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MINISTRY OF JAL SHAKTI
Department of Water Resources
River Development and Ganga Rejuvenation

LABORATORY ACCREDITATION PROCEDURAL GUIDELINES

ISO 17025

Central Water Commission
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PREFACE

One of the key pillars for Central Water Commission's (CWC) emerging as apex Organisation in the field of Water Resources Management of the Country is its extensive Hydromet & Water Quality monitoring network. This network covers major river basins and observes river gauge, discharge, sediment, and water quality parameters. As the apex National body for the development of water resources in India, one of CWC's key mandates is the assessment of water quality of rivers of India. Currently, CWC follows a three-tier water quality laboratory system, consisting of Level I, Level II, and Level III laboratories. As of January 2025, 22 out of 23 Level II and III laboratories of CWC have received accreditation from the National Accreditation Board for Testing and Calibration Laboratories (NABL), in accordance with the ISO/IEC 17025:2017 standard. Accreditation plays a pivotal role in ensuring the reliability and validity of testing and calibration Laboratories. Achieving accreditation under ISO/IEC 17025:2017 not only demonstrates a Laboratory's commitment to maintaining high-quality standards but also assures clients, stakeholders, and regulatory bodies of the Laboratory's ability to meet internationally recognized benchmarks. This "Laboratory Accreditation Procedural Guideline" is designed to provide comprehensive guidance to Central and State Government laboratories seeking and maintaining accreditation under the ISO/IEC 17025:2017 standard. It outlines the essential steps and requirements for Laboratories pursuing accreditation in line with this International standard. This document aims to help laboratories understand the accreditation process and meet the prerequisites for formal recognition of their competence, credibility, and technical proficiency. This guidebook will serve as a roadmap for laboratories to comprehend the accreditation requirements, prepare for the process, and successfully navigate the path to their accreditation. It details key areas such as training, quality systems, measurement uncertainty, and proficiency testing. Additionally, it outlines the responsibilities of laboratory staff and management in ensuring compliance and fostering continual improvement. The guidelines provided are designed to help laboratories establish and maintain a quality management system aligned with the ISO/IEC 17025:2017 standard. The procedures detailed in the guide Book will help the Laboratories to achieve the accreditation and at the same time will also cultivate a culture of quality and reliability in their operations.

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ABBREVIATION

NABL	National Accreditation Board for Testing and Calibration Laboratories
ISO	International Organization for Standardization
IEC	International Electrotechnical Commission
CAB	Conformity Assessment Body
LOQ	Limits of Quantification
LOD	Limits of Detection
CRM	Certified Reference Materials
PT	Proficiency Testing
IA	Internal Audit
MRM	Management Review Meeting
MRCM	Management Review Committee Meeting
ILC	Inter-Laboratory Comparison
QMS	Quality Management System
CAPA	Corrective Action and Preventive Action
MRA	Mutual Recognition Arrangement
ILAC	International Laboratory Accreditation Cooperation

LABORATORY ACCREDITATION – PROCEDURAL GUIDELINES

1.0 Introduction

Accreditation is the formal recognition, authorization, and registration of a laboratory that has demonstrated its capability, competence, and credibility to carry out the tasks it claims to be able to do. It provides feedback to laboratories regarding whether they are performing their work in accordance with international criteria for technical competence. The concept of laboratory accreditation was developed to offer third-party certification that a laboratory is competent to perform specific tests or types of tests. *Laboratory* accreditation serves as a means to enhance customer confidence in the test reports issued by the laboratory, ensuring that clinicians, and consequently, patients accept the reports with confidence.

NABL is a constituent board of the Quality Council of India. It has been established with the primary objective of providing the government, industry associations, and the industry at large with a scheme for accrediting Conformity Assessment Bodies. This scheme involves third-party assessment of the technical competence of testing laboratories, including medical and calibration laboratories, proficiency testing providers, and reference material producers.

The laboratory accreditation services for testing and calibration laboratories comply with ISO/IEC 17025:2017, which outline the 'General Requirements for the Competence of Testing and Calibration Laboratories'. Additionally, accreditation for Proficiency Testing Providers is conducted in accordance with ISO/IEC 17043:2010, titled "Conformity assessment - General requirements for proficiency testing," while accreditation for reference material producers is based on ISO 17034:2016, which sets out the "General requirements for the competence of reference material producers.

2.0 Benefits of Accredited

Formal recognition of competence of a laboratory by an Accreditation body in accordance with international criteria has many advantages:

1. Increased confidence in Testing/ Calibration Reports issued by the laboratory
2. Better control of laboratory operations and feedback to laboratories as to whether they have sound Quality Assurance System and are technically competent
3. Potential increase in business due to enhanced customer confidence and satisfaction.
4. Customers can search and identify the laboratories accredited by NABL for their specific requirements from the NABL Web-site or Directory of Accredited Laboratories
5. Users of accredited laboratories enjoy greater access for their products, in both domestic and international markets.
6. Savings in terms of time and money due to reduction or elimination of the need for re-testing of products.

3.0 Getting Ready for Accreditation

It is crucial for a laboratory to develop a well-defined plan for obtaining accreditation and designate a responsible person as the Quality Manager (who should be familiar with the laboratory's existing quality system) to oversee all activities related to seeking accreditation. The requirements of the relevant standards and NABL specific criteria (wherever applicable) should be thoroughly discussed among the concerned staff of the CAB. This will help them gain insight into their strengths and weaknesses.

The Quality Manager is responsible for overseeing compliance with the quality management system. They report directly to the top management. The laboratory also needs to appoint a Technical Manager who will be in charge of the technical operations and making sure the necessary resources are available to maintain the required quality of laboratory procedures. Furthermore, it's important to identify a Document Control Officer, whose responsibility will be to manage all the created documents.

The laboratory should carry out the following important tasks towards getting ready for accreditation:

3.1 Training

The designated personnel (Quality Manager) responsible for the implementation, maintenance, and improvement of the laboratory's management system must have successfully undergone a 4-day training on ISO/IEC 17025 from a reputed institute (NABL 165 document). The training on ISO 17025:2017 will provide knowledge regarding the following general requirements for a testing laboratory.

1. **General requirements**
   (a) Impartiality
   (b) Confidentiality
2. **Structural requirements**
   (a) Legal
   (b) Management
3. **Resource requirements**
   (a) Manpower
   (b) Facilities and Environmental conditions
   (c) Equipment
   (d) Traceability (Certified Reference Material and Calibration of Equipment)
   (e) Product and services
4. **Process requirements**
   (a) Review of request, tenders and contracts
   (b) Selection, verification and validation of methods
   (c) Sampling
   (d) Handling of test items
   (e) Technical records
   (f) Evaluation of measurement of uncertainty
   (g) Validity of results
   (h) Reporting of results

(i) Complaints
(j) Non conforming work
(k) Control of Data and Information management

5. **Management system requirements**
(a) Management system documentation
(b) Control of management system documents
(c) Control of records
(d) Action to address risks and opportunities
(e) Improvement
(f) Corrective actions
(g) Internal audits
(h) Management reviews

3.2 Quality System Documents:

It must be remembered that the CAB has to prepare a Management System document, which needs to be supplemented by a set of other documents such as procedural manuals, work instructions, etc., in accordance with ISO 17025:2017 standards.

a) Quality Manual: The Quality Manual is a comprehensive document that outlines how your laboratory conforms to the requirements of the standard. It provides an overview of the laboratory's quality management system, including its scope, organizational structure, and key policies. The Quality Manual serves as a reference guide for understanding the laboratory's commitment to quality and its approach to meeting the specified standards.

b) Quality Procedures: Quality Procedures describe how the laboratory's quality management system functions in practice. These procedures detail step-by-step instructions for various processes and activities within the laboratory. They provide a standardized approach to ensure consistency and accuracy in carrying out tasks related to calibration or testing. Quality Procedures cover areas such as sample handling, equipment calibration, data analysis, and reporting.

c) Work Instructions: Work Instructions are specific documents that define detailed job activities that directly impact the quality of calibration or testing. They go beyond the general procedures and provide precise instructions for executing specific tasks or tests. Work Instructions are essential for maintaining consistency and uniformity in the laboratory's operations and ensuring that personnel carry out their responsibilities correctly.

d) Quality Documentation: Quality Documentation includes various documents that outline how quality will be managed for individual calibration or testing projects or contracts. These documents could include quality plans, project-specific procedures, risk assessments, and any other relevant documentation to ensure that quality requirements are met for each specific project. Quality Documentation may vary based on the complexity and specific requirements of each calibration or testing assignment.

e) Quality Records: Quality Records consist of various types of objective evidence that demonstrate compliance with the quality management system and the standard's requirements. These records can include inspection and testing records, calibration

certificates, assessment results, charts, files, and any other relevant documentation that provides evidence of the laboratory's performance and adherence to the specified standards. Quality Records are essential for demonstrating the laboratory's ongoing commitment to maintaining quality and for facilitating audits and assessments.

