

**Raleigh/Wake City-County
Bureau of Identification
Crime Laboratory Division**

FORENSIC SCIENCE QUALITY MANUAL



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Glossary

Version 3

Glossary

Accreditation Cycle – the period of time between the date accreditation is granted and the date accreditation expires.

Additional Report – a report issued when additional examinations are added to a previously issued report.

Administrative Case File Review – a detailed review of the case records for consistency with CCBI Crime Laboratory Division policy and editorial precision.

Administrative Documentation – records such as evidence forms, description of packaging and seals, laboratory examination requests, reports, correspondence sent/received, and other pertinent information.

Administrative Transfer – retrieval of evidence from an employee's custody when the employee is not available to transfer it him/herself.

AFIS – Automated Fingerprint Identification System.

Amended Report – a report issued when changes are required to a previously-issued report.

Analytical Data – all technical records used to formulate a CCBI Crime Laboratory Division report such as notes, worksheets, graphs, spectra, printouts, computer data files, photographs, and photocopies.

Analyst – an individual who conducts and/or directs the analysis of forensic casework or database samples, interprets data, and reaches conclusions.

Annual Accreditation Audit Report – documents submitted annually to ASCLD/LAB showing the CCBI Crime Laboratory Division compliance with policies and procedures.

Annual Management Review – yearly examination to ensure that the current quality system is effective and that management can be confident that all measures taken provide the highest quality service.

Assessment – the process of evaluating an experienced Analyst to determine his/her level of technical knowledge, skills, and abilities.

Associations – the terms used to describe the strength of the relationship between items examined and forensic conclusions reported.

Audit – a review conducted to compare the various aspects of the CCBI Crime Laboratory Division’s performance with a standard for that performance.

Biological Hazard – anything that may be contaminated with blood or body fluids.

Blind Sample Proficiency – a type of proficiency testing where the employee is not aware that the sample is part of a proficiency test.

Calibration Certificates – reports issued by competent external calibration services that demonstrate measurement capability and traceability for the equipment serviced.

Case File – a file folder holding all case records. The case file can contain Examination Documentation (see definition below) from multiple forensic disciplines.

Case Management – the approach for setting up a logical methodology for case acceptance, cases worked, case priority, case transfer, and case return.

Case Record – administrative and technical records generated or received by the CCBI Crime Laboratory Division pertaining to a particular case.

Category of Testing – a specific type of analysis within a discipline of forensic science.

CCBI – Raleigh/Wake City-County Bureau of Identification.

Certification of Competency – written notification issued by CCBI top management to an employee indicating completion of an approved training program or assessment of equivalent experience for a forensic discipline or category of testing.

Chain of Custody – documentation of all transfers of evidence from receipt by the CCBI Crime Laboratory Division to return to the submitting agency.

Chemicals and Toxic Substance List – the list of chemicals and toxic substances present in the CCBI Crime Laboratory Division facilities.

Competency Test – a written, oral, and/or practical test or series of tests designed to evaluate a person’s ability to perform work in any category of testing prior to the performance of independent casework.

Competent – possessing the requisite knowledge, skills, and abilities to perform a job.

Computer Forensics – a category of testing of Digital & Multimedia Evidence that involves the examination, analysis, and/or evaluation of digital evidence.

Continuing Education Courses – periods of formal job-related instruction, including professional meetings, provided to employees of the CCBI Crime Laboratory Division for the purpose of enhancing job knowledge, skills, or abilities.

Contributor – see “Customer.”

Control (control sample) – a test performed in parallel with samples and designed to demonstrate that a procedure worked correctly; a standard of comparison for verifying or checking the finding.

Controlled Document – a document that is issued and distributed in a trackable manner.

Controlled Substances (forensic science discipline) – the identification of controlled drug substances either in legal or illicit forms.

Corrective Action – course of action to be taken to minimize the impact of nonconformity and prevent its recurrence.

Corrective Action Request (CAR) – document detailing the course of action taken to minimize the impact of a nonconformity and prevent its recurrence.

Crime Laboratory Report – a document which details the results of the analyses performed on specified items of evidence, administrative information being communicated, or evidence submissions being returned only partially worked (Stop Work). This document will be signed or have an electronic equivalent.

Crime Scene – an area, object, or person generally external to the CCBI Crime Laboratory Division facility, from which evidence is identified, recorded, collected, and/or interpreted.

Critical Consumables/Supplies/Services – consumables, supplies, and services which either affect the quality of the test in a manner that is fundamental to the quality of the test and their reliability must be verified prior to use or affect the quality of the test in a manner that is fundamental to the quality of the test and their reliability is not verified as part of the quality control checks performed in association with the test. Critical consumables, supplies, and services are identified in the technical procedures in which they are utilized. ~~instruments or equipment requiring calibration or performance checks prior to use and periodically thereafter or reagents requiring testing on established samples to ensure the quality of the test result.~~

Customer – a person or organization seeking the testing services of the CCBI Crime Laboratory Division. Also referred to as a contributor or submitting agency.

Digital and Multimedia Evidence (forensic science discipline) – Digital Evidence: The analysis of evidence stored or transmitted in binary form. Multimedia Evidence: Analog or digital media,

including but not limited to magnetic and optical media, and/or information contained therein (includes categories of testing such as computer forensics).

Discipline – a major area of forensic casework dealing with similar tests, examinations, or comparisons.

DWI Blood Chemistry (forensic science discipline) – analysis of blood samples for ethanol concentration and the presence of illicit drugs.

Evidence – anything detectable by sensory, physical, chemical, optical, or electronic means, including those things in a digital or multimedia form, that provides factual information about an alleged criminal violation.

Evidence Audit – the physical accounting of evidence and a comparison of the physical accounting with chain of custody.

Evidence Tracker – an electronic document designed to record and track cases that contain evidence items.

Evidence Transfer – a change of possession of evidence that is documented.

Evidence Vault – a secured room or rooms for the storage of evidence.

Examination Documentation – see “Notes” and “Technical Records.”

Executive Management – This includes the Director, the Deputy Directors, and the Forensic Quality Manager.

Expunge – the elimination of a record or portion of a record pursuant to court order or judicial direction.

External Proficiency Test – a test prepared and provided by a source external to the CCBI Crime Laboratory Division.

Forensic Quality Manager – an individual, irrespective of other responsibilities, who has the defined authority and obligation to ensure that the requirements of the quality system are implemented and maintained.

Forensic Technician – a person who performs casework-related duties within the CCBI Crime Laboratory Division at the direction of another employee.

IAFIS – Integrated Automated Fingerprint Identification System.

Individual Characteristic Database – a collection, in computerized, searchable form, of features associated with an object or person uniquely or with a high degree of probability (including, but not limited to, AFIS systems).

Individual Characteristic Database Sample – a specimen of known origin from which individual characteristic information originates (e.g., known fingerprint and palm print standards, electronic fingerprint records).

Inspection – a review of areas, practices, and procedures for compliance with existing policy.

Interlineations – words, numbers, or other text which are added between the lines of previously written documentation.

Internal Proficiency Test – a proficiency test not provided by an external entity for review used as a quality assessment sample.

International System of Units (SI) – the standard set of basic units of measurement used in scientific literature worldwide. The fundamental quantities are length (meter), mass (kilogram), time (second), electric current (ampere), temperature (kelvin), amount of matter (mole), and luminous intensity (candela).

Inventory – a detailed accounting of all items within a specified location.

Key Managerial Personnel – Includes the Forensic Quality Manager, Supervisors, and Technical Leaders within the CCBI Crime Laboratory Division.

Laboratory Examination Request – the type of analysis required on evidence submitted for testing whether a major area or testing category.

Latent Print (forensic science discipline) – comparison of latent and/or patent print impressions.

Level I Nonconformity – a situation or condition that directly affects and has a fundamental impact on the quality of the work product or the integrity of the evidence.

Level II Nonconformity – a situation or condition which may affect the quality of the work but does not, to any significant degree, affect the fundamental reliability of the work product or the integrity of the evidence.

Management System – the organizational structure, responsibilities, procedures, processes, and resources for implementing quality management; includes all activities which contribute to quality, directly or indirectly.

Manager – a person with the responsibility for directing and controlling an organizational unit or program. Designated in the CCBI management system as Supervisor.

Material Safety Data Sheet (MSDS) – an information sheet which contains the following information: Product Information, Precautionary Labeling, Hazardous Components, Physical Data, Fire and Explosion Hazard Data, Reactivity Data, Spill and Disposal Procedures, Protective Equipment Recommendations, Storage and Handling Precautions, Transportation Data, and Additional Information.

Method – the course of action or technique followed in conducting a specific analysis or comparison leading to an analytical result.

Nonconformity – any reported casework results with a discrepancy or a proficiency result which differs from the consensus results.

Notes – records of procedures, standards, controls and instruments used, observations made, results of tests performed, charts, graphs, photographs, sketches, and other documents generated which are used to support the Analyst's conclusions. See also "Examination Documentation" and "Technical Record."

Notification – A simplified means of communication to advise customers of cases to be returned unworked and/or latent database entry.

Performance Check – the confirmation that a technique, equipment, or reagent is functioning properly and/or is appropriate for its intended use.

Phase I Training – a formalized initial period of instruction emphasizing the specialized techniques used to provide services within a forensic discipline or category of testing.

Phase II Training – a period of supervised casework and less formalized instruction emphasizing the correct interpretation of the results of services within a forensic discipline or category of testing.

