

13. Recognition of Laboratories and Empanelment of Consultant

13.1. Laboratories

Recognition of Environmental Laboratories under Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981.

13.1.1. Introduction

Under the Air (Prevention and Control of Pollution) Act, 1981, the State Board has been defined in relation to a State in which the Water (Prevention and Control of Pollution) Act, 1974, is in force and the State Government has constituted for that State, a State Board for the prevention and control of water pollution under section 4 of that Act, the said State Board; and

Similarly under the Water (Prevention and Control of Pollution) Act, 1974, State Board means a State Pollution Control Board constituted under the section 4 of the Act.

The section 17 of the Water (Prevention and Control of Pollution) Act, 1974, defines functions of the Board which involves to plan a comprehensive program for the prevention, control or abatement of pollution of streams and wells in the State and to secure the execution of thereof. The Section 17 (2) of the said act also state that the Board may establish or recognize a laboratory or laboratories to enable the Board to perform its functions under this Section efficiently, including the analysis of samples of water from any stream or well or of samples of sewage or trade effluents.

Similarly section 17 (2) of Air (Prevention and Control of Pollution) Act, 1981, provides that the State Board may establish or recognize a laboratory or laboratories to enable the Board to perform its functions under this section efficiently.

The environmental laboratory plays a very important role in assessing the status of environment comprising both abiotic (soil, water and air) and biotic (flora, fauna and human being) components. An environmental laboratory is a laboratory processing samples taken from the environmental media (air, water, soil, biota) both from the environment as well as from sources disposing into the environment (industries, domestic and agriculture sources, automobiles etc.).

The laboratories are the essential corner stones of any effective pollution control program. The analytical laboratories provide qualitative as well as quantitative data for good decision making purpose. For generating this valuable data with a desired

accuracy and to quantify concentration of the constituents present in the samples, the laboratory should have the desired facilities and capabilities to achieve the above goal. Laboratory accreditation provides recognition of technical competence including quality system management of the laboratories. Such recognition is considered the first essential step towards mutual acceptance of test results and test certificate.

Need of Accreditation

The State Board has decided to simplify the process of consent management along with its commitment to enforce provisions of Air Act and Water Act. The Board for the purpose of simplification of consent mechanism has decided to allow self certification. To achieve its goal of better compliance along with self certification a need of competent laboratory is essential.

13.1.2. Environmental Laboratory under provisions of Air Act, 1981

The laboratory recognized under provisions of Air Act need to fulfill desired testing of parameters as required by the State Board for disposal of consent as well as monitoring of compliance. The laboratory should have minimum facility to conduct sampling and analysis of following parameters:-

A. Ambient Air/ Fugitive Emissions

Oxide of Nitrogen, Sulphur dioxide, PM₁₀, PM_{2.5}, Ammonia, Carbon monoxide (CO), Benzene, Lead, Nickel, Arsenic, Ozone.

B. Stack Gases/ Source Emission

Particulate Matter, Sulphur Dioxide, Carbon Dioxide, Carbon Monoxide, Oxygen, Oxides of Nitrogen, Acid mist, Chlorine.

C. Ambient Noise Level

The laboratory seeking recognition under Air Act must fulfill following requirements:-

1. Laboratory should be located in the State of Rajasthan.
2. Should have facilities to carry out sampling and analysis of the parameters specified above.
3. Should have original testing procedures/ manuals (APHA, BIS, USEPA, CPCB, ASTM, ISO).
4. Should be having minimum laboratory space of 100 sq. mtr.
5. Regular and stabilized electricity supply through use of Uninterrupted Power Supply (UPS) system.
6. Provision of Diesel Generator (D.G.) sets for continuous supply of power.
7. The laboratory should maintain appropriate environmental conditions for the testing.

8. The laboratory should have instruments as per the testing procedures adopted by them. The testing procedure adopted should be of standard method (APHA, BIS, USEPA, CPCB, ASTM, ISO) or validated methods.
9. All instruments should be properly and regularly calibrated.
10. For preparation of all standard solutions only “Analytical Reagent Grade (AR) or Guaranteed Reagent Grade (GR) should be used, since their purity levels are known.
11. Reference Materials (RM’s) or Certified Reference Materials (CRM’s) should be used for calibrations during analysis of metals, pesticides, and other organics such as THM, PAH’s, BTX etc.
12. Safe laboratory practices should be adopted.
13. Standard Operating Procedure (SOP) should be maintain for data handling, storage and retrieval, health and safety precautions, analytical method, routine inspection, calibration and standardization of instruments etc.
14. The recognized laboratory shall have to participate in AQC program conducted by CPCB.
15. The man power requirement will be as under:-

