

Department of Forensic Science

QUALITY MANUAL

TABLE OF CONTENTS

- 1 [Statement of Quality Policy](#)**
- 2 [Mission, Functions and Capabilities](#)**
 - 2.1 Mission**
 - 2.2 History**
 - 2.3 Mandated Functions**
 - 2.4 Capabilities**
 - 2.5 Service Areas**
- 3 [Management and Authority](#)**
 - 3.1 Overview of Organization**
 - 3.2 Department Organizational Chart**
- 4 [Quality System Documents](#)**
 - 4.1 Quality Manual and Other Quality System Documents**
 - 4.2 Document Custodian**
 - 4.3 Document Management System and Master Document List**
 - 4.4 Document Identification**
 - 4.5 Internal QS Documents**
 - 4.6 External QS Documents**
 - 4.7 QS Document Review**
 - 4.8 Forms**
 - 4.9 Tools**
- 5 [Technical Procedures and Manuals](#)**
 - 5.1 Principle**
 - 5.2 Procedures**
 - 5.3 Manuals**
 - 5.4 Estimation of the Uncertainty of Measurement**
- 6 [Service to the Customer](#)**
 - 6.1 Policy**
 - 6.2 Requests**
 - 6.3 Review of Requests**
 - 6.4 Changes to Requests**
 - 6.5 Communications with Customers**
 - 6.6 Feedback**
 - 6.7 Complaints**
 - 6.8 Guidance for Division of Consolidated Laboratory Services Cases**
 - 6.9 Re-examination of Previously Tested Evidence**
 - 6.10 Non-Departmental Personnel**
- 7 [Subcontracting of Tests](#)**
 - 7.1 Policy**
 - 7.2 Prior to Contract Award**
 - 7.3 Quality Assurance Requirements**
 - 7.4 Testing Results Obtained from Subcontractors**

- 8 [Supplies and Services](#)**
 - 8.1 Purchasing**
 - 8.2 Specification of Supplies and Services**
 - 8.3 Reagents and Reference Materials**
 - 8.4 Receipt and Storage**

- 9 [Complaints](#)**

- 10 [Nonconformities and Corrective Actions](#)**
 - 10.1 Overview**
 - 10.2 Level I Nonconformities**
 - 10.3 Level II Nonconformities**
 - 10.4 Corrective Action – Level I Nonconformities**
 - 10.5 Corrective Action – Level II Nonconformities**

- 11 [Risk Management and Preventive Actions](#)**
 - 11.1 Policy**
 - 11.2 Risk Management**
 - 11.3 Preventive Action - Evaluation and Response**

- 12 [Audits](#)**
 - 12.1 Policy**
 - 12.2 Internal Audits**
 - 12.3 External Audits**
 - 12.4 Documentation**

- 13 [Management Review](#)**
 - 13.1 Purpose**
 - 13.2 Responsibility and Timing**
 - 13.3 Review**
 - 13.4 Documentation**
 - 13.5 Communication**

- 14 [Evidence Handling](#)**
 - 14.1 Policies**
 - 14.2 Evidence Custody**
 - 14.3 Evidence Receipt**
 - 14.4 Internal Evidence Transfer**
 - 14.5 Evidence Return**
 - 14.6 Evidence Labeling and Descriptions**
 - 14.7 Evidence Seals**
 - 14.8 Convenience Packages**
 - 14.9 Evidence Storage**
 - 14.10 Evidence Handling Practices**
 - 14.11 Evidence Handling Practices for Instrument Support**
 - 14.12 Transfer of Submissions to/from Other Agencies**
 - 14.13 Evidence Handling Practices for Toxicology**
 - 14.14 Long Term Storage of Human Biological Evidence**
 - 14.15 Evidence Inventory**

15 [Records and Case Files](#)

- 15.1 Records**
- 15.2 Case File Creation**
- 15.3 Assignment of Forensic Science Laboratory Numbers**
- 15.4 Assignment of Item Numbers**
- 15.5 Evidence Item Descriptions**
- 15.6 Interrelated Submissions**
- 15.7 Case Files**
- 15.8 Administrative Documentation**
- 15.9 Examination Documentation**
- 15.10 Case File Administration: Storage and Disposition of Case Files**
- 15.11 Expungement of Records**
- 15.12 Release of Information**
- 15.13 Court Ordered Examinations**
- 15.14 Records Security**

16 [Reporting Test Results](#)

- 16.1 Policy**
- 16.2 Report Writing Guidelines**
- 16.3 Dissemination of Certificates of Analysis**
- 16.4 Terminated Cases**
- 16.5 Amended Reports**
- 16.6 Supplemental Reports**
- 16.7 Examiner's Responsibility**
- 16.8 Certified Copy**

17 [Monitoring Results](#)

- 17.1 Technical and Administrative Review of Certificates of Analysis**
- 17.2 Technical Review of DNA Database Sample Analysis**
- 17.3 Technical and Administrative Review of Certificates of Instrument Accuracy (CoIA)**
- 17.4 Testimony Monitoring**
- 17.5 Proficiency Testing**

18 [Certification and Calibration](#)

- 18.1 Policy**
- 18.2 Certification Documentation**
- 18.3 Certificates of Instrument Accuracy**
- 18.4 Procedure for Dissemination of Certificates of Instrument Accuracy**
- 18.5 Examiner's Responsibility**
- 18.6 Notarization**
- 18.7 Documentation of Evidentiary Breath Tests**

19 [Personnel and Training](#)

- 19.1 Policy**
- 19.2 Position Requirements and Job Descriptions**
- 19.3 Personnel Evaluations**
- 19.4 General Training**
- 19.5 Training of Forensic Scientists**
- 19.6 DFS Certification and Authorization to Work**
- 19.7 Technical Support Staff**
- 19.8 Continuing Education and Training**

19.9	Qualification Documentation
19.10	Literature Resources
20	Facilities, Security and Safety
20.1	Policy
20.2	Building Criteria
20.3	Physical Security
20.4	Personnel Security
20.5	Safety
21	Equipment
21.1	Policy
21.2	General Requirements
21.3	Technical Equipment
22	Staff Identification Indices
22.1	Background
22.2	Staff Identification Indices
22.3	Procedure for Staff DNA Index
22.4	Procedure for Staff Fingerprint Index
22.5	Corrective Action
23	Laboratory Information Management System (LIMS)
23.1	Entering Subpoenas
24	Glossary
24.1	Purpose
24.2	Definitions
24.3	Acronyms and Abbreviations
Appendix A	Example Certificate of Analysis (1 Page)
Appendix B	Example Certificate of Analysis (2 Pages)
Appendix C	Example Certificate of Analysis (Amended Report)
Appendix D	Example Acknowledgement Receipt for Certificate(s) of Analysis
Appendix E	Example Letter of Evidence Transfer
Appendix F	Example Certificate of Mailing
Appendix G	Organizational Chart
Appendix H	Example Certificate of Analysis Paper
Appendix I	Example Certificate of Instrument Accuracy
Appendix J	Example Work Authorization Letter
Appendix K	Example Certification Letter

[Appendix L](#) **Example Certificate of Blood Alcohol Analysis Paper**

[Appendix M](#) **Example Transfer of Custody of DUI/DUID Blood Sample to Private Laboratory**

[Appendix N](#) **Example Case Termination Letter**

[Appendix O](#) **Example Request for Laboratory Examination**

1 STATEMENT OF QUALITY POLICY

The Department of Forensic Science (the Department, DFS) is responsible for providing scientific analysis of evidential material and breath testing equipment, training and calibration services upon the request of its customers, the criminal justice agencies of the Commonwealth. The Department is dedicated to providing a defect-free product in a professional manner to those agencies. To this end, the Department is committed to good professional practice and to the quality of its testing and calibration in servicing its customers via:

- The performance of forensic analyses and examinations that are accurate, relevant, reliable, thorough, timely and meets the need of the customer,
- Interpretation of analytical results without bias and free of internal and external influence,
- The presentation of the results of analyses and examinations in reports and testimonies that are clear, objective, balanced and easily understood by its customers,
- The ongoing development of the skills and expertise of its personnel,
- The advancement of the state of Forensic Science,
- The conformance of laboratory policies and practices with the accreditation standards of the Department's accrediting body, National DNA Index System (NDIS) Operational Procedures Manual, *FBI Quality Assurance Standards for Forensic DNA Testing Laboratories*, and the *FBI Quality Assurance Standards for DNA Databasing Laboratories*,
- Adherence to the Department's Code of Professional Responsibilities and Ethics, and
- Continual improvement of the effectiveness of its management system through the use of this quality policy, quality objectives as defined in the Department's strategic plan, audit results, analysis of data, corrective and preventive actions and management review.

Department management has developed and implemented an extensive quality system, as set forth in this Quality Manual, which incorporates the policies and procedures necessary to meet these commitments. It is the policy of Department management that all Department operations performed in the Department's permanent facilities and at sites away from its permanent facilities will conform to the practices described herein. All Department personnel, 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 Department Director, Deputy Director or Director of Technical Services.

2 MISSION, FUNCTIONS AND CAPABILITIES

2.1 Mission

- 2.1.1 The Department is established under § 9.1-1100 of the Code of Virginia. (All references below are to the Code of Virginia.)
- 2.1.2 The Department's mission is the following:
- Provide forensic laboratory services upon request of any law enforcement agency, Commonwealth's Attorney, medical examiner, fire department, or any state agency in any criminal matter in the Commonwealth (§ 9.1-1101).
 - Support the criminal justice system with quality and timely services.
 - Advance the understanding of forensic science in order to promote public safety.

2.2 History

- 2.2.1 In 1970, a survey by the International Association of Chiefs of Police identified a need for a statewide forensic laboratory system in Virginia. Two years later, an act of the General Assembly created the Division of Consolidated Laboratory Services (DCLS), which included a Bureau of Forensic Science. The Bureau absorbed the Commonwealth's existing state drug and toxicology laboratories and several local forensic laboratories.
- 2.2.2 In 1990, the Bureau, because of its rapid expansion in the latter part of the 1980s, was elevated to Division status under the Department of General Services (DGS).
- 2.2.3 In 1996, the Division was transferred from DGS to the Department of Criminal Justice Services (DCJS).
- 2.2.4 In 2005, the Division was further elevated and became a Department. An agency within the Governor's Public Safety and Homeland Security Secretariat, the Department provides comprehensive forensic laboratory services to approximately 400 law enforcement agencies in the Commonwealth, while remaining independent of any of them.

2.3 Mandated Functions

The Department performs the following mandated functions:

- 2.3.1 Operate the Forensic Science Academy to provide advanced training to law enforcement personnel in the recognition, collection and preservation of evidence during the investigation of crimes (§ 9.1-1103).
- 2.3.2 Maintain, repair and certify breath test instruments used by law enforcement personnel throughout the Commonwealth. Train and license operators to perform breath testing of persons suspected of driving under the influence of alcohol (§§ [9.1-1101](#), 18.2-268.9, 29.1-738.2 and 46.2-341.26:9).
- 2.3.3 Perform analyses on blood samples submitted in connection with investigations of suspected cases of Driving Under the Influence of Alcohol and/or Drugs (§§ 18.2-268.6, 18.2-268.7, 29.1-738.2, 46.2-341.26:6 and 46.2-341.26:7).
- 2.3.4 Establish and maintain a data bank of the DNA profiles of convicted felons and those convicted of certain misdemeanor violations (§§ 19.2-310.2 et seq.), sex offenders (§ 9.1-903), juveniles convicted of a felony or adjudicated delinquent of an offense that would be a felony if committed by an adult provided the juvenile was 14 years of age or older at the time of the commission of the offense (§ 16.1-299.1), and persons arrested for any violent felony or for certain burglaries (§§ 19.2-310.2:1 et seq).
- 2.3.5 Test and approve field tests for use by law enforcement officers to identify controlled substances and marijuana. (§ 19.2-188.1).

- 2.3.6 Store, preserve and retain human biological evidence, as ordered by the court and when requested by the defense in felony cases (§ 19.2-270.4:1). Pursuant to court order, perform post conviction DNA analysis (§ 19.2-327.1).
- 2.3.7 Perform scientific investigations ordered by the court at the request of the defense (§ 9.1-1104).

2.4 Capabilities

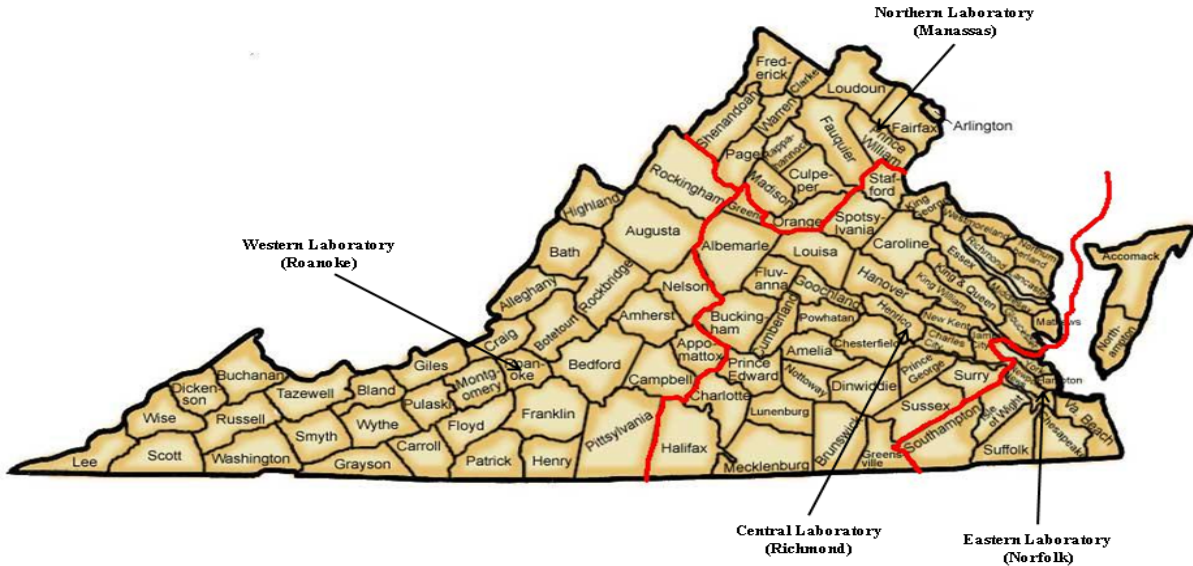
The Department provides the following:

- Analysis of controlled substances,
- Examination of human biological evidence (DNA analysis),
- Examination of firearms and toolmarks,
- Examination of latent prints and impressions (footwear/tire),
- Examination of trace evidence including fire debris, glass, primer residue (PR), hairs, fibers, paint, vehicle lamps, explosives and general physical and chemical analyses,
- Toxicology and alcoholic beverage analysis,
- Examination of digital and multimedia evidence (computer/mobile device analysis, video/image analysis),
- Training through the Forensic Training Section (which conducts the Forensic Science Academy), and
- Breath test instrument maintenance, calibration and certification, and operator training and licensing.

2.5 Service Areas

2.5.1 The Commonwealth of Virginia is divided into four service areas which are served by the four regional laboratories of the Department (see ¶ 3.1).

2.5.2 The four service areas are delineated on the map below:



- 2.5.3 On occasion it is necessary to transfer evidence between laboratories for analysis due to differences in capabilities.
- 2.5.4 The service area map does not necessarily reflect the assignments of Implied Consent (DUI/DUID) cases.

3 MANAGEMENT AND AUTHORITY

3.1 Overview of Organization

3.1.1 The Department is under the Governor’s Secretary of Public Safety and Homeland Security. The organizational structure of the Department is visually depicted in the organizational chart ([Appendix G](#)). The Department operates a Breath Alcohol Calibration Laboratory (Richmond) and four regional testing laboratories:

- Central Laboratory (Richmond)
- Northern Laboratory (Manassas)
- Eastern Laboratory (Norfolk)
- Western Laboratory (Roanoke)

3.1.2 The Department management team consists of the Department Director, Chief Deputy Director, Deputy Director, Director of Technical Services, Department Counsel, Human Resources Director, and four Laboratory Directors. Management defines the Department's policies, manages its fiscal and human resources, establishes legislative and budgetary initiatives, and coordinates the Department's programs statewide, to assure uniformity and compliance with applicable policies and procedures in the operation of the laboratories.

3.1.2.1 **Responsibilities and Authority** - In addition to other responsibilities, the management team members listed below shall ensure that appropriate communication processes are established within the laboratory and that communication takes place regarding the effectiveness of the management system.

3.1.2.1.1 Department Director

- Responsible for the overall leadership and management of the Department, including but not limited to operational, strategic and budgetary planning and review;
- Communicates to laboratory personnel the importance of addressing contributor requests and complying with statutory and regulatory requirements;
- Establishes policies and procedures needed to accomplish Department goals;
- Ensures conformance with accreditation standards;
- Serves as a member of the Department’s Scientific Advisory Committee (§ 9.1-1111); and
- Serves as the Department liaison to the Secretary of Public Safety and Homeland Security, stakeholder agencies and other external entities.

3.1.2.1.2 Deputy Director

- Responsible for the consistent day-to-day operation of the Forensic Laboratory System;
- Establishes policies and procedures needed to accomplish Department goals;
- Monitors budget and develops budget recommendations;
- Administers personnel actions;
- Provides oversight and guidance on capital outlay projects, renovations, automation and other special/major projects;
- Ensures compliance with Department and state policies and procedures;
- Provides oversight to agency IT operations;
- Provides oversight and guidance on agency procurement policies, fiscal operations, and facilities;
- Maintains liaison with the criminal justice community, universities, government officials and the public concerning laboratory matters and forensic issues; and
- Ensures conformance with accreditation standards.

3.1.2.1.3 Director of Technical Services (DTS)

- Serves as the Quality Manager for the Department;
- Serves as the Laboratory Director for the Breath Alcohol Laboratory;
- Ensures that Section Training and Procedures Manuals are properly reviewed, approved and maintained;
- Establishes and implements audit processes and schedules;
- Monitors technical operations, determines the severity of non-conformances and assigns investigative teams, when necessary;
- Manages the Department's review of the quality system;
- Provides technical training to, and coordination with, constituent groups;
- Develops position statements on technical issues for the Department Director;
- Provides programmatic oversight of forensic research, the statewide safety program, and the Forensic Training Section; and
- Ensures conformance with accreditation standards.

3.1.2.1.4 Laboratory Directors

- Supervise personnel;
- Oversee the day-to-day operation of their laboratory;
- Ensure compliance with Department and state policies and procedures;
- Review their laboratory's operations and recommend changes in staffing, equipment and facilities;
- Liaise with Program Managers to coordinate administrative and technical functions of personnel;
- Maintain liaison with criminal justice agencies located within their operational area;
- Ensure conformance with accreditation standards; and
- Submit documentation as required by the laboratory's accrediting body in conjunction with DTS.

3.1.3 Each of the four testing laboratories has the following analytical sections:

- Controlled Substances
- Firearms & Toolmarks
- Forensic Biology
- Toxicology
- Latent Prints & Impressions (Impressions Central and Western only)
- Trace Evidence (except Northern Laboratory)
- Digital & Multimedia Evidence (Central Laboratory only)

3.1.3.1 The analytical sections are grouped into four Program Areas:

- Chemistry (Controlled Substances and Trace Evidence)
- Biology (Nuclear DNA, Mitochondrial DNA, and Data Bank)
- Physical Evidence (Digital & Multimedia Evidence, Firearms & Toolmarks, and Latent Prints & Impressions)
- Toxicology (Breath Alcohol and Toxicology)

3.1.4 Program Managers within the Division of Technical Services act as the technical managers for each of the Program Areas. The Program Manager has statewide responsibility for the technical aspects of their respective area, including analytical procedures and protocols, the interpretation and reporting of analytical results, quality assurance, and assessing resource and training needs. To assist with the technical aspects of this, Program Managers shall appoint and lead Technical Resource Teams (TRTs) comprised of individuals with the appropriate technical training and experience for each discipline within their program area. Program Managers have the authority to assign tasks to supervisors and other

technical resources within the Department with concurrence from the individual's Laboratory Director for ongoing assignments. They are also responsible for ensuring conformance with current accreditation standards.

- 3.1.4.1 The Biology Program Manager is the technical leader for the Department's Forensic Biology program and has the authority to initiate, suspend, and resume DNA analytical operations for a laboratory or an individual with subsequent notification to the appropriate members of the DFS Management Team. In the case that the Biology Program Manager position is vacated, an examiner from the Forensic Biology staff will be selected by departmental management to temporarily fill the technical leader role. The selected individual will meet the requirements of the technical leader as defined in the current *Quality Assurance Standards for Forensic DNA Testing Laboratories* and *Quality Assurance Standards for DNA Databasing Laboratories* and may serve in this role for up to one calendar year. If a qualified individual is not available, the Department will contact the FBI for approval of a contingency plan. This notification will occur within 14 days during which time work in progress may be completed. No new DNA casework or Data Bank analyses will be started until the contingency plan is approved by the FBI.
- 3.1.4.2 TRT designees should generally be Section Supervisors or other individuals with specific expertise.
- 3.1.5 Each section at each of the four laboratories is supervised by a Section Supervisor. The Section Supervisors ensure that the section's technical requirements are followed/met by its examiners and technical support personnel. In large sections, Group Supervisors may assist the Section Supervisor in the performance of supervisory duties. Each subordinate is accountable to one and only one immediate supervisor per function. Supervisors must be familiar with methods and procedures utilized by subordinates, the purpose of each test and/or calibration, and with the assessment of the test or calibration method. Both the Section Supervisor and Group Supervisor(s) are responsible for ensuring conformance with accreditation criteria and Quality and Section Manual requirements. Supervisors collaborate with and perform tasks assigned by the Program Manager to provide technical input on procedures and training. The term "Supervisor", when used without qualification, refers to either a Section Supervisor or a Group Supervisor. In the Breath Alcohol Section, these duties may be performed by the Toxicology Program Manager.
- 3.1.6 All laboratory managers and supervisors have the authority and resources to carry out their duties, including the implementation, maintenance and improvement of the management system, and are responsible for ensuring that the policies and procedures adopted are implemented and adhered to in the daily operations of the Department.
- 3.1.7 Managers and Section Supervisors shall appoint individuals via email who may act on their behalf when appropriate.
- 3.1.8 Each laboratory also employs administrative staff and forensic evidence specialists.
- 3.1.9 In addition, the Department has a Forensic Training Section, which instructs law enforcement personnel in crime scene processing and evidence handling.

3.2 Department Organizational Chart

See [Appendix G](#).

4 QUALITY SYSTEM DOCUMENTS

4.1 Quality Manual and Other Quality System Documents

The Quality Manual is the overarching document describing departmental operations.

4.1.1 The Department's Quality System (QS) documents consist of internal documents generated by the Department, and external documents such as accreditation manuals and standards, published procedures, and instrument manuals. This specifically does not include equipment and software manuals maintained only for general reference purposes. In this context, "general reference purposes" means that laboratory personnel are not required by the laboratory to follow specific procedures or instructions contained in the equipment or software manual.

4.1.1.1 Criteria in any accreditation standard of the Department's accrediting body, including ISO/IEC 17025:2017, that include the following words will be addressed in writing within this manual or other appropriate policy or procedure: agreed, appoint, authorize, define, instructions, method, plan, procedure, program, record, schedule or specify.

