



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Microanalysis Quality Assurance Manual

Quality Assurance Policy

Quality Assurance Policy

The TBI Microanalysis Unit (MU) Quality Assurance Procedure supplements the TBI Forensic Services Division Quality Assurance Manual (QAM). This procedure, in combination with the QAM, MU Standard Operating Procedures, MU Training Manuals, MU Calibration and Maintenance Records, and MU Chemical and Reagent Logs, provide the basis for the effective quality management of analyses performed in the Microanalysis Unit in the Nashville Laboratory.

1. Goals and Objectives

1.1. The goal of the Microanalysis Unit of the Tennessee Bureau of Investigation Forensic Services Division is to provide law enforcement and judicial officers with the results from testing trace evidence associated with criminal investigations. This includes, but is not limited to, fiber analysis, glass analysis, gunshot primer residue analysis, ignitable liquid residue analysis, impressions analysis, paint analysis, physical analysis and comparisons, and unknown chemical analysis. The Forensic Scientists working within the MU shall provide reliable, quality examinations in a timely manner, accurately report the conclusions of these examinations, and testify to those results. The quality, integrity, and accuracy of these results are ensured through the implementation of a detailed Quality Assurance program.

1.2. Objectives

1.2.1. The objective of the MU Standard Operating Procedures is to provide systematic procedures for the routine analysis of evidence submitted to the Microanalysis Unit.

1.2.2. The objectives of the MU Quality Assurance Procedure are to:

- ensure uniformity and accountability in records and analytical techniques;
- ensure the accuracy of analyses and reporting through technical and administrative reviews of case records;
- ensure the use of documented and valid procedures and equipment;
- ensure that the personnel performing analyses within the MU have the appropriate level of training and education;
- ensure the Forensic Scientists' competency in performing the analyses and in interpreting results through appropriate proficiency testing.



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Microanalysis Quality Assurance Manual

Quality Assurance Policy

2. Personnel

2.1. Job Descriptions

2.1.1. MU Supervisor

- Maintains supplies, equipment, and other materials necessary for the operation of the MU.
- Trains, supervises, and evaluates forensic scientists and technicians assigned to the MU, and their work.
- Enforces policies and procedures for operations and functions within the MU.
- Supervises operations of the MU such as scheduling assignments and case reviews.
- Supervises the examination of physical evidence when necessary.
- Performs verifications and technical reviews of casework.
- Performs administrative reviews of case files.
- Maintains technical and professional competence.
- Analyzes and examines physical evidence when necessary.
- Composes technical laboratory reports describing the evidence examined, the results of examinations, and interpretation of results.
- Testifies in court as an expert witness on laboratory findings.
- May gather physical evidence at crime scenes.
- Serves as the Technical Leader.

2.1.2 Technical Leader

- Evaluates all methods used in the MU and seeks proposals for new or modified technical procedures to be used by forensic scientists/technicians.
- Authorizes the stoppage of casework when quality assurance issues are detected in analytical procedures.
- Monitors the resolution of technical problems with analytical methods and oversees training, quality assurance, safety, and proficiency testing.
- Provides literature for review to members of the MU.
- Remains accessible to the laboratory to provide onsite, telephone, or electronic consultation as needed.

2.1.3 Forensic Scientist 2

- Analyzes and examines physical evidence.



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Microanalysis Quality Assurance Manual

Quality Assurance Policy

- Conducts microscopic examinations and analytical work in any of the following sub-disciplines:
 - Fiber analysis and comparisons
 - Glass analysis and comparisons
 - Gunshot primer residue analysis
 - Ignitable liquid residue analysis
 - Impressions analysis and comparisons
 - Paint and polymer analysis and comparisons
 - Physical analysis and comparisons
 - Unknown chemical analysis
- Composes technical laboratory reports describing the evidence examined, the results of examinations, and interpretation of results.
- Testifies in court as an expert witness and provides expert opinion testimony.
- Verifies evidence for other forensic scientists.
- Conducts technical and administrative reviews on case records.
- May gather physical evidence at crime scenes.
- Maintains technical and professional competence.
- Conducts routine and unscheduled maintenance on analytical instrumentation.
- Verifies that instrumentation meets QA requirements prior to beginning casework.
- Resolves technical issues in conjunction with Technical Leader.
- May act as Forensic Scientist Trainer to new employees.
- Conducts troubleshooting and method development.
- Ensures compliance with safety rules and regulations.
- Conducts laboratory housekeeping.