S. No.	Qualification	Nature of Job	Nos. (Minimum)
1.	High School/ Intermediate	Field attendant, Lab	2
2	ITI/ High School/ Intermediate in science	Field chemist	1
3.	Bachelor’s Degree in Basic Science or equivalent	Analyst	1
4.	Master’s Degree in Science or equivalent with minimum two years experience in environment laboratory	Supervision of Analysis and Signing	1
Total Manpower (Minimum)			5

13.1.3. Environmental Laboratory under provisions of Water Act, 1974

The laboratory recognized under provisions of Water Act need to fulfill desired testing of parameters as required by the State Board for disposal of consent as well as monitoring of compliance. The laboratory should have minimum facility to conduct sampling and analysis of following parameters:-

A. Physical Tests

Conductivity, Colour, pH, Total Solids, Total Dissolved Solid, Total Suspended Solids, Turbidity

B. Inorganic General and Non- Metallic

Acidity, Alkalinity, Ammonical Nitrogen, Chloride, Dissolved Oxygen, Fluoride, Total Hardness, Total Kjehldal Nitrogen, Nitrate Nitrogen, Phosphate, Sulphate

C. Trace Metals

Cadmium, Calcium, Chromium Total, Copper, Iron, Lead, Magnesium, Nickel, Sodium, Zinc

D. Organics

Bio-Chemical Oxygen Demand, Chemical Oxygen Demand, Oil & Grease, Phenol

E. Microbiological Tests

Total Coliform, Feacal Coliform

F. Toxicological Test

Bioassay Test (Feast toxicological)

The laboratory seeking recognition under Water Act, 1974 must fulfill following requirements:-

1. Laboratory should be located in the State of Rajasthan.
2. Should have facilities to carry out sampling and analysis of the parameters specified above.
3. Should have original testing procedures/ manuals (APHA, BIS, USEPA, CPCB, ASTM, ISO).
4. Should be having minimum laboratory space of 100 sq. mtr.
5. Regular and stabilized electricity supply through use of Uninterrupted Power Supply (UPS) system.
6. Provision of Diesel Generator (D.G.) sets for continuous supply of power.
7. The laboratory should maintain appropriate environmental conditions for the testing.
8. The laboratory should have instruments as per the testing procedures adopted by them. The testing procedure adopted should be of standard method (APHA, BIS, USEPA, CPCB, ASTM, ISO) or validated methods.
9. All instruments should be properly and regularly calibrated.
10. For preparation of all standard solutions only "Analytical Reagent Grade (AR) or Guaranteed Reagent Grade (GR) should be used, since their purity levels are known.
11. Reference Materials (RM's) or Certified Reference Materials (CRM's) should be used for calibrations during analysis of metals, pesticides, and other organics such as THM, PAH's, BTX etc.
12. Safe laboratory practices should be adopted.
13. Standard Operating Procedure (SOP) should be maintain for data handling, storage and retrieval, health and safety precautions, analytical method, routine inspection, calibration and standardization of instruments etc.

14. The recognized laboratory shall have to participate in AQC program conducted by CPCB.

15. The man power requirement will be as under:-

S. No.	Qualification	Nature of Job	Nos. (Minimum)
1.	High School/ Intermediate	Lab attendant	1
2	ITI/ High School/ Intermediate in science	Field chemist	1
3.	Bachelor's Degree in Basic Science or equivalent	Analyst	1
4.	Master's Degree in Science or equivalent with minimum two years experience in environment laboratory	Supervision of Analysis and Signing	1
Total Manpower (Minimum)			4

13.1.4. Environmental Laboratory under provisions of Air Act, 1981 and Water Act, 1974

The laboratory if wishes can apply to seek recognition under both Air and Water Act. They should have facilities to conduct sampling and analysis of parameters as detailed for laboratories seeking recognition under Air Act and Water Act both.