4.1.2 All new and amended QS documents will be reviewed and approved by authorized personnel prior to use.

4.1.3 After approval, all QS documents will be formally issued for use, and incorporated into the Department's document control system, Qualtrax.

4.1.4 Superseded documents will be removed from use and archived.

4.2 Document Custodian

4.2.1 The Quality Assurance (QA) Section Supervisor is the 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
- the uncontrolled manuals on the Department's website are kept current
- all Forms associated with controlled documents are maintained

4.2.2 A secondary Document Custodian shall be designated to act in the place of the Document Custodian.

4.3 Document Management System and Master Document List

The Department utilizes a document management control system, Ideagen Quality Management (IQM), also known as Qualtrax, which is accessible to all DFS staff utilizing the Department's network. The document control system's master list is accessible within Qualtrax. Appropriate permissions are assigned to document issuers, approvers and reviewers by the DTS or Document Custodian. Only the current revisions are visible in Qualtrax to staff, precluding the use of obsolete documents and forms.

4.4 Document Identification

Documents will be uniquely identified by the footer which shall include:

- Document name and tracking number
- Date of Issue
- Issuing authority
- Revision identification
- Page numbers with total number of pages

- The text “Uncontrolled When Printed” should be added as documents are revised for automatic website synchronization

4.5 Internal QS Documents

4.5.1 Internal QS documents include:

- this manual,
- Section Technical Procedures Manuals,
- Section Training Manuals,
- Regional Operating Procedures (ROPs),
- the Department Safety Manual,
- Departmental Administrative Policies and Procedures,
- Departmental Information Technology Policies,
- Human Resource Policies and Procedures and
- Forms and Worksheets.

4.5.2 The only official copy of any internal document will be the electronic copy in Qualtrax. That folder will be “read only” to all staff.

4.5.3 Individuals may print hardcopies of internal documents as needed for personal use; however, these copies are unofficial.

4.5.3.1 It is the employee’s responsibility to verify that they are using the current revision of any document.

4.5.3.2 When revisions are approved for use, staff will be notified via email that all previous versions are obsolete and shall be removed from all points of use.

4.5.4 With the exception of Departmental Administrative and Human Resource documents, all internal documents will have the same format as this manual.

4.5.5 The Document Issuer

4.5.5.1 The Issuer of an internal document is the person who has primary responsibility for its content. Issuers are:

- this manual – DTS
- Safety Manual – QA Section Supervisor
- Section Manuals – Program Manager
- Evidence Receiving Training Manual – Forensic Evidence Program Manager
- ROPs – Laboratory Director
- Departmental General Administrative Policies – Deputy Director or Department Director
- Departmental Information Technology Policies – DFS Information Security Officer
- Departmental Human Resource Policies – Director of Human Resources
- Departmental Procurement Policies – Procurement and Support Services Manager
- Departmental Finance Policies – Finance Manager
- Forms and Worksheets – Issuer of corresponding manual, policy or procedure
- External Document Master List – QA Section Supervisor

4.5.5.2 It is the responsibility of the Issuer of an internal document to ensure the following:

- the content is current and generally accepted in the forensic science community, if applicable
- sufficient detail is provided for a trained employee to follow, if applicable

- amendments are prepared as necessary, and in a timely manner
- amendments, and any supporting documents, are provided to the Document Custodian and appropriate reviewer

4.5.6 Issuance of or Changes to Internal QS Documents

4.5.6.1 Changes to internal QS documents shall be tracked using Qualtrax.

4.5.6.1.1 Corrections to the footer of internal documents may be performed without issuing a new revision of the document.

4.5.6.2 The history of revisions to documents prior to the implementation of Qualtrax shall be maintained by the QA Section Supervisor.

4.5.6.3 Documents will be amended as a whole, i.e., the entire document will be reissued for each amendment. Revisions in the updated document shall be marked using the Track Changes features in Microsoft® Word (by the use of red underlined text for new language and black strikeout font for deleted text).

4.5.6.3.1 Revisions to numbering, including section numbering, and bullets need not be marked.

4.5.6.3.2 Uncontrolled versions of human resource policies not containing any indication of the revision other than the new Issue Date and Revision Number in the footer will be generated for external distribution.

4.5.6.4 The Issuer will provide the amended document to the Document Custodian and designated reviewer in electronic format for review/approval through Qualtrax; supporting documents may be provided in electronic or hardcopy format.

4.5.6.4.1 Designated approvers are:

- the Department Director for departmental administrative, information technology and human resource policies
- the Deputy Director for this manual, ROPs, procurement policies, finance policies, and policies issued by the Department Director
- the DTS for Section manuals, External Document Master List and the Safety Manual

4.5.6.4.2 The Document Custodian will ensure the integrity of the management system is maintained by identifying any necessary associated changes in that document or others in the Quality System and the document is correctly formatted.

4.5.6.4.3 When the amendment is suitable for publication, the Document Custodian, designated reviewer and issuer will approve the document in Qualtrax. The document will be published immediately following the final approval. A record of the approvals is maintained in the Document Properties.

4.5.6.5 Qualtrax will:

- Maintain the changes in the *History* tab of the Document Properties
- Publish the amended document in Adobe Acrobat “pdf” format or as a “locked” form
- Inform affected staff
- Remove the superseded document from view and archive “off-line”
- Update the master list

- 4.5.6.6 The Document Custodian will update the uncontrolled version of the document that appears on the Department’s website, as applicable.
- 4.5.6.7 If a change must be made quickly, the Deputy Director may authorize a change via email. Such a change must be formally performed within one week of the date of the email.

4.6 External QS Documents

Examples of external documents include:

- ISO/IEC 17025
- ANAB Accreditation Requirements
- National DNA Index System (NDIS) Operational Procedures Manual
- FBI Quality Assurance Standards
- Code of Virginia

- 4.6.1 External QS documents will be reviewed and approved by the same entities as for internal documents.
- 4.6.2 Hardcopies of external documents will be labeled with a unique number which includes an “E” and listed on the External Document Master List. The External Document Master List will be available in Qualtrax.
- 4.6.2.1 The label will be physically generated by the Document Custodian or designee.
- 4.6.2.2 Labels may be placed on digital media containing electronic documents or on the printed first page with appropriate identifying information.
- 4.6.3 Additions, changes and/or deletions of external documents from the master list will be reviewed and approved by the same process and entities as for internal documents.
- 4.6.4 If an external document is removed from the master list, it shall be suitably marked and archived, if necessary.

4.7 QS Document Review

A review shall be performed by the Issuer of each internal document. The list of external documents shall be reviewed by the Issuer for completeness and continued suitability. These reviews shall be performed at least annually and recorded in Qualtrax.

4.8 Forms

Forms and worksheets are generally associated with internal QS documents. Forms may be replaced with an equivalent workflow in Qualtrax. With one exception, the process for issuance and amendment of Forms will follow that for internal documents in ¶ 4.5 above.

- 4.8.1 Because the presence of red underlined text and black strikeout font (per ¶ 4.5.6.3 above) could make Forms unsuitable for use, revisions to forms will not be marked.

4.9 Tools

Each section/discipline may utilize a Tools folder in Qualtrax to house informational resources (e.g., NIBIN Image Reference Collection, Purchase Blanket Justification) for ease of reference.

5 TECHNICAL PROCEDURES AND MANUALS

5.1 Principle

Any examination performed at the Department must be done in a manner that is, first and foremost, scientifically valid. A critical part of the system for ensuring this validity is the documentation of the procedures used for examinations in each Section's Procedures Manual. Procedures and methods utilized in examinations shall be fit for the purpose as required by the customer. Format of Procedures Manuals is discussed in ¶ 4 of this manual.

5.2 Procedures

5.2.1 Procedures used in each Section must be documented as generally accepted by that Section's peers in the forensic community, i.e., agreed methods and/or consensus standards. Procedures that are not so documented shall be supported by appropriate data that is gathered and recorded in a scientific manner. Additionally, procedures used in each Section shall be appropriate for the particular test or calibration.

5.2.2 Procedure/Method Development

5.2.2.1 Development and implementation of in-house procedures and methods will be a planned activity that is performed by qualified personnel with adequate resources. Any significant changes occurring during the development of the procedure will be effectively communicated to all personnel involved in the development process.

5.2.2.2 Records shall be maintained by the Program Manager.

5.2.3 Procedure Validation and Validation Records

5.2.3.1 All new/modified procedures must be validated to some extent before, or concurrent with, their first use.

5.2.3.1.1 At a minimum, any procedure taken directly from reference sources shall be demonstrated to be effective when performed by the Department.

5.2.3.1.2 Minor modifications of methods already in use shall be evaluated to determine the effects, if any, of the modification.

5.2.3.1.3 Procedures largely developed at the Department or existing Department procedures which undergo major modifications must be subjected to a formal validation study, in which known samples representative of those encountered in casework shall be examined to determine if the procedure generates acceptable results. Prior to beginning the validation, a validation plan addressing the appropriate testing areas and acceptance criteria shall be approved through the Division of Technical Services.

5.2.3.1.4 If a new procedure will replace, or be an alternative to, an existing method, the new procedure must generate comparable results; this is best done by analyzing split samples using both procedures in parallel.

5.2.3.1.5 When validating a technical procedure, the range and accuracy of the values obtained will be assessed to ensure that the procedure is fit for use.

5.2.3.1.5.1 Validation of quantitative analyses must include a determination of the procedure's accuracy and precision over the range of concentrations expected in casework, and also establish the procedure's analytical limits (detection, quantitation), data interpretation, limitations of the test method and reporting, as appropriate.

5.2.3.1.6 Applications of computer software developed in-house, which are used in forensic examinations, shall be documented and suitably validated as being adequate for use. Such applications will be protected from unauthorized modifications.

5.2.3.2 Validation records that document the acceptability of a new/modified method shall be maintained by the appropriate Program Manager. Validation records shall include the results obtained, the procedure used for the validation and a statement as to whether the method is fit for the intended use. A *Method Validation Form* shall be completed and stored with the validation records. Such records must be available for all new/modified methods used in each Section, including those that may be limited to use in a single laboratory. Any records of studies that are found to demonstrate that a procedure is not suitable for use may also be maintained for potential future reference.

5.2.4 Approval and Implementation of Procedures

Procedures shall be available for use after they are formally incorporated into a Section's Procedures Manual (§ 4, "Quality System Documents").

5.3 Manuals

5.3.1 Each Program Manager is responsible for the generation, maintenance and revision of the Procedures Manuals in their program area. Each Procedures Manual, as addressed in § 4 of this manual, is a controlled document, and is subject to the Department's document control policies. Each Procedures Manual must describe the procedures used in the Section in sufficient detail to demonstrate, in combination with validation and other applicable records, the procedures' scientific validity. Each Procedures Manual will be available in electronic format on the Department's Intranet. Prior to the issuance of a new revision, in sections with TRTs, the TRT members will individually document receipt and acceptance. Each Section Supervisor will ensure that all examiners, analysts and technical support personnel in the Section understand the contents of the Procedures Manual. The process for tracking changes in electronic worksheets will be addressed in the Procedures Manuals for sections that utilize electronically generated examination documentation.

5.3.2 Each section's Procedures Manual shall, as appropriate, provide language to be used for reporting results in CoAs. This is not limited to, but includes the following:

5.3.2.1 Examples of report wording specifying the significance of associations.

5.3.2.2 Examples of report wording explaining the nature of inconclusive results.

5.3.3 Each procedure, or related group of procedures, as appropriate, shall be described in a Standard Operating Procedure (SOP). Each SOP will be a section of the Procedures Manual.

5.3.4 The SOP should include the following information, when appropriate:

5.3.4.1 The types of evidence (or calibration item) for which the procedure is suitable.

5.3.4.2 The information to be derived from performing the procedure.

5.3.4.3 A summary of the procedure.

5.3.4.4 A description of when verifications of critical findings are required. It should also indicate who performs the verification and how agreement with the finding is to be documented.

5.3.4.4.1 A process for reconciling any disagreements including documentation requirements must be specified.

- 5.3.4.5 The equipment and materials needed to perform the procedure, including any specified levels of quality. The procedure shall include or reference instructions on the use and operation of all relevant equipment, if the absence of the instructions could jeopardize the results. These instructions and equipment manuals shall be kept up to date and be made readily available to personnel.
- 5.3.4.6 A description of environmental conditions which can influence the quality of results, including conditions when testing shall be discontinued due to the possible compromise of the results of the tests and/or calibrations.
- 5.3.4.7 The procedure shall contain adequate information to identify factors affecting the uncertainty of measurement, if applicable.
- 5.3.4.8 The procedure should be sufficiently detailed and written in a manner that any examiner, analyst or technical support personnel following the written procedure would perform the procedure in essentially the same manner, and would generate the same results. The procedure should include, as necessary:
- Any unique safety warnings
 - The method in which the official chain of custody for sub-items created in the laboratory shall be documented (see ¶ 15.4.3.4)
 - Sampling protocols to be used when the procedure will be applied to only a portion of the evidence, but an inference will be made about the population, should:
 - require an evaluation of the selected population for homogeneity to ensure a reasonable expectation of homogeneity to use a sampling plan,
 - require that the sampling plan makes use of probability and provides an opinion or interpretation with a minimum confidence level of ~95%,
 - require each item selected to meet the sampling plan level of confidence to be tested completely and provide instruction regarding the course of action to take if one or more selected items demonstrate a lack of homogeneity.
 - Sample preparation
 - Any settings, checks, adjustments or calibrations of equipment and/or materials before use
 - Quality control requirements (¶ 5.3.9, below)
 - The data, observations and results to be recorded and the method of recording them
 - The requirement that the evaluation of the unknown item(s) to identify characteristics suitable for comparison and, if applicable, characteristics suitable for statistical rarity calculations, prior to comparison to one or more known item(s) for test methods that involve the comparison of an unknown to a known
 - Calculations
 - Criteria for acceptance or rejection of data
 - Statistical techniques for the analysis of data
 - Uncertainty of measurement estimation
 - Instructions on the correlation of results for different characteristics of an item of evidence
- 5.3.5 Each Procedures Manual shall describe, as necessary, the procedure for obtaining testing through the Instrument Support process and for reporting results.
- 5.3.6 Each Procedures Manual must also describe quality assurance procedures unique to the Section, and details of how Department QA requirements in this manual are implemented.
- 5.3.7 Each Procedures Manual shall include an explanation of codes and abbreviations specific to the section used by examiners, analysts and technical support personnel in recording notes.

- 5.3.8 Each Procedures Manual shall describe, as necessary, the length of time evidence may remain in short term storage, based on a justifiable expectation of frequent examination.
- 5.3.9 Each Procedures Manual shall also describe the procedures for the operations of relevant individual characteristic databases (ICDs) or reference the location where they are published, if applicable.
- 5.3.9.1 The Procedures Manual shall establish whether the ICD samples are treated as evidence, reference materials or examination documentation and require the reporting of the initial database entry, as applicable.
- 5.3.9.2 ICD samples defined by the SOP as evidence shall meet chain of custody, evidence sealing and protection, evidence storage and evidence marking requirements as specified in ¶ 14.
- 5.3.9.3 For ICD samples defined by the SOP as reference materials or examination documentation, the SOP shall address the following:
- Define a procedure for uniquely identifying ICD samples.
 - Define storage requirements which will ensure protection of ICD samples from loss, cross transfer, contamination and/or deleterious change.
- 5.3.9.4 Access to ICD samples shall be restricted to those persons authorized by the Laboratory Director, upon recommendation by the appropriate Program Manager.
- 5.3.9.4.1 The Laboratory Director shall approve and notify individuals of their authorization to access ICD samples, if access is needed prior to the completion of training, this approval will be placed in the training binder by the trainee or the Training Coordinator. Otherwise, this will be captured on the individual's Work Authorization.

5.3.10 QC Practices and Components

Program Managers will define quality control (QC) requirements for each of the Section's procedures. As appropriate, the following QC practices and components will be addressed in the Procedures Manuals.

- 5.3.10.1 Batching - The grouping of evidential and QC samples to associate the results of the examinations of the QC samples with those of the evidential samples.
- 5.3.10.2 Reference Materials (Standards) – Materials or items of known or well-established composition used to prepare QC samples or used as QC samples. Standards must be verified and documented (¶ 8.3.1) prior to use or concurrently with casework. All measurements reported in, or supporting, examination documentation must be recorded in such a manner that results are traceable to known standards.
- 5.3.10.3 Calibration – The determination of the relationship between a measurable property of a sample and the response of the measuring instrument or device using calibration standards (calibrators).
- 5.3.10.4 2nd Source Calibration Check - The assessment of the applicability of a calibration using an “independently prepared” standard immediately after calibration.
- 5.3.10.5 Calibration Checks – The assessment of the applicability of a calibration over a protracted time period using calibration standards.
- 5.3.10.6 Blanks (Negative Controls) - QC samples which determine if any contamination is present in all or part of an analytical procedure. Procedures will define the frequency at which negative controls will be run and where results will be recorded.

- 5.3.10.7 Laboratory Control Samples (Positive Controls) - QC samples which determine if the analytical process has been performed properly/successfully. Procedures will define the frequency at which positive controls will be run and where results will be recorded.
- 5.3.10.8 Matrix Spikes - QC samples which assess the effect of the sample matrix on the analytical process.
- 5.3.10.9 Replicates - Evidential or QC samples that determine the precision of the analytical process.
- 5.3.10.10 Sample QC – The assessment of a result of the analysis of an evidential sample other than that for the analyte of interest, e.g., internal standard recovery.
- 5.3.10.11 Acceptance Criteria - Results of the analyses of standards, QC samples or evidential samples that allow the reporting of evidential sample results.
- 5.3.10.12 Statistical Acceptance Criteria – Acceptance criteria developed by statistical analysis of historical or associated data.
- 5.3.10.13 Documentation – Written records pertaining to QC analyses and results.
- Controls and standards specified in procedures must be used and documented in the case record.
 - QC results shall be recorded in such a way that trends are detectable.
 - Written records or logs must be maintained for each piece of equipment, showing calibration results and dates, repair records, and other information appropriate to the instrument.
- 5.3.10.14 Defined responses to analytical results which do not meet acceptance criteria.
- 5.3.11 Protocol Deviations

It must be noted that some examinations are not, and cannot be, performed exactly as written in the Department's Procedures Manuals because of the widely variable nature of evidence. When such deviations are foreseeable, they should be addressed in the appropriate Procedures Manual.

- 5.3.11.1 As noted in ¶ 15.9.6, examination documentation must record unexpected deviations from written technical procedures occasioned by unusual evidence. In addition, deviations should be discussed with the examiner's supervisor and/or Program Manager.
- 5.3.11.1.1 Authorizations for minor deviations shall be documented in the case file by the Section Supervisor.
- 5.3.11.1.2 Major deviations shall require formal written authorization by the Program Manager; the authorization shall be stored in the case file.
- 5.3.11.1.3 In addition, deviations that are not specifically accounted for in the appropriate Procedures Manual shall be reported pursuant to ¶16.2.4 and ¶16.2.14

5.4 Estimation of the Uncertainty of Measurement

5.4.1 Introduction and Scope

- 5.4.1.1 The estimated Uncertainty of Measurement (UoM) shall be evaluated, or estimated when applicable, for all reported quantitative results.

- 5.4.1.2 The purpose of UoM is to ensure that quantitative results provided to DFS customers can be understood within the context of the accuracy and precision of the methods utilized.
- 5.4.1.3 The Department shall take factors affecting uncertainty into account in developing test and calibration methods and procedures, in the training and qualification of personnel, and in the selection and calibration of the equipment it uses.
- 5.4.1.4 Estimation of UoM shall be calculated from data collected from all laboratories performing the method.
- 5.4.2 Responsibilities
 - 5.4.2.1 The DTS is responsible for implementation of this policy.
 - 5.4.2.2 Laboratory Directors are responsible for ensuring UoM procedures are completed on all required methods performed within their respective laboratories.
 - 5.4.2.3 Program Managers are responsible for the following:
 - 5.4.2.3.1 Development of procedures for the estimation of UoM.
 - 5.4.2.3.2 Inclusion of UoM procedures in their Technical Procedures Manual(s).
 - 5.4.2.3.3 Coordination with Section Supervisors for data collection, UoM maintenance and proper reporting.
 - 5.4.2.3.4 Review of UoM data and establishment of UoM for each test method or calibration.
 - 5.4.2.3.5 Annual review of procedures to determine the need for updating and/or revising UoM for specific test methods or calibrations.
 - 5.4.2.4 Section Supervisors are responsible for the following:
 - 5.4.2.4.1 Proper UoM reporting by their section.
 - 5.4.2.4.2 Generation, collection, documentation and maintenance of UoM data for their section.
 - 5.4.2.4.3 Coordination with the Program Manager for annual review of UoM requirements.
- 5.4.3 Procedures
 - 5.4.3.1 Procedures used to determine UoM are based on experience with the test or calibration method, method validation data, historical quality control (QC) data, and/or knowledge of sources of uncertainty within the method.
 - 5.4.3.2 At a minimum, a measurement uncertainty budget is constructed for each test method or calibration that requires an estimation of UoM. A validated uncertainty budget shall be utilized to identify and document potential sources of uncertainty that are included in the calculation. The uncertainty budget for a given method shall include both Type A and Type B standard uncertainties.
 - 5.4.3.2.1 Type A standard uncertainty is best estimated from the use of historical data or a large number of measurements utilizing the test method or calibration. The following procedures can be utilized to collect Type A data:

- 5.4.3.2.1.1 Repeatability data available from test method validation or calibration data.
- 5.4.3.2.1.2 Historical QC data generated by the test method.
- 5.4.3.2.1.3 Experiments designed to generate acceptable repeatability/reproducibility data.
- 5.4.3.2.2 Type B standard uncertainties arise from inherent bias of the measurement system such as the equipment calibration and visual bias when conducting measurements. Values for Type B uncertainties may be found in:
- 5.4.3.2.2.1 Certificates of laboratory standards, instruments and equipment.
- 5.4.3.2.2.2 Manufacturer specifications of analytical glassware, pipettes, instrumentation and equipment.
- 5.4.3.2.2.3 Reference data from handbooks.
- 5.4.3.2.3 Once the sources of uncertainty have been identified, they shall be evaluated and combined to generate the final estimation of UoM. When a source of uncertainty has a value which is insignificant compared to other sources, it may be excluded.
- 5.4.3.2.3.1 Documentation of the objective evidence for the exclusion will be maintained by the Program Manager.
- 5.4.3.3 UoM will be calculated to provide a minimum ~95% confidence interval.
- 5.4.4 Program Managers will develop UoM procedures appropriate for their sections' test methods or calibrations. Such procedures and/or associated records shall include:
- A statement defining the measurand,
 - A statement of how traceability is established for the measurement,
 - The equipment (including a requirement that the specific measuring device[s] or instrument[s] used for reported test results or calibrations is included in or evaluated against the estimated UoM for that test/calibration method),
 - A procedure for evaluating new measuring devices or instruments against the estimated UoM,
 - All uncertainty components considered,
 - All uncertainty components of significance, including those arising from sampling, and how they were evaluated,
 - Data used to estimate repeatability and reproducibility,
 - All calculations performed,
 - The combined standard uncertainty, the coverage factor, the coverage probability and the resulting expanded uncertainty, and
 - The schedule to review and/or recalculate the measurement uncertainty.
- 5.4.5 Reporting
- 5.4.5.1 UoM shall be reported on Certificates of Analysis (CoAs) or Calibration Certificates (Certificates of Instrument Accuracy - CoIAs), as specified in the section's Procedures Manual. The reporting of results shall not provide an incorrect impression of the uncertainty.

