

**A. PURPOSE:**

General laboratory training: used to introduce new analytical employees to the general operating procedures of the Division of Scientific Services. The goal is to have new analysts introduced to the general operating procedures of the Division prior to their intensive Section/Unit specific training.

Retraining: used to re-introduce analysts to Section/Unit specific training. This may be due to many reasons, from a failure of a proficiency test, issues noted during review of work, to return to work after an extended absence.

**B. SCOPE:**

Besides training newly hired personnel, the DSS offers training opportunities for continuing education beyond the required in-house training and competency testing. Outside training opportunities include, but are not limited to, courses, seminars and professional meetings which provide a means to remain current and/or increase expertise in a particular field.

All analysts (however titled) and contract employees must show technical competency in their given discipline prior to assuming independent case work. This is demonstrated by the use of competency tests in the assigned Unit; see GL 14.5 'Competency Testing General Guidance' for guidance on competency testing. This procedure is for general laboratory guidance to introduce the trainee to the Division and its general practices. All components in this GL must be met. If Sections choose to go above and beyond these requirements, specific information will be found in the Section or Unit SOPs.

NOTE: The length and duration of the training will be dependent upon the knowledge, skills and abilities that a new employee brings to their position. All training steps must be addressed as appropriate for the trainee, based on their knowledge, skill and experience. The length of time necessary to complete the training process will vary depending again on the knowledge, skill and experience of the trainee. Any modifications to a training program will be documented. The Unit's specific training manual will always be used unless a deviation/modification is approved by the Director. Regardless of past experience, all trainees must successfully complete competency testing as indicated in the respective Unit training manual. There is to be no modifications allowed to competency tests.

For training on new methodologies the details may not yet be in the unit training manual. In these cases the Unit Manager will determine the appropriate manner in which to train individuals on the method. The training will include competency testing.

**C. RESPONSIBILITY:**

Trainees: responsible to follow the guidance of the trainer, to ask questions when they do not understand a policy or procedure and to understand their importance and the importance of the laboratory in the criminal justice system.

Trainers: responsible to train employees based on laboratory policy. General Laboratory training will be performed by the Quality Section, or designee as appointed by the Director.

Section Supervisor/Unit Lead: responsible to work with the Quality Section to ensure that the General Laboratory training is scheduled in a timely manner for new employees.

Unit Manager (however titled): responsible for ensuring the adequate supervision for the training of new employees in their sections.

Director: directs and approves laboratory policies and procedures that support adequate training to provide employees expertise in their discipline.

**D. PROCEDURE:** New employee – Analyst (however titled)

A member of the Quality Section or a designee will perform General Laboratory Training of new employees. The Section Manager must inform the Quality Section when a new hire is starting so that the training can be scheduled. The term employee includes individuals hired by the DSS, employees of the DESPP assigned to the DSS or individuals under contract with the DSS from outside agencies.

The trainer will utilize the "General Laboratory Training Checklist" (GL-14.1) as a guide in performing the training. Contract employees are trained in the same manner as a new employee.

The General Laboratory Training will include all topics listed on the checklists GL-2.2 "Safety Training Check list for New Employees" and GL-14.1 "General Laboratory Training Checklist". Portions of the General Laboratory Training will be completed independently through the QMS (Quality Management Software); these include: General Forensics training and Review of Legal Proceedings and rulings. Collect awareness training will be assigned as external training.

Contract employees will have the same general training using GL-14.1 to document the training and will also be issued the policies as documented on form GL-14.4 'Contract Employee Orientation'. Receipt of the documents will be documented through signature on form GL-14.4.

All new employees must know the significance of the Division Mission Statement, and read and Understand the General Laboratory SOPs.

Division of Scientific Services Mission Statement:

*It is the on-going policy of the Division of Scientific Services to provide services that meet our specifications and comply with the ANAB AR3125, ISO/IEC 17025, the FBI DNA QAS and the ATF MROS requirements while meeting or exceeding the expectations of the criminal justice community.*

1. All aspects of the training relating to technical competency including, required knowledge, skills and abilities and moot court shall be addressed in Unit specific training SOPs.
  - a. Unit training SOPs will include the use of practical competency tests to demonstrate competency of all analysts (however titled) performing testing. Unit Leads and Managers

are responsible to ensure training is appropriately documented prior to a competency test being issued. When possible competency tests will include a past proficiency test or a portion of a past proficiency test. See GL-14.5 for guidance on preparing competency tests. Unit SOPs may also have the option to include written or oral tests in conjunction with practical examinations.