The laboratory seeking recognition under Air Act and Water Act should be having following:-

1. Laboratory should be located in the State of Rajasthan.
2. Should have facilities to carry out sampling and analysis of the parameters specified above.
3. Should have original testing procedures/ manuals (APHA, BIS, USEPA, CPCB, ASTM, ISO).
4. Should be having minimum laboratory space of 150 sq. mtr.
5. Regular and stabilized electricity supply through use of Uninterrupted Power Supply (UPS) system.
6. Provision of Diesel Generator (D.G.) sets for continuous supply of power.
7. The laboratory should maintain appropriate environmental conditions for the testing.
8. The laboratory should have instruments as per the testing procedures adopted by them. The testing procedure adopted should be of standard method (APHA, BIS, USEPA, CPCB, ASTM, ISO) or validated methods.
9. All instruments should be properly and regularly calibrated.

10. For preparation of all standard solutions only “Analytical Reagent Grade (AR) or Guaranteed Reagent Grade (GR) should be used, since their purity levels are known.
11. Reference Materials (RM’s) or Certified Reference Materials (CRM’s) should be used for calibrations during analysis of metals, pesticides, and other organics such as THM, PAH’s, BTX etc.
12. Safe laboratory practices should be adopted.
13. Standard Operating Procedure (SOP) should be maintain for data handling, storage and retrieval, health and safety precautions, analytical method, routine inspection, calibration and standardization of instruments etc.
14. The recognized laboratory shall have to participate in AQC program conducted by CPCB.
15. The man power requirement will be as under:-

S. No.	Qualification	Nature of Job	Nos. (Minimum)
1.	High School/ Intermediate	Lab attendant/ Filed Attendant	2
2	ITI/ High School/ Intermediate in science	Field chemist	2
3.	Bachelor’s Degree in Basic Science or equivalent	Analyst	2
4.	Master’s Degree in Science or equivalent with minimum two years experience in environment laboratory	Supervision of Analysis and Signing Authority	1
Total Manpower (Minimum)			7

13.1.5. Procedure for recognition of Lab

- Step-I Submission of application in prescribed format along with necessary enclosures.
- Step-II Preliminary scrutiny of the application received based on criteria for evaluation & assessment of environmental laboratory by RSPCB.
- Step-III Laboratories fulfilling criteria for recognition on the basis of desktop evaluation will be inspected by the team constituted by the Board.
- Step-IV The recommendation of the inspecting team along with desktop evaluation report will be submitted to Expert Committee to decision.
- Step-V The Expert Committee will submit its recommendations to Member Secretary and Chairperson.
- Step-VI Approval by the RSPCB for eligible recommended laboratory (ies) for their recognition.
- Step-VII Gazette Notification of approved environmental laboratory. The list of approved laboratories will be posted on Websites of RSPCB.

Constitution of Inspecting Team

1. Officer not below the rank of Supdt. Scientific Officer from Central Laboratory.
2. Officer not below the rank of JSO from Central Laboratory.
3. Lab In-charge from Regional Laboratory.

Constitution of Expert Committee

1. Chief Scientific Officer, RSPCB.
2. Chief Environmental Engineer, RSPCB.
3. Supdt. Scientific Officer, RSPCB.

13.1.6. General conditions for recognized laboratories

The Environmental laboratories desirous of renewal of recognition at the expiry of earlier recognition period have to submit application for renewal of recognition at least six months before the expiry date of earlier recognition.

The recognition of a lab shall be for the period of 3 years.

The RSPCB reserves its right to de-recognize or revoke its recognition at any time in public interest without assigning any reason, if it is deemed necessary by the RSPCB.

The recognition will also be revoked during following events:

- If the laboratory is not maintaining calibration of equipments.

- If the laboratory is not using chemicals/ consumable/ glass ware of appropriate quality.
- If the laboratory is not following conditions of recognition.
- In case, the laboratory indulges in malpractices and issuing fraudulent reports.
- There are complaints against the laboratory regarding analytical malpractices.
- The laboratory not complying the rules and regulations notified under the Acts.

13.2. Consultant

The provisions of Air Act/ Water Act do not warrant recognition of consultant. The Board therefore cannot issue mandatory list of consultants. However, for the benefit of proponents, the Board may prepare a list of competent consultants of whom project proponent if required can utilize the services off. The Board can prepare a list of consultants for working in the field of preparation of application, compliance report, environment statement and environment audit. The requirement for consultant's desires of being listed with the State Board shall be

1. Should have office in Rajasthan.
2. The minimum area of office should be 50 Sq. meter.
3. Should have adequate infrastructure facility.
4. The man power requirement shall be as under:-

S. No.	Qualification	Nature of Job	Nos. (Minimum)
1.	High School/ Intermediate	Office attendant	1
2	ITI/ High School/ Intermediate with good typing speed in English	Office Assistant Cum Data Entry Operator	1
3.	M. Tech Environment/ M. Sc. Environment with minimum two years experience in relevant field*	Principal Consultant	1
Total Manpower (Minimum)			3

* Persons with Post Graduate qualification in Science or Bachelors degree in engineering with experience of two years in environment department of government/ government undertaking/ PSU/ limited company can also be considered.