- 5.4.5.2 UoM reporting will be as specified in a section's Procedures Manual and shall be expressed as an expanded uncertainty and include the coverage probability (level of confidence).
- 5.4.5.2.1 UoM for breath alcohol calibrations shall also include the coverage factor.
- 5.4.5.3 Expanded uncertainties will be rounded using conventional rounding rules (i.e., if the number to the right of the rounding digit is ≥ 5 but ≤ 9 , add one to the rounding digit and if the number to the right of the rounding digit is ≥ 0 but ≤ 4 , the rounding digit remains unchanged).
- 5.4.5.3.1 Example 1: 5.342 rounded to two (2) significant figures = 5.3.
- 5.4.5.3.2 Example 2: 5.354 rounded to two (2) significant figures = 5.4.
- 5.4.5.4 The measurement result and the rounded expanded uncertainty shall be reported to the same significance. In addition, they shall be reported in the same units as that of the measurand or as a percent of the measurand as delineated in the section's Procedures Manual.
- 5.4.5.5 The rounded expanded uncertainty shall be reported to at most two significant digits unless specified otherwise in the section's Procedures Manual.
- 5.4.5.5.1 The rationale for reporting additional significant digits shall be documented.
- 5.4.6 Records
- 5.4.6.1 Examination documentation and Breath Alcohol certification documentation shall include the estimation of UoM for measurements within the scope of this policy.
- 5.4.6.2 Records associated with the estimation of UoM for specific test methods and Breath Alcohol instrument calibrations shall be maintained by the appropriate Program Manager and be available to Regional Laboratories utilizing the test method.
- 5.4.6.3 Records supporting an administrative UoM (including data from all regional laboratories) shall be maintained by the Program Manager.
- 5.4.7 References
- 5.4.7.1 ISO/IEC 17025:2017 7.6 Evaluation of measurement uncertainty.
- 5.4.7.2 ASCLD/LAB Policy on Measurement Uncertainty (AL-PD-3060 Ver 1.1 effective date May 22, 2013).
- 5.4.7.3 JCGM 100:2008 *Evaluation of Measurement Data-Guide to the Expression of Uncertainty in Measurement*.
- 5.4.8.4 Zumdahl, Steven S., (1989), Chemistry, Lexington, MA: D.C. Heath and Company

6 SERVICE TO THE CUSTOMER

6.1 Policy

The Department will provide “value added” services to its customers through the following:

- Developing and maintaining good working relationships with customers
- Clarifying requested examinations when the request is ambiguous
- Discussing requested examinations and suggesting possible changes in the request to provide more relevant and/or more probative information
- Maintaining contact with the customer during lengthy examinations to report progress or delays, as appropriate
- Providing technical advice, guidance, and assistance in matters related to examinations, e.g., the proper packaging of evidence or suggestions for questions to be posed during court testimony
- Providing explanations, clarifications, elaborations, and interpretations of the results presented in the Certificate of Analysis (CoA), and the examinations performed to support those results
- Proactively seeking feedback from customers that may be used to improve the quality system and technical operations
- Presenting seminars and training sessions
- Ensuring confidentiality

6.2 Requests

6.2.1 Pursuant to § [9.1-1101](#), customers request forensic testing and submit evidence to the Department. The *Request for Laboratory Examination* (RFLE) is used for evidence submission and represents the contract for testing between the customer and the Department.

6.2.1.1 Although submitting agencies will be encouraged to use the most current revision of the RFLE, previous revisions may be accepted in order to provide timely service to the customer.

6.2.2 Court ordered examinations are contracts between the court and the laboratory. The laboratory shall perform the testing required by the court order. The laboratory shall notify the court and other appropriate individuals or entities if the laboratory is not able to perform the testing listed in the court order.

6.2.3 Pursuant to §§ [18.2-268.6](#) and [18.2-268.7](#), blood samples are submitted, tested and destroyed as described in the statutory language.

6.2.4 Pursuant to §§ [9.1-1101](#) and [18.2-268.9](#) the Breath Alcohol Section maintains, repairs and certifies for accuracy the evidential breath testing equipment used in the Commonwealth of Virginia.

6.3 Review of Requests

6.3.1 The evidence and accompanying RFLE will undergo an initial review process by the Forensic Evidence Specialists. This review is designed to ensure that the RFLE is accurate and contains all information pertinent to the exams requested and review case facts to determine the probative value of evidence submitted. Evidence containers will also be inspected during this initial review to ensure they are in compliance with safety standards and the criteria described in ¶ 14, “Evidence Handling”.

6.3.2 Some cases may require an additional review and communication with the customer to clarify the customer’s request, determine the probative nature of evidence, and define the methods to be used or discuss the limitations and resources available for testing. This review and communication by the forensic scientist will be documented, typically on a Memorandum for Record (MFR) in the case file, in the object repository or communication log in the LIMS.

- 6.3.3 If the testing requested by the submitting agency requires items to be sent to a subcontractor this needs to be conveyed to the customer (see ¶ 7, “Subcontracting of Tests”).
- 6.3.4 Court orders for testing shall be reviewed as described in ¶ 15.13, “Court Ordered Examinations.”
- 6.3.5 Non-routine occurrences associated with the analysis of blood samples described in ¶ 6.2.3 will be communicated to the customer and documented in the case record.

6.4 Changes to Requests

- 6.4.1 If a method of testing, including a sampling procedure, is proposed by the customer which is not appropriate, the customer will be informed as soon as possible and an alternate acceptable method will be agreed upon.
- 6.4.2 Any amendments to or deviations from the original contract will be communicated to all affected personnel. A record of these changes will be documented and stored in the case file.

6.5 Communications with Customers

All pertinent communications with the customer relating to submitted evidence shall be recorded and stored within the case file, in the object repository or communication log in the LIMS. Communications related to Breath Alcohol calibrations shall be recorded as per ¶ 18.

6.6 Feedback

- 6.6.1 The laboratory shall seek feedback from customers in several ways including personal communications, attendance at meetings and through surveys which will be sent out periodically. The *Customer Satisfaction Survey* form may be sent to customers at any time and the *Customer Satisfaction Survey - Case Specific* may be sent with certificates of analysis. Electronic surveys, with prior approval of Department Administration, may also be used to solicit feedback.
- 6.6.2 Completed surveys shall be retained by the Laboratory Director pursuant to the Library of Virginia Specific Schedule Number 778-001 (Quality Assurance:Program Accreditation 100272 series).
- 6.6.3 Feedback from customers should be reviewed by the appropriate Laboratory Director, and also reviewed during the Annual Management System Review.

6.7 Complaints

See ¶ 9 Complaints.

6.8 Guidance for Division of Consolidated Laboratory Services Cases

- 6.8.1 The Division of Consolidated Laboratory Services (DCLS) provides evidentiary testing services for some types of cases/samples that DFS does not currently support. These types of cases include the following:
- Illegal Dumping/Chemical Spills
 - Product Tampering
 - Suspicious Powders
 - Food Adulteration
 - Animal Feed Adulteration
 - Biological Terrorism
 - Chemical Terrorism
 - Suspected Radioactive Materials

- 6.8.2 DCLS prefers to receive their evidence directly from the submitting agency rather than use DFS as a courier. This allows for direct communication between DCLS and the agency, more appropriate packaging, and may better preserve the evidence for examination. DCLS maintains approximately 150 daily courier drop-off points throughout the state (many at regional Department of Environmental Quality offices and local health departments) and can arrange for emergency courier pickups for single incidents, if needed.
- 6.8.3 DCLS Contact Numbers - to distribute to submitting agencies with questions about DCLS capabilities or to arrange for DCLS courier pickup:
- 6.8.3.1 Business Hours - Main Number - 804-648-4480
- 6.8.3.2 24 Hours - Emergency Response Line or for unknown powder analysis performed at DCLS, contact EMRS1 - 804-335-4617
- 6.8.4 DFS Resources - the following individuals may be contacted to answer questions regarding DCLS testing policies and capabilities:
- Forensic Evidence Program Manager
 - Chemistry Program Manager
 - Toxicology Program Manager
 - Trace Evidence Section Supervisors
 - Toxicology Section Supervisors

6.9 Re-examination of Previously Tested Evidence

It is the policy of the Department to refuse to conduct a re-examination of evidence that has been previously examined. This does not apply to the conduct of a different type of analysis than that originally performed on the evidence. Any exceptions to this policy must be approved by the Department Director or their designee.

A party seeking re-examination of previously tested evidence will be directed to Department Counsel who will forward all necessary information for the request to the Department Director or their designee. If approved, Department Counsel will communicate the approval to the appropriate Laboratory Director.

6.10 Non-Departmental Personnel

The Department will not permit any actions in its laboratories that may lead to compromise of the integrity of evidence, to a breach of confidentiality or safety, or to disruption of the efficiency of laboratory operations. Therefore, it is the policy of the Department that, with the exception of persons being trained by the Department, non-Department personnel are not permitted to observe the performance of examinations of evidence. Any exception to this policy must be approved by the Laboratory Director or their designee.

7 **SUBCONTRACTING OF TESTS****7.1 Policy**

- 7.1.1 When the Department subcontracts work, this work shall be placed with a contractor competent to perform forensic testing.
- 7.1.2 A competent subcontractor is one with an appropriate scope of testing/calibration that is accredited by an accrediting body that requires conformance to forensic specific requirements and which is a signatory to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement for Testing. Program Managers will be responsible for evaluating the competency of subcontractors. The QA Section Supervisor shall maintain a register of all subcontractors used for testing along with supporting documentation of competency.
- 7.1.3 The Department is responsible to the customer for the subcontractor's work, except in the case where the customer or a regulatory authority specifies which subcontractor is to be used.
- 7.1.4 The Department shall advise the customer of the arrangement in writing and, when appropriate, gain the approval of the customer, preferably in writing.

7.2 Prior to Contract Award

- 7.2.1 The bidders must permit the Department to inspect their laboratory facilities and perform a suitable audit to verify the bidders' capabilities to meet the scope of work as stated in the contract.
- 7.2.2 The Department may require bidders to demonstrate their ability to perform analyses as specified in the contract.

7.3 Quality Assurance Requirements

- 7.3.1 The subcontractor must participate in a proficiency testing program in accordance with the requirements of its accrediting body. Each examiner employed by the subcontractor to work on the contract will participate in that proficiency testing program.
- 7.3.2 Discrepancies
 - 7.3.2.1 Discrepancies will be corrected to the satisfaction of the Department at no cost to the Department.

7.4 Testing Results Obtained from Subcontractors

- 7.4.1 The subcontractor shall report their results to the Department either in writing or electronically.
- 7.4.2 Data or test results from subcontractors shall be identified as such when reported on a CoA.

8 **SUPPLIES AND SERVICES****8.1 Purchasing**

- 8.1.1 The Department will observe all requirements of the Virginia Public Procurement Act and any additional policies of DFS, the Department of Accounts, or other policies relevant to purchasing supplies and services.
- 8.1.2 The Department will purchase only those supplies and services of the quality specified by management or Program Managers in appropriate documents.

8.2 Specification of Supplies and Services

- 8.2.1 Management, as necessary, will specify quality levels for supplies and services used in multiple Sections.
- 8.2.2 Program Managers will specify, in appropriate documents, the quality levels for all supplies and services, including critical supplies, used solely in their Sections.
 - 8.2.2.1 Critical supplies and services are those that require a quality assurance check prior to use in casework.
 - 8.2.2.2 Program Managers shall identify and evaluate suppliers of critical consumables, supplies and services which affect quality of testing or calibration in their technical procedures manual and shall maintain records of the evaluations.
- 8.2.3 Purchased supplies and services must meet or exceed specified quality levels.
- 8.2.4 When ordering, vendors must be provided with the specifications of the item or service desired. This information may include the type, class, grade, specific identification through a catalog number, or other technical information.
- 8.2.5 Section Supervisors are responsible for ensuring that orders are placed in a timely manner to prevent any case examination delays due to insufficient supplies.
- 8.2.6 Vendors providing calibration services shall ensure that equipment that they have calibrated is labeled with the date of calibration and when the next calibration is due.

8.3 Reagents and Reference Materials

- 8.3.1 Reagents and reference materials must be verified and documented as defined in SOPs.
 - 8.3.1.1 SOPs may refer to reference materials as “standards”.
- 8.3.2 Logs shall be maintained for prepared reagents electronically in LIMS, using the *Reagent Preparation Log* or as specified in Section protocols. The instructions on the second tab of the log (form) shall be followed.
- 8.3.3 When available, reference materials will be traceable to SI units and obtained from
 - a) a supplier that is a National Metrology Institute that is a signatory to the BIPM - CIPM Mutual Recognition Arrangement with the reference standard to be purchased or the certified reference material listed to be purchased in Appendix C of the BIPM key comparison database (KCDB); or
 - b) a service supplier accredited to ISO/IEC 17025 by an accrediting body that is a signatory to the ILAC Mutual Recognition Arrangement, with the reference standard to be purchased listed in a scope of accreditation; or
 - c) an accredited reference material producer that is accredited to ISO 17034 by an accrediting body that is a signatory to a mutual or multilateral recognition arrangement in an ILAC recognized regional

accreditation cooperation or the ILAC Mutual Recognition Arrangement, with a scope of accreditation covering the certified reference material to be purchased.

If no such supplier exists, a supplier that demonstrates competence, measurement capability and traceability will be used.

Copies of the supplier's accreditation documentation/competence determination will be maintained by the QA Section Supervisor.

8.3.4 Collections of reference materials will be fully documented, uniquely identified and properly controlled.

8.3.4.1 Fully automatic or modified to be fully automatic weapons in the Firearms Reference Collection shall have a copy of the certificate of registration as required by § [18.2-295](#), maintained by the Senior Legal Assistant (CF738). For weapons registered after April 2020, the copy of the registration may also be attached in the Firearm Details portion of the Firearms Collection in FA.

8.3.5 Intermediate checks of reference materials and reagents will be performed at periodic intervals delineated in the SOPs.

8.3.5.1 Once the interval for intermediate checks has been established, any extension in the interval shall be based on empirical data and an evaluation of risk. Records will be maintained by the appropriate Program Manager.

8.3.6 The following information shall be recorded for all purchased reagents and reference materials, either on the bottle/container or in the log with a reference on the bottle/container:

- date of receipt,
- date opened,
- date of verification (if appropriate),
- the initials of the person opening,
- the initials of the person performing the verification, if different, and
- the expiration date, if necessary.

8.3.7 Reagent Bottle Labeling

All bottles of stock reagents prepared in-house must be labeled with the identity of the reagent, the date of preparation or lot number, and the initials of the person who prepared the reagent. Reagent bottles for individual use must be labeled with the identity of the reagent, and the preparation date or lot number.

8.4 Receipt and Storage

8.4.1 Upon receipt, supplies will be inspected and inventoried against the packing slip and the purchase document. Discrepancies will be brought to the attention of the vendor immediately. When a purchased supply or material fails to meet established laboratory standards it should be discarded or returned to the vendor.

8.4.2 For supplies and reagents that potentially affect test results, a copy of the signed purchase request and a signed, dated copy of the packing slip shall be maintained by the Section Supervisor, Office Manager or designee for at least five years.

8.4.2.1 The signature of the Supervisor/ Program Manager/Director on the purchase request signifies that the supply ordered meets quality specifications of the SOP.

8.4.2.2 The signature of the receiver on the packing slip signifies that the goods received were those that were ordered.

- 8.4.3 Supplies will be handled, transported, stored and used in a manner that maintains their quality at an acceptable level. This may include controlled temperature and/or humidity requirements, storage in the dark, or other specific conditions.
- 8.4.4 Each Section is responsible for storage of its supplies and will have proper storage for specific items such as acids, bases, solvents, etc.
- 8.4.5 In addition, there will also be a general storage area available within the laboratory. Each laboratory will also have an appropriate room or rooms for chemical storage.

9 COMPLAINTS

- 9.1** Any staff member receiving a complaint should resolve the complaint at the time of receipt or as soon as practicable if within their authority, and notify the appropriate Supervisor/Program Manager and management. An effort will be made to get all pertinent details from the complainant that could assist in the investigation of the complaint. For purposes of this section, a response to a customer satisfaction or internal agency survey shall not be considered a complaint.
- 9.2** If the complaint involves case examination nonconformity, the procedures outlined in ¶ 10, “Nonconformities and Corrective Actions”, will be followed.
- 9.3** All complaints, investigations and resolutions will be documented typically via Memorandum for Record or email, a copy of which shall be kept by the Laboratory Director. The Laboratory Director will confer with the Department management team to ensure appropriate action was taken.
- 9.3.1 The outcome(s) to be communicated to the complainant shall be determined by, or reviewed and approved by, members of the management team not involved in the original complaint activities in question.
- 9.3.2 Documentation shall be retained by the appropriate Laboratory Director pursuant to the Library of Virginia Specific Schedule Number 778-001 (Quality Assurance:Program Accreditation 100272 series).
- 9.4** If the complaint alleges an ethical violation, professional negligence, or professional misconduct by an employee or employees, the complaint will be forwarded by the supervisor or Department management team member receiving the complaint to the Director for review and consideration.
- 9.4.1 The Director may assign staff to collect preliminary information related to the complaint or disclosure, which may include interviewing the complainant, the employee(s) named in the complaint and/or any witnesses, reviewing relevant case file documentation or other records of the Department, and researching the status of any underlying criminal or civil case(s) and whether the complaint addresses a forensic analysis subject to investigation by the Department.
- 9.4.2 The Director may make the following dispositions of a complaint:
- Dismiss the complaint;
 - Appoint a team to investigate the complaint;
 - Refer the complaint to the Scientific Advisory Committee (SAC) or a subcommittee of the SAC made up of subject matter experts;
 - Refer the complaint to the Forensic Science Board (FSB);
 - If the complaint involves fraud, waste or abuse, refer the complaint for investigation to the Office of the State Inspector General (OSIG);
 - If the complaint involves potential criminal conduct, refer the complaint for investigation by the Virginia State Police (VSP); or
 - Take such other action as appropriate.
- 9.4.3 If the Director dismisses the complaint or refers the complaint to the SAC or the FSB, the complainant and the employee(s) named in the complaint will be notified. No notification shall be made if the complaint is referred to VSP or OSIG for investigation.
- 9.4.4 If the Director should determine that an Investigation Team (Team) is required, no less than three (3) staff members shall be named to the Investigation Team. One member shall be designated as the Chair of the Team.
- 9.4.5 Within three (3) business days of their appointment, the chair of the Investigation Team shall provide to the employee(s) named in the complaint a summary of the allegations. The employee(s) named in the

complaint shall be provided with an opportunity to speak to the members of the Team and/or provide a written response to the allegations contained in the complaint.

- 9.4.6 The Team may collect and review documents and data as necessary; conduct interviews with individuals as needed; and/or make recommendations to the Director regarding:
- Notification to the accrediting body;
 - The opening of a corrective action;
 - The referral of the complaint to the SAC or a subcommittee of the SAC made up of subject matter experts;
 - The referral of the complaint to the FSB;
 - The presence or absence of professional negligence or misconduct, and other observations and recommendations as permitted by law;
 - The presence or absence of violations of the Department's Code of Professional Responsibilities and Ethics;
 - The dismissal of the complaint for insufficient information or failure to conclude that ethics violations, professional negligence or professional misconduct occurred; and/or
 - Other such actions as appropriate and necessary to fulfill the Team's duties.
- 9.4.7 The Investigation Team shall provide its recommendations to the Director in writing within thirty (30) days of its appointment. If additional time is required, the Director has the discretion to approve additional time for completion of the Team's investigation. All documentation prepared or collected by the Investigation Team shall be forwarded to the Director's Office.
- 9.4.8 The Director shall consider the recommendations of the Investigation Team and determine the appropriate disposition of the complaint and the course of action for the Department. If appropriate, the Director shall determine if the complaint is founded or unfounded. If a referral has been made to the SAC or FSB, the SAC or FSB shall determine if the complaint is founded or unfounded and what, if any, further action should be taken by the Department. The employee(s) named in the complaint shall be notified of the determination made by the Director, the SAC, or the FSB regarding the disposition of the complaint. Depending on the circumstances, a founded complaint may result in the initiation of a disciplinary proceeding or a performance improvement plan for the employee named in the complaint.
- 9.4.9 Records of complaints of alleged ethical violations, professional negligence, or professional misconduct by employees shall be retained by the Director's Office and considered confidential records. Complaints deemed unfounded shall not be disclosed unless subject to a subpoena *duces tecum* or court order or as required by the Department's accrediting body to comply with accreditation requirements. Founded complaints may be disclosed with a subpoena *duces tecum*, court order, with the permission of the employee(s) named in the complaint, or as part of the Department's required *Giglio* disclosures. If so disclosed, Department Counsel will notify the employee named in the complaint. Upon their request, an employee may review the record of any complaint filed against them.
- 9.5** Complaints will be discussed at the Annual Management Review.
- 9.6** Complaints or concerns by laboratory employees concerning quality-related aspects of the management system are covered under this policy. Employees are encouraged to bring complaints/concerns about the quality system to the appropriate individual as soon as practicable.

10 NONCONFORMITIES AND CORRECTIVE ACTIONS

10.1 Overview

- 10.1.1 Laboratories from time to time will experience technical or administrative nonconformities. Such occurrences are adverse to the quality of the work product and/or the integrity of evidence. Nonconformities are defined as Level I or Level II, depending on the level of risk established by the Department. The level of risk will be determined by assessing the potential impact of the nonconformity on the Department, in addition to the likelihood of the nonconformity occurring/reoccurring and the ease of detection. The level of nonconformity will be considered in determining any course of corrective action. Nonconforming work shall be evaluated to determine its significance.
- 10.1.2 Where this evaluation indicates the non-conforming work could recur or there is doubt about the compliance of the laboratory's operations with its own policies and procedures, corrective action will be initiated.
- 10.1.3 The goals of corrective action are to identify the root cause(s) of a problem and implement the best solution to prevent recurrence.

10.2 Level I Nonconformities

Level I nonconformities generally:

- are unexpected,
- have an unacceptable level of risk,
- require an investigation to determine their root cause,
- require elaborate and/or intensive corrective action with extensive documentation,
- must be addressed by more than one individual, and
- have compromised the quality of the work product and/or the integrity of evidence.

10.3 Level II Nonconformities

Level II nonconformities generally:

- are foreseeable,
- have an acceptable level of risk,
- have a clear-cut immediate cause,
- can be addressed by a simple action, which can be adequately documented by an entry in existing documentation, or utilizing the Technical Review Form,
- can be addressed by a single individual, and
- if properly addressed, have not and will not in any way compromise the quality of work or integrity of the evidence.

10.4 Corrective Action – Level I Nonconformities

- 10.4.1 Any employee who identifies a potential Level I nonconformity shall initiate a quality inquiry (QI) by informing their supervisor or Laboratory Director as soon as practicably possible, preferably before the end of the next business day.
- 10.4.1.1 If the nature of the nonconformity is severe enough in nature to possibly necessitate a large scale response, the employee shall verbally notify the Laboratory Director, DTS, Deputy Director, or Department Director of the situation as soon as possible.
- 10.4.1.2 The individuals listed above and the Biology Program Manager (for the Forensic Biology discipline only) have the authority to halt (or resume) work, stop the release of CoAs/CoIAs, recall CoAs and issue amended reports, notify customers, request the return of evidence, and

implement any other necessary short-term response. The determination to halt work may involve calculating a Risk Priority Number (RPN, see ¶11.2.2).

