroleum test/method as listed in Annexure-3. Recommendation should be provided if any new/latest apparatus required for the accreditation. N.B.: If necessary, the completion time required for Accreditation phase can be extended through mutual agreement between the purchaser and the consultant but payment will be made only on the achievement of milestone.	**720** **(seven hundred twenty)** **(after issuance of completion certificate by ERL)**

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6.0 Payments to the consultant (Payment schedule)

Phase	Particulars	Quoted Price mentioning Currency (in number & word)	% of Payment for Milestone
1	**Feasibility study including cost estimation phase:**		-
	a) General Feasibility study.	-	20%
	b) Cost estimation based on design and drawing.	-	15%
	c) Economic Feasibility study if Purchaser demands.	-	10%
	d) Preparation of design and drawings for construction of the ISO/IEC 17025 (latest version) accredited laboratory.	-	25%
	e) Preparation of a guideline for ensuring ISO/IEC 17025 (latest version) accreditation for testing mentioning conditions and requirements.	-	10%
	f) Preparation of tender document in congruence with PPA 2006 and PPR 2008 for invitation of tender from bidders for construction of the ISO/IEC 17025 (latest version) accredited laboratory.	-	10%
	g) Assistance for gaining approval of design and drawings etc. for construction of the ISO/IEC 17025 (latest version) accredited laboratory from Department of Environment (DOE).	-	10%
	Total Cost		100%
2	**Evaluation phase:** Evaluation of tenders (technical & financial) submitted by the bidders based on the requirements and conditions mentioned in the tender document and recommendation to ERL/ purchaser for selection of a competent contractor.		-
	Total Cost		100%

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3	**Construction Phase:**		-
	a) Contract management as per contract between the successful bidder and ERL/Purchaser till issuance of Completion certificate/Acceptance certificate by ERL/Purchaser. N.B.: i) Payment will be made for each 25% progress in construction work of laboratory building. ii) Payment will be made through work progress report submitted by consultant and issuance of work completion certificate/ Acceptance certificate by ERLPurchaser.	-	80%
	b) Submission of project completion report with as built drawings.	-	20%
	Total Cost		100%
4	**Accreditation Phase:**	-	-
	a) Assistance for smooth transfer and setting up the existing apparatus as listed in Annexure-1.		100%
	b) Preparation of all necessary documents for application process and provides full assistance to achieve ISO/IEC 17025 (latest version) accreditation for testing of petroleum test/method as listed in Annexure-3. Recommendation should be provided if any new/latest apparatus required for the accreditation. N.B.: The consultant must quote for each single test/method accreditation.		After achievement of each single test/method accreditation
N.B.: Payments will be made after successful achievement of the milestone mentioned above and issuing completion certificate for each milestone by ERL/Purchaser.			

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7.0 Others

a) The laboratory must incorporate the state-of-the-art technology as well as Green Laboratory concept.
b) The laboratory must be designed and constructed to meet the requirements of the Sustainable Development Goals (SDG 2030) and assist to achieve the Vision of Smart Bangladesh 2041.

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Annexure-1

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List of Test/Method for petroleum products presently available at ERL