Physical Security – measures taken to counteract security threats.

Preventive Action Request (PAR) – document detailing a course of action to prevent nonconformities from occurring, and to monitor its effectiveness.

Principal Instructor – a certified competent Analyst assigned primary training responsibilities within their discipline.

Procedure – the manner in which an operation is performed; a set of directions for performing an examination or analysis; or the actual parameters of the methods employed.

Proficiency Test – a test to evaluate the continuing capability of Analysts, technical support personnel, and the performance of the CCBI Crime Laboratory Division.

Property Inventory – the physical accounting of capital equipment.

Protocol – detailed instructions for the performance of a CCBI Crime Laboratory Division service or some aspect of a CCBI Crime Laboratory Division service.

Quality – the degree of excellence achieved by the CCBI Crime Laboratory Division through its work product.

Quality Assessment – the overall system of activities designed to provide assurance that quality control activities are effective.

Quality Assurance – those planned and systematic actions necessary to provide sufficient confidence that a CCBI Crime Laboratory Division’s product or service will satisfy the requirements for quality.

Quality Audit – a management tool used to evaluate and confirm activities related to quality.

Quality Control – the internal activities used to monitor the quality of analytical data or results as compared to specified criteria.

Quality Manual – a document stating the quality policy and describing the various elements of the quality system and quality practices of the CCBI Crime Laboratory Division. The Forensic Science Quality Manual is the “Quality Manual” for the CCBI Crime Laboratory Division.

Quality System – see “Management System”

Reference Material – items or collections of materials or data purchased or encountered in casework which are maintained for identification, comparison, or interpretation purposes, e.g. mass spectra, drug samples.

Reference Standard – a standard used for calibration of equipment or instrumentation whose properties are traceable to the International System of Units (SI).

Root Cause Investigation – means of determining the reason for a nonconformity.

Safety Officer – employee appointed the responsibility for ensuring that facilities maintain a safe working environment.

Seal – a closure that prevents loss, cross-transfer, or contamination while ensuring that attempted entry into the container is detectable. This may include a heat seal or tape seal with the initials of the person creating the seal being placed on the seal or across the seal onto the container when possible. A container is “properly sealed” only if its contents cannot readily escape and only if entering the container results in obvious damage/alteration to the container or its seal.

Secure Area – a locked space (e.g., cabinet, vault, room, etc.) with access restricted to personnel authorized by the Director.

Security Plan – a detailed document which describes physical security measures applicable to each area of the CCBI Crime Laboratory Division.

SI – see “International System of Units”.

Technical Procedure (SOP) – procedures and/or protocols developed for analyses, examination, comparison, or identification that guides the work processes in a forensic discipline.

Supervised Casework – analysis performed by an employee under the supervision of a certified Analyst. This is generally performed as part of Phase II training.

Technical Leader – a designated employee certified to perform independent case work and assigned system level quality assurance and quality control responsibilities in the specified forensic discipline.

Technical Management – Includes the Director, Deputy Director, Forensic Quality Manager, Supervisors, and Technical Leaders.

Technical Record – Includes reference to procedures followed, tests conducted, standards and controls used, diagrams, printouts, photographs, observations, and results of examinations. See also “Notes.”

Technical Review – review of notes, data, and other supporting records which form the basis for the scientific conclusion(s).

Testimony Review – the observation and evaluation of the sworn testimony given by an employee as part of his/her normal job duties.

Top Managerial Personnel – Includes the Director and Deputy Directors.

Traceability – ability to confirm measurements are accurate through an unbroken chain of comparisons to SI units of measurement.

Trainee – an employee appointed to fill an established position that does not meet the minimum qualifications for competency certification.

Training Objectives – a description of a performance that an individual must exhibit to demonstrate competence.

Training Program – a written description of activities to be performed by a trainee status employee of the CCBI Crime Laboratory Division to achieve competence in a specific discipline.

Uncertainty of Measurement – expected range of variation between the recorded measurement and the actual value.

Validation – the process of performing a set of experiments which establish the efficiency and reliability of a technique, procedure or instrument, or modification thereof.

Verification – independent analysis by a qualified Analyst to assess another Analyst's work.

Revision History		
Effective Date	Version Number	Reason
September 24, 2014	1	Glossary became its own document

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Introduction

The Raleigh/Wake City-County Bureau of Identification (CCBI) Crime Laboratory Division Forensic Science Quality Manual has been prepared to meet the requirement for accreditation of the International Organization of Standardization (ISO 17025). This manual has been formatted using clause numbers from ISO/17025.

Mission Statement

The Raleigh/Wake City-County Bureau of Identification Crime Laboratory is committed to delivering state of the art scientific analysis, while maintaining the highest level of integrity, impartiality, and professionalism to all communities in Wake County that we serve, thereby contributing to the citizens' safety and due process of the judicial system.

Quality Policy Statement

The Raleigh/Wake City-County Bureau of Identification is responsible for providing scientific analysis of evidentiary material upon the request of its customers, the criminal justice agencies of Wake County. The CCBI is dedicated to providing a defect-free service in a professional manner to those agencies. To this end, CCBI is committed to good professional practice and to the quality of its testing services to the customer via the following quality objectives:

- The performance of forensic analyses that are accurate, relevant, reliable, thorough, timely, and meeting the need of the customer;
- Interpretation of analytical results without bias and free of internal and external influence;
- The presentation of the results of analysis and reports and testimonies that are clear, objective, balanced, and easily understood by its customers;
- The ongoing development of the skills and expertise of its employees;
- The advancement of the state of forensic science;
- The conformance of CCBI Crime Laboratory Division policies and practices with the *ASCLD/LAB-International Program* accreditation standards; and

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- Continual improvement of the effectiveness of its management system through the use of this quality policy. Quality objectives are integrated into CCBI's strategic plan, audit results, analysis of data, corrective and preventive actions, and management review.

CCBI management has developed and implemented an extensive quality system, as set forth in this Forensic Science Quality Manual, the Administrative Procedures Manual, and unit Technical Procedures, which incorporate the policies and procedures necessary to meet these commitments.

It is the policy of CCBI management that all operations performed in the CCBI Crime Laboratory Division facility will conform to the practices described herein. All CCBI Crime Laboratory Division employees, therefore, will be familiar with this document and its subordinate documents and will implement the contained policies and procedures in their work. Deviations from these practices require the express written permission of the Forensic Quality Manager.

Sam Pennica, Director

Date

Forensic Quality Manager

Date

CHAPTER 4

4.1 Organization

4.1.1

The Raleigh/Wake City-County Bureau of Identification (CCBI) consists of the CCBI Crime Laboratory Division, Support Services Division, and Investigations Division. The CCBI provides examination of evidentiary materials to aid in the investigation, prosecution, and defense of criminal offenses, and the Investigations Division processes crime scenes for all jurisdictions in Wake County. These responsibilities are mandated under Chapter 535 of the North Carolina Public-Local Laws of 1937, North Carolina common law, and North Carolina General Statutes §15A-401, §15A-402, and §162-14.

4.1.2

The CCBI will carry out all crime laboratory services in accordance with stated methods, the requirements of the customer, state statutes and regulations, federal regulatory authorities, the ISO 17025 standards, and any supplemental standards required by the CCBI Crime Laboratory Division accrediting organization (American Society of Crime Laboratory Directors/Laboratory Accreditation Board or ASCLD/LAB).

4.1.3

The CCBI Crime Laboratory Division management system covers forensic operations by CCBI Crime Laboratory Division staff with offices and evidence processing areas located at the permanent facility located at:

3301 Hammond Road
Raleigh, NC 27603

Crime Laboratory personnel may provide technical field assistance for any investigation having original jurisdiction under the District Attorney of the Tenth Prosecutorial District and may respond to any geographic location necessary to carry out an authorized examination. Any response required outside of Wake County geographical boundaries requires approval from the Crime Laboratory Division Deputy Director and/or the CCBI Director.

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Administrative work performed outside of the CCBI facility will be performed in conformance with the CCBI Crime Laboratory Administrative Procedures Manual and the CCBI Crime Laboratory Forensic Quality Manual.

4.1.4

The CCBI is designed as a forensic assistance agency for law enforcement agencies in Wake County. The Director serves as the agency's chief executive officer and authorizes policy and procedure. Each division within CCBI is commanded by a Deputy Director who reports to the Director.

The CCBI Support Services Division incorporates Central Records, a civilian unit, and a criminal unit. Central Records maintains all case records according to a pre-described retention policy and state law. Civilian services include fingerprinting and records checks to the public for a variety of purposes including employment, citizenship, and personal reasons. The criminal unit is responsible for positively identifying persons arrested in Wake County, ensuring arrestee information is recorded, and obtaining arrestee fingerprints and photographs.

The CCBI Investigations Division consists of four squads of Agents with each squad reporting to a specific Investigations Supervisor. The duties of this division include forensic crime scene examination and the proper protection, collection, and identification of all evidence. In addition, the scope of the crime scene agent is to process evidence for latent prints, shooting reconstruction, and serial number restoration.

The CCBI Crime Laboratory Division is composed of the Latent Print Unit, Drug Chemistry Unit, DWI Blood Chemistry Unit, Computer Forensics Unit, Forensic Photography Unit, and Evidence Receiving Unit. The duties of the CCBI Crime Laboratory Division encompass controlled substance analysis, blood alcohol and blood controlled substance analysis, digital media examinations, latent print analysis, footwear analysis, photographic services, and evidence submission to the State Crime Laboratory. The Latent Print Unit Supervisor and Analysts of the other units report to the Deputy Director of CCBI Crime Laboratory Division.