For the Forensic Biology discipline, the Biology Program Manager must approve the resumption of DNA operations for the laboratory or an individual.

10.4.1.3 Steps to address the immediate nonconformity will be initiated as described below.

10.4.2 The supervisor, Program Manager or Laboratory Director shall briefly but clearly document the potential nonconformity and its identification in a QI notification to the appropriate Laboratory Director(s), Program Manager(s) and the DTS within 2 business days of being informed. The DTS may request the Laboratory Director, Program Manager or another appropriate individual to calculate and submit a RPN (see ¶11.2.2) for the potential nonconformity.

10.4.3 The DTS will determine if the nonconformity QI warrants further investigation within one week of receipt of the notification, and if so determined, will initiate the Qualtrax Workflow and assign a team to perform an investigation to determine the root cause(s).

10.4.3.1 The team shall generally include the Program Manager or Laboratory Director, and the supervisor.

10.4.3.2 The QA Section Supervisor will be notified of the team members and will assign a Corrective Action Report (CAR) number.

10.4.3.3 The CODIS administrator will be notified when the nonconformity impacts DNA records entered into CODIS.

10.4.4 The team will confer with the QA Liaison to develop an approach and establish a timeline for the investigation.

Within approximately 10 business days of the assignment, a preliminary CAR will be developed by the team, and provided to the DTS for approval. The preliminary CAR will document the following items as they are known at the time:

10.4.4.1 The nonconformity

10.4.4.2 The event(s) which identified the nonconformity

10.4.4.3 The extent of the nonconformity

10.4.4.4 The effect(s) of the nonconformity on the quality of work and/or integrity of evidence

10.4.4.5 Any response to date

10.4.4.6 The root cause of the nonconformity

10.4.4.6.1 Root cause identification allows for continuous improvement of laboratory quality, safety, and reliability by learning from nonconformities. In some cases, an individual may be held responsible for causing a nonconformity, but personnel issues are handled through a process separate from the corrective action process.

10.4.4.6.2 Root cause determination may identify multiple contributing factors for the nonconformity, but there is generally only one underlying cause.

10.4.4.7 A recommended course of action and a reasonable timeframe for the completion of the corrective action (typically 90 days or less)

- 10.4.4.8 A recommended course of any follow-up activities, to include evaluating the effectiveness of actions taken
- 10.4.5 The DTS may concur with the determination or specify further action. Once the preliminary CAR is approved, the recommended course of action shall be implemented.
- 10.4.6 Within 30 calendar days of determining that a significant change, event or nonconformity has occurred, the Lab Director in concert with the DTS shall notify ANAB as specified by the Accreditation Manual for Forensic Science Service Providers.
- 10.4.7 If the investigation indicates there may be a significant problem of nonconformance at a laboratory-wide or Section level, the DTS will initiate an appropriate audit by personnel from outside of the suspect laboratory or Section. A written report from the auditor(s) will be made to the DTS, who will determine if any action other than that in the CAR will be carried out.
- 10.4.8 If the course of action and/or follow-up activities extend(s) over a protracted time period, the team leader will generate regular progress reports to the appropriate Directors and Program Manager(s), particularly on completion of milestones. The frequency of such reports should be defined in the preliminary CAR.
- 10.4.9 On completion of the course of action and/or follow-up activities, the team shall generate a final CAR that addresses all findings and actions. The final CAR or a separate request will include a written recommendation to the DTS as to the status of the corrective action. The DTS either will deem the corrective action completed or specify further action.
- 10.4.10 The team will provide all appropriate supporting documentation in the Corrective Action Workflow. All original CARs, reports, supporting documentation, and recommendations will be retained pursuant to the Library of Virginia Specific Schedule Number 778-001 (Quality Assurance:Program Accreditation 100272 series).

10.5 Corrective Action - Level II Nonconformities

- 10.5.1 Level II nonconformities are addressed by staff as part of routine business. Such nonconformities are minor deviations from protocol or customer requirements. All employees have the responsibility to identify, and the authority to address, Level II nonconformities. Any employee who identifies a non-routine, major (potentially Level I) nonconformity shall take appropriate steps as in ¶ 10.4.1 above.
- 10.5.2 Level II nonconformities shall be addressed and resolved in a timely manner.
- 10.5.3 Staff addressing Level II nonconformities will briefly but clearly document the nonconformity, its cause, as necessary, and its resolution.

11 RISK MANAGEMENT AND PREVENTIVE ACTIONS

11.1 Policy

The Department must be proactive in identifying risks and opportunities associated with laboratory activities in order to:

- Give assurance that the quality management system achieves its intended results;
- Enhance opportunities to achieve the purpose and objectives of the Department;
- Prevent or reduce undesired impacts and/or potential failures in laboratory activities; and
- Achieve improvement.

All employees are encouraged to identify opportunities to improve the technical operation and management system of the Department and to eliminate potential sources of nonconformities. Employees should take and report actions within their authority to prevent nonconformities, and report ideas and observations for improvement to management.

Actions taken to address risks and opportunities should be proportional to the potential impact on the validity of results.

11.2 Risk Management

11.2.1 **Identifying Risks** - The Department may identify risks through multiple quality assurance processes including, but not limited to: method validations, preventive action requests (i.e., *Laboratory System Improvement* submissions), corrective actions, internal audits and management reviews.

11.2.2 **Assessing Risks** - Risk assessment may be accomplished by analyzing historical data or by calculating the RPN. Additional guidance on the use of the RPN can be found in the Quality Manual and Forms - Tools Folder in Qualtrax.

11.2.3 **Mitigating Risks** - Appropriate action(s) to address the risk may include Preventive Action, Corrective Action, halting of work, or no action due to an acceptable level of risk.

11.3 Preventive Action - Evaluation and Response

If an opportunity to improve the technical operations and management system or a potential source of nonconformity is identified, the following procedures will be followed:

11.3.1 A *Laboratory System Improvement* (LSI) Workflow will be completed and submitted to the staff member's supervisor. The supervisor will review and forward to the corresponding Program Manager. The Program Manager will prepare and forward a brief written analysis of the LSI to the DTS.

11.3.2 The DTS will assess the LSI information and determine if action should be taken. If so, they will assign a team to address the preventive action. The team will generally consist of the QA Section Supervisor and the appropriate Program Manager or Laboratory Director.

11.3.3 The team will confer with appropriate staff to discuss possible actions. The team will then develop an approach and establish a timeline for implementation and then submit a written plan to the DTS for approval.

11.3.4 The team will oversee execution of the plan and will monitor and document its effect.

11.3.5 If the plan extends over a protracted time period, the team will prepare regular progress reports for the DTS and appropriate Directors and/or Program Managers.

11.3.6 On completion of the plan, the team will prepare and provide a summary report to the appropriate Directors. The DTS will either deem the preventive action completed or specify further action.

- 11.3.7 The QA Section Supervisor will maintain all original forms, plans and reports concerning preventive actions for at least five years. Team members will maintain appropriate supporting documentation. Laboratory Directors will maintain a copy of all forms, plans and reports pertaining to their laboratory.

12 AUDITS

12.1 Policy

All Sections of the DFS laboratory system will be audited at least annually. Audits, which may be either internal or external, will be conducted to verify that the laboratory's operations continue to comply with the requirements of the DFS management system, accreditation standards and the FBI DNA Quality Assurance Standards.

The annual audits of the Forensic Biology Section shall be conducted utilizing, at a minimum, the applicable FBI Quality Assurance Standards Audit Document and shall be at least six months and no more than eighteen months apart.

When audit findings cast doubt on the effectiveness of the operations or on the correctness or validity of the laboratory's test or calibration results, the laboratory shall take timely corrective action per [§ 10](#), and shall notify customers in writing, via amended report as necessary, if investigations show that the laboratory results may have been affected.

12.2 Internal Audits

12.2.1 The internal audit program shall address all elements of the DFS management system, including the testing or calibration activities performed by each discipline, direct observation of a sampling of activities within each discipline and corrective action effectiveness monitoring.

12.2.2 The DTS will be responsible for coordinating all internal audits according to established schedules and in response to requests by management.

12.2.3 The DTS will ensure that internal audits are carried out by trained and qualified personnel who are, wherever resources permit, independent of the laboratory being audited. Documentation of audit training and qualification will be maintained in Qualtrax.

12.2.3.1 Appropriate training for internal auditors may be either internal or external auditor training.

12.2.3.1.1 Examples of acceptable external auditor training include successful completion of:

- ASCLD/LAB-*International* Assessor Training
- FBI DNA Auditor Training
- Forensic ISO/IEC 17025 Assessor Training

12.2.3.1.2 Internal training should include the following topics and be documented in a MFR:

- Accrediting body organization
- Overview of the accreditation standards
- Document hierarchy including QM
- Documents vs. Records
- Objective evidence
- Document control
- Process for potential findings
- Use of tools such as the Audit Trail document, DFS records list, and examiner interview questions/techniques
- Case file review
- Completion of an Audit Trail document and discussion with trainer

- 12.2.4 Internal audits of the laboratories will be conducted at least annually. Each laboratory will be notified in advance of its audit dates to minimize disruption of operations and to ensure the presence of necessary personnel.
- 12.2.5 The auditors will use an audit checklist (e.g., complete an Audit Trail). The Forensic Biology Section will be audited using the FBI DNA Quality Assurance Standards Audit Document when a required internal audit is necessary to fulfill these standards. These checklists are intended as a minimal list of audit items. Auditors will not be restricted to items on these checklists but may pursue any issue affecting quality.
- 12.2.6 Upon completion of the audit, the auditors will give a verbal exit briefing to the Laboratory Director.
- 12.2.7 Upon completion of the prescribed annual audits, a system-wide report will be prepared and disseminated by the DTS.

12.3 External Audits

- 12.3.1 External audits are generally under the control of, and performed by, an auditing body external to the Department.
- 12.3.2 As a general rule, external audits follow the same pattern described above.
- 12.3.3 The Forensic Biology Sections will be audited at least every two years by an external audit group. The audit document will be the FBI DNA Quality Assurance Standards Audit Document. The DNA Technical Leader will coordinate these audits of the section.
- 12.3.4 The DTS will be notified of all external audits. The DTS' involvement will vary depending on the auditing body.

12.4 Documentation

- 12.4.1 Documentation of all forensic-related audits will be maintained by the DTS and retained pursuant to the Library of Virginia Specific Schedule Number 778-001 (Quality Assurance:Program Accreditation 100272 series).
 - 12.4.1.1 Documentation of internal and external audits conducted utilizing a FBI Quality Assurance Standards Audit Document and, if applicable, corrective action(s), shall be reviewed by the Biology Program Manager (Technical Leader) to ensure that findings, if any, are appropriately addressed. This review will be documented.
 - 12.4.1.2 Documentation of internal and external audits conducted utilizing a FBI Quality Assurance Standards Audit Document and, if applicable, corrective action(s), shall be provided to the CODIS Administrator so as to allow the CODIS Administrator to ensure the quality of data stored in CODIS is in accordance with state and/or federal law and NDIS operational procedures.
 - 12.4.1.3 Documentation of internal and external audits conducted utilizing a FBI Quality Assurance Standards Audit Document and, if applicable, corrective action(s), will be retained and available for inspection during subsequent audits. Within 30 days of laboratory receipt of the audit document or report, a copy of the external audit documentation and laboratory responses shall be provided to the FBI.
- 12.4.2 The area of activity audited, the audit findings and corrective actions that arise from them shall be documented.
 - 12.4.2.1 The *Notice of Audit Finding* form shall be used to document internal audit findings and their resolution.

- 12.4.3 Summaries of internal and external audit reports shall be presented to management at the Annual Management Review Meeting, ¶ 13, “Management Review”.
- 12.4.4 The Quality Manager in coordination with the Laboratory Director of each laboratory shall submit appropriate accreditation reports as specified by the accrediting body.

13 **MANAGEMENT REVIEW****13.1 Purpose**

Department management is committed to the development and implementation of a quality management system. Management reviews shall be conducted at least annually to determine if the Department's management system and operational activities remain suitable, adequate and effective and to introduce any necessary changes and improvements.

13.2 Responsibility and Timing

The Department management team and Program Managers will conduct a comprehensive management review annually. This planned review will serve as basis for complying with accreditation requirements and does not preclude management from reviewing the Department's activities throughout the rest of the year.

13.3 Review

The review will address but not be limited to the following:

- Changes in internal and external issues that are relevant to DFS
- Fulfillment of objectives
- Suitability of policies and procedures
- Status of actions from previous management reviews
- Outcome of recent internal audits
- Corrective actions
- Assessments by external bodies
- Changes in volume and type of work or in the range of laboratory activities
- Customer and personnel feedback
- Complaints
- Effectiveness of any implemented improvements
- Adequacy of resources
- Results of risk identification
- Outcomes of the assurance of the validity of results
- Training

13.4 Documentation

13.4.1 Topics addressed during management reviews shall be documented and the documentation retained in Qualtrax pursuant to the Library of Virginia Specific Schedule Number 778-001 (Quality Assurance:Program Accreditation 100272 series).

13.4.2 Actionable items from the management review will be documented and addressed, as appropriate.

13.5 Communication

Pertinent information from this review will be communicated by Laboratory Directors to their staff members.

14 EVIDENCE HANDLING

14.1 Policies

- 14.1.1 The Department will ensure the integrity of the evidence in its custody to protect the interests of the laboratory and its customers. This will be accomplished by prescribing rules for transporting, receiving, handling, protecting, storing, retaining and returning evidence, and by documenting the chain of custody to provide for the generation of legally admissible chain of custody records.
- 14.1.2 All evidence receipts and returns between the laboratory and its customers will be documented both in writing and in LIMS, however the written record constitutes the official chain of custody record.
- 14.1.3 All evidence transfers internal to DFS shall be tracked in LIMS except as defined in ¶¶ 14.1.3.2 – 14.1.3.3. The LIMS record shall detail each person relinquishing/taking possession of an item of evidence, and, for administrative custody, the location of that item. The LIMS record constitutes the official chain of custody record for those transfers.
- 14.1.3.1 Sub-items which are subdivided in the laboratory shall be tracked through a documented chain of custody. See ¶ 15.4.3 for custody practices regarding sub-items.
- 14.1.3.2 Evidence transfers within a section of a laboratory may be made on case file documentation as described in ¶ 14.13.2 (Evidence Handling Practices for Toxicology).
- 14.1.3.2.1 When the Evidence Transfer Form is utilized to track evidence created in the laboratory, it constitutes the official chain of custody record for the items/sub-items until the created evidence is entered into LIMS. Subsequent transfers are officially tracked in LIMS.
- 14.1.3.3 Mailed-in DUI/DUID Evidence
- 14.1.3.3.1 When DUI/DUID evidence is received via mail at a regional laboratory that will not be performing the requested analysis, the *DUI/DUID Supplemental Custody Form* shall be used to transfer the evidence to the laboratory that will be performing the analysis.
- 14.1.3.3.2 As delineated on the *DUI/DUID Supplemental Custody Form*, a temporary tracking number will be assigned to the evidence and marked on the mailing container.
- 14.1.3.3.3 Evidence will be entered into LIMS and assigned an FS Lab # in the laboratory where the analysis is scheduled to be performed.
- 14.1.4 Corrections to LIMS chain of custody records shall be requested via the use of the “FA Data Corrections” system. The requestor shall document the update/correction to the chain of custody describing the nature of the change and that resolution has been completed. This may be accomplished either by MFR or by printing a copy of the FA Data Corrections item report showing resolution. This documentation shall be maintained in the case file.
- 14.1.5 Evidence transfer records (internal and external) shall include:
- A signature, or equivalent identification, of the person receiving or relinquishing evidence
 - signatures for RFLE or Evidence Transfer forms
 - secure passwords (electronic signature equivalent) confirming the person’s identity in LIMS
 - for administrative custody, the location of the evidence
 - the date of transfer
 - a unique identifier of the evidence, e.g., FS Lab #, container number, and item number

- 14.1.5.1 Evidence Transfer forms (§ 14.4.5) may be used internally as described in § 14.4.1.
- 14.1.5.2 When LIMS is unavailable, the Evidence Transfer form shall be used to record internal transfers of evidence. The information shall be updated in LIMS as soon as it becomes available, so that the electronic record is complete. The Evidence Transfer form shall be retained in the case file.
- 14.1.6 The Forensic Science Laboratory Number (FS Lab #) is a unique identifier assigned by LIMS for all submissions of physical evidence related to a single criminal event.

14.2 Evidence Custody

There are two types of evidence custody within the Department: personal and administrative.

- 14.2.1 Personal custody is individual custody by a section member.
- 14.2.2 Administrative custody is group custody of evidence in each section, including evidence placed into a lockbox for transfer between laboratories.

14.3 Evidence Receipt

- 14.3.1 A Request for Laboratory Examination (RFLE) shall accompany all evidence submitted to the laboratory.
 - 14.3.1.1 DUI/DUID evidence that is collected pursuant to §§ [18.2-268.6](#) and [18.2-268.7](#) and received by mail may be submitted without an RFLE. The information associated with the evidence may be entered into LIMS by qualified personnel other than the individual receiving the evidence.
- 14.3.2 Evidence will normally be received in a laboratory's Evidence Receiving area by hand to hand transfer from a submitting officer to a Forensic Evidence Specialist (FES). Evidence may similarly be received, as necessary, by other appropriately trained personnel.
- 14.3.3 Evidence may also be received from a submitting agency through a carrier service, e.g., United States Postal Service (USPS), Federal Express (FedEx), or United Parcel Service (UPS) by an authorized agent of the Department.
 - 14.3.3.1 Personnel receiving evidence via carrier service will remove the evidence container(s) from the mailing package and record the carrier service name and service tracking number (if applicable) on the RFLE(s). The information associated with the evidence will then be entered into LIMS by qualified personnel who will affix their signature, date and corresponding bar code to the RFLE(s).
 - 14.3.3.2 The evidence container(s) will be bar-coded, marked, seals remediated as necessary (§ 14.7.4), and otherwise handled in accordance with the policies outlined in § 14, "Evidence Handling". A photocopy of the mailing package surface(s) bearing the carrier information will be generated. The photocopy will be labeled with the FS Lab # and initials of the receiving employee and maintained with the RFLE. This will be placed in the case file as administrative documentation. A copy will be attached and returned with the evidence.
 - 14.3.3.3 When evidence from multiple criminal events is submitted in a single mailing package, photocopies of the mailing package surface(s) bearing the carrier information will be generated. A photocopy will be labeled with each FS Lab # and initials of the receiving employee and maintained with each RFLE. This will be placed in the case file as administrative documentation when the examination(s) are completed. A copy will also be attached and returned with the evidence.

- 14.3.3.4 If evidence in the mailing package is not appropriately packaged to allow proper bar-coding and processing, Evidence Specialists will place the evidence in a laboratory-provided evidence container, which will be sealed, initialed and bar-coded. When this occurs, the FES shall document the action on the RFLE by writing “container added and sealed” next to the container number/description on the RFLE.
- 14.3.3.5 Once mailing package carrier information has been preserved via photocopy, the mailing package may be discarded.
 - 14.3.3.5.1 When used for the submission of an implied consent case, DUI/DUID kit packaging does not bear any sample identification information and is not retained with the evidence (tubes) nor does a photocopy need to be generated/retained.
- 14.3.4 Personnel transcribing information from an RFLE to LIMS will perform the following:
 - 14.3.4.1 Determine if the RFLE is properly completed by the submitting officer. Request officers making hand to hand transfers perform any necessary corrections/clarifications. As necessary, contact submitting officers of evidence submitted by mail to discuss any necessary corrections/ clarifications.
 - 14.3.4.2 Check for previous submissions from the same event or activity; assign evidence to the existing FS Lab # if determined to be a subsequent submission.
 - 14.3.4.3 Transcribe the appropriate information from the RFLE into LIMS using the following guidelines:
 - 14.3.4.3.1 LIMS entries, e.g., officer names and agency addresses, must be chosen from the appropriate LIMS database if available.
 - 14.3.4.3.2 Agency Case #: Make no entry if a number is not supplied.
 - 14.3.4.3.3 Victim name: Enter last, first and middle names, and appropriate last name suffix, e.g., Jr., with only first letter in upper case; enter a period after initials or appropriate last name suffixes; make no entry if a name is not supplied. If only an Alias or Presumed to be (PTB) is listed on the RFLE, enter a space in the Last Name Field and the Display Name Field and then enter the listed name only in the Alias field (beginning with first name). Additional identifying information (e.g., location of body or remains) may be entered in the Alias field.
 - 14.3.4.3.4 Suspect name: Enter last, first and middle name, and appropriate last name suffix, e.g., Jr., with only first letter in upper case; enter a period after initials or appropriate last name suffixes; make no entry if a name is not supplied. If only an Alias or Presumed to be (PTB) is listed on the RFLE, enter a space in the Last Name Field and the Display Name Field and then enter the listed name only in the Alias field (beginning with first name). Additional identifying information (e.g., location of body or remains) may be entered in the Alias field.
 - 14.3.4.3.5 Business Name: Enter as normally referenced, e.g., Pizza House, ABC, Inc., Bob and Doug’s.
- 14.3.5 Personnel receiving evidence will:
 - 14.3.5.1 Determine if the evidence submitted corresponds to the item(s) listed on the RFLE as much as possible.

- 14.3.5.2 Determine if containers are sealed. Seal or upgrade seal(s) as necessary following Department procedures (§ 14.7.4).
- 14.3.5.3 When clarification of the requested examination(s) is necessary (e.g., when there is doubt as to the suitability of an item for testing, or the test required is not specified in sufficient detail), the laboratory shall consult the customer for further instructions before proceeding and shall record the discussion on the RFLE, on a MFR stored within the case file, in the object repository, or communication log in the LIMS.
- 14.3.5.3.1 When any corrections are necessary to the RFLE, the text shall be crossed out, not erased, made illegible or obliterated. The new text shall be entered alongside. Changes, alterations and additional notations, including interlineations shall be initialed and dated by the person making the change.
- 14.3.5.3.2 Large, multi-item case submissions should undergo a pre-submission review by appropriate staff prior to receipt.
- 14.3.5.4 Assign the primary and secondary section(s), if applicable, and document on the RFLE. The primary section is generally determined by the most items submitted for one type of exam. In death investigations, Toxicology will be the primary section until non-toxicological evidence is submitted in a subsequent submission.
- 14.3.5.5 Assign each evidence container a unique identifier, consisting of the FS Lab # and container number.
- 14.3.5.5.1 Attach the appropriate LIMS generated label to each container, as appropriate.
- 14.3.5.5.2 Containers shall also be marked by hand with the initials of the receiving employee, the FS Lab #, the date and, when possible, the item number(s) of its contents.
- 14.3.5.5.3 If a label cannot be placed on a container, write by hand the container number on the container.
- 14.3.5.6 Write the container number(s) next to the corresponding item(s) on the RFLE.
- 14.3.5.7 If the submitting agency is different from the investigating agency, identify it on the RFLE.
- 14.3.5.8 Request that the submitting officer relinquish evidence custody by printing their name, signing and dating the appropriate submission spaces on the RFLE.
- 14.3.5.9 Write the appropriate FS Lab # in the assigned space on the RFLE and attach a corresponding LIMS generated label to the RFLE.
- 14.3.5.10 Write appropriate laboratory examination abbreviations on the RFLE to indicate the examinations requested by the agency and the primary section, listing the primary section first.
- 14.3.5.11 Accept evidence custody in LIMS and sign and date the appropriate receipt spaces on the RFLE.
- 14.3.5.11.1 Evidence Receiving personnel do not maintain evidence in their personal custody. By their signing and dating the appropriate receiving (or relinquishment) spaces on the RFLE or Evidence Transfer form, evidence is placed directly into (or removed directly from) Evidence Receiving administrative custody.