Sl. No.	Name of the Tests (Property)	Method & Designation	Apparatus	Remarks
1.	Acidity (total) in Aviation Turbine Fuel (Titration Method)	ASTM D 3242	Potentiometer	
2.	Acid/Base Number by Color Indicator method	ASTM D 974	Potentiometer	
3.	Acid Number by Potentiometric method	ASTM D 664	Potentiometer	Total: 2 units
4.	Acid Degree by Potentiometric method	ASTM D 664	Potentiometer	
5.	Aniline Point and Mixed Aniline Point of Petroleum products and Hydrocarbon solvents	ASTM D 611	Glassware &Thermostat	
6.	Appearance ASTM Color, Visual	ASTM D 1500	Colorimeter	Total: 2 units
7.	Ash from Petroleum Products	ASTM D 482	Glassware, furnace	
8.	Ash (sulphated) from Lubricating Oils and Additives	ASTM D 874	Glassware, furnace	
9.	Asphaltenes in Petroleum Products (Heptane Insoluble)	IP 143	Glassware, heater	
10.	Analysis of Liquefied Petroleum Gases and Propane Concentration by Gas Chromatograph	ASTM D 2163	Gas Chromatograph	
11.	Analysis of Reforming Recycle Gas by Gas-Chromatograph	ASTM D 2163	Gas Chromatograph	
12.	Average Molecular Weight of POL Product	UOP 375	Apparatus	
13.	Free Water and Particulate Contamination in Distillate Fuels (Visual Inspection Procedures)	ASTM D 4176	Glassware	
14.	Base Number of Petroleum Products (Potentiometric Perchloric Acid Titration)	ASTM D 2896	Potentiometer	Total: 2 units
15.	Bromine Number and Bromine Index of Hydrocarbon by Potentiometric Titration	UOP 304	Potentiometer	
16.	Bromine Index of Petroleum distillate by Coulometric Titration	UOP 358	Coulometric Titrator	
17.	Carbon Residue (Micro)	ASTM D 4530	CR Apparatus	
18.	Carbon Residue (Conradson)	ASTM D 189	CR Apparatus	

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19.	Caustic Solution Analysis (double indicator method) of Merox Sweetening: 1) Percent spent 2) Strong base alkalinity 3) Total alkalinity	UOP 210	Glassware	
20.	Cetane Index (calculated) of Distillate fuels	ASTM D 976	Cetane Engine	
21.	Char value (burning test)	IP 10	Glassware	
22.	Chlorine (total) in Petroleum Distillate oils by Potentiometric Titration	UOP 588	Potentiometer	
23.	Chlorine in Hydrogen and Recycle gas by Colorimetric method	UOP 317	Apparatus	
24.	Cloud Point of Petroleum oils	ASTM D 2500	Cloud Point Apparatus	
25.	Copper Strip Corrosion for LPG	ASTM D 1838	Apparatus	
26.	Color stability of Petroleum distillates	UOP 793	Apparatus	
27.	Compatibility of Fuel Oil blends by Spot Test	ASTM D 2781	Glassware	
28.	Character Factor of POL Product	UOP 375	-	
29.	Compatibility and Stability of Residual Fuels by Spot Test	ASTM D 4740	Glassware	
30.	Calculated Carbon Aromaticity Index	Calculated Direct test	-	
31.	Demulsifying Characteristics of Lube oils	ASTM D 2711	Apparatus	
32.	Demulsification Number of Lubricating oils	IP 19	Apparatus	
33.	Density and Relative Density of liquids by Lipkin Bicapillary Pycnometer	ASTM D 941	Glassware & Thermostat	
34.	Density and Relative Density or API gravity of Crude Petroleum & Liquid Petroleum Products	ASTM D 1298	Glassware & Hydrometer	
		ASTM D 4052	Density meter	
35.	Density and Relative Density of Light Hydrocarbon by Pressure Hydrometer	ASTM D 1657	Pressure Hydrometer	
36.	De-pentanization of Gasoline and Naphtha	ASTM D 2001	Apparatus	
37.	Gasoline Diluent in used Gasoline Engine Oils by Distillation	ASTM D 322	Apparatus	
38.	Distillation of Petroleum products	ASTM D 86	Distillation Apparatus	Total unit: 12 Nos.
39.	Distillation of Crude Petroleum (Hampel Apparatus)	ASTM D 285	Hampel Apparatus	
40.	Distillation of Petroleum Products at Reduced Pressure	ASTM D 1160	Reduced Press. Apparatus	
41.	TBP (True Boiling Point) Distillation of	ASTM D 2892	TBP Apparatus	