The laboratory is ready for accreditation after implementing an ISO/IEC 17025 management system and allowing ample time for laboratory employees to:

- Become familiar with the system, and
- Develop a sufficient evidentiary trail of documents that can be assessed (PGLA, 2009).

3.3 Scope of Accreditation

The scope of accreditation for a laboratory is the formal statement that specifies the range of activities for which the laboratory has been accredited. This scope is recorded in detail on the laboratory's accreditation certificate. It is essential for the laboratory's scope to be defined as precisely as possible so that all parties involved can accurately and unambiguously understand the specific range of tests, Limits of Quantification (LOQ), Limits of Detection (LOD), and/or analyses covered by that particular laboratory's accreditation.

S. No.	Materials or Products tested	Component, parameter or characteristic tested/ Specific Test Performed/ Tests or type of tests performed	Test Method Specification against which tests are performed and/or the techniques/ equipment used	Range of Testing/ Limits of detection	Uncertainty of Measurement (±) at Value

Note:

i. *CAB(s) performing site testing shall clearly identify the specific tests on product(s)/ material performed at site separately.*
ii. *Measurement uncertainty shall be expressed as expanded uncertainty with 95% confidence level*
iii. *Latest test method / standard to be mentioned in the applied scope.*
iv. *Test methods and standards shall be mentioned along with the year of publication of the standard*

3.4 Measurement of Uncertainty

The international standard ISO / IEC 17025 for testing and calibration laboratories requires the laboratories to estimate the uncertainties of measurement results. The laboratory‘s customers use the results for taking important business decisions. Too large an uncertainty may affect the reliability of the decision and too small uncertainty may make the situation complex and costly. So an appropriable estimate of measurement uncertainty is an important task performed by laboratories.

3.5 Latest Test Methods / Standards in the laboratory

According to clause 7.2.1.3 of ISO/IEC 17025:2017 for testing and calibration laboratories, the laboratory shall ensure that it uses the latest valid version of a method.

3.6 Certified Reference Materials (CRMs)

Certified Reference Materials (CRMs) are 'controls' or standards used to check the quality and metrological traceability of products, to validate analytical measurement methods, or for the calibration of instruments. The reference material producer is fully responsible for project planning and management, assignment of and decision on property values and relevant uncertainties, authorization of property values and issue of the certificate and other statement for the reference materials it produces. ISO 17034:2016 specifies General Requirements in accordance with which a reference material producer has to demonstrate that it operates, if it is to be recognized as competent to carry out the production of reference materials.

3.7 Proficiency Testing (PT)

Proficiency testing is one of the powerful methods of checking the validity of the test and/or calibration results. All ISO 17025 accredited testing and calibration laboratories are required to participate in proficiency testing programmes conducted by NABL accredited PT providers.

- Proficiency Testing is the use of inter-laboratory comparison for determining the performance of individual laboratories for specific tests. Participation in proficiency testing programmes provides laboratories with an objective means of assessing and demonstrating the reliability of data they are producing. The International Standard ISO/IEC 17043:2010 provides a consistent basis for all interested parties to determine the competence of organizations that provide proficiency testing.
- The applicant CAB / Laboratory must have participated satisfactorily in the proficiency testing program, wherever applicable, conducted by NABL/ APAC or any other national or international accredited/ recognized PT provider**.** ***Directory of Accredited Proficiency Testing Providers is available as NABL 700 on NABL web site.***
- If no suitable PT program is available the CAB can initiate an inter-laboratory comparison with adequate number of accredited laboratories. The satisfactory performance shall be defined in term of z-score and En number respectively or any other acceptable internationally accepted method. For unsatisfactory performance, the CAB is to take corrective action and inform NABL. ISO/ IEC 17043, NABL 163 and NABL 164 give details of proficiency testing.

3.8 Inter-Laboratory Comparison (ILC)

The Laboratory must have participated satisfactorily in an inter-laboratory comparison with adequate number of accredited laboratories. The minimum stipulated participation for laboratories is one parameter/ type of test/ calibration per discipline, prior to grant of accreditation and an ongoing program as per NABL 163. The satisfactory performance shall be defined in term of z-score or any other acceptable internationally accepted method. For unsatisfactory performance, the laboratory is to take corrective actions.

3.9 Certification of Equipment

Ensure the calibration of equipment and glassware from an accredited institute for calibration and maintain their chain of traceability with preventive maintenance. Only NABL Accredited Calibration Laboratories are authorized to provide calibration. NABL website gives the names of NABL accredited calibration laboratories in the various fields of Accreditation.

Sl.	Name of equipment	Model/ type/ year of make	Range and accuracy	Date of last calibration	Calibration due on *	Calibrated by**

3.10 Internal Audit (IA) and Management Review Meeting (MRM)

According to the clause 8.8.1of Internal Audit of ISO/IEC 17025: 2017, Laboratory shall conduct internal audit at least once in a year covering all elements. Internal audit ensures that quality system fulfills the requirements of ISO /IEC 17025, accreditation relevant specific criteria document and regulatory bodies. The Audit also ensures whether or not the requirements of the laboratory quality manual and related documents are applied at all levels of work. The non-conformities found during the internal audit give valuable information for the improvements of the laboratory's quality system and technical competence, which is to be used as a input to management reviews. Quality managers manage internal audits. They verify conformance to the ISO/IEC 17025 requirements and also to company policies, processes and procedures. Internal audits are also quite useful in preparation for external audits. External auditors can come from clients or from accreditation bodies. They verify that the laboratory is operating in compliance with ISO/IEC 17025.

Management reviews are key processes in many quality-management systems, including laboratory-management systems, in accordance with ISO/IEC 17025. These reviews are fine opportunities to understand and manage all the inputs and outputs of a quality-management system. As per the Clause no. 8.9 of Management reviews, laboratory shall review its management system at least once in a year and the laboratory management shall review its management system at planned intervals, in order to ensure its continuing suitability, adequacy and effectiveness, including the stated policies and objectives related to the fulfillment of this document.

Conduct at least one internal audit for Quality management and Technical Aspect in accordance with ISO and Management review Meeting (MRM) followed by Management Review Committee Meeting (MRCM) of the laboratory before applying for accreditation. Laboratory has to maintain records of Internal audit as well as training documents of IA in respective form and files

4.0 Application Form

After completion as elaborate in section 3.0, CABs are required to apply through NABL Web Portal (through website www.nabl-india.org) to NABL in prescribed application form NABL 151 (Application Form for Chemical Testing Laboratories). Separate application form shall be submitted for each discipline of testing. The application shall consist of the following:

- Complete application form
- Management System Document / Quality Manual
- Application fees (As per latest NABL document)
- Duly signed NABL-131 form.

[Disclaimer: Incomplete application, fraudulent behavior, false information and concealing the information may lead to rejection of application or termination of the assessment process.]

5.0 Accreditation Procedure

5.1 Application for Accreditation

- CABs are required to apply through NABL Web Portal (through website www.nabl-india.org) to NABL in prescribed application form (NABL 151) for Chemical Testing, which should describe the management system in accordance with ISO/IEC 17025: 2017.
- The application fees shall be accompanied with prescribed application fee as detailed in NABL 100.
- A signed copy of NABL 131 shall also be submitted along with the application.
- CAB has to take special care in filling the scope of accreditation/ uploading on the Web Portal for which the CAB wishes to apply. In case, the CAB finds any clause (in part or full) not applicable to the CAB, it is expected to furnish the reasons.