- 14.3.5.12 Give, send by encrypted email or mail the submitting officer a copy of the RFLE as a receipt.
- 14.3.5.13 Place a “Biohazard” label on appropriate containers as specified in Section 6.1.1 of the DFS Exposure Control Plan (Appendix B of the DFS Safety Manual).
- 14.3.5.14 Place the evidence in storage with appropriate copies of the RFLE attached until it is to be transferred for examination.
- 14.3.6 When LIMS is down and temporary FS Lab #s must be used (§ 15.3.7), the following changes will be made in receiving procedures (otherwise proceed as though the FS Lab # is the permanent number):
- LIMS generated labels are unavailable, therefore each container will be marked by hand with the temporary FS Lab # and appropriate container number, in addition to the other required markings per (§ 14.3.5.5),
 - LIMS itself is not available, therefore neither checks for previous submissions nor entries into LIMS may be made, and
 - when the submitting officer is given a copy of the RFLE, they will be told a revised copy with the permanent FS Lab # added to it will be mailed to them once LIMS comes back on-line.
- 14.3.7 When LIMS comes back on-line:
- the evidence assigned temporary FS Lab #s will be entered into the system and assigned appropriate permanent FS Lab #s after checks for previous submissions are made,
 - the new permanent numbers will be recorded and associated with the corresponding temporary numbers in the Evidence Receiving logbook,
 - the new permanent numbers will be written on the corresponding RFLEs, and copies will be mailed to the appropriate submitting officers, and
 - LIMS generated labels will be placed adjacent to the corresponding temporary numbers on the RFLEs and containers.

14.4 Internal Evidence Transfer

- 14.4.1 All internal transfers within DFS shall be tracked using the LIMS, except as defined in § 14.1.3.2. When LIMS is unavailable, the Evidence Transfer form shall be used to record internal transfers of evidence. The information shall be updated in LIMS as soon as it becomes available, so that the electronic record is complete. The Evidence Transfer form shall be retained in the case file.
- 14.4.2 Personnel initiating an internal evidence transfer shall:
- use LIMS to document internal evidence transfers.
 - ensure enough copies of the RFLE (and Evidence Transfer Form, when necessary) accompany the evidence for each requested examination.
 - utilize the *Evidence Routing Slip* to designate transfer instructions, if necessary. The routing slips are used for internal transfer instructions, not permanent case file information, and do not need to be maintained in the case file.
- 14.4.3 Personnel receiving evidence shall follow the evidence handling practices listed in § 14.6.5 and record its receipt in LIMS.
- 14.4.4 Personnel may place evidence in or remove evidence from their Section’s administrative custody using LIMS.
- 14.4.5 Evidence Transfer Form:
- 14.4.5.1 An Evidence Transfer form will be initiated when LIMS is unavailable.

- 14.4.5.2 Original Evidence Transfer forms will accompany the corresponding evidence when possible.
- 14.4.5.3 Original Evidence Transfer forms shall be placed in the case file of the originating laboratory for the corresponding submission.
- 14.4.5.4 Completing the Evidence Transfer Form
 - 14.4.5.4.1 To the extent possible the blocks will be completed using the abbreviations listed at the bottom of the form.
 - 14.4.5.4.2 The “Evidence” block on the form will be used to list, at the very least, the container number(s) and container description(s), and if known, the item number(s) in each container. In the absence of a container, the appropriate item number(s) and item description(s) will be listed. The following formats will be used:
 - 14.4.5.4.2.1 List the container number and description, with items in parentheses, e.g., Cont. 1, BX (Items 1-3), Cont. 2, YEN (Items 4-8).
 - 14.4.5.4.2.2 When items are transferred without containers, list the item number and description, e.g., Item 4, MC.
 - 14.4.5.4.3 In the “VIA” column, use of the abbreviation for a section signifies that the evidence is being placed into administrative custody of that section. The abbreviation “LB” signifies that the evidence is being placed into administrative custody into a lockbox. The abbreviation “HH” signifies that the evidence is being transferred hand to hand between personnel.
 - 14.4.5.4.4 The “Destination” columns shall indicate the Laboratory, Section and Reason for Transfer using the appropriate abbreviated transfer codes.
 - 14.4.5.4.5 If clarifying information needs to be added, place the information in the “COMMENTS” section of the form.
- 14.4.6 Transfer Between Laboratories
 - 14.4.6.1 Evidence Receiving personnel are responsible for placing evidence into a lockbox for transfer between laboratories. Evidence is placed into a locked box during transportation, however, when evidence is too large for the lockbox, it shall be secured in a locked cargo area in the evidence van.
 - 14.4.6.2 Evidence Receiving personnel shall physically place evidence into the lockbox and record this transaction in LIMS.
 - 14.4.6.2.1 The *Evidence Routing Slip* shall be utilized to designate transfer instructions. The routing slips are used for internal transfer instructions, not permanent case file information, and do not need to be maintained in the case file.
 - 14.4.6.3 The lockbox shall be secured during transportation between laboratories. The lockbox keys will remain at each laboratory, so as during transport, the driver will not have access to the lockbox.
 - 14.4.6.4 Evidence Receiving personnel at the receiving laboratory shall open the lockbox and receive the evidence in LIMS.

- 14.4.6.5 When exams are to be performed in a laboratory other than the originating lab, the original RFLE maybe sent with the evidence if required for examination documentation, otherwise a copy will be sent. If the original RFLE is sent with the evidence, a copy shall remain at the originating laboratory.

14.4.7 Primary Examiner

An examiner, from the primary section as assigned in ¶ 14.3.5.4, will serve as the lead examiner in major cases involving multiple forensic disciplines. The primary examiner should serve as liaison between the Department and the customer. Responsibilities include the following:

*Sections marked by an asterisk below may be performed by a Forensic Evidence Specialist.

- 14.4.7.1 *Arrange for the proper sequence of examinations in order to maximize the evidentiary value of submitted items.
- 14.4.7.2 *Coordinate the timely transfer of evidence between assigned sections in order to efficiently perform necessary examinations. In instances where there may be a time limitation (e.g., a detained juvenile per § 16.1-277.1), ensure relevant dates are communicated to all other examiners.
- 14.4.7.3 *Transfer the evidence to the other examiners as soon as possible.
- 14.4.7.4 Ensure identical designation of items/sub-items of evidence.
- 14.4.7.5 Ensure identical description of the evidence on each Certificate of Analysis when multiple examinations are performed on the same items/sub-items (¶ 15.4). Curly brackets {} should be used to denote temporary descriptions in LIMS, as appropriate.
- 14.4.7.6 *Ensure all evidence from a submission, including collected samples, e.g., DNA, hairs, fibers, paints, and glass, are returned at one time to the submitting agency or to the laboratory that originally received the evidence. Exceptions may be granted by the appropriate Laboratory Director.
- 14.4.7.7 Ensure all submitted, but unexamined, items/sub-items of evidence within the submission are the subject of a report in the file (see ¶16.2.10).
- 14.4.7.7.1 It is necessary for unexamined parent items containing sub-items to be listed in the CoA by the Controlled Substance Section however, these parent items need not be listed in the CoAs issued by other sections.

Example: Item 1 One plastic film canister containing Items 1A and 1B
 Item 1A Plant material
 Item 1B One smoking device with residue

In this example, Items 1, 1A and 1B, would be listed in the Controlled Substances CoA. If Trace Evidence examined 1A or 1B, Item 1 (unexamined parent item) would not be listed on the Trace Evidence CoA.

14.4.8 Biohazard Labels

A “Biohazard” label must be placed on all “secondary” containers of liquid blood/ body fluid/tissue before transfer between laboratories on the lockbox (Section 6.1.2.2 of the DFS Exposure Control Plan).

14.5 Evidence Return

- 14.5.1 Evidence is normally returned by the originating laboratory.
- 14.5.2 All evidence associated with a submission should be returned at the same time to the submitting agency. Similarly, when evidence is transferred to another laboratory, all evidence associated with a submission should be transferred at the same time back to the originating laboratory.
- 14.5.3 It is preferred that evidence be returned directly to the submitting agency. If the submitting agency requires return of evidence via mail and if a single laboratory works the entire case, it will return the evidence even if the evidence did not originate in that laboratory.
- 14.5.4 Original RFLEs shall be returned to the originating laboratory. Original RFLEs should bear the original signatures of the submitting and receiving officer(s) when possible.
- 14.5.5 Personnel returning evidence by hand to hand transfer to an officer will:
- relinquish evidence custody by signing and dating the appropriate relinquishment spaces on the original RFLE, when available,
 - request the receiving officer accept evidence custody by signing and dating the appropriate receipt spaces on the RFLE,
 - give the evidence and a copy of the RFLE to the receiving officer,
 - retain the original RFLE for the file, and
 - relinquish evidence custody in LIMS.
- 14.5.6 Personnel returning evidence by carrier service will:
- relinquish evidence custody by signing and dating the appropriate relinquishment spaces on the original corresponding RFLE,
 - note the method of return, service tracking number, and return date on the RFLE,
 - retain the original RFLE for the file,
 - place the evidence, a copy of the original mailing package, and a copy of the RFLE in a mailing package,
 - seal the mailing package,
 - relinquish evidence custody in LIMS,
 - send the mailing package and contents to the submitting agency, with a request to the carrier service for a delivery receipt, and
 - ensure placement of the delivery receipt, when received, with the case file.
- 14.5.7 Personnel returning evidence by hand to hand transfer to the Medical Examiner's Office may relinquish evidence using the procedure listed in ¶ 14.5.5 or via the following batch transfer process:
- relinquish evidence custody by signing and dating the appropriate relinquishment spaces on the original LIMS batch transfer form,
 - request the receiving individual accept evidence custody by signing and dating the appropriate receipt space on the batch transfer form,
 - give the evidence and a copy of the batch transfer form to the receiving individual,
 - retain the original batch transfer form, and
 - place a copy of the LIMS batch transfer form, noting the file location of the original, in each file listed on the form.
- 14.5.8 When received, a delivery receipt from the carrier service will be placed in the appropriate file. If the mailing package contained evidence that was assigned to multiple files, copies of the receipt will be placed in each of the associated files.

- 14.5.9 When evidence is returned by a laboratory other than the originating laboratory, the original RFLE will be used to document relinquishment of evidence custody. The return method will be documented on the original RFLE, and the form will be returned to the originating laboratory.

14.6 Evidence Labeling and Descriptions

- 14.6.1 All marks placed on containers by submitting agencies should remain visible.
- 14.6.2 The DFS staff member who initially opens containers of evidence shall mark the containers with the item number(s) of their contents. Markings placed on containers by non-DFS staff members do not fulfill this requirement of documenting an inventory of the container.
- 14.6.3 Personnel accepting custody of evidence must contemporaneously place their initials and the date on any containers (or container-less items) accepted. If the receiving staff member's initials already appear on the container, they may add only the new date proximate to their previous initials and date.
- 14.6.4 Personnel examining/processing items of evidence shall mark each item (including any packaging associated with the item) for identification by placing their initials, the FS Lab #, and the item number on each item. If the evidence does not lend itself to marking (e.g., too small to mark or marking may alter its evidentiary value for forensic examination), its proximal container or identifying tag shall be marked as above.
- 14.6.5 Descriptions of evidence in LIMS shall be consistent with the submitting agency's description on the RFLE (¶15, "Records and Case Files) unless a specific allowance is made in the respective section's Technical Procedures Manual.
- 14.6.6 Item descriptions shall be identical in all reports within a single case file.
- 14.6.7 When an item does not conform to the description provided, the laboratory shall consult the customer and record the discussion on the RFLE, on a MFR stored within the case file, in the object repository, or in the communication log in the LIMS.
- 14.6.7.1 Customer consultation and receipt of further instructions is required before proceeding with analysis when there is a significant difference between the item submitted for testing and the description provided by the customer. Examples include:

RFLE Description	Submitted Evidence
Item 1 Gun	Item 1 Blood vial
Item 2 Jacket	Item 2 Jeans
Item 3 Plant material	Item 3 White oblong pills
Item 4 Evidence from X.X. Smith	Item 4 Evidence from X.X. Jones
Item 4 Latent lift from window	Item 5 Latent lift from door
Item 1 Twelve plastic bags with powder	Item 1 Ten plastic bags with powder

- 14.6.8 Occasionally, the original container may be compromised or can not accommodate either the original evidence and/or any items/sub-items associated with the analysis. The original container, the evidence and any items/sub-items will be placed in a container provided by the laboratory. Whenever possible, the provided container should be transparent.
- 14.6.8.1 This new outer container shall be properly sealed and marked with the FS Lab #, original container number and examiner initials. The markings of the original container should remain visible whenever possible.
- 14.6.8.2 The reason for and a description of the repackaging shall be recorded in the case notes.

14.7 Evidence Seals

- 14.7.1 All evidence shall be sealed on receipt, while in long term storage, during transfer between laboratories, and for return to the submitting agency.
- 14.7.1.1 For hand to hand transfers within a laboratory, the evidence need only be closed to prevent loss or contamination. The original packaging or a convenience package (§ 14.8) may be used for transferring the evidence. If the receiving individual does not examine the evidence within a reasonable time, sealing is required based on the definition of long-term storage.
- 14.7.2 An acceptable seal is one that prevents ready escape of the evidence and will be clearly damaged or altered if broken to permit entry. Acceptable seals include:
- original manufacturer’s closures that meet the definition of “acceptable seal” above,
 - heat seals,
 - closures made with tamper-resistant tape,
 - certain closures made with adhesives, e.g., gummed envelopes, and
 - any other types of seal that clearly meets the definition above.
- 14.7.3 Personnel sealing evidence must place their initials or mark on, across or under the seal.
- 14.7.4 Personnel receiving unacceptably closed and/or sealed evidence containers from submitting officers will close and/or upgrade the seal. A piece of Department evidence tape shall be placed perpendicularly across the unacceptable seal once the container is closed, and shall be appropriately initialed. When this occurs, the receiving personnel shall document the action on the RFLE by writing “seal upgraded” next to the container number/description on the RFLE.
- 14.7.5 Evidence not suitable for sealing will be handled as appropriate for the examination(s) requested.
- 14.7.6 Evidence submitted for Instrument Support need not be sealed if the transfer is hand to hand within a DFS laboratory (§ 14.11.3.1).

14.8 Convenience Packages

- 14.8.1 A convenience package is one used to facilitate storage and/or transfer of sealed containers or items, but is not part of the chain of custody, therefore will not be marked with chain of custody information. A convenience package may also be used to submit unsealed evidence for Instrument Support if the transfer is hand to hand within a DFS laboratory.
- 14.8.2 Convenience packages will not be sealed as evidence (§ 14.7), but may be closed using tape/staples.
- 14.8.3 Convenience packages will be labeled or marked with the phrase "Convenience Package". The FS Lab # will be placed on the convenience package.
- 14.8.4 Only sealed containers and/or items will be placed in convenience packages, except for intra-laboratory Instrument Support transfers.

14.9 Evidence Storage

- 14.9.1 Evidence must be stored in a manner that prevents loss, contamination, degradation, damage, and that maintains custody of the evidence.
- 14.9.1.1 Long term storage is used when evidence is pending analysis, waiting for return to the agency, waiting for other requested examinations to be completed, or where the examination process has been temporarily halted/delayed, such as when an employee goes on vacation, or is waiting for additional evidence. Evidence in long term storage must be properly sealed per § 14.7.

- 14.9.1.2 Short term storage is used when evidence is in the process of examination or is waiting for instrumental support results. The length of time evidence may remain in short term storage will be in accordance with appropriate section policy.
- 14.9.2 Evidence must be stored in an evidence locker, evidence storage room, or evidence storage area.
- 14.9.2.1 Large and/or cumbersome items may be stored in a limited access area, if it is impossible or inconvenient to store them in an evidence storage room or evidence locker.
- 14.9.2.2 Areas in evidence storage rooms used for personal custody should be clearly marked.
- 14.9.3 Evidence storage spaces must be maintained in a neat, orderly condition.
- 14.9.4 Access to laboratory and Section lockers/evidence rooms/areas is to be limited to designated personnel as defined by the Laboratory Director. Designated personnel are authorized to receive, store, transfer and return evidence.
- 14.9.5 In the event that a Laboratory Director or designee must enter an examiner's evidence locker, a MFR will be completed summarizing the circumstances under which the evidence locker was entered.
- 14.9.5.1 Distribution of the MFR will be as follows:
- the original will be maintained in the case file,
 - a copy may be maintained by the Laboratory Director or designee, and
 - a copy may be provided to the examiner.
- 14.9.5.2 If evidence is removed from the locker the LIMS administrator will be notified via "FA Data Corrections" to make the appropriate edits to the electronic chain of custody as per ¶ 14.1.4.

14.10 Evidence Handling Practices

- 14.10.1 When there is doubt as to the suitability of an item for testing or the test required is not specified in sufficient detail or at all, the laboratory shall consult the customer for further instructions before proceeding and shall record the discussion on the RFLE or on a MFR stored within the case file, in the object repository or communication log in the LIMS.
- 14.10.2 Evidence must be handled in a manner that prevents loss, contamination, degradation and damage during storage, handling and preparation.
- 14.10.3 Evidence must be handled in a manner that maintains its security at all times. Evidence that will be unattended for a short time such as during an examiner's lunch or bathroom break will be maintained in a limited access area.
- 14.10.4 When evidence has to be stored or conditioned under specified environmental conditions, these conditions shall be maintained, monitored and recorded.
- 14.10.5 Examiners shall make every reasonable effort to maintain representative, unaltered portions of evidence for return to the submitting agency. In some instances, such as in the analyses for accelerants or DNA, the only remaining sample to be returned may be the extracted portion.
- 14.10.6 When evidence, (e.g., bloody fingerprints, latent prints and impressions), can only be recorded or collected by photography and the image itself is not recoverable, the photograph or negative or digital media containing the image shall be treated as evidence. This requires that the evidence is added to the RFLE and is tracked in LIMS.

- 14.10.7 Money reported as an item or part of an item on an RFLE, and valued at, or in excess of, \$50 US, will be opened at the time of examination in the presence of a second examiner or a FLS. Both staff members will count the money and document the amount in the case notes. This may be accomplished by the second staff member writing and initialing the word “verified” near that part of the first examiner's notes describing the money. Money not listed on the RFLE but discovered during opening of evidence will be accounted for in the same manner.
- 14.10.8 Evidence shall be replaced in its original container when possible. (see ¶ 14.6.8)
- 14.10.9 Evidence shall be returned in a timely manner to the Evidence Receiving Section, or Primary Examiner, as appropriate, after completion of the associated report.

14.11 Evidence Handling Practices for Instrument Support

- 14.11.1 The *Instrument Support Request and Report* (ISRR) form is used for instrument support requests and serves as an internal report (¶ 24.2.19). This will be stored in the case file.
- 14.11.2 Evidence Transfer to another DFS laboratory
- 14.11.2.1 The evidence being transferred will be sealed and labeled (¶¶ 14.4, 14.6 & 14.7)
- 14.11.2.2 If the evidence being transferred is an item containing liquid biological material, it will be placed in a safety package. A safety package is a plastic bag **closed** with heat or tape in order to contain possible leakage and minimize any potential staff exposure to biohazardous material.
- The item within the safety bag will be sealed in accordance with ¶ 14.7.
 - The safety package will be labeled with the FS Lab #, item number, “Biohazard” label and initials of staff handling the package.
 - After return to the originating laboratory, the safety package will be retained with the evidence.
- 14.11.2.3 The evidence will be transferred and returned in LIMS (or using the Evidence Transfer form, if LIMS is unavailable).
- 14.11.2.4 An ISRR form will accompany the sample.
- 14.11.3 Evidence Transfer within a DFS laboratory
- 14.11.3.1 An ISRR form will accompany the sample.
- 14.11.3.2 Hand to hand transfer.
- 14.11.3.2.1 The evidence will be labeled (¶ 14.6.6).
- 14.11.3.2.2 The samples will be transferred and returned using LIMS.
- 14.11.3.2.3 The evidence need only be closed to prevent loss or contamination. The original packaging or a convenience package (¶ 14.8) may be used for transferring the evidence. If the receiving individual does not examine the evidence within a reasonable time, sealing is required based on the definition of long-term storage.
- 14.11.3.3 Transfer via an Evidence Storage Room.
- 14.11.3.3.1 The evidence will be sealed and labeled (¶¶ 14.4, 14.6 & 14.7).
- 14.11.3.3.2 The evidence will be transferred and returned using LIMS.

14.12 Transfer of Submissions to/from Other Agencies

- 14.12.1 The Department sometimes receives submissions that, all or in part, may be more appropriately tested by other agencies as listed in ¶ 6, Service to Customer, particularly the Commonwealth's Division of Consolidated Laboratory Services (DCLS). Such evidence will be handled in the same manner as other evidence except as noted below.
- 14.12.1.1 An employee who identifies evidence that should be transferred to another agency shall notify their supervisor, Program Manager, or Laboratory Director, as necessary.
- 14.12.1.2 If it is decided, after any necessary discussion with the other testing agency, that the evidence will be transferred to that testing agency, the originating laboratory, as necessary, will be notified of the decision. The originating laboratory will notify the submitting agency of the transfer by preparing and sending a letter, similar to that in [Appendix E](#) with a copy to the testing agency and to the file.
- 14.12.1.3 The evidence will be transferred to an authorized representative of the other testing agency with appropriate custody relinquishment and receipt documentation. The evidence will be accompanied by at least one copy of the RFLE, or Evidence Transfer form, as necessary. The RFLE may be omitted if the evidence is accompanied by a transmittal letter describing the requested examinations.
- 14.12.1.4 If/when the evidence is transferred back from the other testing agency, it shall also be with appropriate custody relinquishment and receipt documentation.

14.13 Evidence Handling Practices for Toxicology

- 14.13.1 Evidence in the process of examination (from initial sampling until completion of exams and release of the CoA) may be maintained in a designated, locked "in-process refrigerator/freezer/location". Access shall be limited to personnel designated by the Laboratory Director. Containers/items shall be secured to prevent loss or contamination. Containers/items shall be re-sealed upon case completion and retained in secure storage until transferred out of the Section.
- 14.13.1.1 DUI/DUID vials and blood samples shall be destroyed after completion of the analyses in accordance with statutory time frames for storage, unless a notice of a motion, a motion, or an order to transmit the remainder of the sample to an independent laboratory is received (§ 18.2-268.7).
- 14.13.2 Evidence custody for the receipt into the Section and placement into administrative storage shall be documented in accordance with ¶ 14.3 and ¶ 14.4. Evidence custody for accessioning and sampling of items/sub-items shall be documented on exam work sheets with the FS Lab #, item/sub-item designation, date and analyst's signature. Return of evidence to the Evidence Receiving Section or submitting agency shall be in accordance with ¶ 14.4 and ¶ 14.5.
- 14.13.3 Additional handling procedures for toxicological evidence are outlined in the section's operational procedures.

14.14 Long Term Storage of Human Biological Evidence

Evidence submitted for this purpose must be retained in accordance with § 19.2-270.4:1. All such submissions must be accompanied by a court order. A separate area may be set aside in each regional laboratory's main evidence vault for holding these submissions.