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	Crude Petroleum			
42.	Disulphide Sulphur in Light Petroleum Distillate and LPG (by Potentiometric Method)	UOP 202	Potentiometer	
43.	Doctor Test of Petroleum Products	ASTM D 235	Glassware	
44.	Ductility of Bituminous Materials	ASTM D 113	Apparatus	
45.	Diesel Index of Distillate fuels	IP 21	-	
46.	Electrical Conductivity of Aviation fuels	IP 274	Conductivity meter	
47.	Existent Gum in fuels by jet evaporation	ASTM D 381	Apparatus	
48.	Emulsion characteristics of Petroleum Oils and Synthetic Fluids	ASTM D 1401	Apparatus	
49.	Emulsifying characteristics of Jute Batching Oil	BDS 1448	Apparatus	
50.	Flash Point by Abel apparatus	IP 170	Abel Apparatus	Total: 2 units
51.	Flash and Fire Point by Cleveland Open Cup Tester	ASTM D 92	COC Tester	Total: 2 units
52.	Flash Point by Pensky-Marten Close Cup Tester	ASTM D 93	PMCC Tester	Total: 4 units
53.	Flue gas analysis (by Orsat app.) i) O_2, % vol. ii) CO, % vol. iii) CO_2, % vol.	UOP 170	Orsat Apparatus	
54.	Flocculation Ratio of Bitumen and Fuel Oils	SMS 305	Glassware	
55.	Foaming characteristics of Lubricating Oils.	IP 146	Apparatus	
56.	Freezing characteristics of Aviation Fuels	IP 16	Apparatus	
57.	Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter	ASTM D 240	Bomb Calorimeter	Total: 2 units
58.	Higher/Lower Heating Value	ASTM D 4868	-	
59.	Hydrocarbon constituents in Liquid Petroleum Products (PONA) by Fluorescent Indicator Adsorption	ASTM D 1319	Apparatus	
60.	Hydrogen Content of Refinery Gases by Gas Chromatography	UOP 735	Gas Chromatograph	
61.	Hydrogen Content (estimated) of Aviation Fuels	ASTM D 3343	-	
62.	Hydrogen Sulfide and Mercaptan Sulfur in liquid hydrocarbon by Potentiometric Titration	ASTM D 3227	Potentiometer	
63.	Hydrogen Sulfide in LPG by Potentiometric Titration method	UOP 212	Potentiometer	
64.	Hydrogen Chloride in Gas-streams by Potentiometric Titration method	UOP 405	Potentiometer	

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65.	Hydrogen Chloride in Petroleum Products by Potentiometric Titration	UOP 232	Potentiometer	
66.	Iodine Value by Iodine Monochloride method	IP 84	Glassware	
67.	Insolubles in used Lube Oils	ASTM D 893	Apparatus	
68.	Lead (traces) in Aviation Turbine Fuels and Light Petroleum Products	IP 224	Apparatus	
69.	Lead in Gasoline (EDXRF Method)	ASTM D 5059	Apparatus	
70.	Loss on Heating of Oil and Asphaltic Compounds	ASTM D 6	Apparatus	
71.	Lower Heating Value (LHV)	ASTM D 4868	-	
72.	Nitrogen Bases in Hydrocarbon by Potentiometric method	UOP 269	Potentiometer	
73.	Nitrogen in Liquefied Gases by Kjeldahl method	UOP 432	Kjeldahl Apparatus	
74.	Knock characteristics of Motor Fuels by Research method (RON)	ASTM D 2699	CFR Engine	
75.	Knock Characteristics of Motor & Aviation Fuels by Motor method (MON)	ASTM D 2700	CFR Engine	
76.	Anti-knock Index	ASTM D2699/ ASTM D 2700	-	
77.	Mechanical Impurities (Visual)	ASTM D 4176	Glassware	
78.	Oxidation Stability of Gasoline (Induction Period method)	ASTM D 525	Apparatus	
79.	Penetration of Bituminous Materials	ASTM D 5	Penetrometer	Total: 2 units
80.	Penetration after loss on heating of Bituminous materials	ASTM D 5 & 6	Penetrometer and Loss on heat Apparatus	
81.	Pentane Insoluble in Used Lubricating Oils (Centrifuge method)	ASTM D 893	Apparatus	
82.	Pentane Insoluble in Used Lubricating Oils (Membrane Filtration method)	ASTM D 4055	Apparatus	
83.	Pour Point of Petroleum Oils	ASTM D 97	Apparatus	Total: 2 units
84.	Paraffin Wax content of Petroleum Oils & Asphalt	UOP 46	Apparatus	
85.	Particulate Contamination	ASTM D 5452	Apparatus	
86.	Refractive Index	ASTM D 1218	Apparatus	
87.	Salt content in Crude Oil (Electrometric method)	ASTM D 3230	Salt Analyzer	Total: 2 units
88.	Salt content in Crude Oil by Titration	UOP 22	Glassware	
89.	Saybolt Color of Petroleum products	ASTM D 156	Apparatus	
90.	Sediment in Crude Oil & Fuel Oil by Extraction method	ASTM D 473	Apparatus	
91.	Sediment content (total) in Residual Fuel Oil and Distillate blends by Filtration method	IP 375	Apparatus	