5.2 Acknowledgement and Registration of Application

NABL Secretariat through Web Portal, on receipt of online application form along with Management system document / quality manual and the fees, send an acknowledgement with a unique ID number to the CAB. The unique ID of the CAB will be used for further correspondence with the CAB. After scrutiny of application for its completeness in all respects, NABL Secretariat may ask for additional information/ clarification(s) at this stage, if found necessary.

Appointment of Lead Assessor

NABL secretariat appoints a Lead assessor from the list of empaneled assessors. The lead assessor does the document review on behalf of NABL and submits the report to NABL secretariat.

Document Review

The preliminary document review of the application and management system document/ quality manual submitted by the CAB is carried out by NABL Secretariat whereas the detailed. The lead assessor informs NABL regarding the document review, indicating inadequacies (if any). The CAB amends the relevant documents and also implements the management system accordingly.

5.3 Pre-Assessment

In case there are no inadequacies in the document review after satisfactory corrective action by the CAB, a pre -assessment of the CAB is conducted by lead assessor appointed by NABL. Since Pre-assessment is optional, CAB shall express its willingness in writing to undergo the same. The CAB must ensure their preparedness by carrying out an internal audit and a management review before the pre -assessment.

The pre-assessment of the CAB is conducted to:

a. evaluate non-conformities (if any) in the implementation of the quality system.
b. assess the degree of preparedness of the CAB for the assessment
c. determine the number of assessors required in various fields based on the scope of accreditation, number of key locations to be visited etc.

The lead assessor submits a pre-assessment report to NABL Secretariat with a copy to the CAB. The CAB takes corrective actions on the non-conformities raised on the documented management system and its implementation and submits a report to NABL Secretariat.

5.4 Assessment

- After the CAB has taken corrective actions, NABL proposes constitution of an assessment team. The team includes the lead assessor (generally same who is already appointed for pre-assessment), the technical assessor(s)/ expert(s) in order to cover various fields within the scope of accreditation sought.
- NABL may also nominate an observer.
- NABL seeks CAB's acceptance for the proposed assessment team and the CAB is free not to accept one or more members of the proposed assessment team by giving specific reason(s) for their non - acceptance. After the constitution of assessment team is finalized, NABL fixes dates for on-site assessment in consultation with the CAB, the lead assessor and technical assessor(s)/ expert(s).
- The assessment team reviews the CAB 's documented management system and verifies its compliance with the requirements of ISO/ IEC 17025: 2005 and relevant specific criteria (wherever applicable) and other NABL policies. The documented Management system, SOPs, work instructions, test methods etc. are assessed for their implementation and effectiveness.
- The CAB's technical competence to perform specific tasks is also evaluated. The assessment report contains the evaluation of technical manpower, all relevant material examined, test witnessed including those of replicate testing/ measurement, compliance to ISO/ IEC 17025 and relevant NABL specific criteria.
- The nonconformities if identified are reported in the assessment report. It also provides a recommendation towards grant of accreditation or otherwise. The report prepared by the assessment team is sent to NABL Secretariat. However, a copy of summary of assessment report and copies of non-conformities if any, are provided to the CAB at the end of the assessment visit.

5.5 Scrutiny of Assessment Report

The assessment report is examined by NABL Secretariat and follow up action as required is initiated. CAB has to take necessary corrective action on non - conformities/ concerns and submit a report to NABL Secretariat within 30 days.

NABL monitors the progress of closing of non -conformities. If any non-conformity is observed during the assessment of a Sample Collection Centre/ facility (SCF), the laboratory shall be asked to take corrective actions within 30 days time. In case the laboratory fails to take corrective actions or there is a consistent system failure, an appropriate and proportionate action against the laboratory will be taken.

5.6 Accreditation Committee

After satisfactory corrective action by the CAB, the Accreditation Committee examines the assessment report, additional information received from the CAB and the consequent verification, if any.

In case the Accreditation Committee finds deficiencies in the assessment report, the NABL Secretariat obtains clarification from the Lead Assessor/ Assessor/ CAB concerned. In case everything is in order, the Accreditation Committee makes appropriate recommendations regarding accreditation of the CAB to the Chairman, NABL. All decisions taken by NABL regarding grant of accreditation are open to appeal by the CAB. The appeal is to be addressed to the CEO, NABL

5.7 Issue of Accreditation Certificate

- When the recommendation results in the grant of accreditation, NABL issues an accreditation certificate which has a unique number and QR Code, discipline, date of validity along with the scope of accreditation.
- The scope of accreditation for testing laboratory defines Discipline/ Group, materials or products tested component, parameter or characteristic tested and Tests or Type of tests performed and, where appropriate, the techniques, methods and / or equipment used.
- The applicant CAB must make all payments due to NABL, before the accreditation certificate(s) is/ are issued to them.

6.o Maintaining Accreditation

a. Compliance with Applicable Standards and NABL Requirements

Accredited CABs must consistently adhere to relevant international standards, specific criteria (when applicable), and NABL Policies at all times.

b. Terms and Conditions

Accredited CABs are required to continually comply with the terms and conditions outlined in NABL 131, "Terms & Conditions for Obtaining and Maintaining NABL Accreditation" Acceptance of these terms must be submitted through the NABL web portal. CABs located outside India must provide a signed copy of NABL 131, confirming their commitment to comply with the stated terms and conditions.

6.1 Surveillance assessment

NABL conducts annual surveillance to assess the continued compliance of laboratories with ISO/IEC 17025:2017 standards, relevant specific criteria, and NABL policies. This surveillance is essential for ensuring that accredited laboratories maintain high-quality practices and adhere to the necessary guidelines. The following types of surveillance assessments are provided:

6.1.1 On-Site Surveillance

On-site surveillance is carried out for newly accredited CABs during their first accreditation cycle. This assessment takes place within 12 months of accreditation, ideally in the 10th month by NABL to verify the continued compliance, competency and the implementation of quality system established by the laboratory. The on-site surveillance assessment will be less comprehensive than reassessment. Annual on-site surveillance shall be carried out by the assessment team nominated by NABL and shall be carried out in same manner as in initial assessment

6.1.2 Desktop Surveillance

- In the second and subsequent accreditation cycles, desktop surveillance is conducted within 12 months of each re-accreditation, preferably in the 10th month.
- For laboratories accredited under integrated assessments, annual on-site surveillance is performed in every accreditation cycle. The desktop surveillance involves reviewing records (as outlined in the NABL 218 document) from the CAB to ensure continued compliance with relevant international standards, applicable NABL-specific criteria, and NABL policies.
- NABL reserves the right to convert desktop surveillance to on-site surveillance if feedback, complaints, or significant deficiencies are noted in the submitted records.

6.2 Reassessment

- The CAB must apply for renewal of accreditation at least six (6) months before the current accreditation expires. This timeline allows NABL to arrange the necessary assessment in a timely manner, ensuring the continuity of the accreditation status. Late applications may result in a break in the accreditation cycle.
- Applications submitted after the accreditation has expired will not be considered for renewal. In such cases, the CAB must submit a new application. Additionally, if there are changes to the legal entity, name, ownership, or address of the CAB since the last accreditation certificate was issued, a fresh application is also required. Under these circumstances, a new CAB ID and accreditation certificate number will be assigned.
- NABL will conduct a reassessment within 24 months, ideally during the 20th to 22nd month following the grant or renewal of accreditation. The accredited CAB will undergo reassessment every two years before the accreditation cycle expires.