The CCBI organizational chart shows the relationship between its divisions.

4.1.4.1

The CCBI Director and command staff personnel have responsibilities and authorities that are defined in their job descriptions. The Director organizes the Divisions to maximize operational effectiveness through proper delegation of authority.

4.1.4.1.1

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The Director possesses the authority to delegate, make decisions, and enforce policies involving the three (3) Divisions.

4.1.5

The CCBI Crime Laboratory Division:

- a) Provides its employees with the authority and resources needed to carry out their duties, including the implementation, maintenance, and improvement of the quality system. CCBI Crime Laboratory Division employees will identify and report departures from the quality system.
- b) Ensures that there is no influence on the professional judgments of employees including any undue internal and external commercial, financial, or other pressures and influences that may adversely affect the quality of their work. Management has the responsibility and authority to take action on employee concerns within their Division. Any instances of undue influence on analytical findings or conflicts of interest will be reported to the Forensic Quality Manager.
- c) Has policies and procedures to ensure that the contributors' confidential information is protected as described in CCBI Crime Laboratory Administrative Procedures Manual, Chapter 12 ("Release of Reports" and "FTP Server") and the CCBI Report Writing Manual.
- d) Provides guidance concerning any situations that could diminish confidence in its competence, impartiality, judgment, or operational integrity. Work shall be performed in an environment free from undue pressure that might influence technical judgment. Employees shall not engage in activities that may diminish confidence in CCBI's competence, impartiality, judgment, or operational integrity. All conflict of interest concerns and situations that could cause undue pressure that adversely affect the quality of the work shall be brought to the attention of the Forensic Quality Manager or Director.
- e) Has an organizational chart showing the structure and relationships of all operations of the CCBI.
- f) Specifies the responsibility and authority of each employee of the CCBI Crime Laboratory Division. Each CCBI Crime Laboratory Division employee will be accountable to only one (1) immediate supervisor per function.
- g) Provides adequate supervision of all employees, including trainees. Employees responsible for supervision will be familiar with the purposes, methods, and Technical

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Procedures of examinations conducted in their area of expertise and the assessment of results.

- h) Has technical management responsible for oversight and provision of resources to ensure the reliability and integrity of CCBI Crime Laboratory Division operations.
 - 1. Each unit will have one (1) Technical Leader who has technical management responsibility within that unit.
- i) Has a Forensic Quality Manager that reports to the Director. The Forensic Quality Manager ensures the quality system is implemented and followed at all times.
- j) Has designees appointed by key management personnel as shown in the Administrative Procedure for Management Continuity.
- k) Has CCBI Crime Laboratory Division employees that are aware of the importance and relevance of their activities and how they relate to the objectives of the quality system.

4.1.6

Management shall ensure that appropriate communication processes such as staff meetings and email messages are established within the CCBI Crime Laboratory Division and that communication takes place regarding the effectiveness of the management system.

4.1.7

The CCBI Crime Laboratory Division has a health and safety officer with the responsibility and authority for ensuring that the health and safety program described in the CCBI Safety Manual is implemented and followed at all times.

4.1.8

Top Managerial Personnel and Key Managerial Personnel shall be defined as:

- Top Managerial Personnel – The Director and Deputy Directors.
- Key Managerial Personnel – The Forensic Quality Manager, Supervisors, and Technical Leaders within the CCBI Crime Laboratory Division.

4.2 Management System

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4.2.1

CCBI will develop and maintain a Crime Laboratory Quality Assurance Program. This program will include technical and operational guidelines for each forensic discipline as well as guidelines for evidence management, records retention, analytical data and administrative documentation, CCBI Crime Laboratory Division reports, case file review, testimony review, proficiency testing, and training and continuing education.

The CCBI quality system documentation includes the Forensic Science Quality Manual, Administrative Manual, unit Technical Procedures, and training manuals. These documents will be available on a CCBI network location for employee review. Additional quality system documents such as instrumentation manuals will be available in the units.

4.2.2

CCBI is committed to protecting and serving the citizens of Wake County, North Carolina, by providing quality CCBI Crime Laboratory Division services. The Quality Policy Statement is one of the most important documents in this Quality Assurance Manual. It is issued under the authority of the Director and shall be reviewed annually during the management review. The quality statement in the front of this manual addresses subcategories a-e.

4.2.2.1

The document *ASCLD/LAB Guiding Principles of Professional Responsibility for Crime Laboratories and Forensic Scientists* has been incorporated into this Forensic Science Quality Manual.

4.2.2.2

These principles shall be reviewed annually with CCBI Crime Laboratory Division employees, and the records of this review shall be maintained by the Forensic Quality Manager or designee.

4.2.3

CCBI and its management are committed to professional excellence. The entire staff of the CCBI Crime Laboratory Division shall adhere to the spirit and intent of a quality program that is described in this manual, in the Mission Statement, and in the Quality Policy Statement.

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Management will communicate with CCBI Crime Laboratory Division employees regarding the development, implementation, and continuous improvement of the quality system.

4.2.4

The CCBI Crime Laboratory Division is committed to carrying out its testing activities to meet the needs of its customers to the maximum extent possible considering the resources available. Management will continually improve the effectiveness of the management system by setting and achieving goals and objectives that are specific to the organization, that are measurable and attainable, and that meet all statutory and regulatory requirements. Management will advise CCBI Crime Laboratory Division employees of the importance of addressing contributor requests and complying with any relevant statutory and regulatory requirements.

4.2.5

The CCBI Crime Laboratory Division's quality system documentation is comprised of policies and procedures. The authority to approve, issue, and revise quality system documentation is defined as follows:

The CCBI Crime Laboratory Division's policy is set forth in this Forensic Science Quality Manual. The policy statements have been approved by the Director. The Forensic Quality Manager will issue these policies. Any revisions to the Forensic Science Quality Manual must be approved by the Director.

CCBI Crime Laboratory Division administrative procedures are found in the Crime Laboratory Administrative Procedures Manual. Procedures are used to implement CCBI Crime Laboratory Division policies. These procedures have been approved by the Director. The Forensic Quality Manager will issue these procedures. Any revisions to these procedures must be approved by the Director.

CCBI technical procedures are found in each unit's Technical Procedures. These procedures have been approved by the Director. The Forensic Quality Manager will issue these procedures. Any revisions to these procedures must be approved by the Director.

The only official copy of any internal document will be the electronic copy on CCBI's network location. These documents will be "read only" to all staff but the Forensic Quality Manager and the Document Custodian.

Individuals may print hardcopies of quality documents as needed for personal use; however, these copies are unofficial. It is the employees' responsibility to verify that they are using the

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current revision of any documents. When revisions are approved for use, staff will be notified via email that all previous versions are obsolete and should be removed from all points of use.

4.2.6

To be successful, the CCBI Crime Laboratory Division quality system must have the complete support and commitment of all employees. This section describes CCBI Crime Laboratory Division technical management and the Forensic Quality Manager's responsibilities for implementing the quality system.

The CCBI Management comprised of the Director and Deputy Directors will support and promote the quality system; ensure conformance with ASCLD/LAB-*International* standards; ensure that the policies and procedures within the quality system are implemented within the CCBI Crime Laboratory Division; ensure that CCBI Crime Laboratory Division employees understand and apply current policies and procedures to appropriate situations; and ensure that corrective and preventive actions are taken and documented to resolve deficiencies if they are found.

The Forensic Quality Manager will serve as the CCBI Crime Laboratory Division's quality manager; ensure conformance with ASCLD/LAB-*International* standards; ensure that all quality assurance programs function in accordance with CCBI Crime Laboratory Division goals and objectives; ensure that the policies and procedures within the quality system are documented; advise key management regarding the development, implementation, and maintenance of the quality system; coordinate the development and revision of the quality system; and ensure that corrective and preventative action is taken and documented to resolve deficiencies if they are found.

Supervisors will support and promote the quality system; ensure conformance with ASCLD/LAB-*International* standards; communicate the quality system and related policies and procedures to all employees under their supervision; ensure that the policies and procedures within the quality system are adhered to; appropriately delegate authority to implement the quality system; ensure that all unit employees receive necessary training and are qualified for their assigned work; ensure the completeness of case files and supporting case documentation; and ensure that corrective and preventative action is taken and documented to resolve deficiencies if they are found.

The Technical Leaders will support and promote the quality system; assist in conducting audits to ensure compliance with the policies and procedures within the quality system in their disciplines and categories of testing; advise management regarding issues specific to their disciplines and categories of testing; and recommend corrective and preventative action specific to their disciplines and categories of testing.

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4.2.7

The Director, Deputy Directors, and the Forensic Quality Manager will review proposed revisions to the CCBI Crime Laboratory Division quality system to ensure that the integrity of the system is maintained when changes are implemented.

4.3 Document Control

4.3.1 General

The CCBI Crime Laboratory Division has established and will maintain procedures to control all documents that form part of the CCBI management and quality systems. Documents that specify quality requirements or prescribe quality-affecting activities will be controlled to ensure that they are adequate, approved for use, and the most current version of those documents. All documents and records will be included on a master list.