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92.	Sediment (trace) in Lubricating Oil	ASTM D 2273	Apparatus	
93.	Silver Strip Corrosion of Aviation Turbine Fuel	IP 227	Apparatus	
94.	Smoke Point of Aviation Turbine Fuel	ASTM D 1322	Apparatus	
95.	Specific Energy of Aviation Turbine Fuel	ASTM D 4529	-	
96.	Specific Gravity of semi-solid Bituminous materials	ASTM D 70	Thermostat and Glassware	
97.	Specific Gravity of gas by Schilling Effusion method	UOP 114	Apparatus	
98.	Solubility of Asphalt Materials in Trichloroethylene	ASTM D 2042	Glassware	
99.	Storage Stability of Residual Fuel Oils	UOP 174	Glassware	
100.	Sulfur(total) in Petroleum products by X-ray Spectrometry	ASTM D 4294	EDXRF Apparatus	
101.	Sulfur in Petroleum Products, High Temperature method.	ASTM D 1552	Apparatus	
102.	Sulfur (Mercaptan) in POL products by Potentiometric Titration	ASTM D 3227	Potentiometer	
103.	Sulfur (Mercaptan) in Light Petroleum Distillates by Titration method	IP 104	Potentiometer	
104.	Sulfur (Mercaptan) in Hydrocarbon gases by Potentiometric Titration method	UOP 212	Potentiometer	
105.	Sulfur (Carbony) in Hydrocarbon gases by Potentiometric Titration method	UOP 212	Potentiometer	
106.	Sulfur (Phenolic) in Hydrocarbon gases by Potentiometric method	UOP 212	Potentiometer	
107.	Sulfur (Elementary) in Liquid Hydrocarbon gases by Potentiometric Titration method	UOP 165	Potentiometer	
108.	Sulfur (Free) in Liquid Petroleum Gases by Mercury Number	UOP 377	-	
109.	Sulfur (trace) in Light Petroleum Distillate by Nickel Reduction method	UOP 357	Glassware	
110.	Thermal Oxidation Stability of Aviation Turbine Fuel (JFTOT procedure)	ASTM D 3241	JFTOT Apparatus	
111.	Thiosulfate in used Refinery Caustic (Merox Sweetening)	UOP 423	Glassware	
112.	Trace quantity of Oil in Water	ASTM D 322	Glassware/ Apparatus	
113.	Vapor Pressure of Petroleum Products by Reid Method	ASTM D 323	RVP Apparatus	
114.	Vapor Pressure of Liquefied Petroleum Gases (LPG) by LP Gas Method	ASTM D 1267	Apparatus	
115.	Viscosity (Kinematic) of Transparent	ASTM D 445	Thermostat and	Total: 5