2.1.4 Forensic Scientist 1 (Forensic Scientist in Training)

- Analyzes and examines physical evidence under direct supervision of the Unit Supervisor or the Forensic Scientist Trainer.
- Learns to conduct the appropriate technical procedures for the analysis of evidence in the assigned sub-disciplines.
- Learns to compose technical laboratory reports describing the evidence examined, the results of examinations, and interpretation of results.
- Learns to testify in court as an expert witness and provide expert opinion testimony.
- May gather physical evidence at crime scenes.
- Maintains technical and professional competence.
- May conduct troubleshooting and method development.



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Microanalysis Quality Assurance Manual

Quality Assurance Policy

- Ensures compliance with safety rules and regulations.
- Conducts laboratory housekeeping.
- Upon successful completion of training program in sub-discipline(s), job responsibilities will match that of a Forensic Scientist 2.

2.1.5 Forensic Technician

- May process physical evidence that does not involve the interpretation of data to formulate a result.
- Performs general laboratory tasks when necessary.
- Ensures compliance with safety rules and regulations.
- Conducts laboratory housekeeping.

2.2. Training

- 2.2.1. The initial training period for a new Forensic Scientist varies between six (6) months and two (2) years depending on the first sub-discipline chosen. Forensic Scientists are expected to complete training in three (3) to five (5) sub-disciplines. Every examiner shall successfully complete the sub-discipline training program prior to performing independent casework analysis in that sub-discipline.

Initial training for a beginning forensic scientist shall include the following topics:

- TBI General Policies and Procedures and Laboratory Policies and Procedures;
- general knowledge of forensic science;
- application of ethical practices in forensic science;
- criminal law, civil law, and testimony;
- knowledge of proper evidence handling procedures.

- 2.2.2. Discipline-specific training programs should be evaluated and updated prior to the beginning of training for a new forensic scientist. The program outline shall contain a suggested time period for each unit to be completed. The outline is not meant to be followed in exact order and overlap among and between units is to be expected. Certain individuals may require less time than others depending upon education, experience, or learning ability.

Discipline-specific training programs should, when applicable, include knowledge about:

- examination documentation
- discipline-specific evidence handling procedures



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Microanalysis Quality Assurance Manual

Quality Assurance Policy

- instrumentation theory
- analysis techniques
- sample recovery and preparation
- extraction techniques
- instrumentation usage
- report writing
- manufacturing procedures and operation

2.2.3. A beginning forensic scientist in training shall successfully complete a competency test on proper evidence handling procedures prior to handling actual evidence.

The evidence handling competency test shall evaluate the following areas:

- preparation of work surfaces
- personal protective equipment (PPE)
- documentation of packaging and evidence items
- return of evidence items to packaging
- sealing and marking of packaging

The evidence handling competency test shall consist of a minimum of two items of mock evidence in proper packaging and properly sealed. The trainer or unit supervisor shall monitor the forensic scientist in training during the test and shall document the following:

- cleans and disinfects the work surface prior to beginning work if necessary and uses bench paper;
- uses, at minimum, gloves and lab coat. The forensic scientist in training may also use eye protection and mask;
- accurately writes descriptions of packaging, seals, markings, and evidence;
- opens packaging while maintaining previous seals if possible;
- only opens one item at a time and maintains separation of items;
- returns evidence to packaging in the same manner as retrieved;
- seals evidence packaging completely with TBI Evidence Tape, marks seal with initials, marks packaging with Laboratory number, exhibit number, and initials

The forensic scientist in training then may assist forensic scientists with actual casework. The new examiner shall not process evidence unsupervised.

If enough samples exist within submitted cases, the sample(s) may be split and provided to the forensic scientist in training to analyze, if appropriate. This should only be done after the case examiner



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Microanalysis Quality Assurance Manual

Quality Assurance Policy

successfully completes the case and a technical review has been performed. Then the sample(s) should be divided in such a way that sufficient sample remains for possible future TBI or private laboratory analysis.

- 2.2.4. During discipline-specific training programs, the forensic scientist in training shall receive mock cases to be completed and verified.

At the end of forensic scientist in training's first discipline-specific training program, the forensic scientist in training shall be given a final competency test that includes complete documentation and examination of a mock case and testimony in a mock trial.

Subsequent discipline-specific training programs should end with, at a minimum, mock evidence to be analyzed as if it were a real case and a question and answer session over discipline-specific testimony.