- i. Practical examination(s) covering the spectrum of anticipated tasks related to the testing. Passing will at minimum include achieving the intended results, including the demonstration of appropriate documentation.
- ii. Written or Oral Examination (when used): These examinations should cover an overview of the topic(s) addressed in the method(s) being assessed. A grade of 80% or greater is required for the passing of a written competency test. Units using verbal competency tests will have clear guidance in their training SOPs on how these will be graded and clearly documented. All training and competency tests must be maintained with the trainee's training file.
- iii. The intended results of the competency test shall be achieved and authorization obtained prior to performing tasks on evidence.

2. General Training will minimally include:

- a. Introduction to the general structure of the DSS.
- b. Introduction to safety issues, such as fire alarms, evacuation routes, the active shooter response plan and other general laboratory wide topics. This will be documented on GL-2.1 'Safety Training Checklist New Employees'. Specific safety instructions will be given during Unit specific training. (See SOP GL-2 Safety).
- c. Introduction to the DSS laboratory system including the role the laboratory plays in the criminal justice system.
- d. Introduction to ethics in the forensic laboratory and the ANAB 'Guiding Principles of Professional Responsibility for Forensic Service Providers and Forensic Personnel' (See SOP GL-5).
- e. Introduction to the General Laboratory SOPs through the QMS.
- f. Introduction to the use of the QMS.
- g. GL-3 Security as pertains to the building systems.
- h. GL-9 Quality Action Requests; specifically the availability of this resource to individual employees.
- i. GL-15 Professional Development; specifically the availability of outside training, and membership in professional organizations.

- j. Note that other general laboratory SOPs will be introduced as appropriate during Unit specific training. GL SOPs will be assigned in the QMS based on the role of the employee. Analytical employees will be assigned all GL SOPs.
  - k. New hires to non-analytical laboratory support positions will be given an abbreviated general training based on the needs of the position; this will be determined by the Quality Section with the Director. For example an individual hired as a secretary may be introduced to GL SOPs 1-6, but not necessarily GL-7 to GL-23 which relate more to case work and evidence handling.
3. There will be no testing for the General Training section since this only acts to introduce the trainee to the Division.
- a. This will be documented using General Training Checklist form GL-14.1. This document will be scanned and added to the analyst's training records in the QMS. The paper copy will be maintained with the analyst's training records for their assigned Unit.
  - b. Portions of this training will be assigned through the QMS. The CJIS (Criminal Justice Information System) Collect security training will be assigned by the Laboratory Information System Manager (or designee) through CJIS.
4. The Training Program for personnel who perform testing and can influence results, to the extent necessary based on job function, shall include:
- a. General Forensic Training, this will include a brief introduction to various forensic science disciplines. This may be achieved by attending a course given by a laboratory employee or through training in the QMS, or other appropriate pre-approved manner.
  - b. Legal Issues, this will cover general topics that affect this laboratory including information of some legal precedents (Frye, Daubert, etc.). This training may be given by a guest speaker, by a laboratory employee, through the QMS, through on-line training or other pre-approved training manner. In general, it is extremely rare for analysts to testify on civil cases however if testifying for this type of case the testimony would not vary from a criminal case. Training for legal issues concentrates on criminal proceedings.
    - i. Note: individual Units will cover issues and laws that impact the Unit.
  - c. Ethics, the application of ethical practices in forensic science.
  - d. Criteria for acceptable performance, will be included in the Units' training manuals. Feedback on training assignments/worksheets and pass/fail results on tests will be included.
  - e. Knowledge, skills and abilities, individuals will demonstrate these topics throughout the training program and competency test(s).
  - f. Authorizations: Where applicable Unit training programs will address requirements for authorizations in the following tasks (defined above):