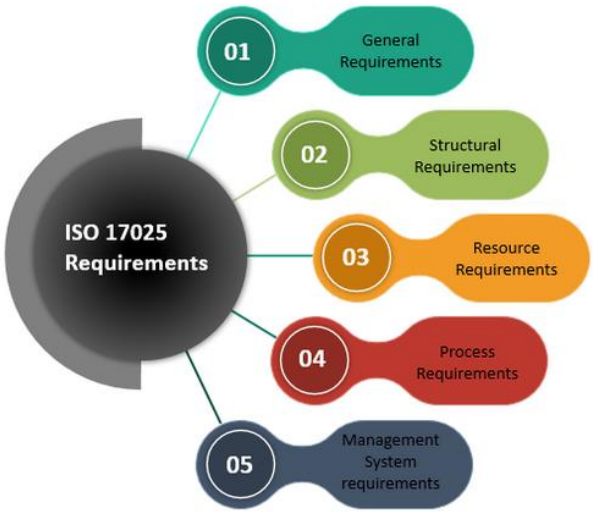
7.0 Extension of Scope

Many laboratories initially apply for accreditation with a limited scope of parameters. After obtaining accreditation for this limited scope, the laboratory may wish to expand or extend the scope. There are two options to enhance the scope of parameters:

1. The laboratory can expand the scope of parameters during the renewal assessment.
2. The approved laboratory can request NABL for extension of its scope of approval to cover additional product/matrix and parameter/ personnel responsible for authorizing the results. The Laboratory shall apply in the prescribed format by filling in the relevant information applicable for the extension of the scope along with supporting documents and application.
3. Outside the scheduled renewal or re-assessment, the laboratory can pay Rs. 5,500 per product group to NABL for extending the scope. NABL will then review the laboratory's request and, if appropriate, assign an assessor to conduct a technical assessment for the expanded scope.

8.0 Summary of ISO/IEC 17025: 2017

ISO/IEC 17025:2017 is a comprehensive standard that covers all aspects of laboratory operations, from personnel competence to equipment calibration, measurement traceability, quality control, and management system implementation. The standard's structured approach ensures that laboratories consistently deliver reliable and accurate results, contributing to scientific credibility, client trust, and overall quality assurance.



1.0 Scope

This scope serves as a foundation for the standard. It emphasizes that ISO/IEC 17025 applies to laboratories regardless of their size, location, or the nature of their testing or calibration services. The standard is designed to help laboratories demonstrate their competence and ability to consistently produce valid and reliable results, enhancing the credibility of their services.

2.0 Normative References

The references listed in ISO/IEC 17025 provide laboratories with a set of established guidelines, practices, and methods that align with international standards. These references help laboratories ensure their activities are in line with recognized best practices, fostering consistency and reliability.

3.0 Terms and Definitions

Precise definitions of terms are essential to avoid ambiguity and misunderstanding. This clause ensures that all stakeholders, including laboratory personnel, clients, and auditors, share a common understanding of the terminology used throughout the standard.

4.0 General Requirements

This clause establishes fundamental principles that underpin laboratory operations. It emphasizes the importance of impartiality, avoiding conflicts of interest, maintaining confidentiality, and upholding professional ethics. Laboratories must establish a quality management system that incorporates these principles and continuously strive for improvement. Laboratories must establish and maintain impartiality and confidentiality in all their testing and calibration activities. Impartiality ensures that decisions are not influenced by any conflicting interests, and confidentiality safeguards the information received from clients.

5.0 Structural Requirements

Laboratories address administrative aspects. It covers matters such as legal status, organizational structure, and the assignment of responsibilities. This clause also deals with issues like personnel competence and resources allocation to ensure the effective functioning of the laboratory.

6.0 Resource Requirements

Resource Requirements" of the ISO/IEC 17025:2017 standard outlines the essential resources that testing and calibration laboratories must allocate and manage to ensure the effective and reliable operation of their activities.

Clause 6.1 General:

Resource Requirements" of the ISO/IEC 17025:2017 standard outlines the essential resources that testing and calibration laboratories must allocate and manage to ensure the effective and reliable operation of their activities.

Clause 6.2 Personnel:

The competence and qualifications of personnel are essential factors in ensuring the accuracy, reliability, and quality of testing and calibration results. Laboratories need to ensure that their staff possesses the appropriate education, training, and experience to perform their roles competently. This includes technical, managerial, and support staff.

Clause 6.3 Facilities and Environmental Conditions:

The facilities and environmental conditions within which testing and calibration activities take place have a direct impact on the accuracy, reliability, and quality of the results generated. This clause emphasizes the importance of providing appropriate facilities and controlling the environmental conditions. Laboratories must create an environment conducive to accurate testing and calibration, controlling factors such as temperature, humidity, and cleanliness.

Clause 6.4 Equipment:

Equipment is a crucial component of testing and calibration activities, and its accuracy, reliability, and proper usage are essential for obtaining accurate measurement results. This clause emphasizes the importance of maintaining the quality and performance of laboratory equipment. This section details the requirements for maintaining and calibrating equipment to ensure its accuracy and reliability.

Clause 6.5 Metrological Traceability:

Metrological traceability is a fundamental concept in measurement quality assurance. It involves establishing a chain of comparisons that links the measurement results to internationally or nationally recognized measurement standards, ensuring the accuracy and reliability of the results.

Clause 6.6 Externally Provided Products and Services:

Externally provided products and services, also known as "outsourced" or "subcontracted" activities, are those obtained from external sources to support the testing and calibration processes of a laboratory. This clause emphasizes the importance of ensuring the quality and compatibility of these externally provided products and services. By effectively managing externally provided products and services, laboratories ensure that the quality and reliability of their testing and calibration processes are not compromised. This includes maintaining control over outsourced activities, verifying the quality of externally provided items, and fostering collaboration between the laboratory and external providers to achieve mutual success.

7.0 Process requirement:

Clause 7.1 Review of Requests, Tenders, and Contracts:

Laboratories must meticulously review client requests, assess their capacity to meet the requirements, and communicate effectively to avoid misunderstandings. By conducting a thorough review of requests, tenders, and contracts, laboratories ensure that they have a clear understanding of the work to be undertaken and that both parties are aligned on the scope, expectations, and commitments. This transparency and effective communication contribute to successful outcomes and client satisfaction.

Clause 7.2 Selection, Verification, and Validation of Methods:

Laboratories must use appropriate methods for testing and calibration, validate these methods for their intended purpose, and ensure their accuracy. The selection, verification, and validation of methods are critical steps in ensuring that the testing and calibration processes used by a laboratory are accurate, reliable, and fit for their intended purpose. By following a systematic approach to method selection, verification, and validation, laboratories can ensure that the methods they use are appropriate and reliable.

Clause 7.3 Sampling:

Sampling is a critical step in many testing and calibration processes. By adhering to proper sampling procedures, laboratories can ensure that the samples they analyze are representative and accurate, which in turn contributes to the reliability and credibility of their testing and calibration results. The careful consideration of sampling methods and techniques enhances the overall quality of laboratory services.

Clause 7.4 Handling of Test and Calibration Items:

The handling of test and calibration items is a critical aspect of laboratory operations, as it directly impacts the integrity, accuracy, and reliability of the testing and calibration processes. Laboratories can ensure that the items are treated with care, that their integrity is preserved, and that the accuracy and reliability of the testing and calibration processes are maintained. This contributes to the overall quality and credibility of the laboratory's services.

Clause 7.5 Technical Records:

Technical records play a crucial role in documenting the entire testing and calibration process, from initial requests to the final results. This clause emphasizes the importance of maintaining accurate, complete, and traceable records. By maintaining comprehensive and well-documented

technical records, laboratories ensure that their testing and calibration processes are transparent, accountable, and repeatable. Accurate records contribute to the integrity of the laboratory's services and provide a valuable resource for quality control, troubleshooting, and ongoing improvement.

Clause 7.6 Evaluation of Measurement Uncertainty:

Laboratories need to assess and quantify the uncertainty associated with measurement results, contributing to the overall reliability of the reported values. By evaluating and reporting measurement uncertainty, laboratories provide essential information about the reliability of their results. This information allows clients and stakeholders to make informed decisions based on the confidence level associated with the reported values. The consideration of uncertainty enhances the credibility of the laboratory's services and contributes to the broader goals of quality assurance and scientific integrity.