The document control procedures will:

- Define what is and is not included in the document control program.
- Ensure that authorized versions of the documents are located in the appropriate locations.
- Outline the process for creation, approval, distribution, review, revision, removal, and archiving of documents. This procedure addresses the control process for handling and maintaining quality system documents in both digital and paper media, relating to the requirements of ISO 17025.

Quality system documents include the Quality System Manual, Administrative Manual, unit Technical Procedure manuals, health and safety manual, and any documentation that affects the quality system.

Any instrument manuals provided by the manufacturer are considered to be general reference sources only and will not be used directly for casework. As such, they are not a part of CCBI's document control program unless specifically referred to within unit Technical Procedures.

Responsibilities of Management in the Document Control System

CCBI management has designated a Document Custodian for all controlled documents. It is the responsibility of the Document Custodian to ensure the following:

- Internal documents are formatted correctly
- Amendments are published and appropriate staff notified in a timely manner

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- The master list of quality system documents and the electronic archive file are maintained
- All forms associated with official documents are maintained

4.3.2 Document approval and issue

4.3.2.1

Prior to implementation, all CCBI Crime Laboratory Division quality system documents will be thoroughly reviewed, approved for release by authorized personnel, and made available for use by employees.

The Administrative Procedure for Document Control contains provisions for identifying the current revision of documents, for distributing quality system documents, and to preclude the use of invalid and/or obsolete documents.

4.3.2.2

The Administrative Procedure for Document Control ensures:

- Current revisions of appropriate documents will be available where critical operations are performed
- Quality system documents will be annually reviewed and revised as necessary to comply with applicable requirements
- Invalid or obsolete documents will be promptly removed
- Archived quality system documents will be marked as such to preclude their use
- All quality system documents will name the issuing authority

4.3.2.3

CCBI Crime Laboratory Division-prepared quality system documents are uniquely identified according to the requirements of the Administrative Procedure for Document Control. This identification includes the document title, date of issue, revision number, unique document identifier, and page numbering including total number of pages. The issuing authorities are also identified in the document.

4.3.3 Document changes

4.3.3.1

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Revisions to CCBI Crime Laboratory Division-prepared quality system documents will be subject to the same review, approval, documentation, and issuance requirements as the original document. Revisions to externally produced quality documents will be subject to the same review and approval as the original document. Changes to policies, practices, procedures, and training program manuals will be described in the revision history portion of the document. Additionally, appropriate personnel will have access to any information necessary to conduct the review and approve the revision.

4.3.3.2

Revised or new text will be identified in the document according to the Administrative Procedure for Document Control.

4.3.3.3

The CCBI Crime Laboratory Division does not permit the amendment of documents by hand.

4.3.3.4

The Administrative Procedure for Document Control also applies to documents maintained in computerized systems.

4.4 Review of requests, tenders, and contracts

4.4.1

Prior to examination of evidence, CCBI Crime Laboratory Division personnel will evaluate the request to ensure that the CCBI Crime Laboratory Division has the capability and resources to perform the services that are being requested.

4.4.2

Records of reviews shall be maintained according to the Administrative Procedure for the Review of Requests, Tenders, and Contracts for Laboratory Services.

4.4.3

Not applicable.

4.4.4

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Contributors submitting evidence to the CCBI Crime Laboratory Division agree to the terms and conditions for analysis as outlined in the CCBI Evidence Submission Guide and denoted on the Laboratory Examination Request form.

4.4.5

Any changes will be communicated to all affected personnel as stated in the Administrative Procedure for the Review of Requests, Tenders, and Contracts for Laboratory Services.

4.5 Subcontracting of Tests and Calibrations

4.5.1

Not applicable.

4.5.2

Not applicable.

4.5.3

Not applicable.

4.5.4

Not applicable.

4.6 Purchasing Services and Supplies

4.6.1

Wake County purchasing guidelines govern the procurement of products and services for the CCBI Crime Laboratory Division. The CCBI Crime Laboratory Division follows the Administrative Procedure for Equipment Records, Services, and Supplies.

4.6.2

CCBI Crime Laboratory Division units will ensure supplies, reagents, and consumable materials that affect the quality of the examinations are not used in casework until they have been evaluated for compliance with unit Technical Procedure requirements **and/or specifications in the purchase requisition**. Records of compliance evaluations will be maintained.

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4.6.3

CCBI Crime Laboratory Division units will ensure that purchase requisitions contain specifications of **consumables**, supplies, and services ordered if they affect the quality of testing. The requisitions will **originate from or** be reviewed and approved by **the applicable unit Technical Leader or designee** ~~key management or designee~~ prior to ordering to ensure compliance with unit criteria.

4.6.4

The CCBI Crime Laboratory Division will evaluate suppliers of critical consumables, supplies, and services **which either affect the quality of the test in a manner that is fundamental to the quality of the test. Their reliability must be verified prior to use or affect the quality of the test in a manner that is fundamental to the quality of the test and their reliability is not verified as part of the quality control checks performed in association with the test. These critical consumables, supplies, and services will be identified in the technical procedures in which they are utilized. Each unit Technical Leader will** ~~and~~ maintain records of the evaluations. A list of approved suppliers will be maintained on the CCBI network location.

4.7 Service to the Customer

4.7.1

CCBI employees will confidentially communicate with customers as needed to clarify their requests and to answer any questions concerning the status of their requests.

All case records are confidential. Laboratory results will not be released outside CCBI except as described below:

- Preliminary findings and investigative lead information may be released to the submitting law enforcement agency, to the prosecuting attorney's office, or during deposition. Appropriate documentation of what information was released and to whom will be included in the case record.
- Final results, conclusions, or reports will only be released to prosecuting attorneys and the submitting agency unless directed by the court, by the submitting agency, or authorized by the prosecuting attorney. Results may also be released by the appropriate authority in response to discovery requests or court orders.

4.7.2

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The CCBI seeks feedback from its customers through annual performance measures review with Wake County law enforcement agencies and testimony review forms.

4.8 Complaints

As part of the CCBI Crime Laboratory Division's commitment to provide reliable forensic examinations, the CCBI Crime Laboratory Division will take appropriate steps to address valid complaints regarding its services as stated in the Administrative Procedure for the Resolution of Complaints.

4.8.1

CCBI Crime Laboratory Division employee complaints concerning quality-related aspects of the CCBI Crime Laboratory Division management system shall be addressed as stated in the Administrative Procedure for the Resolution of Complaints.

4.9 Control of Nonconforming Testing

4.9.1

If a nonconformity occurs during the examination process, the Administrative Procedure for Corrective and Preventive Action will be followed. The procedure designates:

- actions to be taken by technical management
- evaluation of the significance of the nonconforming work
- timely implementation of corrective actions
- notification of the customers when necessary
- responsibility for authorizing the resumption of work

There are times when deviating from policies and/or procedures is necessary. These exceptions will be controlled to ensure that quality is not compromised. The Administrative Procedure for Exceptions specifies the requirements for requesting and approving exceptions.

4.9.2

Where the evaluation indicates that nonconformity could reoccur, the corrective action policy outlined in 4.11 shall be promptly followed.

4.10 Improvement

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The CCBI Crime Laboratory Division uses policies, objectives, audit results, data review, corrective actions, preventive actions, and management reviews to continuously improve the effectiveness of the quality system.

4.11 Corrective Action

4.11.1 General

Technical Leaders and Supervisors may identify conditions or situations where corrective actions may be required. Any employee identifying a potential situation where a corrective action may be required will notify a Supervisor or Technical Leader. All discrepancies and occurrences of non-compliance will be properly noted, reported, and promptly reviewed. The intent of a corrective action is to prevent the recurrence of the nonconformity that affects the quality of work performed within the CCBI Crime Laboratory Division.

4.11.2 Cause analysis

Any corrective actions must begin with an investigation into the root cause of the problem.

4.11.3 Selection and implementation of corrective actions

The corrective action implemented shall be appropriate to the magnitude and risk of the problem. Any required changes will be documented and implemented.

4.11.4 Monitoring of corrective actions

Any required changes will be monitored to ensure effectiveness.

4.11.5 Additional audits

When conditions or situations require a corrective action, the Forensic Quality Manager will determine if an additional audit is necessary to assess the effectiveness of the corrective action. If an audit is required, the audit will be conducted in a timely manner.

4.12 Preventive Action

4.12.1

Any CCBI Crime Laboratory Division employee may identify conditions or situation where preventative actions may be required. Preventive actions are taken to prevent an occurrence of

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nonconformity. When improvement opportunities are identified, a plan shall be developed to take advantage of the prevention of nonconformity.

4.12.2

The Administrative Procedure for Corrective and Preventive Action includes measures for verifying the effectiveness of any preventive actions that are implemented.

4.13 Control of Records

4.13.1 General

4.13.1.1

The Administrative Procedure for Quality and Technical Records describes the requirements for the identification, collection, organization, accessibility, filing, storage, maintenance, and disposal of quality records and technical records.

4.13.1.2

All CCBI Crime Laboratory Division records will be legible, appropriately stored, and readily retrievable. Retention times for records will be determined the North Carolina Records and Retention Schedule for Sheriff's Offices and/or ASCLD/LAB-*International*.

4.13.1.3

CCBI Crime Laboratory Division case files shall be kept confidential, and access to CCBI Crime Laboratory Division case files is controlled according to the Administrative Procedures for Laboratory Case Record Contents, Management, and Retention and Crime Laboratory Reports. All other records are stored within secure areas in CCBI.