- 2.2.5. Each forensic scientist in training shall maintain a training notebook for each discipline in which that forensic scientist is trained. This notebook shall document the successful completion of the forensic scientist's training. The forensic scientist in training shall also maintain a digital training folder in ensur. This should include:

- work authorization form(s)
- transcripts or educational compliance letter
- proficiency test result sheets
- courtroom evaluation forms
- curriculum vitae

- 2.2.6. A Forensic Technician or a Forensic Scientist acting as a Forensic Technician shall complete a training program in the areas in which technician work will be performed. The forensic technician/scientist shall satisfactorily complete a competency test and mock trial (or question and answer session) before working unsupervised with evidence. The technician/scientist shall also be proficiency tested annually. This should be an internal proficiency test provided by another forensic scientist in the Microanalysis Unit.

- 2.2.7. Forensic Scientists and Technicians should stay abreast of developments within the various sub-disciplines in the Microanalysis Unit by reading current scientific literature and by attending seminars, professional meetings, and other training sessions. Documentation of all training, continuing education, and periodical review should be maintained in each examiner's digital training file in ensur.



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Microanalysis Quality Assurance Manual

Quality Assurance Policy

2.2.8. If a deficiency is detected in an examiner's casework or proficiency tests, that examiner may be subject to a remedial training period. The course of action shall be determined by the MU Technical Leader/Unit Supervisor, Quality Assurance Manager, and Crime Laboratory Regional Administrator, and may include exercises, casework performed under the direct supervision of another court qualified examiner, an adjusted caseload, or additional training. Depending on the severity of the deficiency, the examiner may be suspended from casework during the period of remedial training. Once the examiner has successfully completed remedial training requirements, they will be permitted to resume normal casework.

3. Equipment

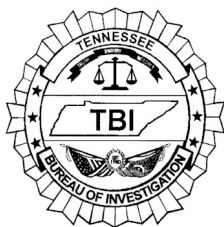
The MU Technical Leader/Supervisor, or a designee, shall approve all purchase requests for equipment (includes equipment, instruments, chemicals, reagents, and consumables) used in the MU. Upon receipt of equipment, the packing slip or invoice shall be reviewed to verify the items received match the order placed. This review shall be documented on the packing slip or invoice.

3.1. Instruments

- 3.1.1. Forensic Scientists or Technicians who utilize instrumentation shall be authorized.
- 3.1.2. All instruments shall be validated or performance checked prior to being placed in service in the MU.
- 3.1.3. Maintenance records for each instrument shall be maintained. These records should contain performance checks, maintenance records, summaries of service or repairs, and certificates of calibration.
- 3.1.4. An Equipment Inventory List of all instruments and equipment shall be maintained. This log should include the following information (when applicable): State Tag/ID number, type of instrument/equipment, manufacturer, model, serial number, and results of initial performance check.

3.2. Chemicals

- 3.2.1. Chemicals and solvents shall be logged into the MU Chemical and Reagent Log when they are received into the section.



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Microanalysis Quality Assurance Manual

Quality Assurance Policy

- The date received, supplier, catalog number, lot number, expiration date, and whether a certificate of analysis was received will be recorded, if applicable
- Certificate of Analysis documents shall be maintained with the Chemical Certificates. A warning sticker may be applied, if not already appropriately labeled, when the chemical poses a hazard.
- The container shall be marked with the date received and expiration date. Upon opening the container, the date opened and initials will be added. If the manufacturer does not indicate that the chemical will expire, then N/A may be used as an acceptable expiration date, until such time as relevant analytical controls indicate it is not working properly.
- When a container is initially opened the examiner shall record the date and initials in the Chemical and Reagent Log. Only one container of a chemical/solvent should be opened at a time. (This excludes chemicals opened before 4/1/2013 and any chemical that is being used as a second source standard).
- When a chemical is used in its entirety or is disposed of, the date emptied shall be recorded in the Chemical and Reagent Log. Expired chemicals shall be removed from the unit or segregated from other chemicals. Some expired chemicals may continue to be used if they are performance checked. Evidence of the check shall be maintained. Permout may be used after the expiration date if it remains flowing.