Clause 7.7 Assuring the Validity of Results:

This clause emphasizes the importance of establishing measures to ensure the accuracy, reliability, and validity of the testing and calibration results produced by a laboratory. By implementing measures to assure the validity of results, laboratories demonstrate their commitment to delivering accurate and reliable data to clients. This not only contributes to scientific integrity but also instills confidence in clients, regulatory bodies, and other stakeholders who rely on the laboratory's services.

Clause 7.8 Reporting the Results:

The reporting of results is a critical step in the testing and calibration process, as it involves conveying accurate and reliable information to clients and stakeholders. This clause emphasizes the importance of clear, complete, and accurate reporting. By adhering to proper reporting procedures, laboratories ensure that their clients receive accurate, reliable, and understandable information about the testing or calibration services provided. Clear reporting enhances the transparency of the laboratory's operations and contributes to the confidence and trust of clients and stakeholders.

Clause 7.9 Complaints:

A well-defined complaints handling process, laboratories not only address client concerns but also have an opportunity to learn from issues and improve their overall operations. This, in turn, contributes to client satisfaction, strengthens the laboratory's reputation, and ensures that quality and reliability are maintained throughout its services.

Clause 7.10 Nonconforming Work:

Laboratories need to establish procedures for identifying, documenting, and addressing instances where work does not meet specified requirements. This clause emphasizes the importance of identifying, documenting, addressing, and preventing instances of nonconforming work within a laboratory's operations. Nonconforming work refers to situations where the results or processes deviate from established requirements, which could potentially affect the accuracy, reliability, or validity of the laboratory's services.

Clause 7.11 Control of Data and Information Management

This clause of the standard addresses the management and control of data and information generated by the laboratory during testing and calibration activities. Proper control ensures the accuracy, traceability, and security of data, which are essential for producing valid and reliable results.

8.0 Management System Requirements:

Clause 8.1 Options:

Laboratories must establish a management system for all activities, guided by ISO/IEC 17025:2017. Compliance can be achieved via two routes: (a) Option A - creating a dedicated system meeting this standard, or (b) Option B - obtaining standalone accreditation for ISO 9001:2015 (or ISO 13485).

Clause 8.2 Management System Documentation:

Laboratories can create documentation outlining their management system and processes, helping ensure consistency and transparency. A compliant ISO/IEC 17025:2017 system necessitates a well-crafted quality policy manual. Essential elements include: (a) written procedures, (b) a concise quality policy statement, (c) management commitment to system development and continuous improvement, (d) communication of meeting customer and regulatory needs, (e) referencing procedures in the manual, (f) defining roles for technical and quality management, and (g) maintaining system integrity by quality efforts.

Clause 8.3 Control of Management System Documents:

Lab procedures must detail policy and processes for effective document management. ISO/IEC 17025:2017's clause 8.3 requirements should be met, allowing electronic document control. Review, approval, and release of lab-created documents are crucial. The system must handle external documents, retaining revision history. Document lifecycle, including revisions, must be documented. Obsolete documents should be promptly identified and ideally removed from use.

Clause 8.4 Control of Records:

Clause 8.4 of ISO/IEC 17025:2017 outlines stringent requirements, mandating an established procedure encompassing record identification, collection, indexing, access, filing, storage, maintenance, disposal, and encompassing quality and technical records. These records can span various mediums, though hard-copy (paper) or electronic formats are common. Labs must ensure record preservation and compliance with regulations, retaining records as needed by regulations, statutes, and customer demands. Confidentiality is paramount, requiring safeguarding of record content. Establishing a Good Documentation Practices (GDP) policy is crucial for effective record control, emphasizing accuracy, and legibility even in the face of errors.

Clause 8.5 Actions to Address Risks and Opportunities:

Laboratories should systematically identify and manage risks and opportunities that could impact the quality of their services and results. Preventive action involves mitigating risks and seizing opportunities to enhance organizations. Aligned with ISO/IEC 17025:2017, it's vital for effective management systems. It mandates drafting, implementing, and monitoring preventive

action plans in labs. This proactive approach ensures improvements, prevents nonconformities, and drives overall progress by addressing potential issues before they impact negatively.

Clause 8.6 Improvement:

Proactive organizations emphasize continuous improvement. Laboratories must invest in enhancing their management system, utilizing tools such as quality policy, objectives, internal and external audits, data analysis, CAPA, and management review. Feedback from customers, both positive and negative, is essential for labs.

Clause 8.7 Corrective Actions:

An organization's QMS relies on corrective action to address non-conformances. ISO/IEC 17025:2017 demands documented policies and procedures. Inputs include nonconforming work, audit deviations, customer feedback, and staff observations. Framing and identifying root causes are crucial, influencing the corrective approach. Effective and exhaustive root-cause analysis is essential. After implementing corrective actions based on the root cause, monitoring their effectiveness becomes vital.

Clause 8.8 Internal Audits:

Internal audits are proactive tools to assess ongoing compliance with standards. ISO/IEC 17025:2017 mandates periodic internal audits for labs to confirm adherence to policies, procedures, and the standard. The audit program must evaluate all management system aspects, with a planned schedule. Trained personnel conduct audits, addressing deviations with corrective action.

Clause 8.9 Management Reviews:

Management review is vital for organizations to maintain an effective management system. Conducted at planned intervals, often annually, it utilizes quality and collected records to assess ongoing testing and calibration efficacy. Audit results, customer feedback, and improvement suggestions are included. Attendees should ensure thorough meeting records and implement outcomes, including corrective actions. Management is responsible for overseeing active completion of assigned actions as per ISO/IEC 17025, 2017

9.0 Documents and Records

When laboratories are going for accreditation, there is specific ISO/IEC 17025:2017 documentation requirements that need to be fulfilled. These documents are used to design and develop testing and calibration laboratories. There are several categories of such requirements for better understanding and defining quality systems in laboratory as per the ISO/IEC 17025:2017 standard. The document categories are as following:

- Policies
- Documents
- Procedures
- Records
- Processes
- Review

1.0 Policies:

Policies are covered in Clause 8 of the standard.

Clause 8.2.1	Option A – Management reviews to include policies and objectives
Clause 8.2.2	Management system documentation
Clause 8.9.1	Management Review related to fulfillment
Clause 8.9.2c	Management Review - suitability of policies and procedures

2.0 Documents:

Clause 5.3	Document the range of laboratory activities
Clause 5.5c	Document all procedures
Clause 6.2.2	Document competence requirements of personnel
Clause 6.3.2	Environmental condition requirements
Clause 6.4.13.f	Document records of reference materials
Clause 6.5.1	Document unbroken chain of calibrations
Clause 7.1.1	All lab requirements documented
Clause 7.2.1.2	Documentation; document methods and supporting documentation
Clause 7.2.1.7	Method deviations
Clause 7.4.2	Identification of test or calibration items
Clause 7.8.6.1	Decision rule for statement of conformity
Clause 7.8.7.1	Basis for opinions and interpretations
Clause 7.8.8.2	Amendments to reports
Clause 7.9.1	Complaints process
Clause 7.11.2	Changes to laboratory software
Clause 8.1.1	Document the entire management system
Clause 8.1.2	Option A management system
Clause 8.2.1	Laboratory management shall document the management system
Clause 8.2.4	Documentation included in or linked to the Management System
Clause 8.3.1	Option A document control
Clause 8.3.2 d	Document available and distribution contracted

3.0 Procedures:

Clause 5.5 c Document Laboratory procedures to ensure consistent activities

Clause 5.6 b Personnel identification deviations

Clause 6.2.5	Procedures and records in lab
Clause 6.3.3	Environmental conditions monitoring
Clause 6.4.3	Equipment handling, etc.
Clause 6.4.10	Intermediate check of equipment
Clause 6.5.3 b	Reference measurement procedures
Clause 6.6.2	External services
Clause 7.1.1	Review of requirements, tenders
Clause 7.1.1 d	Meet customer requirements
Clause 7.2.1.1	Selection of methods
Clause 7.2.1.2	Assuring methods up to date / available
Clause 7.2.2.4	Method validation
Clause 7.4.1	Handling of test or calibration items
Clause 7.7.1	Monitoring validity of results
Clause 7.10.1	Non-conforming work
Clause 8.9.2 c	Management review suitability of policies and procedures