4.13.1.4

The Wake County Sheriff's Office supports and maintains CCBI's primary records management system for all electronically maintained investigative, examination, or analytical test reports in Sungard's® ONESolution RMS system, hereafter referred to as RMS. Access to these records is controlled by the RMS System Administrator. CCBI's Administrative Procedure on Laboratory Reports outlines CCBI's procedures for protecting and backing up records stored electronically.

4.13.2 Technical records

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4.13.2.1

The CCBI Crime Laboratory Division will retain examination and administrative documentation as part of the case record for a defined period in accordance with the North Carolina Records and Retention Schedule for Sheriff's Offices. Technical records will be such that another qualified Analyst could repeat the examination under conditions as close as possible to the original.

4.13.2.2

Examination notes will include observations, data, and calculations, where applicable. These notes will be recorded at the time the examination is performed and will be identifiable to the specific examination performed.

4.13.2.2.1

Technical records will contain the date(s) of examination according to the Administrative Procedure for Laboratory Case Record Contents, Management, and Retention.

4.13.2.3

Mistakes that occur in case documentation or records will be corrected with an initialed single strike-out and the correction entered alongside. No part of case documentation or records can be erased or otherwise made illegible.

4.13.2.3.1

Any additions made to case documentation will be initialed and dated next to the addition by the employee making the addition.

4.13.2.3.2

In the case of electronically stored records, equivalent measures will be taken to track changes in original data. Examination records shall be considered completed prior to any technical or administrative review of the records.

4.13.2.4

The Administrative Procedure for Case Record Contents, Management, and Retention will identify what documents will be maintained in the case record.

4.13.2.5

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Technical records will be such that, in the absence of the Analyst, another competent Analyst could evaluate the examinations performed and interpret the data.

4.13.2.5.1

Technical records in the Latent Print Unit will meet the criteria as described in Appendix C (Latent Print Examination Records) of ASCLD/LAB-*International* Supplemental Standards.

4.13.2.6

The CCBI Crime Laboratory Division case number and the Analyst's handwritten initials will be on each page of the examination records.

4.13.2.7

When examination records are prepared by an individual other than the Analyst who interprets the findings, the individual's handwritten initials will be on each page of the documentation representing his/her work.

4.13.2.8

The CCBI Crime Laboratory Division case number and initials of the individual that generated or received the document will be on each page of the administrative documentation in the case record. When information is recorded on both sides of administrative documentation, each side will be labeled with the CCBI Crime Laboratory Division case number.

4.13.2.9

The CCBI Crime Laboratory Division case number for each case for which data was generated shall be appropriately recorded on the printout when data from multiple cases is recorded on a single printout.

4.13.2.10

When information is recorded on both sides of technical documentation, each side will be initialed and labeled with the CCBI Crime Laboratory Division case number.

4.13.2.11

Handwritten case documentation will be in permanent ink. Exceptions to this will be noted in the Administrative Procedure for Case Record Contents, Management, and Retention.

4.13.2.12

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When an independent check on a critical finding is carried out, it will be conducted by another competent Analyst and documented in the case file.

4.13.2.13

Abbreviations and notations will be acceptable if they are clearly documented and comprehensible. CCBI Crime Laboratory Division Unit Technical Procedures will contain a list of common abbreviations and/or symbols that are used by their personnel.

4.14 Internal Audits

4.14.1

The Administrative Procedure for Annual Quality Audits will be followed when conducting scheduled audits to verify that operations conform to the requirements of the CCBI Crime Laboratory Division quality system and ASCLD/LAB-*International*.

Audits are performed to measure and evaluate the effectiveness of the quality system; to verify the effectiveness of corrective actions; and to recommend improvements for CCBI Crime Laboratory Division operations.

An annual audit will be conducted in each unit of the CCBI Crime Laboratory Division to verify that its operations continue to comply with the discipline and CCBI Crime Laboratory Division quality system policies and procedures. The Forensic Quality Manager or designee is responsible for planning and organizing audits as required and as requested by key management. Such audits are carried out by trained auditors in the CCBI Crime Laboratory Division that are independent of the discipline being audited.

4.14.1.1

Internal audits will be conducted, at a minimum, on an annual basis according to the Administrative Procedure for Annual Quality Audits.

4.14.1.2

Internal audit records will be retained for at least five (5) years on one (1) ASCLD/LAB accreditation cycle, whichever is longer.

4.14.2

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When an audit identifies a nonconformity, the Forensic Quality Manager will address it according to the appropriate administrative procedure. When necessary, the CCBI Crime Laboratory Division will notify contributors, in writing, if CCBI Crime Laboratory Division results have been affected.

4.14.3

A Quality Audit Report Form will be issued for every internal audit according to the Administrative Procedure for Annual Quality Audits.

4.14.4

Follow-up audit activities will be documented, implemented, and monitored to ensure effectiveness of any corrective action taken.

4.14.5

The CCBI Crime Laboratory Division will submit an Annual Accreditation Audit Report to ASCLD/LAB within the time period required by the accrediting body.

4.15 Management Reviews

4.15.1

The CCBI Crime Laboratory Division's Forensic Quality Manager, in conjunction with key management, will evaluate the quality system and forensic examination activities to ensure their continued suitability and effectiveness. This management review will be used as the foundation for future development of CCBI Crime Laboratory Division goals and objectives as well as for any necessary changes or improvements to the quality system.

4.15.1.1

Management reviews will be conducted at least once per calendar year.

4.15.1.2

Management reviews will be documented and retained by the Forensic Quality Manager for at least five (5) years or one (1) ASCLD/LAB accreditation cycle, whichever is longer.

4.15.2

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An annual review is required to ensure that management can continue to be confident that all measures taken provide the highest quality service. Management will carry out any necessary actions as a result of the annual review in an appropriate and agreed upon time frame. The CCBI Crime Laboratory Division will conduct an annual review to determine if the current quality system is effective and prepare an annual accreditation review report as required by ASCLD/LAB-*International*.

Revision History		
Effective Date	Version Number	Reason
January 1, 2013	1	New policy for compliance with ISO 17025
January 28, 2013	2	Change 4.1.3, 4.1.5(c), 4.7.1 in response to Gap analysis
April 11, 2013	3	Identified key and top management
September 24, 2014	4	Revised Definition of critical consumable, differentiate between affect quality and critically affect quality, technical leaders to approve orders

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Chapter 5

5.1 General

5.1.1

The CCBI Crime Laboratory Division ensures correct and reliable forensic examinations by using adequately trained employees, appropriate facilities, validated Technical Procedures, properly maintained and calibrated equipment and instrumentation, and by maintaining the integrity of evidence. When applicable, traceable reference standards and materials and suitable sampling procedures are utilized.

5.1.2

In affected forensic disciplines, the CCBI Crime Laboratory Division will consider all factors contributing to the total uncertainty of measurement when developing and validating Technical Procedures, in the training and qualification of employees, and in the calibration and maintenance of the equipment it uses.

5.1.3

CCBI Crime Laboratory Division unit Technical Procedures will have documented procedures for routinely checking the reliability of its reagents.

5.1.3.1

Reagents prepared in CCBI Crime Laboratory Division units will be labeled with, at a minimum, the identity of the reagent and the date of preparation or lot number. Records maintained by the units will identify who made the reagent, the date of preparation or lot number, who tested the reagent, and the quality control check result(s). The quality control check will be performed before use or, if appropriate, concurrent with the test.

5.2 Personnel

5.2.1

Management will ensure that only qualified technical personnel conduct forensic examinations, confirm identifications and associations, review results, and issue reports. Personnel who are undergoing training will be appropriately supervised.

5.2.1.1

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Each discipline and category of testing within the CCBI Crime Laboratory Division will have a documented training program that is used to develop an individual's knowledge, skills, and abilities required to perform forensic examinations. The Administrative Procedure for Training Programs will provide for maintaining the skills and expertise of personnel and provide for retraining, when needed.

Each Supervisor or Technical Leader will ensure that, at a minimum, each trainee successfully completes a competency test in the relevant discipline or category of testing prior to conducting independent casework. A trainee's successful completion of the training program will be documented through CCBI Training Progress Reports and a final memorandum and certificate identifying the discipline and/or category of testing and his/her position as indicated in the Administrative Procedure for Training Programs.

5.2.1.2

All CCBI Crime Laboratory Division Analyst and Forensic Technician training programs will contain training in the presentation of evidence in court.

5.2.1.3

Training shall include the application of ethical practices in forensic science, a general knowledge of forensic science, and all applicable civil and criminal laws and procedures.

5.2.2

Management establishes objectives for the continuing education and training of all personnel to meet the present and anticipated needs of the CCBI Crime Laboratory Division. Identifying training needs, providing this training to personnel, and evaluating the effectiveness of this training is addressed in the Administrative Procedure for Training Programs.

5.2.3

The CCBI Crime Laboratory Division uses qualified technical personnel who are employed by the CCBI. Supervision, training, and competence shall be documented for all contracted and additional technical and key support personnel.

5.2.4

The CCBI Crime Laboratory Division shall maintain active job descriptions for managerial, technical, and key support personnel. Job descriptions shall include the following:

- Knowledge, skills, and abilities (KSA's)

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- Minimum educational requirements
- Level and type of experience
- Required certifications
- Core job responsibilities

A copy of the current job description for each applicable position shall be maintained in each employee's personnel file.

Management shall maintain a current Statement of Qualification (*curriculum vitae* or CV) for each Analyst and technical support staff and shall update the CV at least annually.

