# Laboratory Training System and Records Management

## SCOPE

This SOP is intended to provide guidance on the objectives and use of the laboratory's training system and the means for complying with the requirements of Section 5.2, V1M2 [2016 TNI Standard]. The Florida Department of Environmental Protection (FDEP) Laboratory retains, primarily, electronic records of all analytical tests and employee training records. This document specifies laboratory training requirements and describes how electronic certification of training is accomplished.

## PROCEDURE

### Basic Training Requirements

All laboratory staff are required to complete basic training requirements regardless of their duties. Basic training is required in areas listed below. Some of this training need only be performed once, when the employee joins the lab, while others need to be performed on an annual basis. Training that is required only once may still be taken by employees in successive years on an as-needed basis or at their supervisor's discretion.

Annual training is required for:

- Laboratory Quality Manual
- Laboratory Ethics Training

A single training session for new lab employees is required for:

- Laboratory Safety
- Fire Extinguisher Use
- Hazardous Waste Handling

Additional general, one-time training for selected staff includes:

- Boat Operator Certification
- CPR and First Aid
- Hazardous Material Shipment
- Radiation Safety

### Analyst Training

All analysts and technicians engaged in analytical work are required to complete training in the methodological requirements for assigned analyses. Additionally, analysts generating reportable data are required to (a) successfully complete method proficiency demonstrations prior to reporting any data from an analytical test and (b) demonstrate continuing proficiency on an annual basis.


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Certification and Documentation

1. **Laboratory Staff Documentation** - All training for laboratory staff is documented in the Laboratory Information Management System (LIMS) training module. Three training categories exist in the LIMS training module: 1) a **Bureau** training category covering basic training requirements (described above) for all laboratory staff; 2) an **SOP** training category covering methodological requirements; and 3) a **Method** training category covering initial and continuing proficiency demonstrations.

   Training requirements for routine tests that are frequently performed by experienced analysts are described in **SOP LB-007**, *Procedure and Policy for Demonstration of Capability for Methods, Instruments and Laboratory Staff*.

   For all other categories, including training for new analysts, instruments or methods and tests that are performed infrequently, supervisors are responsible for assigning appropriate training and a training due date for their staff within the LIMS training module. After training is assigned, personnel are alerted to training needs by a LIMS message that is displayed after logging into the system. When personnel complete their assigned training, they enter the LIMS training module and attest to completion of the training by a) selecting the 'Complete' menu tab; b) entering the training completion date and c) citing the analytical records containing method proficiency data where appropriate.

2. **Non-Staff Personnel Documentation** - All non-staff (i.e., visitor, contractor, and technician) training is documented in a logbook located in the main office area at the Non-Staff Training computer terminal.

Basic Training

Completion of Quality Manual training means that the employee has read, understood, and is using the latest version of the laboratory's in-house quality documentation, which relates to his/her job responsibilities. This training is conducted annually.

SOP Training

For SOP training, analysts that enter training records are attesting that they have read, understood, and agree to use the cited version of the method in the laboratory. This training is conducted on an annual basis.

Method Training

Supervisors are responsible for reviewing employee training records and any associated analytical records. If the review is acceptable, supervisors utilize the LIMS training module to authorize the completion of employee training. For method proficiency training, a supervisor's authorization attests that, consistent with Section 1.6 of V1M4, V1M5 and V1M7 [2016 TNI Standard]:


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1. The analyst has performed the cited test method(s) according to approved lab SOPs for the analyses of samples under the National Environmental Laboratory Accreditation Program, and has met all demonstration of capability (DOC) requirements.

2. The test method(s) was performed by the analyst(s) identified on this certification (LIMS training record).

3. A copy of the test method(s) and the on-line laboratory-specific SOPs are available for all personnel on-site. The official copy of the SOP is the on-line version. Paper/printed copies of SOPs are not allowed in the lab.

4. The data associated with the DOC are true, accurate, complete, and self-explanatory.

5. All raw data (including electronic certification records) necessary to reconstruct and validate these analyses have been retained at the facility, and that the associated information is well organized and available for review by authorized assessors.

Because much of the raw data acquired and retained by the laboratory are in the form of electronic records, the requirement of item (5) above may be met by including references to electronic data records in the LIMS training module. Method training is conducted annually by lab analysts for the analyses they perform. Details are documented in **SOP LB-007**.

## DEMONSTRATION OF CAPABILITY

Demonstrations of capability (DOCs) are documented electronically under Method training as described above. Initial demonstrations of capability are performed for all analytes and methods according to Section 1.6.2, V1M4, V1M5 and V1M7 [2016 TNI Standard]. Ongoing DOCs are performed annually according to the requirements specified in Section 1.6.3 of V1M4, V1M5 and V1M7 [2016 TNI Standard]. More details are provided in **SOP LB-007**. Documentation for only one test method is maintained for similar test methods using the same technology. EPA test method 1311 (TCLP) and 1312 (SPLP) are considered similar methods differing only in the leaching solution.

For some methods, it is not feasible or practical to include all analytes in the blind performance samples, laboratory control samples or authentic samples. If an analyst is demonstrating on-going capability using one of those samples and an analyte was not added or present in the sample, the analyte must still be reported by the analyst. Acceptability of results for analytes not added or present in ongoing capability demonstration samples shall be based on the supervisor's judgment (either using non-detection as a criterion or, if the amount is judged to be a co-contaminant, based on comparability of results produced by other experienced analysts).

## REFERENCES

1. SOP LB-007, *Procedure and Policy for Demonstration of Capability for Methods, Instruments and Laboratory Staff*.
2. 2016 TNI Standard, Volume 1, Revision 2.1.


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## APPENDIX OF CHANGES

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| 10/06/2010 | Added language to address ERLN Tiered training and non-staff personnel training. |
| 11/29/2016 | This SOP was edited and checked for 508 compliance. |
| 12/02/2022 | Update those requiring ERLN tiered training and CPR & First Aid training. |
| 10/05/2026 | Removed the ERNL training section since such work is no longer performed in the lab. |


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