4.0 Records:

Clause 6.2.5	Personnel records from (a-f)
Clause 6.3.3	Records of environmental conditions
Clause 6.4.13	Equipment records which influence laboratory activities
Clause 6.6.2	Procedure and records for external services
Clause 7.1.8	Requests tenders and contracts, records of reviews and changes
Clause 7.2.1.5	Records of method verification
Clause 7.2.2.4	Records of method validation
Clause 7.3.3	Records of sampling data
Clause 7.4.3	Records of deviations from specified conditions for test items
Clause 7.4.4	Test item storage conditions
Clause 7.5.1	Technical records for each lab activity
Clause 7.5.2	Amendments to technical records
Clause 7.7.1	Data from assuring the validity of results
Clause 7.8.1.2	Calibration certificates or test reports
Clause 7.8.7.3	Opinions and interpretations communication
Clause 7.9.3 b	Complaints
Clause 7.10.2	Nonconforming work
Clause 8.4.1	Control of records
Clause 8.4.2	Controls needed for records
Clause 8.7.3	Corrective action records
Clause 8.8.2 e	Internal audit records
Clause 8.9.2	Management review records
Clause 8.9.3	Records of Management review outputs

5.0 Processes

Clause 7.9.1	Complaints
Clause 7.9.2	Complaint handling
Clause 7.9.3	Complaint handling elements
Clause 7.11.2	Control of data – LIMS
Clause 8.2.4	Management system documentation
Clause 8.9.3 a	Management review effectiveness

6.0 Review

Clause 6.2.6	Personnel review results
Clause 6.3.4	Measures to control facilities
Clause 6.4.7	Calibration program reviewed
Clause 6.6.2	Laboratory requirements for external services
Clause 7.1.1	Requests, tenders, controls
Clause 7.1.6	Contract review
Clause 7.1.8	Contract review changes
Clause 7.2.1.6	Method development
Clause 7.7.1	Validity of results
Clause 7.7.2	Quality assurance monitoring
Clause 7.8.1.1	Reporting of results
Clause 7.9.6	Complaint outcome
Clause 8.3.2	Document control reviewed
Clause 8.7.1	Root cause effectiveness
Clause 8.9.1	Management review

Note :

In compliance with ISO/IEC 17025:2017, certain policies, documents, procedures, and records are required to be maintained. Accordingly, an indicative list of documents and records maintained by National River Water Quality Laboratory, CWC is given in the as "14.0 Standard Operation Procedure & Records Maintaining by CWC Water Quality Laboratories"

10.0 Accreditation Fee

NABL Fee Structure: A uniform fee structure is maintained for all CABs, ensuring that charges are kept at a reasonable level so that CABs are not denied participation in the accreditation process due to unreasonable financial conditions. The information about the fee structure for various fields/disciplines is applicable from 01.10.2021 onwards, as per NABL 100A 'General Information Brochure,' issued on 23.11.2022 and amended on 21.02.2024, as detailed below:

- **Application Fee** (non-refundable, to be paid along with the application) –

  Testing Laboratories: For 01 product group/ discipline - Rs. 11,000

- **Enhancement of Scope (apart from the scheduled re-assessment)**

  Testing Laboratories any extension in the existing accredited scope per discipline of testing - Rs.5,500 per product group.

- **Change in Authorized signatory**

  Any addition of authorized signatory(s) apart from the scheduled assessment - Rs. 5,500 / request

- **Change of Certificate**

  Any change in the name and or premises of the laboratory leading to issue of new accreditation certificate with scope - Rs. 5,500

- **Annual Accreditation Fee (per year from the date of accreditation)** - Rs. 24,000
- **Overhead Charges –**

  For each assessment including Desktop surveillance, irrespective of number of disciplines - Rs. 11,000/-

- **Assessment Charges (payable after the completion of assessment visit to the CAB)**

  Travel, Boarding, Lodging - Honorarium for NABL Assessors - Overhead Charges

- **Travel, Boarding and Lodging expenditure**

  The CAB will make the travel arrangements for assessors as per the following entitlements. Any travel or boarding and lodging beyond the following entitlement shall be agreed upon in advance by the CAB under the intimation to NABL. CAB shall not make any cash transactions with the assessor. Also, CAB shall ensure the safety and security of the assessor visiting there for conducting assessments.

  Travel

  - If the journey is more than 300 Km, travel to be made by Air in economy class (Apex fare).
  - If the journey is upto 300 Km, travel to be made by train in 2nd AC Class / AC Chair Class or by AC Bus.

- If outstation journey is made by own car, the reimbursement will be restricted to 2nd AC class fare by train.
- Travel within the city by taxi will be reimbursed on production of receipts / bills. In absence of taxi bills or travel by own car within the city, claim will be reimbursed @ Rs.15 per km.
- Any other relevant expenses during the travel will be reimbursed only on production of receipts / bills.

Boarding and Lodging

- A single occupancy AC accommodation to be provided for each Assessor and Observer in a reasonably good hotel / guesthouse and arrangement for local transportation from temporary residence to the CAB site and airport / railway station / bus stand to be made.
- The CAB shall pay for meals of Assessor/ Observer during the stay, within the reasonable limitations. Note: The travel, boarding & lodging for NABL Officials joining assessment as Observer, shall be borne by NABL.

- **Honorarium for NABL Assessors –**
  - Document review by Lead Assessor- Rs. 3,000 per day
  - Pre-Assessment, Assessment, Verification, Special Visit

    - by Lead Assessor - Rs. 5,500 per day
    - by Technical Assessor/ Expert - Rs. 5,000 per day

Note :

- ***The CAB / Laboratory shall clear all due payment to NABL during the accreditation process (First / Renewal). The CAB/ Laboratory must pay the onsite/desktop surveillance and annual accreditation fee within the specified timeline.***
- ***During the first and renewal accreditation process the accreditation certificate will be issued and made visible to the CAB/ Laboratory on the portal only after all due payments to NABL have been cleared.***
- ***The CAB/Laboratory advised to check the applicable fee as per the latest NABL documents, updated/amended time to time by NABL.***

11.0 NABL Accreditation affected if

- **NABL Symbol Requirement:** The use of the NABL symbol is mandatory on all test reports issued by accredited CABs for parameters or tests within the accredited scope. Do not use the symbol for parameters that are not accredited.
- **Symbol Usage Restrictions:** The NABL symbol cannot appear on any part of a report that includes non-accredited tests / parameters.
- **Using the NABL Symbol**: NABL-accredited labs should use the NABL symbol, which includes their accreditation certificate number (TC-XXXX). A CAB or its franchisee/subcontractor that is not accredited by NABL must not use the NABL symbol or claim accreditation.
- **Report Standards:** Test reports from accredited CABs must comply with ISO/IEC 17025 and NABL standards, including parameters within the accredited scope, test methods, ranges, and authorization by the person designated to NABL as responsible for reviewing, reporting, and authorizing results.
- **Accreditation Claims**: Only NABL-accredited organizations can use the NABL symbol and claim accreditation during their valid accreditation period.
- **Third-Party Use**: NABL-accredited CAB cannot allow their customers, subcontractors, or anyone else to use the NABL symbol.
- **Proper Use of NABL Symbol**: Only NABL-accredited CABs may use the NABL symbol and claim accreditation, and they must do so only under the name and address specified in their accreditation certificate.
- **Combined ILAC MRA Mark**: A CAB can use the NABL-accredited CAB Combined ILAC MRA Mark only with written permission from NABL, and only for the period specified in that permission.
- **Moving Premises**: NABL accreditation is specific to the location of the CAB. Accreditation claims should only apply to the accredited location and not to any non-accredited sites. If an accredited CAB relocates, it must immediately stop using the NABL symbol or any claim of NABL accreditation at the new location until NABL approves the new premises.
- **Accreditation Claim**: Applicant CABs must not claim NABL accreditation or use the NABL symbol/logo until they receive official confirmation from NABL granting accreditation.
  If a CAB is found claiming NABL accreditation or using the NABL symbol/logo during the application process, it may lead to application rejection, termination of assessment, denial of accreditation, or legal action.
- **ILAC MRA Mark Violations**: If a CAB misuses the NABL Accredited CAB Combined ILAC MRA Mark, it will face consequences according to NABL 216, and its accreditation may be withdrawn.