14.14.1 Policy

- 14.14.1.1 The following tasks should be performed at the time of submission:

- 14.14.1.1.1 Use the submitting agency as usual, but the primary section will be Evidence Receiving Section staff (SE code in LIMS).
 - 14.14.1.1.2 Input the submitting and investigating officers, the Agency case number(s) and the offense description.
 - 14.14.1.1.3 In the court field, enter the court ordering the storage.
 - 14.14.1.1.4 For requested exam use **ST** (Human Biological Evidence Storage). For the “Submission Type”, select Human Biological Storage and for the exam type on the RFLE assign ST.
 - 14.14.1.1.5 Input the convicted felon into the suspect field.
 - 14.14.1.1.6 On the evidence screen, create new container numbers starting with the next sequential number allowed by LIMS, even if there are already container barcode labels on the evidence. **Do not resubmit any containers.**
 - 14.14.1.1.7 Ensure that the container descriptions are detailed to assist in evidence location in the future.
 - 14.14.1.1.8 Generate barcode labels and place them on the correct container(s). If a previous barcode label is present, place a single strike through it and initial in such a manner as to leave the original information legible.
 - 14.14.1.1.9 Mark the item number(s) on the container(s) using the item numbers indicated on the RFLE,
 - 14.14.1.1.10 Mark container numbers on the original RFLE so that each item can be associated with its container. The submitting agency should have a correct inventory of the evidence and an accurate listing of which items are in which containers.
 - 14.14.1.1.10.1 Although a complete inventory will not be conducted by DFS, DFS will ensure that the number of containers matches the RFLE and will either observe an inventory conducted by the agency or will get assurance from the agency that an inventory has been conducted.
 - 14.14.1.1.11 When transferring by lock box, select the code ST (Human Biological Evidence Storage) for transfer reason.
 - 14.14.1.1.12 Attach a copy of the RFLE to at least one container and mark each container appropriately, the same as for other evidence. A copy of the court order will be forwarded with the evidence.
 - 14.14.1.1.13 The original RFLE and court order shall be placed in the original case file.
- 14.14.1.2 Laboratory personnel will:
- 14.14.1.2.1 Forward the original RFLE and a copy of the court order to the appropriate Laboratory Administration Section for filing.
 - 14.14.1.2.2 Forward a copy of the RFLE and court order to the Department Counsel and the Forensic Evidence Program Manager.

- 14.14.1.2.3 Place all containers, if necessary, in the appropriate size box (convenience package) for storage.
- 14.14.1.2.4 Attach a copy of the court order and RFLE to a container unless the container(s) is (are) placed into a convenience package. In that situation, attach a copy of the court order and RFLE to the outside of the convenience package and mark the FS Lab # on the outside so it is easily seen.
- 14.14.1.2.5 Place the evidence in the long term storage area and enter the appropriate shelf location into LIMS.

14.15 Evidence Inventory

14.15.1 Purpose

Periodic inventories should be performed to ensure that evidence is properly managed. The Department's LIMS includes an automated evidence tracking system and is designed to provide printouts of inventories of evidence by location and in whose custody the evidence resides.

14.15.2 Responsibilities

- 14.15.2.1 Forensic Evidence Specialist Supervisors are responsible for the accuracy of the evidence inventories for their laboratories' main evidence vaults.
- 14.15.2.2 Supervisors are responsible for the accuracy of their sections' administrative evidence inventories.
- 14.15.2.3 Examiners having personal custody of evidence are responsible for the accuracy of their evidence inventories.
- 14.15.2.4 The LIMS Coordinator, when notified that a correction must be made to the LIMS record of the chain of custody, is responsible for making the correction to the LIMS in a timely manner.

14.15.3 Physical Evidence Inventories

- 14.15.3.1 Each laboratory will conduct an inventory of all its physical evidence semi-annually, during the months of January and July. The specific date(s) within those months will be specified by the respective Laboratory Director.
- 14.15.3.2 The physical inventory of evidence will include accounting for not only FS Lab #s and their included containers but also for items, if items have been separated or a container is open.
- 14.15.3.3 Each laboratory's main evidence vault, its sections' administrative evidence storage areas, and all evidence in the personal custody of examiners will be inventoried.
- 14.15.3.4 All physical inventories will be checked against the LIMS-generated custody lists of evidence and annotated. Any containers or items located but not listed on the LIMS-generated custody list will be added.
- 14.15.3.5 Documentation of Inventory Completion
 - 14.15.3.5.1 Forensic Evidence Specialist Supervisors and Section Supervisors will document the completion of their respective inventories in MFRs with copies of the annotated LIMS-generated lists attached. The MFR will also indicate that all inconsistencies were resolved.

14.15.3.5.2 Examiners who have evidence in their personal custody will forward their annotated LIMS-generated lists to their Section Supervisor who will include them in the section's MFR.

14.15.3.5.3 Memorandums will be forwarded to the Laboratory Director. These memorandums documenting completed inventories will be maintained in the laboratory's administrative section or electronically on the secure DFS server.

14.15.3.6 All personnel will, on a continuous basis, review and research LIMS listings of "Complete" cases that are questionable based on age, location, etc.

14.15.3.7 Inventories made more frequently than semi-annually are encouraged but need not be documented.

14.15.4 Resolution of Inconsistencies

Inconsistencies will be resolved as soon as practicable after detection by the individuals concerned and generally prior to further custody transactions by measures including but not limited to:

- Case file documentation to correspond with the LIMS records,
- LIMS corrections by a LIMS Coordinator to correspond with the correct case file records, or
- LIMS comments to clarify the inconsistency.

15 RECORDS AND CASE FILES

15.1 Records

- 15.1.1 Records include quality records and case files. Policies and practices for the identification, collection, organization, accessibility, filing, storage, maintenance and disposal of technical records are defined below. Policies and practices for quality records are defined in their corresponding sections in the QM.
- 15.1.1.1 Quality records include but are not limited to audit reports (§ 12), management reviews (§ 13), and corrective actions (§ 10), preventive actions (§ 11), and reagent (§ 8) and equipment performance verifications and maintenance (§ 21).
- 15.1.2 All DFS records will be legible and readily retrievable from storage in each of the DFS facilities. Retention times for records will be as defined in The Library of Virginia Specific Schedule Number 778-001 or as defined in QS documents.
- 15.1.3 DFS personnel who are making corrections, additions or deletions to information contained in records shall perform them in accordance with § 15.9.4.
- 15.1.4 Breath Alcohol Calibration records are addressed in § 18, Certifications (Calibration).

15.2 Case File Creation

A file will be created for all submissions of physical evidence related to one criminal event that has been uniquely identified by a submitting agency when received into the Department. The case file will be assigned a unique FS Lab # and includes the corresponding case in LIMS.

15.3 Assignment of Forensic Science Laboratory Numbers

- 15.3.1 A LIMS generated FS Lab # will be assigned upon receipt of the first RFLE. The laboratory assigning the number is designated the originating laboratory.
- 15.3.2 Only one FS Lab # will be assigned to the same criminal event in a single jurisdiction regardless of the number of submitting agencies, suspects or victims.
- 15.3.3 Submissions involving criminal events committed by a suspect in more than one jurisdiction will be assigned a unique FS Lab # for each criminal event.
- 15.3.4 Any subsequent submission(s) will be assigned the same FS Lab # as the original submission.
- 15.3.5 An assigned FS Lab # will be retained throughout the life of the case file, unless changed by mutual consent of the Director(s) of the laboratory(ies) involved. This change will be fully documented in the case file(s).
- 15.3.6 FS Lab #s will be formatted as follows:

LYY-# (Example: C01-12345), where:

L is the laboratory designator,

C = Central
N = Northern
T = Eastern
W = Western

YY are the last two digits of the calendar year

is the number assigned by LIMS, consecutively beginning with the first case submitted in the calendar year. (There will be no leading zeros.)

- 15.3.7 When LIMS is down, temporary log numbers will be used.
- 15.3.7.1 A logbook of all Temporary D numbers will be kept by the Evidence Receiving Section. The next system-down occurrence will use the next sequential D number.
- 15.3.7.2 Until the system is back on line, the evidence will be marked with the Temporary D number and held by Evidence Receiving.
- 15.3.7.3 A copy of the RFLE bearing the Temporary D number is to be given to the submitting officer with an explanation that a copy of the RFLE with the FS Lab # will be mailed to him/her once the system is back on-line.
- 15.3.7.4 When the system comes back on-line, cases assigned a Temporary D number will be received into the system and assigned an FS Lab #. Barcode labels will be generated and placed beside the Temporary D number on the RFLE and the evidence.
- 15.3.7.5 The FS Lab # will be recorded beside its corresponding Temporary D number in the logbook.
- 15.3.7.6 A copy of the RFLE showing both numbers will be mailed to the submitting officer.
- 15.3.7.7 Format for Temporary D Numbers when LIMS is down:

DLYY-#, where:

D is the designator for system down

L is the laboratory designator, C, N, T or W

YY are the last two digits of the calendar year

is the temporary number assigned consecutively beginning with the first temporary number assigned in the calendar year. (There will be no leading zeros.)

Example: DC22-8

15.4 Assignment of Item Numbers

- 15.4.1 The Department prefers consecutive numerical designations and recommends the same to its customers. Examiners will maintain the same item number designation used by the submitter whenever possible. If the examiner's item number must be different from the submitter's item number, the examiner will reference the customer's designation when listing evidence on the CoA or reflect the examiner's item number on the original RFLE and the copy of the RFLE returned to the submitter.
- 15.4.2 Item and sub-item numbers shall be unique. Identification of an (sub-) item, which includes the FS Lab # and description of the item, shall be retained throughout the life of the item in the laboratory so as to ensure that (sub-) items cannot be confused physically or when referred to in records or other documents.
- 15.4.3 Sub-items
- A sub-item shall be created when a part, portion or component of an item requires individual transfer or when it must be uniquely described for clarity.
- 15.4.3.1 If sub-items are created for instrument support purposes the RFLE does not need to be updated.

- 15.4.3.2 If an item with multiple components is listed on the RFLE (e.g., Item 1 is a plastic bag with plant material and a pipe), the components may be separated into sub-items 1A and 1B for reporting, but the RFLE would not need to be updated and the chain of custody of the parent item encompasses the chain of custody of the sub-items.
- 15.4.3.3 The chain of custody for DNA extracts, Controlled Substances residue extracts and Fire Debris/Explosives extracts that will be returned with the evidence will be documented in the examination documentation.
- 15.4.3.4 Items created in the laboratory (e.g., digital media, test fires) shall be separated into sub-items and the LIMS, RFLE and any other chain of custody documents shall be updated to reflect the creation of the sub-items.
 - 15.4.3.4.1 For items created in the laboratory, the official chain of custody for the item’s creation will be documented in the examination documentation.
- 15.4.3.5 Items which are sub-itemized for clarity in examination documentation and are reported on a Certificate of Analysis do not need to be added to the RFLE (e.g, blood stains collected from the original item, a random sampling of drug packages is sub-itemized to distinguish those tested from non-tested, trace evidence recovered from a shirt).
- 15.4.3.6 Sub-item designations will be generated by using an alternating alphanumeric sequence not separated by any space, hyphen, comma, or any other symbol. The original item number will determine the sequence used.
- 15.4.3.7 In reporting or referencing a sub-item, simply refer to it as an "item".
- 15.4.3.8 Formatting Schemes

<u>Customer's Designation</u>	<u>Sub-item Designation</u>
Item 1	Item 1A
Item 23	Item 23A
Item AB	Item AB1
Item 2B	Item 2B1
Item AB31	Item AB31A
Item 1-A-2	Item 1-A-2A

- 15.4.3.9 Examples of sub-items:
 - The submitter submits a shirt identified as Item 8. The fibers removed from the shirt and transferred to another examiner become Item 8A. The blood removed from the shirt and transferred to another laboratory becomes Item 8B.
 - The RFLE lists a bag of clothing as Item 1A. The contents of the bag are a shirt (Item 1A1), a pair of pants (Item 1A2), and a pair of underwear (Item 1A3). The paint removed from the pants is sent to another examiner and designated Item 1A2A.

15.5 Evidence Item Descriptions

- 15.5.1 Descriptions of evidence in LIMS and on the CoA shall be consistent with the submitting agency’s description on the RFLE. Alterations may be made if the description is too long, incorrect, or needs clarification.

15.7 Case Files

Contents of case files can be classified as administrative documentation or technical records. The total documentation constitutes the case file. Except as provided in ¶15.7.1, each file will include at least one RFLE. All documentation related to this and subsequent submissions will be stored in the case file. The case file will be uniquely identified by the FS Lab # assigned to the first RFLE. Documentation reflecting communication with customers will also be stored in case files or in the object repository or communication log in the LIMS. This includes requested changes to documented sampling procedures.

15.7.1 DUI/DUID files (pursuant to §§ [18.2-268.6](#) and [18.2-268.7](#)) need not contain an RFLE if none was included with the submission.

15.8 Administrative Documentation

Administrative documentation includes copies of RFLEs, internal chain of custody documents, copies of court orders, notes and Memorandums for Record of case-related conversations, subpoenas (testimony subpoenas optional), records of discovery, and other pertinent information which are related to the case file but do not necessarily support the conclusions drawn. Administrative documentation must be labeled with at least the FS Lab #. Multi-paged administrative documents which are bound together, in some manner, may be identified on the front page of the document.

Some chain of custody documentation may be recorded on examination documentation worksheets and will be labeled in accordance with ¶ 15.9.1.

15.9 Examination Documentation

Examination documentation includes tests conducted, standards and controls used, diagrams, printouts, photographs, spectra, chromatograms, observations, hand written notes and other material used by the examiner to reach a conclusion. Examination documentation must contain sufficient detail to allow another examiner, in the absence of the initial examiner, to evaluate the data and interpret the data that was the basis for the conclusion. The records shall include the identity of personnel responsible for the sampling, performance of each test and/or calibration and checking of results.

15.9.1 Unless excepted below, each page of examination documentation will be labeled with the FS Lab # and the issuing examiner's original initials. The issuing examiner shall review and initial each page of examination documentation prepared by another individual(s). For examination documentation stored in the appropriate object repository that is prepared and will remain electronic, the secure electronic signature or equivalent and FS Lab # need only be placed on the first page. Examination documentation shall reflect, at a minimum, the starting date of examination. The examination documentation should be sufficiently complete to ascertain when specific sampling or testing was performed or critical observations were recorded.

15.9.1.1 The FS Lab # and date may be machine generated, but the initials must be handwritten. Digital signatures are only required on the first page of electronic examination documentation stored in the appropriate object repository. If the examination documentation is solely maintained electronically, the check-in/check-out Case Notes functionality suffices for the examiner's original initials/digital signature.

15.9.1.2 When examination documentation is prepared by an individual other than the issuing examiner, the handwritten initials or secure electronic equivalent (for solely electronic documentation) of any such individual(s) shall be on the page(s) of examination documentation representing their work.

15.9.1.3 Non-issuing examiners, who testify to the results of another examiner, shall document their review of all relevant pages of examination documentation in a MFR which will be stored in the case file.

- 15.9.2 All examination documentation will be restricted to one side of a sheet of paper only, except for AFIS ten print cards which are automatically generated as double sided records. These shall be labeled with the FS Lab # and handwritten initials on both sides of the page.
- 15.9.3 All handwritten notes will be of a permanent nature (e.g., in ink or permanent colored pencil).
- 15.9.4 When handwritten corrections are necessary, the text shall be crossed out, not erased, made illegible or obliterated. The new text shall be entered alongside. Changes, alterations and additional notations, including interlineations shall be initialed by the person making the change. Noncontemporaneous changes, alterations and additional notations, including interlineations shall also be dated by the person making the change. In limited instances, redaction of text is legally necessary/required. These redactions shall be initialed and dated by the person making the redaction.
- 15.9.4.1 If a section maintains electronic examination documentation, the check-in/check-out Case Notes functionality of the appropriate LIMS Case Record's Object Repository shall be utilized to track amendments once uploaded into the Object Repository (also see 5.3.1).
- 15.9.5 All material smaller than 8 ½" x 11" must be securely affixed to an 8 ½" x 11" sheet of paper or placed in an envelope marked with the FS Lab # and examiner's initials. The envelope must be no smaller than 6" x 9" and no larger than 10" x 13".
- 15.9.6 Nonstandard procedures must be described in sufficient detail to allow another forensic scientist to review and, if necessary, to repeat the procedure. Appropriate literature references should be included when available.
- 15.9.7 Verifications (independent checks) of critical findings and/or associations such as, but not limited to, verification of latent print identifications, as defined in the section's procedures, are considered a part of the examination record and must be documented. The documentation shall include what was checked, that there was agreement, who performed the check and when the check was performed.
- 15.9.7.1 Verifications shall be performed by another scientific staff member qualified in the same (sub-) discipline.
- 15.9.7.2 On occasion, there can be initial disparities between conclusions drawn by qualified examiners in the verification process. The first step towards achieving a unified scientific conclusion should be a discussion between the examiner and verifier/reviewer. In this discussion, each party should provide details supporting the basis of their conclusions. If consensus can not be achieved, the supervisor should be consulted. The program manager can be contacted to coordinate further technical discussions between examiners in other laboratories, if necessary. An inconclusive result should be reported in the rare instance where scientific consensus can not be achieved.
- 15.9.8 Notes shall be made contemporaneously with the examinations they document.
- 15.9.8.1 Notes shall be identifiable to the specific task and will include descriptions of containers, items, other packaging, condition of the items and condition of seals.
- 15.9.8.2 Examination documentation shall be such that another qualified examiner could repeat the test or calibration under conditions as close as possible to the original, including identification of factors affecting the uncertainty.
- 15.9.8.3 Examination documentation shall include or reference the sampling procedure used, an unambiguous identification of the item sampled, any relevant environmental conditions, diagrams or other equivalent means to identify the sampling location as necessary and, if appropriate, the statistical basis for the sampling procedures.

- 15.9.8.4 When no definitive conclusions can be reached (e.g., results are “inconclusive”), the reason shall be clearly documented in the case record.
- 15.9.9 The records of each test and/or calibration shall contain estimates of the uncertainty associated with reported measurements, where appropriate.
- 15.9.10 If modification of a previously reported conclusion is necessary due to subsequent testing, reconsideration of test results or new information, the basis for an amended conclusion shall be noted in new examination documentation. The original notes will not be altered.
- 15.9.11 Digital Images
- 15.9.11.1 When digital images are utilized in the process of formulating a scientific conclusion (e.g., Latent Prints or Impressions comparison examinations), they will be stored and retained with the case file according to the pertinent Procedures Manual.
- 15.9.11.2 When digital images are utilized to document the condition of evidence (e.g., Forensic Biology) or characteristics observed (e.g., Firearms and Toolmarks images documenting comparison conclusion), they shall be retained in the case file in printed form and/or on digital media.
- 15.9.11.2.1 Only images which best represent the item(s) or area(s) of interest must be retained.
- 15.9.11.2.2 If possible, the FS Lab # and Item #(s) will be visible in the image. If this is not possible, the information shall be added to the file name and/or documented on the printed copy.
- 15.9.11.2.3 Electronic copies of images (not to include SEM-EDS images) shall not be retained outside the case file, except when done so for training purposes.
- 15.9.11.2.3.1 When an image is retained for training purposes, the FS Lab # shall not appear in/shall be redacted from the image and file name.
- 15.9.12 Records for analyses run in batch mode, e.g., alcohol or ELISA analyses, may be more appropriately retained for the batch in a single file. Section Technical Procedures Manuals will specify the procedures to be used, if this is an option, to assure that the information is referenced in the examination documentation.
- 15.9.12.1 The unique identifier for which data was generated shall be appropriately recorded on the printout when data from multiple cases is recorded on a single printout.
- 15.9.13 All test results supporting examination documentation must be recorded in such a manner that results are traceable to known standards (see ¶ 8.3.3).
- 15.9.14 When instrumental analyses are conducted, operating parameters shall be recorded pursuant to directions specified in the technical procedures.

15.10 Case File Administration: Storage and Disposition of Case Files

- 15.10.1 Case files will be retained and disposed of according to The Library of Virginia Specific Schedule Number 778-001, series number 100267, Forensic Case Files.
- 15.10.2 In brief, files will be retained locally approximately five years, then transferred to the State Records Center (SRC). Total file retention is established to be 75 years.

- 15.10.3 The Department Director shall designate an individual to be responsible for the storage of case files in, and retrieval from, The Library of Virginia and will establish the Department's procedures for storage and retrieval. Case files shall only be transferred within the agency in a blue Inter-Department Delivery envelope or with one attached to the box if the case file(s) is too large to be contained in a blue envelope.
- 15.10.4 Each laboratory will develop a written policy for local control of case file access, distribution, and return, and the associated documentation.
- 15.10.5 Case files checked out from the SRC shall be requested by the employee and tracked using the Qualtrax Archive File Order Workflow.
- 15.10.6 Case files from the SRC will be returned expeditiously and should not remain in circulation unless there is an exigent need.

15.11 Expungement of Records

- 15.11.1 Federal and State statutes require expungement of criminal records under certain conditions. The Department of State Police directs expungements of adult records (§ 19.2-392.2). Juvenile and Domestic Relations Courts direct expungements of juvenile records (§ 16.1-306).
- 15.11.2 The Department's Counsel will assure that the directed expungements are carried out in a timely manner.

15.12 Release of Information

15.12.1 General

- 15.12.1.1 The Department receives numerous requests from defense attorneys and other individuals for information contained in its files, ranging from requests under § 9.1-1104, the Freedom of Information Act, to Discovery Motions and Court Orders.
- 15.12.1.2 All Requests for Information from the Department must be in writing or documented in a Memorandum for Record. The requests must be specific as to the information desired.
- 15.12.1.3 Only the Department Director, the Chief Deputy Director, the Deputy Director, the DTS, the Laboratory Directors, the Department Counsel, the Toxicology Program Manager, and the Breath Alcohol Section Supervisor are authorized to consent to the release of information in the Department's files. For the Toxicology Program Manager and the Breath Alcohol Section Supervisor, this applies to Breath Alcohol records only.
- 15.12.1.4 A copy of each response to an information request will be placed in an appropriate case file or administrative file.