- i. Development, Modification, Verification & Validation of methods
- ii. Performance of Laboratory Activities including Testing, Calibration and Sampling
- iii. Analysis of Results
- iv. Authorize Results including Express Opinion or Interpretations
- v. Review Results (such as for trends in reported results)
- vi. Verification of Results
- vii. Technical Reviews
  - 1. Note in Units where technical reviews are provided by an external source an internal authorization is not required. The DSS will maintain records documenting the individual is qualified to perform these reviews.
- viii. Report Results, Authorize Reports
- g. To perform 'Development, Modification, Verification & Validation of Methods' the following is required:
  - i. Meet educational requirements of the analyst's titled position.
    - 1. FB/DNA Section: minimally a baccalaureate in a chemical, physical or biological science or in forensic science; additionally the educational requirements of the FBI DNA QAS document will be met for DNA analysts.
    - 2. Chemical Analysis Section: minimally a baccalaureate in a chemical, physical or biological science or in forensic science.
    - 3. Identification Section: minimally six years of experience in forensic analysis of evidentiary material.
  - ii. Have completed the general DSS training requirements for an analyst as listed in this document.
  - iii. Have training in the discipline in which the task is to be performed.
  - iv. Be authorized by the Director in at least one task within the discipline.
    - 1. It is noted that these tasks may be related to new technologies/processes and therefore prior authorization in the specific task cannot be obtained.
    - 2. Generally authorization for this group of tasks may be included with an analysts 1<sup>st</sup> analytical authorization within a discipline. It will not be required to be included for further authorizations.
- h. To 'Perform Laboratory Activities including Testing, Calibration and Sampling' the following is required:

- i. Meet educational requirements of the analyst's titled position.
  - 1. FB/DNA Section: minimally a baccalaureate in a chemical, physical or biological science or in forensic science; additionally the educational requirements of the FBI DNA QAS document will be met for DNA analysts.
  - 2. Chemical Analysis Section: minimally a baccalaureate in a chemical, physical or biological science or in forensic science.
  - 3. Identification Section: minimally six years of experience in forensic analysis of evidentiary material.
- ii. Have completed the general DSS training requirements for an analyst as listed in this document.
- iii. Have completed the training for the task(s) to be performed within the specific Unit.
- iv. Have successfully completed a competency test (as per Unit guidance) in the task(s) to be performed within the specific Unit.
- v. Have competency monitored through normal laboratory practices (i.e. Proficiency testing).
- vi. Be authorized by the Director in the task(s).
- i. To perform 'Analysis of Results' the following is required:
  - i. Meet educational requirements of the analyst's titled position.
    - 1. FB/DNA Section: minimally a baccalaureate in a chemical, physical or biological science or in forensic science; additionally the educational requirements of the FBI DNA QAS document will be met for DNA analysts.
    - 2. Chemical Analysis Section: minimally a baccalaureate in a chemical, physical or biological science or in forensic science.
    - 3. Identification Section: minimally six years of experience in forensic analysis of evidentiary material.
  - ii. Have completed the general DSS training requirements for an analyst as listed in this document.
  - iii. Have completed the training for the task(s) to be performed within the specific Unit.
  - iv. Have successfully completed a competency test (as per Unit guidance) in the task(s) to be performed within the specific Unit.

- v. Have competency monitored through normal laboratory practices (i.e. Proficiency testing).
- vi. Be authorized by the Director in the task(s).
  - 1. Note: the analysis of results is the act of reviewing data/results to interpret and arrive at a result, opinion or interpretation. In general, this will relate to the 'Findings Entered' milestone in LIMS.
- j. To perform 'Review of Results' the following is required:
  - i. Meet educational requirements of the analyst's titled position.
    - 1. FB/DNA Section: minimally a baccalaureate in a chemical, physical or biological science or in forensic science; additionally the educational requirements of the FBI DNA QAS document will be met for DNA analysts.
    - 2. Chemical Analysis Section: minimally a baccalaureate in a chemical, physical or biological science or in forensic science.
    - 3. Identification Section: minimally six years of experience in forensic analysis of evidentiary material.
  - ii. Have completed the general DSS training requirements for an analyst as listed in this document.
  - iii. Have completed the training for the task(s) to be performed within the specific Unit.
  - iv. Have successfully completed a competency test (as per Unit guidance) in the task(s) to be performed within the specific Unit.
  - v. Have competency monitored through normal laboratory practices (i.e. Proficiency testing).
  - vi. Be authorized by the Director in the task(s).
    - 1. Note: Review of results is the act of reviewing data for trends or issues. This is not to be confused with technical review of results. In general, this is the review of reported results.
- k. To perform 'Authorize Results' and 'Express Opinion or Interpretations' the following is required:
  - i. Meet educational requirements of the analyst's titled position.
    - 1. FB/DNA Section: minimally a baccalaureate in a chemical, physical or biological science or in forensic science; additionally the educational

requirements of the FBI DNA QAS document will be met for DNA analysts.