5.2.5

The Director authorizes qualified employees to perform forensic examinations as described in the Administrative Procedure for Certification of Competency. The CCBI Crime Laboratory Division will maintain records of an employee's qualifications to include education, professional experience, competency test results, proficiency test results, and documentation of the successful completion date of the training program.

5.2.6 Analyst/Technician Qualifications

5.2.6.1 Education

5.2.6.1.1

Analysts working in the Drug Chemistry discipline of forensic science will possess a baccalaureate or an advanced degree in a natural science, criminalistics, or a closely related field.

5.2.6.1.2

Analysts working in the DWI Blood Chemistry Unit will possess a baccalaureate or an advanced degree in a natural science, toxicology, criminalistics, or a closely related field.

5.2.6.1.3

NA

5.2.6.1.4

Analysts working in the Latent Print Unit and Digital Evidence Unit will meet the educational requirement(s) specified in their job descriptions.

5.2.6.1.5

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All CCBI Forensic Technicians will meet the educational requirement(s) specified in their job descriptions.

5.2.6.2 Competency Testing

5.2.6.2.1

All Analysts must satisfactorily complete a competency test prior to assuming casework responsibilities in the CCBI Crime Laboratory Division. Previously trained Analysts, regardless of education or past work experience, shall satisfactorily complete a competency test in each category of analysis prior to assuming casework responsibilities.

5.2.6.2.2

Competency testing of employees shall include at a minimum:

- Examination of unknown samples to cover the anticipated spectrum of duties and to evaluate the ability to perform proper analyses;
- Preparation of a written report to demonstrate the ability to convey results and/or conclusions accurately; and
- Completion of a written or oral examination to assess knowledge of the discipline, analysis, or task being performed.

5.2.6.2.3

All Forensic Technicians must satisfactorily complete a competency test prior to assuming independent responsibility for any task that could reasonably be expected to affect the outcome of any examination reported by the CCBI.

5.2.7

The CCBI Crime Laboratory Division provides access to forensic science resources such as relevant books, journals and literature, and internet access to relevant forensic resources.

5.3 Facilities and Environmental Conditions

5.3.1

CCBI Crime Laboratory Division facilities will be such as to permit the accurate performance of forensic examinations. Units and management will ensure that the environmental conditions do not adversely affect the quality required of any measurement. Any environmental conditions that

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can affect the results of examinations will be described in the appropriate unit Technical Procedure.

All examinations require normal CCBI Crime Laboratory Division environmental conditions unless noted in a unit Technical Procedure. Extreme care will be taken when sampling and/or examinations are undertaken at sites other than a permanent CCBI Crime Laboratory Division facility.

5.3.2

If environmental conditions could affect the quality of an examination, units will monitor, control, and record those conditions as required by unit Technical Procedures. Examinations will be stopped when the environmental conditions jeopardize the results.

5.3.3

CCBI Crime Laboratory Division management will be responsible for maintaining effective separation between incompatible activities to prevent cross-contamination.

5.3.4

Access to and use of all examination areas in the CCBI Crime Laboratory Division is controlled and limited to those individuals authorized by the Director.

5.3.4.1

CCBI Crime Laboratory Division procedures and/or practices for security are found in the Administrative Procedure for Facilities and Security.

5.3.5

The CCBI Safety Manual requires good housekeeping in all units within CCBI Crime Laboratory Division. Special housekeeping procedures will be created when necessary to ensure the quality of examinations.

5.3.6

The CCBI Safety Manual documents the CCBI Crime Laboratory Division's health and safety program.

5.4 Test and calibration methods and method validation

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5.4.1 General

Unit Technical Procedures as well as validations are a key element in establishing and maintaining quality within the CCBI Crime Laboratory Division. It is the policy of the CCBI Crime Laboratory Division for units to have and use written procedures for all examinations within their scope.

These procedures include, when necessary and relevant, handling, transfer, storage, and preparation of evidence to be examined; a unit on sampling; a unit on calculations, including any statistical techniques for the analysis of examination data; and a unit on limitations of the procedures including any environmental conditions affecting quality. All unit Technical Procedures used in the CCBI Crime Laboratory Division will be reviewed, approved, and controlled prior to implementation.

Units will have procedures and/or instructions for operating CCBI Crime Laboratory Division equipment where the absence of such instructions would jeopardize the results of tests. Procedures will also exist for handling and preparing evidence for examination to ensure the quality of the results. Any deviations from a Technical Procedure will follow the Administrative Procedure for Exceptions.

Units will be responsible for maintaining their Technical Procedures and ensuring the procedures are up-to-date and readily available to appropriate employees.

Technical Procedures may specify the use of appropriate standards and controls. Any standards or controls used will be recorded in the technical records.

5.4.2 Selection of methods

Analysts will select appropriate technical procedures to meet the needs of the contributor while taking into account the nature of the evidence and the facts of the case. These technical procedures should be consistent with procedures published in international, regional, or national standards, by reputable technical organizations, in relevant scientific texts or journals, or as specified by the manufacturer of the equipment or developed by the CCBI Crime Laboratory Division.

If the CCBI Crime Laboratory Division uses a technical procedure, it will use the latest version when possible. The technical procedure will be supplemented with additional details to ensure consistent application.

The CCBI Crime Laboratory Division will confirm that it can properly use a technical procedure prior to introducing it for forensic examinations. The confirmation will be repeated if the technical procedure changes.

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Technical procedures developed or adopted by the CCBI Crime Laboratory Division, including standard procedures, will be used as appropriate. Customers accept and approve these technical methods by way of submission of the CCBI Laboratory Examination Request Form.

The reliability of a validated technical procedure that is new to the CCBI Crime Laboratory Division will be confirmed in-house against any documented performance characteristics of that procedure prior to first use. Records of performance checks conducted during the validation process will be maintained in CCBI Crime Laboratory Division units for future reference.

5.4.3 CCBI Crime Laboratory Division-developed methods

When a unit develops a technical procedure, it will be a planned activity that is performed by qualified employees with adequate resources. Any significant changes occurring during the development of the procedure will be effectively communicated to all employees involved in the development process.

5.4.4 Non-standard methods

Units will use validated technical procedures; however, this does not preclude the Analyst from deviating from a procedure if the nature of the evidence precludes the use of a technical procedure. Changes to or deviations from a technical procedure must be within the bounds of good Crime Laboratory practice, documented, justified, and approved according to the Administrative Procedure for Exceptions.

5.4.5 Validation of methods

5.4.5.1

Validation is the confirmation by examination and the provision of objective evidence that the particular requirements for a specific intended use are fulfilled.

5.4.5.2

New non-standard methods, laboratory-designed/developed methods, standard methods used outside their intended scope and amplifications and modifications of standard methods must be validated prior to use to confirm that the methods are fit for the intended use. The Administrative Procedure for Validations and Performance Verifications outlines the requirements for proceeding with the validation process. The validation must be as extensive as is necessary to meet the needs of the given application or field of application. Units will maintain validation records to include, but not limited to, the results obtained, the procedure used for the validation and a statement as to whether the method is fit for the intended use.

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Minor upgrades to critical software in the digital evidence discipline shall be subjected to performance verification prior to use.

5.4.5.3

The range and accuracy of the values obtainable from new validated methods will be assessed to ensure that the procedure meets the requirements of a given application.

5.4.5.4

Prior to implementation of a validated method new to the CCBI Crime Laboratory Division, the method shall be subjected to performance verification prior to use. The reliability of the method shall be demonstrated “in-house” against any documented performance characteristics of that method. Performance verification must, at a minimum, demonstrate that a representative set of reference materials has been carried through the process and yielded the expected results. The Administrative Procedure for Validations and Performance Verifications outlines the requirements for proceeding with the performance verification process. Units will maintain performance verification records to include, but not limited to, the results obtained, the procedure used for the performance verification and a statement as to whether the method is fit for the intended use.

5.4.6 Estimation of Uncertainty of Measurement

5.4.6.1

The CCBI Crime Laboratory Division does not perform calibration services.

5.4.6.2

When a quantitative numerical measurement result for a measurement that matters is included in a laboratory report, the uncertainty of measurement (when established) shall be reported clearly. Unit Technical Procedures shall include considerations for reasonably estimating the uncertainty of measurement by attempting to identify and combine all significant components of uncertainty. The estimation shall be based on knowledge of the performance of the method, the measurement scope, and shall make use of any previous experience and validation data. The degree of rigor in an estimation of uncertainty of measurement depends of factors such as:

- The requirements of the procedure.
- The existence of limits on which decisions on conformity to a specification are based.

Each Unit in which the estimation of the uncertainty of measurement is required shall maintain records of each estimation of uncertainty of measurement performed.

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5.4.6.3

When estimating the uncertainty of measurement, all uncertainty components which are of importance in the given situation shall be taken into account using appropriate methods of analysis.

5.4.7 Control of Data

5.4.7.1

All Analysts will ensure that manual calculations and data transcriptions and transfers relevant to examinations are checked for accuracy.

5.4.7.2

When computers or automated equipment are used for forensic examinations, units will ensure that:

- Computer software developed in-house is documented, evaluated, and validated prior to use;
- Procedures for protecting test data maintain the integrity and confidentiality of the data;
- Operating conditions and maintenance are such that computers and automated equipment function properly.