15.12.2 Review of Current Law in the Code of Virginia covering the Release of Department Information

15.12.2.1 Freedom of Information Act (FOIA):

Requests for records, unless covered specifically in other sections of the Code of Virginia (COV), fall under the purview of the Freedom of Information Act (FOIA). Every attempt must be made to answer FOIA requests within five days of receipt. If it is not practically possible to provide the requested records within five days, an interim written response made within five working days stating the reasons a timely response is not possible will provide the Department with an additional seven working days in which to respond. The individual making the request does not have to cite the FOIA specifically as the basis for the request. Also, the individual is not necessarily eligible to obtain information. The following sections of the FOIA limit the Department's response:

- 15.12.2.1.1 Under § 2.2-3704(A) of the Virginia FOIA, access to records is limited to “citizens of the Commonwealth, representatives of newspapers and magazines with circulation in the Commonwealth, and representatives of radio and television stations broadcasting in or into the Commonwealth.” Therefore, the FOIA does not necessarily mandate a response to a request from outside of the Commonwealth.
- 15.12.2.1.2 Pursuant to § 2.2-3706, certain records relating to a criminal investigation or prosecution may be excluded from or discretionarily released under the provisions of the FOIA.
- 15.12.2.1.3 § 2.2-3703(C) provides that persons incarcerated in local, state or federal correctional facilities are not afforded rights under the provisions of the FOIA.
- 15.12.2.2 Government Data Collection and Dissemination Practices Act
- § 2.2-3802(11) of the Code of Virginia states that the provisions of the Act are **not** applicable to information systems maintained by the Department.
- 15.12.2.3 Requests in accordance with §§ 9.1-1104 and 18.2-268.7
- 15.12.2.3.1 § 9.1-1104 of the Code states that the Department shall furnish, when requested by an accused person or their attorney, “the results of any investigation that has been conducted by it and that is related in any way to a crime for which the person is accused.”
- 15.12.2.3.1.1 The written request should state the name of the accused and, if known, the FS Lab #, or provide sufficient information to allow for identification of the laboratory file such as the jurisdiction and date of offense or the investigating agency’s case number.
- 15.12.2.3.1.2 If there is some question whether the named person is an “accused” or whether the requesting attorney is the attorney for the accused person, Legal will be consulted and will verify that charges are pending for the named person.
- 15.12.2.3.1.3 Requests from an attorney in any civil matter will be treated as requests under the Freedom of Information Act.
- 15.12.2.3.1.4 When the request is legitimate, the Certificate(s) of Analysis will be released to the requestor. Responses may be delivered in person, by mail, facsimile or encrypted email with appropriate documentation maintained in the case file.
- 15.12.2.3.2 § 18.2-268.7 provides that “[u]pon request of the person whose blood was analyzed, the test results shall be made available to him.”
- 15.12.2.3.2.1 The written request should include some verification as to the person’s identity (e.g., a copy of the person’s driver’s license).
- 15.12.2.4 Subpoena *duces tecum*
- 15.12.2.4.1 The subpoena *duces tecum* is covered in Rule 3A:12 of the Rules of the Supreme Court of Virginia.
- 15.12.2.4.2 § 19.2-187.2 outlines the procedure for the issuance of a subpoena *duces tecum* “for the production of writings or documents used to reach the conclusion

contained in a certificate of analysis.” It provides that if the production of such materials would place an undue burden on the Department, “the court may order that the subpoena *duces tecum* be satisfied by making the writings and documents available for inspection by the requesting party at the laboratory site where the analysis was performed or at the laboratory operated by the Department of Forensic Science which is closest to the court in which the case is pending.”

15.12.2.5 Requests for Data Bank Information

Requests for Data Bank Information shall be forwarded to the DNA Data Bank administrator and handled in accordance with § 19.2-310.5.

15.13 Court Ordered Examinations

- 15.13.1 The Department shall comply with § 19.2-188.1(B) court orders requiring the full chemical analysis of alleged plant material as specified in ¶ 15.13.7.
- 15.13.2 Any other court order mandating examinations (i.e., ordered under § 9.1-1104 or § 19.2-327.1) will be forwarded to Department Counsel (or the Department Director or Chief Deputy Director, if Counsel is unavailable) and the appropriate Laboratory Director prior to any examinations being conducted.
- 15.13.3 The Laboratory Director, after consultation with the Department Counsel or the Department Director/Chief Deputy Director, will provide the examiner proper guidelines as to the requirements of the court ordered examination. If the Department is unable to comply with the court ordered examination, Department Counsel will notify the parties and the Court and seek an amended order or further clarification from the Court.
- 15.13.4 Prior to issuance of the CoA, a copy will be sent to the Department Counsel or the Department Director/Chief Deputy Director for review to ensure the report is responsive to the court order. The Department Counsel or the Department Director/Chief Deputy Director will notify the examiner when the CoA is ready for release.
- 15.13.5 When reporting the results of a court ordered examination under § 9.1-1104, the CoA should be addressed to the Clerk of Court with a copy provided to the defense attorney of record.
- 15.13.5.1 The attorney for the Commonwealth should be provided a copy of the CoA if it is indicated in the court order, the attorney for the Commonwealth has endorsed the order, or the attorney for the Commonwealth has made a request to the Department for the results to be provided.
- 15.13.5.2 A certificate of mailing is not required for court ordered examinations under § 9.1-1104, but a cover letter (to include docket number) should be generated by the Laboratory Director forwarding the CoA to the Clerk of Court with a copy to any party receiving the CoA. The cover letter should note that the testing was conducted pursuant to the Court’s Order and include the Court’s case number.
- 15.13.5.3 A copy of the order shall be placed in the case file.
- 15.13.6 When reporting the results of post-conviction testing under § 19.2-327.1, the results are to “be furnished simultaneously to the court, the petitioner and his attorney of record and the attorney for the Commonwealth” (§ 19.2-327.1(E)).
- 15.13.6.1 A “Certificate of Mailing” ([Appendix F](#)) is to be completed by the Laboratory Director or Department Counsel for each CoA issued as a result of post-conviction testing. The original Certificate of Mailing is to be maintained in the corresponding case file.

- 15.13.6.2 The CoA shall be addressed to the Clerk of the Court (original CoA), with copies to the petitioner, the petitioner's attorney, and the attorney for the Commonwealth. A copy of the Certificate of Mailing must be included with the CoA (or copy). All post-conviction testing results are to be sent by carrier service with delivery confirmation. Confirmation of receipt of the testing results by the Clerk of the Court and the parties shall be documented in the case file by the Laboratory Director or designee.
- 15.13.6.3 A copy of the order shall be placed in the case file.
- 15.13.7 §19.2-188.1(B) Court Ordered Chemical Analysis of Alleged Plant Material (Form DC-304)
- 15.13.7.1 Orders received without the accompanying evidence (plant material) will be forwarded to Department Counsel.
- 15.13.7.2 Orders received by the Department after the issuance of a CoA associated with the evidence specified in the order shall be complied with by mailing/forwarding copies of that CoA to the defendant/attorney and clerk of court.
- 15.13.7.3 For court orders received concurrently with the evidence, the assigned Controlled Substances examiner will ensure that the appropriate analysis is conducted in compliance with the court order.
- 15.13.7.4 The CoA will be completed as outlined above and with the following additional requirements:
- 15.13.7.4.1 A copy of the CoA shall be mailed or forwarded to the defendant/attorney for defendant if a complete address is listed on the order.
- 15.13.7.4.2 A copy of the CoA shall be directed to the Clerk of the Court listed on the order.
- 15.13.7.4.3 The administrative statement in ¶ 16.2.13, bullet 1, will be entered on the CoA.
- 15.13.7.5 A copy of the order shall be placed in the case file.

15.14 Records Security

15.14.1 Policy

The Department will ensure the security, confidentiality and integrity of records, both written and electronic.

15.14.2 Case Records

15.14.2.1 It is the policy of DFS to treat case files, including all information received from the submitting agency as well as the data developed and the results reached in the examination of criminal evidence, as **confidential**. Compliance with this policy is mandatory and is considered a condition of continued employment.

15.14.2.2 Release of Case File Information

15.14.2.2.1 Employees will not verbally release the content of case files to any individual or entity that does not have the authority to possess the information. Persons with this authority are appropriate members of the staff, the agency conducting the investigation or submitting the evidence, the defense attorney representing the defendant (as noted in writing or by verbal assertion notated on a MFR in the case file), and the Commonwealth's Attorney of the jurisdiction involved. Any deviation from this guideline must have the prior approval of one of the individuals specified in ¶ 15.12.1.3.

- 15.14.2.2.2 Examination results must be reviewed for technical and administrative correctness prior to their release to any external entity.
- 15.14.2.2.3 Copies of the content of case files shall not be provided to anyone outside DFS without a written request. This request shall be forwarded to Department Counsel for review to ensure that all legal requirements are met.
- 15.14.2.3 When information from case files and records must be removed from the laboratory for purposes such as court testimony, every effort should be made to avoid loss of original documentation. This includes photocopying portions of, or the entire case file as practicable.
 - 15.14.2.3.1 Examiners shall not remove case file documentation from the laboratory for the purposes of review or data interpretation at their residence unless they are approved for telework and adhere to the below locked filebox procedure. Files in transport to/from a residence may not be left unattended in a vehicle.
 - 15.14.2.3.1.1 The Excel spreadsheet (Case file tracking sheet for approved telework) located in Qualtrax as a Tool in the QM folder will be used to check out case file records for approved teleworking examiners.
 - 15.14.2.3.1.2 The case file records will be transported in the locking boxes.
 - 15.14.2.3.1.3 The supervisor (or designee) will serve as the verifier and will check-in/check-out case file records.
 - 15.14.2.3.1.4 The FS Lab #s will be documented on the tracking sheet along with the handwritten examiner's initials, verifier's handwritten initials and date out.
 - 15.14.2.3.1.5 The case file records will be placed into the box and locked. Each box has two keys, one will be taken by the staff member and one will remain in the laboratory as designated by the Laboratory Director.
 - 15.14.2.3.1.6 When returning to the laboratory, a verifier will inventory the case file records and mark that they were returned to the laboratory and initial the tracking sheet.

15.14.3 Electronic Records and Data

- 15.14.3.1 Test/Calibration data resides on departmental instrumentation and their associated data processing systems. Testing instrumentation is located in a secure laboratory environment and accessed by authorized personnel. Breath Alcohol instrument data can only be accessed by authorized personnel.
- 15.14.3.2 Electronic records include but are not limited to LIMS, CODIS, AFIS/NGI, NIBIN, the DNA data bank, and the Breath Alcohol Database (BrAD).
- 15.14.3.3 Electronic record systems may be compartmentalized, restricting access to various levels of both operation and information, by defining security levels and/or using other means, e.g., passwords or special procedures that would restrict access to only authorized users. Therefore, the staff is not authorized to:
 - 15.14.3.3.1 Disclose one's personal access code or an access procedure to another individual.

- 15.14.3.3.2 Possess or use the personal access code or procedure of another staff member except as authorized by a Laboratory Director or the Deputy Director.
- 15.14.3.4 The Department's Information Security Officer will establish an IT Security Policy containing procedures for the security and operation of the Department's computers and associated hardware and software.

16 REPORTING TEST RESULTS

16.1 Policy

- 16.1.1 The completed Certificate of Analysis is the official Department document used to provide examiners' results to our customers (See example in [Appendix A](#)). Each examiner receiving a Request for Laboratory Examination form (RFLE) will issue a CoA, with the exception of the termination of cases as discussed in ¶ 16.4, below, or when evidence is transferred to another agency for examination.
- 16.1.1.1 For NIBIN potential associations, a Certificate of Analysis will be issued for the initial search of evidence. Notification for all potentially linked cases will be sent to the agency via email or regular mail.
- 16.1.2 The issuing examiner shall be responsible for the accuracy and completeness of the CoA in consonance with its service as a legal document acceptable as evidence in criminal proceedings in lieu of testimony under provisions of the Code of Virginia (§§ 19.2-187 and 18.2-268.7).
- 16.1.3 The results of each test or series of tests carried out by the laboratory shall be reported accurately, clearly, unambiguously and objectively. Test results shall be reported on a CoA (including supplemental and amended reports). Supporting information which is not listed on the CoA shall be readily available in the case record.
- 16.1.4 Instrument support results are reported internally on the ISRR form. Supporting information that is not listed on the ISRR shall be readily available in the case record.
- 16.1.5 Certificates of Instrument Accuracy are addressed in ¶ 18, Certifications (Calibration).

16.2 Report Writing Guidelines

- 16.2.1 The title of the report is “Certificate of Analysis” and is preprinted on the top of each page of the report (See example CoA paper in Appendix H).
- 16.2.2 Certificates of Analysis are uniquely identified by a combination of the FS Lab #, the report date, the submission date, the items tested and the examiner’s signature.
- 16.2.3 The format of the CoA is generated by LIMS including:
- The name and address of the laboratory where the work was performed
 - FS Lab #
 - Name and address of submitting officer and agency
- 16.2.4 The following supporting information shall be included in the case file and reported on the CoA:
- Identification of the method(s) used
 - Additions to, deviations, or exclusions from the methods used
 - If any of the testing was performed at another Department laboratory location, its name and address and the method used at that location
 - If any Instrument Support testing was performed by another individual, their name, the method used and Laboratory/Section, if different from their own
 - Condition of items (this includes the item description and circumstances that affect the results of testing – e.g., moldy, broken, wet, rusty, leaky)
 - Date(s) of the performance of testing/laboratory activity
 - Reference to sampling plan or procedures (for statistical sampling, this includes the confidence level and corresponding inference regarding the population)
 - Estimation of uncertainty of measurement (see ¶ 5.4.6)

- 16.2.5 The following supporting information shall be included in the case record and may be reported on the CoA:
- Condition of outer packaging
 - Information on specific test or sampling conditions, such as environmental conditions (when necessary for the interpretation of results, on CoA)
 - The date of sampling, identification of the item sampled, and location of sampling (including any diagrams, sketches or photographs) (when necessary for the interpretation of results, on CoA)
- 16.2.6 A previously merged CoA may be changed by re-merging the CoA with the corrected information.
- 16.2.7 The date of the CoA, which will serve as the end date of the performance of testing/laboratory activity and the CoA issue date, is normally generated by the report merge process. See ¶ 16.2.14.1.
- 16.2.8 The following categories are completed by the report generation function of LIMS from information previously put into the LIMS database at the time of submission of the evidence (formatting is described in ¶ 14.3.4):
- Your Case #:**
Victim(s):
Suspect(s):
Submitting Officer:
Date Received:
- 16.2.8.1 If the submitting officer's agency differs from the agency to which the report is addressed, the submitting officer's agency will be specified on the line below their name.
- 16.2.9 Appropriate item numbers and descriptions shall be listed on the CoA. See ¶ 15.4 and ¶ 15.5 for assignment of item numbers and descriptions of evidence.
- 16.2.10 When two or more examiners are examining evidence from a submission, each examiner will list only those items that they examined. If any submitted items are not examined, the primary examiner or the last reporting examiner will address those items in their report and will state that they were not examined.
- 16.2.11 The portion of the CoA that will contain the findings will be headed with the phrase "RESULTS AND INTERPRETATIONS:" The wording of the findings and conclusions will be consistent with that approved in the Technical Procedures Manual by the Program Manager for use within the Section.
- 16.2.11.1 The findings and conclusions should relate clearly to the items tested with units of measurement, where appropriate. Items not analyzed or examined shall be reported as such.
- 16.2.11.2 When associations are made, the significance of the association shall be communicated clearly and qualified properly in the CoA.
- 16.2.11.3 When no definitive conclusions can be reached (e.g., results are "inconclusive"), the reason shall be clearly stated.
- 16.2.11.4 When comparative examinations result in the elimination of an individual or object, the report shall clearly communicate the elimination. If an identification is made to a submitted known sample, it is not required to report elimination results to other submitted known samples within the case if a comparison was not performed.
- 16.2.11.5 Data or test results from subcontractors shall be identified as such when reported on the CoA.

16.2.11.6 Initial database entries shall be reported as required by the Section's Procedures Manual.

16.2.11.7 Care should be taken to avoid confusion of reporting item numbers beside reported values within a sentence. If a number starts a sentence or is ten or less, it should be spelled out (e.g., Twenty-three blue round tablets...). When spelled out, compound numbers (21-99) should be hyphenated. This is not applicable to reported quantitative results (e.g., weights, concentrations, percentages) or DNA statistics.

16.2.12 The typist's initials, and copy distribution, if needed, should be entered after the findings and conclusions.

16.2.13 Administrative statements, which may provide additional information required by the customer, should be selected from among the following, when applicable:

- This Certificate of Analysis has been issued as a result of a § 19.2-188.1(B) order for chemical analysis issued on (Date) by the (City/County) (Court Type as listed on order) Court, and has been mailed/forwarded to the attorney for the Commonwealth pursuant to § 19.2-187.
- The requested (Trace Evidence, Latent Print, etc.) examination was terminated at the request of (name and title) on (date).
- The requested (Trace Evidence, Latent Print, etc.) examination was terminated after discussion with (name and title) on (date).
- The evidence (and any preserved portions of extracts generated during analysis) is/are being retained for personal pickup.
- The evidence (and any preserved portions of extracts generated during analysis) will be returned via registered mail.
- The evidence (and any preserved portions of extracts generated during analysis) will be returned via United Parcel Service.
- The evidence (and any preserved portions of extracts generated during analysis) will be returned via FedEx.
- The results of other requested examinations will be reported separately.
- The disposition of the evidence and the results of other requested examinations are the subject of another report.
- The evidence (and any preserved portions of extracts generated during analysis) is/are being returned to the (XXX) Laboratory where it will be available for personal pickup.
- The evidence (and any preserved portions of extracts generated during analysis) will be available at the (XXX) Laboratory after you have received the results of all requested examinations.
- The evidence (and any preserved portions of extracts generated during analysis) is/are being returned to the (XXX) Laboratory.
- The evidence (and any preserved portions of extracts generated during analysis) is/are being returned to the Office of the Chief Medical Examiner.
- The evidence (and any preserved portions of extracts generated during analysis) will be available for personal pickup at the (XXX) Laboratory two weeks after the receipt of this Certificate of Analysis.
- The disposition of the evidence was the subject of a previous report.

16.2.13.1 Administrative statements regarding the disposition of the evidence shall be used on each CoA.

16.2.13.1.1 Administrative statements regarding the disposition of the evidence are not required in Toxicology reports for Implied Consent DUI/DUID cases pursuant to §18.2-267.

16.2.14 The following statements shall be added to Certificates of Analysis, preferably prior to disposition statements:

When there are no Deviations, Additions or Exclusions from Published Methods

Date(s) of testing: mm/dd/yyyy – mm/dd/yyyy. Supporting examination documentation is maintained in the case file. The above listed methods are those approved for use at the time of analysis. Current methods can be found in the {Section} Procedures Manual, which can be found at www.dfs.virginia.gov/documentation-publications/manuals/.

When there is a Deviation, Addition or Exclusion from Published Methods

Date(s) of testing: mm/dd/yyyy – mm/dd/yyyy. Supporting examination documentation, including a method {deviation, addition, exclusion}, is maintained in the case file. The above listed methods are those approved for use at the time of analysis. Current methods can be found in the {Section} Procedures Manual, which can be found at www.dfs.virginia.gov/documentation-publications/manuals/.

NOTE: For the date format, leading zeros are not required and the www may be removed from the website address.

- 16.2.14.1 For Instrument Support performed at the same laboratory: “The [method title] was performed via Instrument Support by [analyst name].”
 - 16.2.14.2 For Instrument Support performed at another laboratory: “The [method title] was performed via Instrument Support by [analyst name] at the [laboratory location] Laboratory, [address].”
 - 16.2.14.3 Unless otherwise noted in a section’s procedures manual, the start date is the earliest date in the examination documentation pertaining to a section’s evidence and the end date is the date on the CoA.
 - 16.2.14.4 There are specific instances as delineated in the Forensic Biology Procedures Manual for which the methods statements are not required.
- 16.2.15 If a report requires more than one page (See example in [Appendix B](#)), the following heading should go on the top left corner of the second and subsequent pages:
- Any town Police Department
FS Lab # X 92-9876
Your Case # 92-123/1234567
Date of Report
- 16.2.16 The issuing examiner shall have performed the analysis or examination by conducting, participating in, or scientifically reviewing the examination or testing.
- 16.2.16.1 An attest statement shall be below the “RESULTS AND INTERPRETATIONS” section of the CoA, followed by the issuing examiner’s name, title and signature.
 - 16.2.16.2 Attest statement: I certify that I performed the above analysis or examination as an employee of the Department of Forensic Science and that the above is an accurate record of the results and interpretations of that analysis or examination.
 - 16.2.16.3 Attest statement for DUI/DUID certificates: I certify that I performed the above analysis or examination as an employee of and in a laboratory operated by the Department of Forensic Science, that the above is an accurate record of the results and interpretations of that analysis or examination, and that this duty has been delegated to me by the Director of the Department of Forensic Science pursuant to § 18.2-268.7 or § 46.2-341.26:7 of the Code of Virginia.
- 16.2.17 When a CoA bearing the FS Lab # of another laboratory is issued, a copy of the CoA will be sent to that (originating) laboratory.
- 16.2.18 The report writing function of LIMS will print the notation, "Page __ of __ ", at the bottom of the page.

16.3 Dissemination of Certificates of Analysis

16.3.1 Procedure

- 16.3.1.1 Certificates of Analysis should be delivered to the Investigating Officer listed on the RFLE with additional copies provided to designated recipients and a copy placed in the case file.
- 16.3.1.2 Delivery is typically accomplished through the U.S. Mail.
- 16.3.1.3 The transmission of examination results by telephone, facsimile, or encrypted email shall be documented and that documentation placed in the case file.
 - 16.3.1.3.1 Orally and/or electronically reported examination results, other than those conveyed to routine parties (e.g., Commonwealth Attorneys, investigating officers) shall have appropriate, prior approval (see ¶ 15.12.1.3), all necessary information in the case record, and have been technically reviewed.

16.3.2 Controlled Substances Certificates of Analysis

- 16.3.2.1 The Code of Virginia, § 19.2-187, requires that the Certificate of Analysis "...relating to a controlled substance or marijuana shall be mailed or forwarded to the attorney of the Commonwealth of the jurisdiction where the offense may be heard." Law enforcement agencies may request that a CoA of controlled substances recovered in undercover operations be held by the laboratory and sent to the office of the Commonwealth's Attorney after the undercover operation is completed. Security of undercover personnel is the principal concern.

16.3.2.2 Procedure

- 16.3.2.2.1 The original CoA will be mailed to the Commonwealth's Attorney of the jurisdiction where the offense may be heard.
- 16.3.2.2.2 An acknowledgment-of-receipt form (see [Appendix D](#) for example) will be included with the CoA(s). The status of the acknowledgment forms will be tracked. The forms will be filed upon return.

16.3.2.3 Procedural Variation

- 16.3.2.3.1 If a law enforcement agency requests that a report be held, the request must be in writing on agency letterhead and signed by an administrative official of the law enforcement agency making said request. The request must contain sufficient information to facilitate identification of the report to be held.
- 16.3.2.3.2 Laboratory Directors may approve report retention in undercover operations. Upon receipt of a written request to retain a report for an undercover operation, a written acknowledgment of the request shall be returned to the agency. The acknowledgement will contain the following stipulations:
 - The requesting agency must provide a written request to the laboratory to release the retained report to the appropriate Commonwealth's Attorney when the undercover operation is completed.
 - The requesting agency must bear responsibility for the resolution of any problems, conflicts, etc., with the Commonwealth's Attorney over the Department's temporary retention of the report.

- The Department's agreement to retain reports **does not** apply to retention of the evidence addressed in those reports.

16.3.3 Implied Consent DUI/DUID Certificates of Analysis

- 16.3.3.1 The Code of Virginia, § 18.2-268.7, requires that the Certificate of Analysis “and the withdrawal certificate shall be returned or electronically transmitted to the clerk of the court in which the charge will be heard.”
- 16.3.3.2 Procedure: The original CoA will be mailed to the Clerk of the court in which the charge will be heard.

16.4 Terminated Cases

16.4.1 There are occasions when a submitting agency will request the termination of a case. The written request from the agency or a MFR documenting the agreement between the agency and DFS employee to terminate shall be maintained in the case file.

16.4.1.1 A terminated case requires written notification to the investigating/submitting agency. This notification may occur via the issuance of a CoA or letter. The CoA or letter shall include a statement akin to those listed in ¶ 16.2.13 describing the manner in which the termination occurred.