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	& Opaque Liquids and calculation of Dynamic Viscosity)		Glassware	Thermostat
116.	Viscosity Index calculation from Kinematic Viscosity at 40°C & 100°C	ASTM D 2270	-	
117.	ISO-Viscosity Grade	ASTM D 2422	-	
118.	Volatility of Liquefied Petroleum	ASTM D 1837	Glassware	
119.	Water in Petroleum Products & Bituminous Materials by Distillation (Dean & Stark)	ASTM D 95	Apparatus	
120.	Water in Crude Oil by Distillation	ASTM D 4006	Apparatus	Total: 2 units
121.	Water & Sediment in Crude Oil by Centrifuge	ASTM D 96/ 1796	Apparatus	Total: 2 units
122.	Water & Sediment in Crude Oil by Centrifuge	ASTM D 4007	Apparatus	
123.	Water in Liquid Petroleum Products by Karl Fischer Reagent (Auto Titration)	ASTM D 1744	KFC Apparatus	
124.	Water reaction of Aviation Fuels	ASTM D 1094	Glassware	
125.	Water Separation Characteristics of Aviation Turbine Fuels (MSEP)	ASTM D 3948	MSEP Apparatus	
126.	Weathering Test for Liquefied Petroleum Gas	UOP 155 ASTM D 2158	Apparatus	

List of Tests of Water

Sl. No.	Name of Tests	Apparatus
1.	Determination of Total Alkalinity	Glassware
2.	Determination of Total Alkali Content	Glassware
3.	Determination of Total Hardness	Glassware
4.	Determination of Calcium Hardness	Glassware
5.	Determination of Magnesium Hardness	Glassware
6.	Determination of pH	pH Meter
7.	Determination of Conductivity	Conductivity meter
8.	Determination of Chloride (NaCl) Content	Glassware
9.	Determination of Total Solid	Glassware
10.	Determination of Total Dissolved Solid	TDS Meter
11.	Determination of Suspended Solid	Glassware
12.	Determination of Dichromate Content	Glassware
13.	Determination of Sulphite Content	Glassware
14.	Determination of Silica Content	Spectrophotometer
15.	Determination of Iron Content	Spectrophotometer
16.	Determination of Phosphate Content	Glassware
17.	Determination of Sulphate Content	Glassware
18.	Determination of Dissolved Oxygen	DO Meter
19.	Determination of Turbidity	Turbidity Meter
20.	Determination of Chlorine Content	Glassware
21.	Determination of Nitrogen(Nitrate) Content	Glassware
22.	Determination of Carbon dioxide Content	Glassware
23.	Determination of Free Mineral Acidity	Glassware
24.	Determination of Total Acidity	Glassware
25.	Determination of Hydrazine	Glassware
26.	Determination of Residual Chlorine	Glassware
27.	Determination of Free Chlorine	Glassware

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List of new test/method required in future

SN	Parameter	Method	Description of Apparatus	Test Applicable for Products	Remarks
1.	Ash content	ASTM D 482	Muffle Furnace, Precision Balance Desiccators (Note 1)	HSD/LDO/FO	
2.	Aromatic content/PIONA	ASTM D 6730	DHA (GC)	SBPS/NAPHTHA	
		ASTM D 1319	FIA Apparatus	NGC	
		ASTM D 6379	DHA (GC)	JET A1	
3.	Asphaltenes Content	IP 143	Glass Wares (Note 1)	CRUDE OIL/FO	
4.	Absorbance & Pyrene Content	USF & DA 178.3620	Spectrophotometer	JBO	
5.	Bottom sediment & water	ASTM D 1796	Centrifuge Apparatus	Crude/FO	
6.	Color	ASTM D 156/ ASTM D 1500	Colorimeter	SBPS/NAPHTHA/ MOGASs/MTT/ KEROSENE/JET A1/HSD/JBO/NGC	
7.	Copper strip Corrosion	ASTM D 130	Copper Strip Corrosion Pressure Vessel & Water Bath	SBPS/NAPHTHA/ MOGASs/MTT/ KEROSENE/JET A1/HSD/JBO/NGC	
8.	Copper strip Corrosion	ASTM D 1838	Copper Strip Corrosion Pressure Vessel & Water Bath	LPG	
9.	Char Value	IP 10 / ASTM D 187	Lamp, Wick	KEROSENE	
10.	Cetane Number	ASTM D 613	Cetane Engine	HSD	
11.	Carbon Residue	ASTM D 4530	Apparatus for determination of carbon residue (Micro Method)	HSD/LDO/FO	
12.	Calorific Value	ASTM D 240	Bomb Calorimeter	HSD/LDO/FO	
13.	Composition of Gas	ASTM D 2163	Gas Analyzer (GC)	LPG/NG/RG	
14.	Cloud Point	ASTM D 2500	Cooling Bath & Glassware	HSD	
15.	Cold Filter Plugging Point	ASTM D 6371	CFPP Apparatus	HSD	
16.	Colour of Dyed Aviation Gasoline	ASTM D 2392	Colour Comparator	Aviation Gasoline	