3.2.2. Chemicals should be stored in the appropriate cabinets under the conditions specified by the manufacturer.

3.2.3. Safety Data Sheets shall be maintained on all chemicals.

3.3. Reagents and Solutions

3.3.1. Reagents and Solutions shall be prepared in accordance with the Standard Operating Procedures of the Microanalysis Unit. Each reagent or solution shall be recorded in the Chemical and Reagent Log. Recorded information should include the reagent name, preparation date, expiration date (if applicable), materials used, appropriate lot numbers, date emptied, and initials. The container shall be marked with the reagent name and dates of preparation and expiration.

3.3.2. All reagents and solutions shall be tested when prepared to ensure they function properly and are fit for use. The results shall be documented in the Chemical and Reagent Log. If testing indicates that the reagent is not



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Microanalysis Quality Assurance Manual

Quality Assurance Policy

functioning properly or is not fit for use, the reagent/solution shall be discarded and made again.

3.3.3. Reagents shall be tested prior to use on evidence. Reagents that require a positive and negative control test prior to use on evidence shall have those results recorded in the case notes.

3.3.4. All reagents and solutions should be stored under appropriate conditions within the MU.

4. Validation

- 4.1. All new methodology shall be validated prior to use on evidentiary items. The MU Technical Leader or designee shall formulate a planned activity to test the reliability of the new methodology. The Quality Assurance Manager shall approve the planned validation study before it is implemented. Once the validation study has been completed, the results are provided to the Technical Leader, Special Agent Forensic Scientist Supervisor, Special Agent Forensic Scientist Manager, Quality Assurance Manager, and Crime Laboratory Regional Administrator for review and final approval.
- 4.2. The Microanalysis Unit shall follow the TBI Forensic Services Division QAM for validation procedures.
- 4.3. Upon successful completion of a competency test, each Forensic Scientist/Technician shall be authorized to use the new procedure in casework.
- 4.4. All validation procedures, reports, results of competency testing, and supporting documentation shall be maintained.

5. Proficiency Testing

- 5.1. Performance of testing within the MU is monitored by laboratory management using a proficiency testing program.
- 5.2. All MU personnel will successfully complete at least one internal/external proficiency test per calendar year in each discipline on the scope of accreditation in which the individual conducts testing.
- 5.3. Proficiency test monitoring shall include the following:
 - 5.3.1. Proficiency test results will not be known or readily available during the testing period.



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Microanalysis Quality Assurance Manual

Quality Assurance Policy

- 5.3.2. Appropriate SOP(s) shall be followed when analyzing proficiency tests.
- 5.3.3. Technical records will be retained with the analyst training documents. Analyst will generate a report in the LIMS.
- 5.3.4. Proficiency test documentation shall be technically reviewed prior to releasing results to the test provider.
- 5.3.5. Proficiency test results will be compared to Proficiency Test Results Report or the manufacturer's data from the proficiency test provider. If the results fall within the range of results listed in the Results Report or are consistent with the manufacturer's data, the results shall be considered correct.
- 5.4. Discrepancies between the results obtained by an MU examiner and the proficiency test provider may occur. In the event a discrepancy has been identified, an investigation shall be opened to discover the source of the discrepancy. Types of discrepancies that may exist include:
 - 5.4.1. The test was presented poorly;
 - 5.4.2. The test sample was inadequate or improperly manufactured;
 - 5.4.3. The report contained typographical errors;
 - 5.4.4. The report contained non-technical errors;
 - 5.4.5. The examiner utilized inappropriate or inadequate analytical procedures;
 - 5.4.6. The examiner erred in interpreting the analytical data thereby creating inaccurate or inappropriate conclusions.
- 5.5. Recommended remediation will be based on the outcome of the proficiency test outlier investigation. If the investigation reveals examiner error, remediation may include the following:
 - 5.5.1. A review of the technical procedures utilized by the MU may be conducted and changes made if needed;
 - 5.5.2. A review of the examiner's cases may be conducted going back to the last successfully completed proficiency test;
 - 5.5.3. A referee laboratory may conduct a reanalysis of the proficiency test;
 - 5.5.4. The examiner should be issued and successfully pass a new externally prepared proficiency test. This test should be prepared using samples similar to those utilized in the initial proficiency test;
 - 5.5.5. The individual may be subject to disciplinary action up to and including termination.

6. Evidence

The Microanalysis Unit maintains practices for the receipt, handling, protection, and storage of items of evidence. These practices give guidance for protecting the



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Microanalysis Quality Assurance Manual

Quality Assurance Policy

integrity of evidence, protecting the interests of the TBI Laboratory, and protecting the interests of the submitting agency.