Note:- For Environment Audit purpose Principal Consultant should necessarily be Engineering Graduate.

Constitution of Inspecting Team

1. Officer not below the rank of Environmental Engineer from Head office.
2. Officer not below the rank of SSO from Central Laboratory.
3. Assistant Environmental Engineer/ Junior Environmental Engineer from Regional Office.

Constitution of Expert Committee

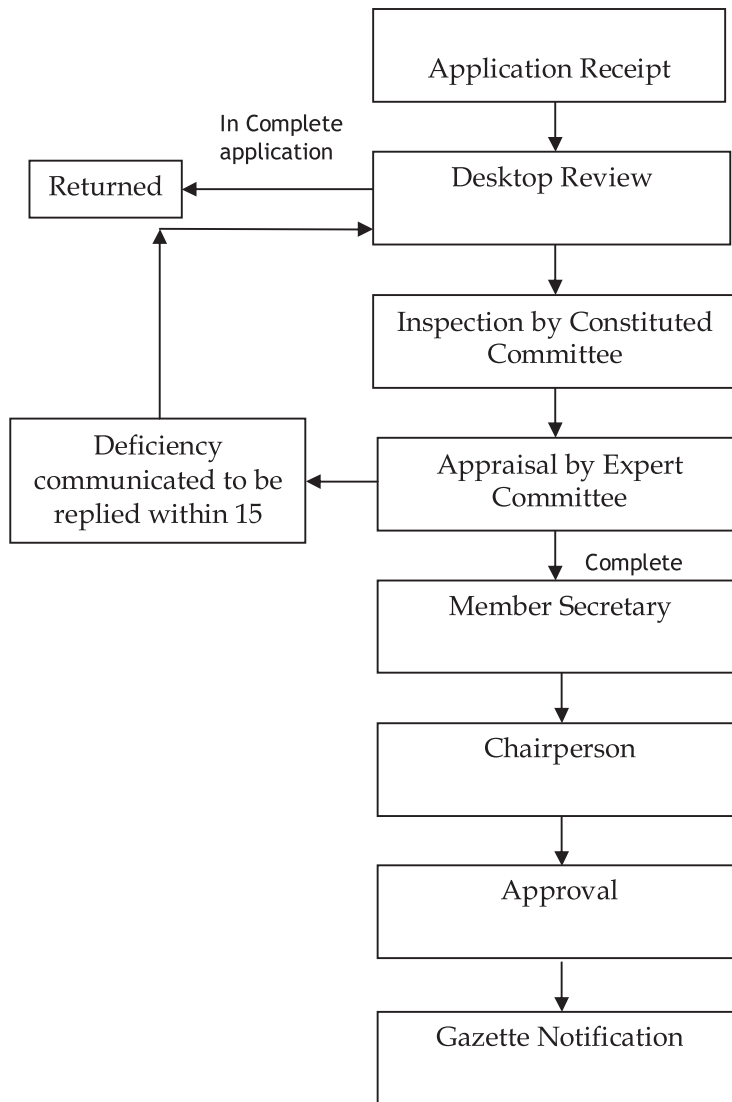
1. Chief Scientific Officer, RSPCB.
2. Chief Environmental Engineer, RSPCB.
3. Environmental Engineer, RSPCB.

13.2.1. Procedure for recognition of Consultant

- Step-I Submission of application in prescribed format along with necessary enclosures.
- Step-II Preliminary scrutiny of the application received based on criteria for evaluation & assessment of Consultant by RSPCB.
- Step-III Consultant fulfilling criteria for recognition on the basis of desktop evaluation will be inspected by the team constituted by the Board.
- Step-IV The recommendation of the inspecting team along with desktop evaluation report will be submitted to Expert Committee to decision.
- Step-V The Expert Committee will submit its recommendations to Member Secretary and Chairperson.
- Step-VI Approval by the RSPCB for eligible recommended consultant for listing.
- Step-VII The list of consultants will be posted on Websites of RSPCB.

FLOW SHEET FOR RECOGNITION OF LABORATORY

Flow Chart



FLOW SHEET FOR EN LISTING OF CONSULTANT

Flow Chart