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17.	Distillation	ASTM D 86	Automatic Distillation Apparatus	All Liquids	
			Manual Distillation Apparatus	All Liquids	
18.	Density	ASTM D 1298 ASTM D 4052	Hydrometers and Thermometers	All Liquids	
			Digital density meter	All Liquids	
19.	Density for LPG	ASTM D 1657	Pressure Hydrometer Cylinder	LPG	
20.	Electrical Conductivity	ASTM D 2624 IP 274	Conductivity Meter	JET A-1	
21.	Existent Gum (Residue on Evaporation)	ASTM D 381	JET Evaporation Bath	MOGASs/ JET A-1/MTT	
22.	Emulsification	BDS 1448	Glass Ware	JBO	
23.	Evaluating Lubricity of Diesel Fuel of by the High Frequency Reciprocating Rig (HFRR)	ASTM D 6079 / 7688	Complete Test Apparatus of HFRR	HSD	
24.	Flash Point, Able	IP 170	Automatic Able Flash Point Apparatus	MTT/KETOSENE	
25.	Flash Point Pensky Marten	ASTM D 93	Semi-Automatic PM Apparatus	HSD/JBO/LDO/FO	
26.	Filterability of Diesel Fuels by Low Temperature Flow Test (LTFT)	ASTM D 4539	LTFT Apparatus	HSD	
27.	Hydrogen Sulphide	UOP 212	Potentiometer	LPG/MOGASs	
28.	Freezing Point	ASTM D 2386 IP 16	Freezing Point Apparatus	JET A-1	
29.	Induction Period (Oxidation Stability)	ASTM D 525	Oxidation Pressure Vessel	MOGASs	
30.	Lubricity*	ASTM D 5001	BOCLE Apparatus	JET A-1	
31.	Loss on Heating	ASTM D 6	Oven	BITUMEN	
32.	Mercaptan Sulphur	UOP 163/ ASTM D3227	Potentiometer	MOGASs/NAPHTHA JET A-1	
33.	MSEP Rating	ASTM D 3948	Micro Separometer	JET A-1	
34.	Moisture Content	ASTM D 2420	Complete Set of Test Apparatus	LPG	
35.	Octane Number	ASTM D 2699	CFR Engine	MOGAS	
36.	Particulate Contamination*	ASTM D 5452	Particle Counting System	JET A-1	
37.	Pour Point	ASTM D 97	Pour point	HSD/JBO/LDO/FO	