6.1. Chain of Custody

The Microanalysis Unit uses the TBI Laboratory electronic chain of custody to document all internal transfers of evidence from the time of receipt by the examiner to return to Evidence Receiving Unit or between other units. The electronic chain of custody identifies each person taking possession of an item of evidence. All evidence transfers between individuals are secured by a scientist/technician personal identification number. The electronic chain of custody includes, at a minimum, an electronic identification of the person receiving evidence, the date and time of transfer, and the unique identifier of the evidence.

It is the responsibility of the examiner to ensure the accuracy of all internal transfers of evidence. In the event that the electronic chain of custody is unavailable, this unit shall follow the chain of custody procedure listed in the Evidence Receiving Unit's policy manual. During the process of examination, evidence transfers into temporary secure, limited access locations from an examiner need not be noted in the chain of custody. For chain of custody purposes the evidence will be considered in an examiner's possession at this time.

When evidence is sub-divided in the Microanalysis Unit, sub-items shall be tracked in the electronic chain of custody.

6.2. Evidence Handling

Upon receipt of the evidence by an examiner, the condition should be evaluated. Any conditions adverse to quality should be recorded in the case file. When the suitability of an item for examination is questionable, when an item does not conform to the description provided, or the method of testing is unclear, the examiner should contact the submitting agency for clarification prior to proceeding with any testing. There may be times when communicating with the submitting agency prior to the start of casework may be impossible or questions may arise after casework has begun. Documentation of all attempts at communication shall be retained in the case file. The examiner may proceed with examination after reasonable attempts have been made to resolve the issue. All communication shall be documented in the case file.

The Microanalysis Unit shall ensure the integrity of evidence by protecting them, or portions concerned, from loss, cross-transfer, or deleterious change



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Microanalysis Quality Assurance Manual

Quality Assurance Policy

during storage, handling, and analysis. Appropriate handling instructions provided with an item shall be followed, when applicable. When evidentiary items have to be stored or handled under specified environmental conditions, these conditions shall be maintained, monitored, and recorded.

The Microanalysis Unit shall ensure that no firearms are allowed into the laboratory areas of the unit in order to prevent the transfer of gunshot residue (GSR) particles. All MU personnel shall maintain their assigned firearms in the office space and wash their hands before entering the laboratory area after handling a firearm. All visitors to the laboratory areas will place their firearms in the locked storage cabinet in the vestibule and wash their hands before entering the laboratory areas. MU personnel should consider processing firearms for trace evidence in a different unit or area of the MU not utilized to process GSR evidence in order to limit the transfer of GSR particles onto relevant surfaces.

Any evidence not in the process of examination shall be packaged to protect it from loss, cross-transfer, or contamination and shall be stored under proper conditions. The laboratory recognizes that large bulky items (e.g. furniture, doors) may not be packaged or properly sealed, but shall be stored in a secure, limited access area.

Unattended evidence that is in the process of examination shall be kept secure. Large, bulky evidence items or evidence that would require disassembly for storage may remain unattended in the secure, limited access Microanalysis Unit.

When analyzing comparison-type evidence, question samples should be processed before known samples. This need not always apply to comparisons in which instrumental data is generated. If there are circumstances that required the known samples to be processed first, the circumstances shall be documented in the case file. This does not apply to target fiber sampling (see TBI Standard Operating Procedure *Fiber Identification and Comparison*).

The Microanalysis Unit may utilize convenience seals on evidence packaging being transferred internally. Convenience seals may be any type of closure that will maintain appropriate integrity of the particular evidence during the transfer.

The time period for evidence to be in the process of examination shall be limited to 120 business days.



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Microanalysis Quality Assurance Manual

Quality Assurance Policy

Each item of evidence shall be marked to ensure that it is uniquely identified and traceable to the TBI Laboratory number. If the evidence does not lend itself to marking, its proximal container or identifying tag shall be marked. Other information may be marked on the evidence including exhibit number, date, and initials or signature.

When impression evidence can only be recorded or collected by photography or digital capture and the impression itself is not recoverable, the photograph, negative, or digital image of the impression shall be treated as evidence.

7. Documentation

7.1. Examination Documentation

All examination documentation shall meet the following requirements.