- **Accredited Scope Claims**: A CAB must not claim NABL accreditation for activities outside its accredited scope, including using product, parameters and test methods not included in the accreditation.
- **Publicity and Advertising**: NABL-accredited CABs may use the NABL symbol and claim accreditation in promotional materials, but only for the services for which they are accredited.
- **Proficiency Testing**: Laboratories must successfully participate in the PT program as per NABL 163 and follow the two-year Proficiency Testing Plan (Form 18). They can find available PT programs on the NABL website.
- **Unsatisfactory PT Results**: If proficiency testing results are unsatisfactory ($|Z|$ score ≥ 3), the laboratory must inform NABL and relevant authorities immediately and take corrective actions within two months.
- **Certified Reference Materials**: Laboratories must obtain certified reference materials that meet the criteria of ISO 17034.
- **Calibration of equipment**: The Laboratory shall maintain the unbroken chain of calibration with accredited laboratory.
- **Document Implementation**: The CAB must ensure that the latest versions of NABL documents are available and effectively implemented.
- **Notification of Changes**: The CAB must notify NABL within 15 days of significant changes affecting accreditation, such as changes in ownership, resources, premises, scope of accreditation, sub-contractors, or any factors impacting its ability to meet NABL requirements.
  Changes in legal entity, name, ownership, or address also necessitate a new application, resulting in a new CAB ID and accreditation certificate number. In these cases, a new CAB ID and accreditation certificate number will be allotted to the CAB.
- **Addressing Non-Conformities or Corrective Actions**: The CAB must resolve all non-conformities identified during assessments within 30 days to avoid negative consequences. It must also inform NABL if any proposed assessors are consultants or associated with the CAB.
- **Inducements**: The CAB must not offer gifts or payments to assessment team members, as violations may result in adverse actions by NABL.
- **Documented Procedures**: The CAB must have a documented procedure for using the NABL symbol and the associated URL number.
- **False Information**: Providing false information in the application regarding personnel, audits, or equipment may lead to withdrawal of scope during assessment.
- **Renewal Application**: If NABL does not receive the renewal application before the expiry date, accreditation may be affected. The CAB must apply for accreditation renewal at least six months before its expiry to ensure timely assessment by NABL and maintain accreditation continuity. Late applications may disrupt the accreditation cycle, and applications submitted after expiry require a fresh application.

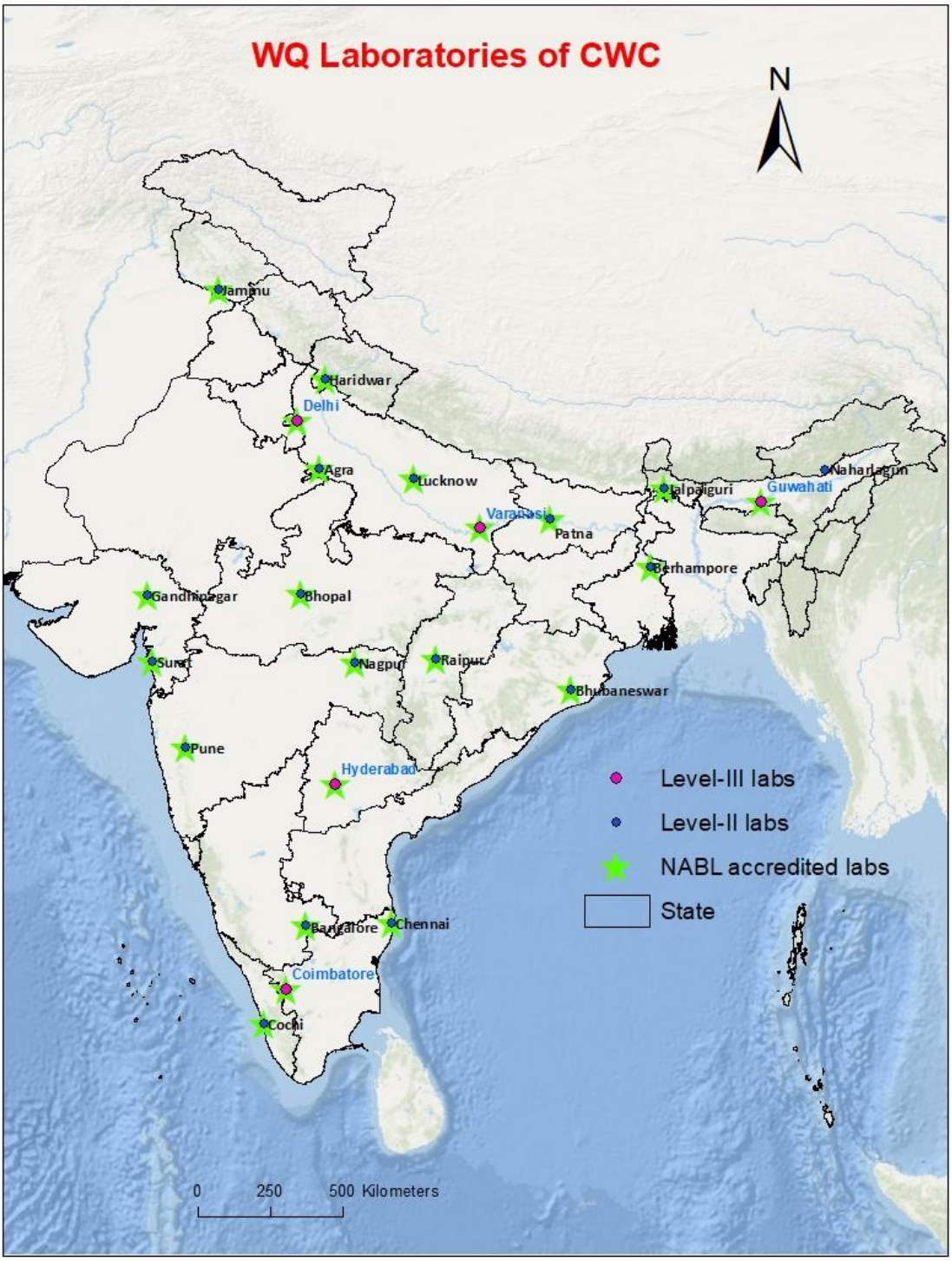
- **Re-assessment Scheduling**: The CAB must schedule re-assessment within two months of submitting the renewal application.
- **Surveillance Documents**: Failure to submit required documents for desktop surveillance within 30 days past the due date will have consequences.
- **Outstanding Fees**: The CAB will face issues if it has outstanding fees for more than three months.
- **Complaints**: Repeated valid complaints against the CAB may lead to consequences.
- **Intimidation**: Intimidating or threatening NABL officials or assessors will not be tolerated.

12.0 NABL documents related to Accreditation

S. No.	Document No.	Document Title
1	NABL 100A	General Information Brochure
2	NABL 100B	Accreditation Process & Procedure
3	NABL 131	Terms & Conditions for Obtaining and Maintaining NABL Accreditation
4	NABL 133	Policy for Use of NABL Symbol and / or Claim of Accreditation by Accredited Conformity Assessment Bodies (CAB) & NABL Accredited CAB Combined ILAC MRA Mark
5	NABL 141	Guidelines for Estimation and Expression of Uncertainty in Measurement
6	NABL 142	Policy on Metrological Traceability of Measurement Results
7	NABL 151	Application Form for Testing Laboratories
8	NABL 160	Guide for Preparing Management System Document / Quality Manual
9	NABL 161	Guide for Internal Audit and Management Review for Conformity Assessment Bodies (Laboratories / PTP / RMP)
10	NABL 163	Policy for Participation in Proficiency Testing Activities
11	NABL 219	Assessment Forms and Checklist (Based on ISO/IEC 17025:2017)
12	NABL 220	Document Review Checklist (as per ISO/IEC 17025: 2017)

13.0NABL Accredited Water Quality Laboratories in CWC

Out of 23 level-II/III laboratories of CWC, 22 laboratories of CWC have got accreditation by National Accreditation Board for Testing and Calibration Laboratories (NABL) in the field of testing in accordance with Standard ISO/IEC 17025:2017.