			apparatus		
38.	Penetration	ASTM D 5	Penetrometer& Cooling Bath	BUTIMEN	
39.	Reid Vapor Pressure	ASTM D 323	Apparatus for vapor pressure (Auto)	MGOAS/ NAPHTHA	
40.	Ramsbottom Carbon Residue	ASTM D 524	Complete Set of Apparatus	HSD/FO	
41.	Residue on Evaporation	ASTM D 2158	Complete Set of Test Apparatus	LPG	
42.	Residue by GC	ASTM D 7756	GC	Residue	
43.	Smoke Point	ASTM D 1322	Smoke point lamp	KEROSENE JET A-1	
44.	Specific Gravity	ASTM D 70	Pycnometer, Balance, Weather Bath	BITUMEN	
45.	Softening point	ASTM D 36	Softening point Test Apparatus	BITUMEN	
46.	Solubility Test	ASTM D 2042	Complete Set of Apparatus	BITUMEN	
47.	Sediment, Total	ASTM D 4870	Apparatus for total sediment	FO	
48.	Sulphur	ASTM D 4294	EDXRF Apparatus	All Liquids	
49.	Salt Content	ASTM D 3230	Salt Analyzer	CRUDE OIL/NGC	
50.	Oxidation Stability	EN 15751		Fuel Oil	
51.	Total Volatile Sulfide	ASTM D 6667	Complete Set of Test Apparatus	LPG	
52.	Distillation of Crude Petroleum	ASTM D 2892	TBP Apparatus	CRUDE OIL/NGC	
53.	Volatility of LPG	ASTM D 1873	Centrifuge Tube & Thermometer	LPG	
54.	Vapour Pressure for LPG	ASTM D 1267	Pressure vessel	LPG	
55.	Low Temperature Viscosity	ASTM D 445	Low Temperature Viscosity	JET A-1	
56.	Color stability of Petroleum distillates	UOP 793	Color stability apparatus	Lub Oil	
57.	Refractive Index	ASTM D 1218	Refractometer	Lub Oil	
58.	Pentane Insoluble in Used Lubricating Oils (Centrifuge method)	ASTM D 893	Centrifuge apparatus	Lub Oil	
59.	Metal Content	-	Suitable Apparatus	Lub Oil	

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Annexure-3

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List of Petroleum Test/Method for ISO/IEC 17025 (latest version) Accreditation

Sl. No.	Property	Test Method	For Samples	Apparatus
1.	Density	ASTM D 1298(manual) &ASTM D4052(Auto)	SBPS, Gasoline, MTT, Jet A1, Kerosene, Diesel, JBO, FO, Lube Oil etc.	Hydrometer, Thermometer & Density meter
2.	Colour, ASTM	ASTM D 1500	Diesel, JBO, Lube Oil	Colorimeter
3.	Colour, Saybolt	ASTM D 156	SBPS, Gasoline, MTT, Jet A1, Kerosene	Colorimeter
4.	Carbon Residue (Conradson and Micro)	ASTM D 189 & ASTM D 4530	Diesel, FO & Lube Oil	Conradson & Micro carbon Test Apparatus
5.	Pour Point	ASTM D 97	Diesel, FO & Lube Oil	Cooling Bath
6.	Flash Point, Pensky Marten Close Cup (PMCC)	ASTM D 93	Diesel, JBO, FO, Lube Oil	Pensky Marten Close Cup (PMCC) Apparatus
7.	Flash Point (Abel)	IP 170	MTT, Jet A1, Kerosene	Abel Test Apparatus
8.	Kinematic Viscosity	ASTM D 445	Diesel, FO & Lube Oil	Viscometer & Constant Temp. bath
9.	Sulphur Content	ASTM D 4294	SBPS, Gasoline, MTT, Jet A1, Kerosene, Diesel, JBO, FO, Lube Oil	EDXRF Apparatus
10.	Distillation	ASTM D 86	SBPS, Gasoline, MTT, Jet A1, Kerosene, Diesel, JBO	Auto-Distillation apparatus
11.	Research Octane Number (RON)	ASTM D 2699	Gasoline	CFR Engine
12.	Penetration	ASTM D 5	Bitumen	Penetrometer & Cooling bath
13.	Softening Point	ASTM D 36	Bitumen	Softening Point Test Apparatus
14.	Ductility	ASTM D 113	Bitumen	Ductility Test Apparatus
15.	Water Content	ASTM D 95	Crude, Diesel, FO, Lube Oil	Test Apparatus

N.B.:
Recommendation should be provided if any new/latest apparatus required for the accreditation.