- All examination documentation including notes, photographs, or any other form of documentation shall clearly support the results so that another examiner possessing the relevant knowledge, skills, and abilities can evaluate the work done and interpret the data.
- All examination documentation should be of a permanent nature, except for drawings and sketches.
- Examination documentation shall contain examiner's notes, all completed forms, photographs, photocopies, and analytical documentation generated. Administrative documentation shall also be maintained in case file.
- The TBI laboratory case number, examiner's handwritten initials, and page number shall be on each page of the examination documentation. The total number of pages shall be recorded in the examination documentation.
- Examination documentation shall have a start and stop date. The start date is when the examiner begins taking notes on the evidence; and the stop date is when the evidence has been processed and the results documented in the examination documentation. If dates are recorded throughout the examination documentation as testing is performed, the first date recorded shall be considered the start date and the date that results are documented shall be considered the stop date.
- All technical records and reports must agree.
- Reports will identify accurately, clearly, unambiguously, and objectively which items were tested or not tested. All items must be addressed in the report.



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Microanalysis Quality Assurance Manual

Quality Assurance Policy

7.2. Review of Casework

All cases in the Microanalysis Unit shall undergo a casework review. Casework review includes a technical review of the examination documentation and an administrative review of the case file.

A blind verification is necessary for impression evidence associations. The blind verification shall be documented on the Blind Verification Worksheet and include TBI laboratory number, handwritten initials, date, and page number. The worksheet(s) should be added at the back of the original examiner's notes. These are independent of the original examiner's notes but need to be located in close proximity.

7.3. Technical Review

Technical reviews shall be performed by any examiner who is technically competent in the relevant sub-discipline.

The technical review should ensure the following:

- all required examination documentation is present;
- all the examination documentation and the report conform with proper technical procedures and laboratory policies and procedures;
- the reviewer verifies any interpretations or associations made;
- the interpretations or associations are properly qualified in the report;
- the report contains all required information;
- all technical records and reports agree;
- the report(s) identify accurately, clearly, unambiguously, and objectively which items were tested and not tested;
- all related evidence is addressed in the report

Prior to issuing a report, both examiners shall agree on the interpretation of the data, any associations made, and the conclusions derived from that data.

If a discrepancy, or difference of opinion, occurs during the technical review resulting in an examiner changing his or her original report, this discrepancy and outcome shall be recorded in the examination documentation with the date and initials of the examiner. If the discrepancy is clerical in nature, the change must also be initialed and dated.

In the event of an unresolvable disagreement between the technical reviewer and the examiner, the casework shall be referred to the MU Supervisor/Technical Leader or the Regional Laboratory Administrator. In the



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Microanalysis Quality Assurance Manual

Quality Assurance Policy

event the disagreement is still unresolved, the matter shall be referred to the Assistant Director who may confer with the Quality Assurance Manager.

The technical reviewer shall indicate that the case is technically correct and all interpretations or associations are agreed to by changing the milestone in LIMS to Tech Reviewed. The technical reviewer may also initial the examination documentation by the results.

The results of testing shall not be given to law enforcement or court officials until a technical review has been performed.

7.4. Administrative Review

The report and case file shall be reviewed for grammatical and spelling errors, proper page numbering, an accurate chain of custody, and that all administrative information is correct. The MU Supervisor or designee may serve as the MU's administrative reviewer.

7.5. Examination Withdrawn

Cases found to be closed/disposed within the judicial system prior to the completion of testing require a TBI Official Microanalysis Report. At any point after the request to withdraw the examination has been made, the examiner may stop their analysis. If full results are not available due to analysis being incomplete, a modified report may be issued. The request type in LIMS should be changed to 'Request Withdrawn – Microanalysis' and the modified report should state who withdrew the request (agency/name) and when (date). Evidence listed on this report may or may not be itemized, depending upon how far into testing the examiner was when the withdrawal request was made. All worksheets, photographs, photocopies, etc. generated prior to ceasing analysis will be retained in the casefile.

8. Professional Development

- 8.1. The employees of the MU should participate in any continual training provided by the Tennessee Bureau of Investigation.
- 8.2. Upon returning from each training program, the training shall be documented in the ensur system.
- 8.3. Each employee shall maintain a training record in the ensur system, which should contain the following:



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Microanalysis Quality Assurance Manual

Quality Assurance Policy

- curriculum vitae
- work authorization form(s)
- court testimony evaluation forms
- proficiency test result sheets
- certificates or documentation from such events as professional meetings, seminars, technical training, in-laboratory training and meetings, college courses, and conferences