2. Chemical Analysis Section: minimally a baccalaureate in a chemical, physical or biological science or in forensic science.
  3. Identification Section: minimally six years of experience in forensic analysis of evidentiary material.
- ii. Have completed the general DSS training requirements for an analyst as listed in this document.
  - iii. Have completed the training for the task(s) to be performed within the specific Unit.
  - iv. Have successfully completed a competency test (as per Unit guidance) in the task(s) to be performed within the specific Unit.
  - v. Have competency monitored through normal laboratory practices (i.e. Proficiency testing).
  - vi. Be authorized by the Director in the task(s).
    1. Note: The authorizer of results is the equivalent of the case analyst; the individual(s) that forms the opinion or interpretation of the result. Generally this is the person setting the LIMS milestone to 'Draft Complete'.
    2. Note 2: The actions of the 'analysis of results', 'review of results', 'authorizing results', 'expressing opinions/interpretations' and 'reporting of results' may be performed by a single person or more than one person.
1. To perform 'Verification of Results' the following is required:
    - i. Meet educational requirements of the analyst's titled position.
      1. FB/DNA Section: minimally a baccalaureate in a chemical, physical or biological science or in forensic science; additionally the educational requirements of the FBI DNA QAS document will be met for DNA analysts.
      2. Chemical Analysis Section: minimally a baccalaureate in a chemical, physical or biological science or in forensic science.
      3. Identification Section: minimally six years of experience in forensic analysis of evidentiary material.
    - ii. Have completed the general DSS training requirements for an analyst as listed in this document.



- iii. Have completed the training for the task(s) to be performed within the specific Unit.
  - iv. Have successfully completed a competency test (as per Unit guidance) in the task(s) to be performed within the specific Unit.
  - v. Have competency monitored through normal laboratory practices (i.e. Proficiency testing).
  - vi. Be authorized by the Director in the task(s).
  - m. To perform 'Technical Review' the following is required:
    - i. Have been competency tested in the work that is to be performed.
      - 1. The DSS distinguishes two types of technical reviewer:
        - a. Technical Reviewer (of casework or testimony): Used in disciplines where one person is responsible for the overall case (analyst). The technical reviewer must have been competency tested in all work that is part of the casework reviewed.
        - b. Batch Technical Reviewer: used in areas where casework is batched. The Technical Reviewer of this data must have been competency testing in the work being reviewed. This is a review of the overall batch for technical compliance (use of controls, calibrators, blanks and other components as required).
          - i. Note: In LIMS the technical review milestone may be updated by the Technical Reviewer or the Authorizer of report.
  - n. To perform 'Report Results' and/or 'Authorize Reports' the following is required:
    - i. Be authorized by the Director (or designee) in the task(s).
    - ii. Note: This task will generally be documented in LIMS by updating the administrative review milestone in LIMS. See further guidance on this task in GL-18 'Case Review' specific to the Toxicology Unit.
  - o. Those performing typical administrative reviews may be, but need not be authorized to perform this task.
5. Training records: Trainees are responsible to maintain training records in an organized manner. Trainees will scan training records and add these to their internal training folder within the 'Electronic Personnel Filing Cabinet' in the QMS. Minimally this will include unit training checklists, competency memos and authorization certificates. Unit Managers (or designees) are responsible to identify a storage location for training binders for their areas. Training records will be readily available for all active employees. Unit Leads and Managers are responsible to ensure training records are maintained appropriately.

Training files/binders should include at a minimum:

- a. Documentation of training records (training assignments, projects, quizzes, mock case assignments, other)
  - b. Documentation of feedback given
  - c. Training checklists
  - d. Competency tests, both practical and written when applicable
  - e. Memos concerning training progress (if applicable)
  - f. Authorization documents
    - i. Training documentation must be maintained as new training is performed.
6. Interns: interns are used at different levels within the Division. All interns will be required to be introduced to the Ethics SOP, including the ANAB Guiding Principles document and the State Ethics policy. Training checklist GL-14.2 is to be completed for each intern.

When approved by the Director, interns may handle evidence items, if the items in question are marked for destruction.

- a. Note: Rarely, interns will be brought in for a limited time period (a week or less); in these cases the need for ethics training will be at the discretion of the Director and/or Scientific Services Administrative Manager.
7. Re-Assignment:
- a. Re-Assignment of Division employees may occur based on the needs of the DSS. This may be between Units within a Section or between Sections. When an employee is transferred to a new Unit or is being cross trained in another Unit, it is expected that the training within the Unit will be followed but may be modified.
    - i. The Unit Supervisor or Lead should work with the Unit Manager to determine what general topics need not be repeated. For the DNA Unit the Technical Leader will accept the modified plan. The Unit Manager and Supervisor or Lead will review the Unit training SOP to determine what the trainee has already been trained in within the DSS. A notation on the training manual or checklist can document the modified training plan.
  - b. It is expected that Unit specific training would follow the normal training path, but may be modified based on the experience level of the trainee and level of training required.
    - i. It is acceptable for a Unit to train individuals on specific tasks and not the complete Unit procedures based on the needs of the DSS. In these cases the full training checklist may not be used.
    - ii. Demonstration of competency will be documented based on normal Unit procedure and as described above.