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Formats of Application

Form A : Letter of Application

General Manager (Planning & Development)
Bangladesh Petroleum Corporation (BPC)
BSC Bhaban, Saltgola Road, P.O. Box No. 2050
Chattogram-4100, Bangladesh.

Name of Work: Expressions of Interest (EOI) for selection of Consulting Firm (International) for setting up an ISO/IEC 17025 (latest version) Accredited Laboratory for Testing at ERL.

Dear Sir,

Having examined the notice inviting applications for appointment of Consulting Firm for the subject services, we [Firm/JV name with address] hereby submit this EOI application along with the statements and related documents as required by the Employer/Procuring Entity.

We understand that the decision and discretion applied by the Employer in evaluation of the applications and grading the applicants are absolute and can't be disputed by or appealed against by the applicant.

Yours sincerely,

[Signature of the authorized representative of Consulting Firm/JV]

Name:
Position:
Address:

[STAMP]

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Form B : Basic Data Sheet of the Consulting Firm

(In case of JV, separate statement of each partner shall have to be submitted)

01.	a) Name of the Consulting Firm	:
	b) Name of the JV (if any)	:
02.	Address in full	
	a) Head Office	:
	b) Branch Regional Office(s) (if any)	:
03.	Telephone no.	:
04.	Fax No., E-mail/Web site etc.	:
05.	Date and place of incorporation/registration of the Firm (proper documents to be enclosed)	:
06.	Status and organizational structure of the Firm.	:
07.	Organizational Chart of the Firm	:
08.	Valid Trade/business license (Copy to be furnished)	:
09.	Brochure of the Firm	:
10.	Total permanent staff number of the Firm	:
11.	Years of Experience in the relevant field	:

Signature of the authorized representative of
Consulting Firm/JV with date and seal

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Form C : Key Professional Staff of the Consulting Firm

(Experienced in consultancy service to set up ISO/IEC 17025 accredited laboratory for testing)

(In case of JV, separate statement of each partner shall have to be submitted)

Sl. No.	Name and position of the expert	Age	Educational Qualifications	Total years of overall experience in consultancy service	Total years of experience in consultancy services related to ISO/IEC 17025 accredited laboratory for testing	Total years of service in the present firm	Description of Experiences
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*

Signature of the authorized representative of
Consulting Firm/JV with date and seal

Notes :

1. Details of experiences under columns 5 and 6 to be clearly and separately described in Column 8 (use additional sheets, if required) which shall include the project name, type of study, role of the expert, duration of services etc.
2. Applicant firm is also requested to input information as per the above formats for all proposed experts as requested in Clause 3.2 (b) of the EOI document.

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Form D : General and Specific Experiences of the Consulting Firm

(In case of JV, separate statement of each partner shall have to be submitted)

Form D1 : General Consultancy Experiences in Consultancy services

Name of the client with postal address, email, phone and fax	Project / Assignment Name	Brief and clear description of services rendered by the Consulting Firm	Start Date (Month/Year)	Completion Date (Month/Year)
1	*2*	*3*	*4*	*5*

Form D2 : Specific Experiences in Consultancy services to set up ISO/IEC 17025 accredited laboratory for testing

Name of client with postal address, email, phone & fax	Project / Assignment Name	Total No. of Test/Method which achieved Accreditation	Brief and clear description of services rendered by the Consulting Firm	Start Date (Month/Year)	Completion Date (Month/Year)
1	*2*	*3*	*4*	*5*	*6*

Signature of the authorized representative of
Consulting Firm/ JV with date and seal

Notes:

1. The above Forms should be filled out with information of relevant projects only and as many numbers of relevant project experiences as available may be included in the Forms without any limitation.
2. At least one specific experience mentioned in Form D2 above must be evidenced by the submission of concerned client's certificate stating satisfactory completion of the services including as minimum, a brief and clear description of Consultant's services together with duration of services from commencement to completion.

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