5.4.7.2.1

Unit Technical Procedures will outline appropriate measures to prevent unauthorized access to computer systems used for examining digital evidence.

5.5 Equipment

5.5.1

The CCBI Crime Laboratory Division is furnished with, or has access to, all items needed for the correct performance of forensic examinations. All instruments and equipment having an effect on the accuracy or validity of forensic examination results will be properly maintained and calibrated or performance checked. Requirements for instrument calibration or performance checks and maintenance are specified in the Technical Procedures for each unit. The CCBI Crime Laboratory Division shall maintain an inventory of all equipment used to perform testing.

5.5.2

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Equipment and its software used for the examination of evidence must meet the requirements of the relevant technical procedure. Before being placed into service, equipment will be calibrated and/or performance checked to verify that it meets the unit's specifications.

Calibration programs for equipment having a significant effect on the results will be established as appropriate. Equipment will also be calibrated and/or performance checked before use, and supporting documentation shall be maintained.

5.5.3

CCBI Crime Laboratory Division equipment will be operated by qualified and authorized employees. Manufacturer's manuals and up-to-date instructions for the use and maintenance of equipment will be available to the appropriate employees.

5.5.4

CCBI Crime Laboratory Division instruments, equipment, and their associated software used for forensic examinations and significant to examination results will be uniquely identified if practicable.

5.5.5

Records of each instrument and its associated software used for forensic examinations will be maintained according to the Administrative Procedure for Equipment Records.

5.5.6

Procedures for appropriate use and planned maintenance of measuring equipment to ensure proper functioning are found in the unit Technical Procedures.

5.5.7

Any instrumentation that is malfunctioning will be taken out of service and clearly labeled to prevent use until repairs are completed. Only when it is shown by calibration or a performance check to operate correctly will the instrument be returned to service. Units will determine the effect of the malfunction, if any, on test results and implement the standard for control of nonconforming testing (FSQM 4.9) when necessary.

5.5.8

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CCBI Crime Laboratory Division instrumentation requiring calibration will be labeled or otherwise identified to indicate the calibration status, when practicable. Methods for calibration shall be explained in the unit Technical Procedures.

5.5.9

Prior to its return to service, calibrations or performance checks must be satisfactorily completed by the appropriate unit on any instrument that goes outside the control of the CCBI Crime Laboratory Division.

5.5.10

When necessary, performance checks will be carried out on calibrated equipment according to the appropriate unit Technical Procedure.

5.5.11

Where instrument calibrations or performance checks produce a set of correction factors, the correction factors will be made available to appropriate employees.

5.5.12

Instrumentation used for forensic examinations, including both hardware and software, will be safeguarded from adjustments which would invalidate the test results.

5.6 Measurement Traceability

5.6.1 General

Equipment used for forensic examinations will be calibrated or performance checked according to unit Technical Procedures prior to being put into service.

5.6.1.1

CCBI Crime Laboratory Division units have established calibration intervals for equipment/instrumentation requiring calibration. In general, calibration intervals will not be less stringent than manufacturer's recommendations. However, equipment/instrumentation that is not calibrated according to the manufacturer's recommended interval will be calibrated prior to use. Equipment/instrumentation calibration will be checked following service, shut down, or other substantial maintenance.

5.6.2 Specific Requirements

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5.6.2.1 Calibration

The CCBI Crime Laboratory Division is not a calibration laboratory. Refer to 5.6.2.2 below.

5.6.2.2 Testing

5.6.2.2.1

Units that perform internal calibrations of equipment/instrumentation will establish traceability by means of an unbroken chain of calibrations or comparisons linking the calibration standards to the relevant primary standards of the SI units of measurement.

When necessary, units can utilize competent external calibration services that can demonstrate measurement capability and traceability. The calibration certificates issued by these entities will contain the calibration results, including the measurement uncertainty and/or a statement of compliance with an identified metrological specification.

5.6.2.2.2

Measurements made by disciplines should be traceable to SI units. The link to SI units may be achieved by reference to national measurement standards.

Where traceability of measurements to SI units is not possible and/or relevant, units will establish traceability to other appropriate measurement standards such as certified reference materials or agreed methods and/or consensus standards.

5.6.3 Reference Standards and Reference Materials

5.6.3.1 Reference Standards

CCBI Crime Laboratory Division units will have procedures for the calibration of their reference standards to ensure that the calibrating organization provides traceability to SI units by a means of an unbroken chain of calibrations or comparisons linking the reference standards to the relevant primary standards of the SI units of measurement. Units will only use a reference standard for calibration purposes unless it can be shown that any additional use will not invalidate it. When appropriate, reference standards will be calibrated before and after any adjustment.

5.6.3.2 Reference Materials

Reference materials will be traceable to SI units or to certified reference materials, where practicable. Internal reference materials will be checked to verify their suitability.

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5.6.3.2.1

CCBI Crime Laboratory Division units utilizing reference collections for comparison or interpretation purposes will document, uniquely identify, and properly control such references.

5.6.3.3 Intermediate Checks

CCBI Crime Laboratory Division units will perform checks on reference, primary, or working standards as well as reference materials to maintain confidence in their calibration status in accordance with the appropriate unit Technical Procedures.

5.6.3.4 Transport and Storage

To protect the integrity of reference standards and materials, CCBI Crime Laboratory Division units will have procedures for their handling and use.

5.7 Sampling

Sampling plans are required when taking part of a representative sample of a substance, material, or item to provide for testing and reporting on the whole substance, material, or item.

5.7.1

The Drug Chemistry Unit will have a plan and procedure for the sampling of evidence included in the appropriate unit Technical Procedures. The sampling plan will address the factors to be controlled to ensure the validity of the examination results.

5.7.2

If the contributor or the nature of the evidence requires deviation or exclusion from the sampling plan described in the appropriate unit Technical Procedures, the deviation will be documented by the Analyst. This deviation will be recorded in detail in the technical records. The deviation will be carried out in accordance with the Administrative Procedure for Exceptions.

5.7.3

The Drug Chemistry Unit will document appropriate sampling data and activities relating to the forensic examination process. Records will be maintained in the CCBI Crime Laboratory Division case file and will include the sampling procedure used, the identification of the individual performing the sampling, any relevant environmental conditions, diagrams of the sampling location as necessary, and, if relevant, the statistical basis for the sampling procedures.

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5.8 Handling of Items of Evidence

5.8.1

The Administrative Procedure for Evidence Handling and Case Management gives guidance for the handling of evidence which protects the integrity of evidence, the interests of the CCBI Crime Laboratory Division, and the interests of the contributor.

5.8.1.1

The CCBI Crime Laboratory Division uses the CCBI Laboratory Examination Request form to record all internal transfers of evidence from the time of receipt. This documentation tracks the chain of custody for each evidence container submitted for analysis. This system includes a signature or equivalent identification of the person/location receiving the evidence, the date of receipt or transfer, and the unique identifier of the evidence.

5.8.1.1.1

When evidence is sub-divided in the CCBI Crime Laboratory Division, sub-items will be tracked to the same extent that the original items of evidence are tracked.

5.8.1.1.2

The CCBI Crime Laboratory Division shall ensure that evidence is sealed in accordance with the Administrative Procedure for Evidence Handling and Case Management.

5.8.2

The CCBI Crime Laboratory Division will identify items of evidence according to the Administrative Procedure for Evidence Handling and Case Management. These procedures ensure that items of evidence are uniquely identified and provide for sub-divided evidence.

Evidentiary items will be transferred within and from the CCBI Crime Laboratory Division according to the Administrative Procedure for Evidence Handling and Case Management. The unique identifier shall be retained throughout the life of the item in the CCBI Crime Laboratory Division.

5.8.3

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Upon receipt of evidence, any departures from normal or specified conditions will be documented according to the Administrative Procedure for Review of Requests, Tenders and Contracts for Laboratory Services.

The contributor will be contacted when the suitability of an item of evidence for examination is questionable or the request for examination is unclear. This communication will be documented in the case record communication log.

5.8.4

The CCBI Crime Laboratory Division will ensure the integrity of evidence by protecting items from loss, cross-transfer, or deleterious change during storage, handling, and preparation according to the Administrative Procedure for Evidence Handling and Case Management. Appropriate handling instructions provided with an item will be followed. When evidentiary items must be stored or handled under specified environmental conditions, these conditions will be maintained, monitored, and recorded.

5.8.4.1

Any evidence not in the process of examination must be protected from loss, cross-transfer, or contamination. Any such evidence will be stored under proper seal and placed in a secure evidence storage area.

5.8.4.2

All evidence which is being processed but is unattended shall be secured as provided in the Administrative Procedure for Evidence Handling and Case Management.

5.8.4.2.1

The time period for active examination shall not be open-ended and shall be based upon a justifiable expectation of frequent examination/analysis. The time periods will be defined by the unit Technical Procedures.

5.8.4.3

Each item of evidence will be marked to ensure that it is uniquely identified and traceable to the CCBI Crime Laboratory Division case number. If the evidence does not lend itself to marking, its proximal container or identifying tag will be marked.

5.8.4.4

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When evidence, such as latent prints and impressions, can only be recorded or collected by photography or digital capture and the image itself is not recoverable, the photograph, negative, or digital image of the image will be treated as evidence.

5.8.4.5

Evidence collected from a crime scene by CCBI Crime Laboratory Division employees will be protected from loss, cross-transfer, contamination, and/or deleterious change whether in a sealed or unsealed container during transportation to the CCBI Crime Laboratory Division.