14.0 Standard Operation Procedure & Records Maintaining by CWC Water Quality Laboratories

STANDARD OPERATION PROCEDURE

S. No.	Document No.	Name of Document
1	CWC/NRWQL/QM/01	Quality Manual
2	CWC/NRWQL/QP - 4.1P-01	Procedure for Impartiality
3	CWC/NRWQL/QP- 4.2 P-01	Procedure for Confidentiality
4	CWC/NRWQL/ QP- 6.2P-01	Procedure for Personnel, Training needs & Training Conduct
5	CWC/NRWQL/ QP- 6.3P-01.	Procedure for House keeping
6	CWC/NRWQL/ QP- 6.3P-02.	Procedure for Maintenance of Environmental Condition
7	CWC/NRWQL/ QP- 6.4 P-01	Procedure for handling, Transport, Storage and Maintenance
8	CWC/NRWQL/ QP- 6.4P-02	Procedure for Intermediate Check
9	CWC/NRWQL/ QP- 6.4 P-03	Procedure for Verification of Calibration Certificate of Equipment
10	CWC/NRWQL/ QP- 6.5 P -.01	Procedure for Metrological Traceability
11	CWC/NRWQL/ QP- 6.6 P -01	Procedure for Externally Provided Products and Services
12	CWC/NRWQL/ QP- 7.1 P-01	Procedure for review of Request, tender and Contracts
13	CWC/NRWQL// QP- 7.4P-01	Procedure for Receipt, Storage and handling of samples
14	CWC/NRWQL// QP- 7.4 P-02	Procedure for Disposal of Remnant samples
15	CWC/NRWQL// QP- 7.6 P-01	Procedure for Evaluation of Uncertainty of Measurement
16	CWC/NRWQL// QP- 7.7 P-01	Procedure for Quality Control
17	CWC/NRWQL// QP- 7.7 P-02	Procedure for Ensuring the validity of Results
18	CWC/NRWQL// QP- 7.9 P-01	Procedure for Resolution of Complaint
19	CWC/NRWQL// QP- 7.10 P-01	Procedure for Non-conforming Work
20	CWC/NRWQL// QP- 8.3P- 01	Procedure for Control of Management System Documents
21	CWC/NRWQL// QP- 8.3 P-02	Procedure for Numbering of Documents
22	CWC/NRWQL// QP- 8.4 P-01	Procedure for Control of Records
23	CWC/NRWQL// QP- 8.7 P-01	Procedure for Corrective Action
24	CWC/NRWQL// QP- 8.8 P-01	Procedure for Internal Audit
25	CWC/NRWQL// QP- 8.9 P-01	Procedure for Management Review
26	CWC/NRWQL/FR/QC-01	Organization Chart

RECORDS

1	CWC/NRWQL/FR/CLC-01	Chemical Laboratory Chart
2	CWC/NRWQL/FR/LL-01	Laboratory layout
3	CWC/NRWQL/FR/SA-01	Scope of Accreditation
4	CWC/NRWQL/FR/QP-01	Quality Policy
5	CWC/NRWQL/FR - 8.3F-01	Documents Distribution Register
6	CWC/NRWQL/FR - 8.3F-02	Master List of Documents

S. No.	Document No.	Name of Document
7	CWC/NRWQL/FR - 8.3F-03	Obsolete Records
8	CWC/NRWQL/FR - 8.3F-04	Externally Originated Documents
9	CWC/NRWQL/FR – 7.1.4F-01	Analytical Request Form
10	CWC/NRWQL/FR - 7.1F-02	Job Card
11	CWC/NRWQL/FR - 7.1F-03	Sample Receipt File
12	CWC/NRWQL/FR - 6.6F-01	Purchase Indent
13	CWC/NRWQL/FR - 6.6F-02	Inspection of Incoming Material
14	CWC/NRWQL/FR - 6.6F-03a	Chemical / Glassware / Plastic ware Record Register
15	CWC/NRWQL/FR - 6.6F-03b	Tool & Plant Record Register
16	CWC/NRWQL/FR - 6.6F-04	Approved Suppliers List
17	CWC/NRWQL/FR - 6.6F-05	Laboratory Purchase File
18	CWC/NRWQL/FR - 6.6F-06	Supplier Evaluation Form
19	CWC/NRWQL/FR - 8.6 F-01	Officer Communication Record
20	CWC/NRWQL/FR - 8.6 F-02	Analysis of Customer Feedback
21	CWC/NRWQL/FR - 7.9 F-01	Complaint Register
22	CWC/NRWQL/FR - 7.9 F-02	Complaint Acknowledgement Card / Letter
23	CWC/NRWQL/FR - 7.10 F-01	Non-Conforming Testing Work Analysis and Corrective Action
24	CWC/NRWQL/FR - 8.6F-01	Improvement Record
25	CWC/NRWQL/FR - 8.5F-01	Plan for addressing Risk and Opportunities
26	CWC/NRWQL/FR – 8.4F-01	Retention Period of Records
27	CWC/NRWQL/FR – 8.8F-01	Internal Audit Plan
28	CWC/NRWQL/FR - 8.8F -02	Internal Audit Checklist
29	CWC/NRWQL/FR - 8.8F -03	Internal Audit Non-conformance Format
30	CWC/NRWQL/FR - 8.8F -04	Internal Audit Non-conformance Status Report
31	CWC/NRWQL/FR - 8.9F -01	Management Review Meeting Agenda
32	CWC/NRWQL/FR - 8.9F -02	Management Review Meeting Status Report
33	CWC/NRWQL/FR - 8.9F -03	Minutes of Management Review Meeting
34	CWC/NRWQL/FR - 6.2 F-01	Competence Chart of Staff
35	CWC/NRWQL/FR - 6.2 F-02	Competence Evaluation Form
36	CWC/NRWQL/FR - 6.2 F-03	Role, Responsibility & Authority
37	CWC/NRWQL/FR - 6.2 F-04	Authorized Laboratory Staff
38	CWC/NRWQL/FR - 6.2 F-05	Training Calendar
39	CWC/NRWQL/FR - 6.2 F-06	Training Record / Attendance Form
40	CWC/NRWQL/FR - 6.2 F-07	Training Evaluation Performa
41	CWC/NRWQL/FR - 6.3 F-01	Laboratory Environment Record
42	CWC/NRWQL/FR - 6.3 F-02	House Keeping Record
43	CWC/NRWQL/FR - 6.4 F-01	List of Instruments
44	CWC/NRWQL/FR - 6.4 F -02	Calibration Calendar

S. No.	Document No.	Name of Document
45	CWC/NRWQL/FR - 6.4 F -03	In-house Calibration Certificate
46	CWC/NRWQL/FR - 6.4 F -04	Equipment Log Book
47	CWC/NRWQL/FR - 6.4 F -05	Breakdown Records of Equipment
48	CWC/NRWQL/FR - 6.4 F -06	Instrument Authorization Record
49	CWC/NRWQL/FR - 6.4 F -07	Preventive Maintenance Schedule
50	CWC/NRWQL/FR - 6.4 F -08	Original Calibration Certificate
51	CWC/NRWQL/FR - 6.4 F F-09	Records of Standards / CRMs
52	CWC/NRWQL/FR - 6.4 F -10	Consumption Record of Standards / CRMs
53	CWC/NRWQL/FR - 7.4 F-01	Receipt & Disposal of Remnant Sample
54	CWC/NRWQL/FR - 7.7 F-01	Replicate Testing
55	CWC/NRWQL/FR - 7.7 F-02	ILC / PT Plan
56	CWC/NRWQL/FR - 7.7 F-03	ILC / PT Results
57	CWC/NRWQL/FR - 7.8 F-01	Test Reports (Chemical Testing)

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