**E. PROCEDURE: Retraining**

1. Provisions for retraining will be dependent on the reason for the needed re-training.
2. When it is determined by a Manager in the respective Unit that significant retraining is necessary, the examiner should be de-authorized (in writing) temporarily from the task(s) until the retraining has successfully been completed. When de-authorization occurs the retraining will end with a competency test and a re-authorization by the Director. Note that when employees are on extended leave a “de-authorization” memo will not be needed.
3. In the event that an examiner requires retraining in any aspect of his/her job performance, pertinent sections of the Unit’s training manual can be used and documented as done in the initial training process or the Unit Manager (or Designee) can develop and pre-approve a training plan specific to the needs.
4. The need for training/retraining of personnel is expected to be identified as a function of the routine Quality Control/Quality Assurance program of the laboratory, including technical reviews (of casework and testimony), evaluation of proficiency testing programs, and through the annual audit program.
5. Supervisors or Leads that feel retraining is required must consult with the Unit Manager to develop a plan for the retraining based on the issue at hand. The Quality Section will be updated when the need for retraining is identified. Based on the cause of the needed retraining a QAR may be required. If retraining is required for a DNA analyst the DNA Technical Leader will be involved and give approval of the plan.
6. The need for retraining may arise due to multiple circumstances including but not limited to:
  - a. Prolonged absence from the DSS, the definition of prolonged absence will be Section/Unit dependent (i.e. an employee newly deemed competent absent for two months may require retraining where a seasoned Section/Unit member absent for three months may not require retraining). This will be decided on a case by case basis.
  - b. Prolonged absence where a proficiency test cycle was missed.
  - c. Failure of a proficiency
  - d. Poor court monitoring reviews
  - e. Problems identified during technical reviews
  - f. Other case examination deficiencies as observed by the Unit Lead or Manager
    - i. Note that the extent of retraining will be dependent on the reason for the retraining.
7. In the DNA Unit the FBI-QAS guidance will be followed for retraining and competency testing for analysts, technicians or technical reviewers (however titled) prior to their return to casework or databasing duties.

- a. The Technical Leader will determine the extent of training/retraining required prior to the issuance of a competency test.
  - b. The competency test will be relevant to the task(s) the individual will be authorized to perform on casework, or databasing, known or casework reference samples. Reasons why training/retraining may be required are:
    - i. Having an extended absence from casework or databasing duties due to the remediation of a corrective action.
    - ii. Having a leave of absence from work where the individual's normal proficiency test cycle is missed.
    - iii. Other reasons when deemed necessary by the Technical Leader.
8. Generally the documentation of retraining will be in the form of a memo via the use of Unit training forms or through the completion of a QAR.
9. Documentation of the retraining is to be maintained in the individual's training records. The following must be detailed in the training records:
- i. Name of person being retrained
  - ii. Reason for retraining
  - iii. Date of start and end of retraining
  - iv. Documentation of de-authorization and re-authorization (if applicable)
  - v. Topics addressed in retraining and how the topics were addressed (simple discussion, re-analysis of case work, competency challenge etc....).
  - vi. Determination of satisfactory completion of retraining
  - vii. Name of person who performed the training
  - viii. Sign-off by Section Supervisor or Unit Lead with a review by the Unit Manager or Quality Section. For the DNA Unit the Technical Lead will also approve the training.
10. When de-authorization has occurred, upon satisfactory completion of the retraining and related competency tests an authorization must be obtained from the Director through the use of an authorization workflow in the QMS.

**F. REFERENCES:**

1. Unit training manuals
2. Professional Development SOP GL-15
3. State Employee Ethics Guide  
[http://www.ct.gov/ethics/lib/ethics/guides/public\\_officials\\_guide\\_10.pdf](http://www.ct.gov/ethics/lib/ethics/guides/public_officials_guide_10.pdf)
4. Ethics SOP GL-5
5. Security SOP GL-3
6. Quality Action Request SOP GL-9
7. In-house training records