



# Implementation of Ensō- LIMS at **NABL certified** Indian Pollution Control Board Lab

## CASE STUDY

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## 1. Project Details

The Telangana State Pollution Control Board (TSPCB) is a statutory authority entrusted to implement Environmental Laws and Rules within the jurisdiction of the State of Telangana, India. The Board ensures proper implementation of the statutes, judicial and legislative pronouncements related to environmental protection within the State. As per A.P. Re-organization Act, 2014, APPCB was bifurcated and TSPCB was constituted under Sec.4 of Water (Prevention & Control of Pollution) Act, 1974 and Section 5 of Air (Prevention & Control of Pollution) Act, 1981.

TSPCB was looking for Laboratory Information System and enquired for the same in the year 2016. As part of evaluation process team of scientists from TSPCB visited some of our clients' for review of LIMS running at their labs. Later TSPCB placed a requirement for LIMS (Laboratory Information Management System) software with NIC(National Informatics Centre) but LIMS is specialized domain and NIC doesn't have the domain specialization and hence recommended TSPCB to procure through open tendering. Our software is implemented and successfully running at all branches of TSPCB. With respect to that TSPCB lunched an open tender for procurement of new LIMS software, which was floated in the year 2016. Their main objective was to find a data centralization platform to establish flexible and dynamic decision support and process control mechanism in the organisation.

## 2. Scope of Work

TSPCB wants to increase the operational efficiency of the laboratory by implementing an automating Laboratory information management system for its

Zonal laboratory at Warangal and Ramachandrapuram to streamlining the workflow. ENSOLIMS covers the journey of a sample from its induction into a laboratory till the end of its life cycle, including the stages of Sample Storage, Testing, Reporting and Archiving. As a sample is introduced into a lab, the LIMS operation starts by accessioning the sample on to the system and assigning it with a particular identification number.

Some of the major objectives of TSPCB are to monitor the pollution sources and ambient environmental quality includes air, soil, solid waste and water. Laboratory plays a vital role in carrying out these tasks.

### *Key Objectives*

- To improve management of materials, energy and environmental resources.
- To build a centralized solution for 3 Branches.
- Track employees' activity on field as well as on premises.
- To develop competency and productivity in human resources.
- To enhance quality and cost-effectiveness.
- To develop different type of MIS report for management processes.

## 3. Challenges

TSPCB wanted a centralize [Laboratory Information Management System](#) (LIMS) that can meet the following requirements:

- To monitoring laboratory programs for Zonal and Regional Laboratories
- To carryout monitoring of water, waste water, air, soil and solid wastes.
- Supporting services for various departments with regard to sampling, analysis and reporting.
- To carry out research and development project studies.
- Standardization of new methodology for analysis of specific pollutants.
- Huge amount of technical data from multiple project location to be acquired and processed.

- Maintaining a complete Chain of Custody (CoC) of samples, right from the samples registration to their final disposal, ensuring complete sample traceability at all times.
- Work assignment and tracking was extremely difficult resulting in effort and cost over-runs.

## 4. Solution

**Assessment of business process led to the idea of web-based integrated system that will cover:**

- Customer data management
- Quotation process
- Sample management
- Task management
- Test data processing
- Automatic Calculation formats
- Inventory management
- Maintenance & Calibration Management
- Real-Time Reporting
- Secured access to remote branches through VPN

## 5. Outcome Benefits

Since its implementation, ENSOLIMS has operated efficiently and has proven to be a significant benefit to TSPCB. Data is entered on a timely basis and shared department-wise as it's a centralized platform for its Zonal Laboratories as well. ENSOLIMS has improved the security of data entry and has greatly assisted in sample identification and tracking of records. TSPCB has received a fully configurable and scalable system meeting regulatory compliance of **ISO/IEC 17025**.

ENSOLIMS system is a significant factor in receiving live monitoring of varies Department in TSPCB Headquarter and Zonal Laboratories. The key was the inherent traceability of the ENSOLIMS system, which maintaining a complete Chain

of Custody of samples, right from the samples registration to their final disposal, ensuring complete sample traceability at all times.

6.



***“ENSOLIMS provides us with a complete set of parameter to track samples and records at different location. Software has met our requirements; Enable IT Solution Pvt Ltd provides the best service. We are happy with the product”***