Where relevant, further processing to preserve, evaluate, document, or render evidence safe will be accomplished prior to final packaging. Additionally, crime scene evidence will be properly identified, packaged, and entered into the CCBI Crime Laboratory Division evidence control system as soon as possible.

5.8.4.6

The Latent Print Unit will have procedures for the operation of individual characteristic databases.

5.8.4.6.1

Individual characteristic databases are collections of items which can be uniquely associated with a person or associated to a high degree of probability (e.g., fingerprints of known individuals).

Latent Print Unit Technical Procedures shall establish whether individual characteristic database samples are treated as evidence, reference material, or examination documentation.

5.8.4.6.1 a

Individual characteristic database samples treated as evidence shall meet chain of custody, evidence sealing and protection, evidence storage, and evidence marking requirements.

5.8.4.6.1 b

Not applicable.

5.8.4.6.2

Individual characteristic database samples shall be uniquely identified.

5.8.4.6.3

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Individual characteristic database samples shall be protected from loss, cross transfer, contamination, and/or deleterious change. Individual characteristic database samples shall be treated in a manner that reasonably ensures their utility as comparison samples.

5.8.4.6.4

Access to individual characteristic database samples under the control of the CCBI Crime Laboratory Division shall be restricted to those persons authorized by the Director.

5.9 Assuring the Quality of Test Results

5.9.1

CCBI Crime Laboratory Division units will have quality control procedures for monitoring the reliability of forensic examinations. The resulting data will be recorded in such a way that trends are detectable and, where practicable, statistical techniques will be applied to the reviewing of the results.

5.9.1.1

Technical procedures shall specify standards and controls, and the use of standards and controls shall be recorded in the case record.

5.9.2

CCBI Crime Laboratory Division units will have procedures for evaluating quality control data against defined criteria. When quality control data are found to fall outside established criteria, appropriate corrective actions will be taken to prevent incorrect results from being reported.

5.9.3

Proficiency testing is an integral part of the CCBI Crime Laboratory Division quality system. It is one of many quality control measures used to monitor the CCBI Crime Laboratory Division's own performance as well as to identify areas where improvement may be needed.

The CCBI Crime Laboratory Division proficiency testing program is documented in the Administrative Procedure for Proficiency Testing and the Crime Laboratory Administrative Procedures Manual Appendix. Proficiency testing applies to Analysts and Forensic Technicians in each discipline and/or category of testing in which casework is performed.

5.9.3.1

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CCBI Crime Laboratory Division units will follow CCBI-approved Technical Procedures when participating in proficiency testing programs with the exception of verification, technical review, and administrative review.

5.9.3.2

The CCBI Crime Laboratory Division proficiency testing program will comply with the ASCLD/LAB Proficiency Testing and Review Program.

5.9.3.3

All Analysts and Forensic Technicians who participate in casework activities will successfully complete at least one (1) internal or external proficiency test per calendar year per discipline.

5.9.3.3.1

N/A

5.9.3.3.2

Analysts and Forensic Technicians shall successfully complete at least one (1) proficiency test per accreditation cycle in each category of testing in which they perform casework as provided in the schedule for proficiency testing.

5.9.3.4

The CCBI Crime Laboratory Division will successfully complete annually at least one (1) external proficiency test for each forensic discipline in which it conducts examinations. ASCLD/LAB-approved proficiency test providers will be used where available. If there is not an ASCLD/LAB-approved test provider available for a particular discipline, the CCBI Crime Laboratory Division will locate and use a source of an external proficiency test.

5.9.3.5

The CCBI Crime Laboratory Division maintains proficiency testing documentation according to the Administrative Procedure for Proficiency Testing.

5.9.3.6

Proficiency testing results will be retained at a minimum of one (1) full ASCLD/LAB-International accreditation cycle or five (5) years, whichever is longer.

5.9.4

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Technical reviews of technical records and reports will be conducted according to the Administrative Procedure for Case File Review and Verifications. The procedure shall ensure that the conclusions of examiners are reasonable, within the constraints of validated scientific knowledge and supported by the examination records. The procedure shall define the scope of the technical review, establish the parameters of the review process, specify how technical reviews are documented, describe a course of action to be taken if a discrepancy is found and define a minimum percentage of cases which must be technically reviewed. Unit Technical Procedures may contain additional requirements for conducting and documenting technical reviews.

5.9.4.1

Each technical review shall be conducted to ensure at least the following:

- Conformance with technical procedure and CCBI Crime Laboratory Division policies and procedures;
- Accuracy of the laboratory report and results and/or conclusions in the report supported by data;
- Proper qualification of associations in the laboratory report; and
- Provision of all required information in the laboratory report.

5.9.4.2

Technical reviews must be conducted by individuals having expertise gained through training and casework experience in the discipline being reviewed. Technical reviewers must be familiar with unit Technical Procedures and authorized by the Director.

5.9.4.3

A technical review of a laboratory report shall not be conducted by the author or co-author of the report.

5.9.5

Administrative reviews on all documentation in the case file will be conducted prior to release and according to the Administrative Procedure for Case File Review and Verifications. The procedure shall define the scope of the review and how it is documented. Unit Technical Procedures may contain additional procedures for conducting and documenting administrative reviews. Administrative reviews may not be performed by the author or co-author of the report

5.9.5.1

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Each administrative review shall include at least the following:

- A review of the laboratory report for spelling and grammatical accuracy;
- A review of all administrative and technical records to ensure unique identification according to policies and procedures; and
- A review of the laboratory report to ensure that all key information is included.

5.9.6

The CCBI Crime Laboratory Division will follow the Administrative Procedure for Testimony Review. All testifying employees will be monitored and evaluated. Each employee will be given feedback by his/her Supervisor or Technical Leader. If the evaluation is less than satisfactory, then it will be investigated to determine if corrective action is needed.

5.9.7

Records of testimony review will be retained for at least five (5) years or one (1) ASCLD/LAB accreditation cycle, whichever is longer.

5.10 Reporting the Results

5.10.1 General

CCBI Crime Laboratory Division employees will accurately, clearly, unambiguously, and objectively report the results of each examination according to the Administrative Procedure for Laboratory Reports.

5.10.1.1

All cases returned unworked will be returned with a simplified notification. The policy for reporting unworked cases shall be provided in the Administrative Procedure for Laboratory Reports.

All cases in which evidence is in the process of being examined but is not yet complete when examination is terminated will be returned with a Stop Work report. The policy for reporting Stop Work cases shall be provided in the Administrative Procedure for Laboratory Reports.

5.10.2 Content of Reports of Examination

CCBI Crime Laboratory Division case records will contain all information required under ISO 17025 standards 5.10.2 and 5.10.3. The Administrative Procedure for Laboratory Reports provides guidance for the content of CCBI Crime Laboratory Division reports.

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5.10.3 Additional Report of Examination Guidelines

5.10.3.1

CCBI Crime Laboratory Division reports may include additional information when it is necessary for the interpretation of the examination results according to the Administrative Procedure for Crime Laboratory Reports.

5.10.3.2

CCBI Crime Laboratory Division reports may include additional information regarding sampling when it is necessary for the interpretation of the examination results according to the Administrative Procedure for Laboratory Reports.

5.10.3.3

CCBI Crime Laboratory Division reports are issued according to the Administrative Procedure for Laboratory Reports.

5.10.3.4

Analysts and Forensic Technicians who issue findings, including writing reports and providing testimony based on the technical records generated by another person will document the review of the technical records.

5.10.3.5

The significance of an association will be included in CCBI Crime Laboratory Division reports.

5.10.3.6

All eliminations resulting from comparative examinations shall be communicated clearly in the laboratory report.

5.10.3.7

When a definitive conclusion cannot be reached, the reason shall be stated clearly in the laboratory report.

5.10.4 Calibration Certificates

N/A

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5.10.5 Opinions and Interpretations

Opinions and interpretations are identified in CCBI Crime Laboratory Division reports under “Results and Conclusions.”

5.10.6 Testing Results Obtained from Subcontractors

If the CCBI Crime Laboratory Division subcontracts or facilitates forensic examinations, the entity conducting the examinations will provide a report of their results, in writing or electronically, to the appropriate CCBI Crime Laboratory Division unit. A copy of this report will be retained as part of the CCBI Crime Laboratory Division case record.

If CCBI Crime Laboratory Division reports contain results of tests performed by an expert outside the CCBI Crime Laboratory Division, those results will be clearly identified.

5.10.7 Electronic Transmission of Results

The transmission of all CCBI Crime Laboratory Division reports and examination results by telephone, facsimile, or other electronic means must follow the Administrative Procedure for Laboratory Reports.

5.10.8 Format of Report of Examination

CCBI Crime Laboratory Division reports are formatted according to the Administrative Procedure for Laboratory Reports.

5.10.9 Amendments to Reports of Examination

Once CCBI Crime Laboratory Division reports have been issued, any amendments or additional reports must be made in the form of another report and will meet all the requirements of the Administrative Procedure for Laboratory Reports.

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Effective Date	Version Number	Reason
January 1, 2013	1	New Policy to comply with ISO 17025
January 28, 2013	2	Changed 5.1.3.1 and 5.6.2.1 for Gap analysis
July 14, 2014	3	Correct 5.8.3. to refer to administrative procedure for review of requests, tenders, and contracts for laboratory services.
June 16, 2015	4	Additions to 5.9.4 and 5.9.5