16.4.1.1.1 A termination CoA shall be created when analytical work began prior to the termination request.

16.4.1.1.2 A termination letter (see Appendix N) may be created if:

- no analytical work has been done prior to the termination request, and
- the evidence has not been opened.

16.4.1.2 When a termination letter is issued, the case shall be terminated and not released via LIMS.

16.4.2 The request from the agency may be telephonic or in writing. A record of this request shall be placed in the case file.

16.4.3 If the primary examiner has not completed their report at the time of termination of a case, the statement will be included in their report for each Section with outstanding examinations.

16.4.4 If all the analytical work on any item or items in a case has been completed at the time of the termination request, the examiner will report those results.

16.5 Amended Reports

16.5.1 The term “Amended” will be applied to reports that will be issued to make a change to or re-issue a previously disseminated report. If the original report has not been issued, the original and amended reports shall be issued. Whenever possible, the amended report will include all language required by the current quality system, including original date(s) of testing.

16.5.1.1 If the amendment is administrative in nature, no addition to the original date(s) of testing is necessary.

16.5.1.2 If the amendment required additional data analysis/testing, the new date(s) will be added to the CoA (e.g., Date(s) of testing: 07/10/2018-07/13/2018 and 03/11/2019-03/13/2019.)

- 16.5.2 The phrase “AMENDED REPORT” will appear in upper case bold type above the FS Lab # on the first page of the report. On the second and subsequent pages, the phrase "AMENDED REPORT" will be placed after the FS Lab #.
- 16.5.3 A sentence, modeled on the examples below to the maximum extent possible, will be placed below the FS Lab # (See example in [Appendix C](#)).
- This report amends the Certificate of Analysis dated _____ to correct the spelling of the _____ (victim’s, suspect’s) _____ name per request of _____ (investigator, doctor) _____, _____ (agency) _____, on _____ (date) _____.
 - This report amends the Certificate of Analysis dated _____ to correct paragraph _____ of the results section on page _____.
 - This report amends the Certificate of Analysis dated _____ to correct line _____ of the chart on page _____.
 - This report amends the Certificate of Analysis dated _____ to add _____ (suspect, victim name) _____ to the report per request of _____ (investigator, attorney, etc.) _____, (agency) _____, on _____ (date) _____.
- 16.5.4 LIMS automatically places the date the report is generated on the amended report.
- 16.5.5 An amended report will not be issued without the approval of the appropriate Laboratory Director. Such approval will be indicated by the approver's initials adjacent to "AMENDED REPORT" on the first page of the file copy of the CoA.
- 16.5.6 The identifying information provided by an agency on the RFLE is not part of the laboratory's examination; therefore, any changes in this information shall not be a basis for amending a CoA without a written request on the requester's letterhead or from their official work email account stating the nature of the amendment. This request will become part of the case file documentation.
- 16.5.7 If the amended report is necessary because of a Department discrepancy, it will be documented on a Technical Review Form.

16.6 Supplemental Reports

- 16.6.1 A supplemental report shall be issued for the reanalysis/additional testing of outsourced cases as authorized by the Department Director or when items of evidence that were the subject of a previous report require additional examination by the same section.
- 16.6.1.1 Within a section, if new items of evidence are submitted for examination along with items that have been previously examined and reported on a CoA, which now require an additional examination, they should all be included on the supplemental report to document the chain of custody. Previously analyzed items should be reported as such.
 - 16.6.1.2 If only new items of evidence are submitted in a case where a previous examination was conducted and reported, a supplemental report is not appropriate.
 - 16.6.1.3 If new items are submitted for examination, but are accompanied by previously examined items that were reported on a CoA, which do not require any additional examination, a supplemental report is not appropriate.
- 16.6.2 The heading, “SUPPLEMENTAL REPORT”, will appear in upper case bold letters, two lines above the FS Lab #. On the second and subsequent pages of the CoA, the term “SUPPLEMENTAL REPORT” will be placed after the FS Lab #.

16.6.2.1 Reanalyzed outsourced cases shall include the following sentence placed below the methods section of the CoA: “This Supplemental Certificate of Analysis is being issued to report the results of the Department of Forensic Science’s reanalysis of evidence previously analyzed by {name of outsource laboratory}.”

16.6.2.2 If approved by the Department Director, reanalyzed DFS cases shall include the applicable sentence placed below the methods section of the CoA:

- At the request of (name and title) on (date), this Supplemental Certificate of Analysis is being issued to report the results of the Department of Forensic Science’s reanalysis of evidence that had been previously analyzed and reported.
- At the request of (name and title) on (date), the data has been reanalyzed and a Supplemental Certificate of Analysis is being issued by an examiner who is available for testimony.

16.6.2.3 The date(s) of the reanalysis/additional testing will be included on the CoA.

16.7 Examiner’s Responsibility

16.7.1 The issuing examiner shall review the technical record, proofread the typed report and **assume responsibility** for its content and accuracy by signing the report.

16.7.2 After the report is signed, it will be subjected to technical review. (see ¶17.1.4)

16.7.3 The issuing examiner or supervisor should forward the technically reviewed CoA to Departmental administrative personnel for dissemination to the submitting agency and release the case in LIMS.

16.8 Certified Copy

16.8.1 All agencies requesting a certified copy of a CoA must put their request in writing on their agency’s letterhead or from their official work email account. The following statement, placed on a laboratory’s letterhead, will be used by the Department to respond to such requests:

16.8.1.1 For one Certificate of Analysis:

CERTIFICATE OF AUTHENTICATION PURSUANT TO CODE §§ 8.01-390 & -391

I, the undersigned, do hereby certify that: (1) I am the custodian of the records for the _____ Laboratory of the Virginia Department of Forensic Science; (2) the attached _____ (list document being certified; i.e., Certificate of Analysis bearing FS Lab # _____ and dated _____) is a true and exact copy of the original record of this office; and (3) I have custody of the referenced record.

 (Custodian’s Signature)
 (Type Custodian’s Name) Date

16.8.1.2 For multiple Certificates of Analysis:

CERTIFICATE OF AUTHENTICATION PURSUANT TO CODE §§ 8.01-390 & -391

I, the undersigned, do hereby certify that: (1) I am the custodian of the records for the _____ Laboratory of the Virginia Department of Forensic Science; (2) the attached Certificates of Analysis (CoAs) bearing FS Lab # _____ are true and exact copies of the original records of this office; and (3) I have custody of the referenced records.

[List Discipline] CoA dated _____
[List Discipline] CoA dated _____

(Custodian's Signature)
(Type Custodian's Name) Date

16.8.2 Each laboratory will designate, in writing, specific laboratory employees as the custodian of records and alternate custodians of records.

17 MONITORING RESULTS

17.1 Technical and Administrative Review of Certificates of Analysis

- 17.1.1 All completed and signed CoAs and the remainder of the technical record will be technically and administratively reviewed prior to release.
- 17.1.2 Technical review is an in-depth evaluation to ensure that the conclusions of examiners are reasonable, within the constraints of validated scientific knowledge, and supported by the examination documentation. Administrative review is proofreading and is combined with the technical review. This combined review is conducted to:
- Ensure the proper use of appropriate technical procedures (test methods) and applicable Department policies and procedures
 - Ensure the accuracy of reports to include spelling and grammatical correctness
 - Ensure the data supports the results and/or conclusion in the reports
 - Ensure that associations are properly qualified in the report
 - Ensure the report contains the required information (§16.2)
 - Ensure that the administrative and examination documentation is properly and uniquely identified (§15.8 and 15.9.1)
 - Check manual calculations and data transfers

The specific requirements for the Forensic Biology combined technical and administrative reviews, pursuant to the FBI Quality Assurance Standards, are detailed in the Forensic Biology Procedures Manual Quality Assurance Program.

- 17.1.3 The reviewer will be another qualified examiner from the same Section as the examiner of record, or a similar qualified individual. Section Supervisors/Group Supervisors must ensure that their examiners and support staff have the training, experience and qualifications necessary to perform assigned reviews. When section size allows, technical reviewer responsibilities shall be rotated within the section in order to promote consistency of approach.
- 17.1.3.1 Technical reviews shall not be conducted by the author or co-author(s) of the examination records or Certificate of Analysis.
- 17.1.3.1.1 The verifier of a critical finding is not considered to be an author or co-author of examination records.
- 17.1.3.1.2 It is permissible for more than one person to contribute to the overall technical review of the examination documentation. Their combined efforts constitute a complete technical review for that case record.
- 17.1.4 Technical reviews will be performed after the CoA has been signed by the examiner of record and within three (3) workdays of receipt by the reviewer or the time period specified in their EWP.
- 17.1.4.1 The Technical and Administrative Review Form (TRF) shall be completed for each review and used to document a nonconformity and its resolution. Once the resolution has been documented by the examiner, appropriate documentation should be provided to the original technical reviewer. When completing a TRF, the “Month/Year” shall correspond with the month and year on the CoA being reviewed.
- 17.1.4.1.1 Discipline-specific TRFs shall be utilized, if available.
- 17.1.4.2 When the CoA satisfies all technical and administrative review criteria delineated on the TRF, this will be documented by the initials of the reviewer(s) and date(s) of review appearing on the CoA in the space underneath the typist’s/examiner’s initials near the left margin.

- 17.1.5 All examiners shall have one case reviewed by a qualified examiner at another laboratory location (post-release) each month. If there is not a qualified examiner at another laboratory location, this review will be conducted by the Program Manager or designee. These reviews will be documented on the electronic *Interlaboratory Review Log* (template can be found in the Quality Manual and Forms - Tools Folder in Qualtrax). A TRF shall be used to document a nonconformity and its resolution. Once the resolution has been documented by the examiner, the steps in ¶17.1.6 shall be followed.
- 17.1.5.1 These post-release reviews will encompass the various categories published on each laboratory's Scope of Accreditation to the extent possible. The reviews may be utilized as case file reviews for annual internal audits and may be used to fulfill the FBI QAS requirement for an additional annual review outside an external audit review, at the discretion of the Biology Program Manager.
- 17.1.5.2 Each Laboratory Director is responsible for ensuring their portions of the electronic *Interlaboratory Review Log* are maintained and properly completed.
- 17.1.6 A TRF that documents a nonconformity will be discussed with the examiner, as well as support staff and technical reviewers, if applicable. All original TRFs will be filed in the corresponding case file. These case files will be forwarded to the examiner's supervisor and subsequently the Laboratory Director for review. These reviews will be documented with the date and initials of the reviewers on the appropriate TRF. A copy of any form which documents a technical nonconformity should be sent to the appropriate Program Manager.
- 17.1.7 Resolution of any nonconformities will be handled in accordance with ¶ 10, "Nonconformities and Corrective Actions".

17.2 Technical Review of DNA Database Sample Analysis

- 17.2.1 Prior to uploading any DNA profile from a database sample into the DNA database, a review of all supporting documentation will be performed. The technical aspects of the review will be conducted by an individual (Data Bank Analyst) who has expertise gained through documented training and experience. The specific requirements for this review are detailed in the Forensic Biology Procedures Manual Quality Assurance Program.
- 17.2.2 The review of the data generated by DFS will be performed using the *CE DNA Data Bank Technical Review Form* (DB-TRF).
- 17.2.3 The DB-TRFs will be placed in and become part of the database sample analysis review file, which will be maintained as documentation of compliance with this section.

17.3 Technical and Administrative Review of Certificates of Instrument Accuracy (CoIA)

- 17.3.1 All completed and signed CoIAs and their supporting documentation will be technically and administratively reviewed prior to notarization and release.
- 17.3.2 Technical review is an in-depth evaluation to ensure that the conclusions of examiners are reasonable, within the constraints of validated scientific knowledge, and supported by the calibration documentation. Administrative review is proofreading and is combined with the technical review. This combined review is conducted to:
- Ensure conformance with the calibration method and applicable Department policies and procedures
 - Ensure the accuracy of the CoIA to include spelling and grammatical correctness
 - Ensure the data supports the results and/or conclusion in the CoIA
 - Ensure the CoIA contains the required information (¶18.3)
 - Ensure that the administrative and calibration documentation is properly and uniquely identified (¶18.2)

- Check manual calculations and data transfers
- 17.3.3 The reviewer will be a Forensic Scientist or higher, from the Breath Alcohol Section, or a similar qualified individual. The Section Supervisor/Group Supervisor must ensure that their staff have the training and experience necessary to perform assigned reviews. When section size allows, technical reviewer responsibilities should be rotated within the section in order to promote consistency of approach.
- 17.3.3.1 Technical reviews shall not be conducted by the author or co-author(s) of the examination records or Certificate of Instrument Accuracy.
- 17.3.4 All examiners shall have one post-release review conducted by the Program Manager or designee each month. These reviews will be documented on the electronic *Interlaboratory Review Log* (template can be found in the Quality Manual and Forms - Tools Folder in Qualtrax). A *Technical Review Form – Breath Alcohol* (TRF-BA) shall be used to document a nonconformity and its resolution. Once the resolution has been documented by the examiner, the steps in ¶17.3.6-17.3.8 shall be followed.
- 17.3.4.1 The DTS is responsible for ensuring the electronic Interlaboratory Review Log is maintained and properly completed.
- 17.3.5 Technical reviews will be performed after the CoIA has been signed by the issuing examiner and should be performed within five (5) workdays of receipt.
- 17.3.5.1 The TRF-BA shall be completed for each review and used to document a discrepancy and its resolution. When completing a TRF-BA, the “Month/Year” shall correspond with the month and year on the CoIA being reviewed.
- 17.3.5.2 When the Certification satisfies all technical and administrative review criteria, this will be documented by the reviewer's signature/initials and date of review appearing on the QA Sheet underneath the examiner's signature and underneath the notarization wording on the CoIA.
- 17.3.6 TRF-BAs which document a nonconformity will be forwarded to the DTS for review. The review will be documented with the date and initials of the reviewer on the form. All forms will be placed in and become part of the corresponding instrument file. A copy of any form that documents a technical nonconformity should be sent to the Toxicology Program Manager.
- 17.3.7 Completed TRF-BAs which document a nonconformity will be discussed with the technician, analyst and/or examiner, as well as support staff and technical reviewers, if applicable.
- 17.3.8 Resolution of any nonconformities will be handled in accordance with ¶ 10, “Nonconformities and Corrective Actions”.

17.4 Testimony Monitoring

- 17.4.1 To ensure that examiner, analyst and technical support personnel's testimony is effective, and does not compromise or negate a scientifically defensible and legally admissible CoA and examination, the Department has established a program of testimony monitoring.
- 17.4.2 Each examiner, analyst and technical support personnel's testimony will be monitored at least once each calendar year in which they testify. The monitoring may be performed in one of three ways (listed in order of preference):
- 17.4.2.1 In-Court and Deposition Observation

The preferred method for testimony monitoring is personal observation of an examiner's testimony by another examiner. Directors, the Department Counsel, Program Managers, Supervisors, and examiners may observe the actual testimony of an examiner, even if the

examiner is not in their Laboratory/Section. At least once per accreditation cycle the testimony monitoring will be performed by an individual that has been competency tested in the same component the testimony encompassed. Whenever possible, no subordinate level position will monitor the testimony of a superior level position within their chain of command. Forensic Scientists, Forensic Scientist Seniors, Principal Forensic Scientists, Forensic Molecular Biologists and non-supervisory Forensic Toxicologists are considered equivalent for this purpose. Supervisory Toxicologists may observe the testimony of the Toxicology Program Manager. During, or at the conclusion of the testimony, the observer will complete an *Expert Testimony Evaluation* (ETE) workflow or form, and review it with the examiner in a timely manner.

17.4.2.2 Review of Transcripts

If an examiner testifies but is not observed, the appropriate Laboratory Director may obtain a transcript of the examiner's testimony. A Director, Program Manager, Supervisor, as appropriate, will review the transcript and complete an ETE. The ETE and the transcript will be reviewed with the examiner in a timely manner.

17.4.2.3 Input from Officers of the Court

If an examiner testifies but monitoring was not achieved by either mechanism listed above, a Director, Program Manager, Supervisor, as appropriate, may have a Court Testimony Evaluation (CTE) form completed by the applicable party. The CTE form will be uploaded into the Qualtrax workflow and reviewed with the examiner in a timely manner.

17.4.3 Supervisors will consider the following in determining the need and frequency for personally observing testimony:

- Examiners who are newly qualified or require improvement in this aspect of their work
- Complaints from attorneys or judges (§ 9, "Complaints").

17.4.4 If an examiner does not testify in a given calendar year, their immediate supervisor will document that on an ETE by January 31st of the following year.

17.4.5 ETEs will be forwarded through the examiner's supervisory chain to the appropriate Laboratory Director who will review it.

17.4.5.1 The original will be maintained in Qualtrax. Forms will be retained pursuant to the Library of Virginia Specific Schedule Number 778-001 (Quality Assurance:Program Accreditation 100272 series).

17.4.5.2 Each laboratory's monitoring status will be tracked through Qualtrax by the appropriate Laboratory Director and the DTS.

17.4.6 Nonconformities will be handled in accordance with § 10, "Nonconformities and Corrective Actions", of this manual.

17.5 Proficiency Testing

17.5.1 The primary purpose of the Department's proficiency testing (PT) program is to conduct regular, objective assessments of the staff's ability to perform examinations in a scientifically defensible and legally admissible manner, and to follow Department and Section policies and procedures. This is generally accomplished by using tests with previously verified test results, against which an individual's test results are assessed. Also, because PTs are performed, as much as possible, in the same manner as examinations on casework/calibrations, the program assesses compliance with administrative policies and procedures.

17.5.2 The Department will adhere to the proficiency testing criteria contained in the current editions of the following documents, as applicable:

- ISO/IEC 17025
- Additional requirements from the accrediting body (e.g., ANAB Accreditation Requirements)
- FBI Quality Assurance Standards for Forensic DNA Testing Laboratories
- FBI Quality Assurance Standards for DNA Databasing Laboratories

17.5.3 Each employee, as applicable to their duties, shall successfully complete at least one proficiency test per calendar year in their discipline, as defined by the scope of accreditation. The practical test (§ 19.5.3.2) in an employee's competency examination may also serve as the employee's proficiency test in their discipline for the calendar year. A copy of the practical test will be retained with the proficiency tests for the applicable year. In addition, after an extended absence of 4 weeks or more, a proficiency test shall be administered to and successfully completed by the employee prior to resuming casework duties.

Successful completion generally means obtaining the expected results on a test:

- For external tests, the test provider's assessment of the results as "Acceptable", or report documenting that the submitted results were consistent with the expected results (or consensus results).
- For internal/reexamination tests, consistency between the obtained and expected/original results.
 - As necessary, the expectations for successful completion should be clearly documented in the test file before the test is administered; for example, the acceptable variance in a quantitative analysis.
- For observational tests, demonstration of acceptable decision making, work practices, and examination documentation.
- Successful completion may be possible with unexpected results if there is a reasonable explanation for the discrepancy; such an event must be thoroughly documented in the file (see also § 17.5.9).

17.5.3.1 Employees who perform casework in multiple disciplines will successfully complete at least one test in each discipline.

17.5.3.2 Employees who perform casework in multiple subdisciplines will successfully complete at least one test in each of the subdisciplines during each accreditation cycle.

17.5.3.3 Each Forensic Biology staff member, as appropriate, will successfully complete two external proficiency tests per year as specified in the current FBI Quality Assurance Standards. For purposes of tracking compliance with the Standards, the receipt date from the manufacturer will be used as the date a test is performed.

17.5.4 Each laboratory will receive at least one external proficiency test for each discipline in which it provides services. ISO/IEC 17043 accredited test providers with applicable proficiency tests on their scope of accreditation will be used where available; if there is not an ISO/IEC 17043 accredited test provider available, another source will be used after gaining approval pursuant to the accrediting body's accreditation requirements.

17.5.5 There are four types of PTs presently used by the Department:

17.5.5.1 External Tests

An external test is one received from outside the Department, known by the examiner being tested to be a test, and for which the expected results, at least initially, are unknown to anyone in the Department.

17.5.5.1.1 With the exception of the Forensic Biology Section, some external proficiency tests, e.g., those for Firearms & Toolmarks and Latent Fingerprints, are taken

independently by multiple examiners in succession. One or more of those examiners at each affected laboratory will have completed the test by the time the expected results become known to the Department. The results from the first examiner completing the test at each laboratory will be used for compliance with ¶ 17.5.4, above.

17.5.5.2 Internal Tests

An internal test is one produced by the Department, known by the examiner being tested to be a test, and for which the expected results are unknown to that examiner.

17.5.5.3 Blind Tests

A blind test is one received from outside the Department, not known by the Department to be a test, and in which the expected results are unknown to anyone in the Department. Reexamination of evidence is a form of blind test in which the original examiner does not initially know they are being tested. This practice has the advantage of assessing all aspects of the examination being repeated, from sample receipt through return. The disadvantage, however, is not having known, or well-established expected, results.

17.5.5.4 Observational Tests

An observational test is one in which the examiner is observed while performing casework or examining test samples, known by the examiner being tested to be a test, and for which the expected results are in compliance with Department and section policies and procedures for the work being performed. A test may address an entire case or a select portion.

17.5.6 Program Management and Process

17.5.6.1 The QA Section Supervisor will manage the program; routine steps in the process may be performed by the QA staff. The QA staff will track and summarize PT information both in files and electronically to document compliance with these requirements. The records will be updated in a timely manner as steps in the process occur. The electronic records will be available on the Department's intranet for queries by the Directors.

17.5.6.2 The QA Section Supervisor will communicate with each Program Manager each calendar year to address the Section's tests for the upcoming year. This communication will document the decision regarding tests to be obtained and/or prepared and the development or approval of a test distribution schedule. The approved distribution will be maintained electronically.

17.5.6.3 External Tests

17.5.6.3.1 On receipt of an external test, the QA Section Supervisor will open and inspect the test, as applicable, and initiate a tracking sheet and test file.

17.5.6.3.2 The QA Section Supervisor will reference the distribution schedule of the appropriate Section and assign the test accordingly.

17.5.6.3.3 The QA Section Supervisor will forward the test and accompanying paperwork to the appropriate individual, along with an assignment memo specifying the date by which the test must be completed, and the disposition of the test samples.

17.5.6.3.4 The assigned individual will perform the test and forward the results in the prescribed format (an email scan and original documentation in a red interagency envelope), together with all supporting documentation, to the

designated QA staff. As detailed in the assignment memo, any other personnel identified will be notified of the completion of the test.

- 17.5.6.3.5 The QA Section Supervisor will review the individual's results, and supporting documentation as necessary, and release and forward them to the test provider on or before the agreed upon due date.
- 17.5.6.3.6 When the test provider supplies the preliminary report or expected results to the QA Section, that information shall be forwarded to the appropriate Supervisor, Program Manager and/or Laboratory Director, as necessary.
- 17.5.6.3.7 The QA Section Supervisor shall compare the individual's results to the expected results, review the supporting documentation as necessary, and forward the results and documentation to the Program Manager, as necessary, for review.
- 17.5.6.3.8 The QA Section Supervisor shall discuss the outcome of the comparison/review(s) with the Program Manager, as necessary.
- 17.5.6.3.9 The QA Section Supervisor shall notify the individual in writing of their performance on the test.
- 17.5.6.3.10 The QA Section Supervisor shall notify the CODIS administrator in the event of non-administrative discrepancies that affect the typing results and/or conclusions.

17.5.6.4 Internal Tests

- 17.5.6.4.1 As specified in the test distribution schedule, Program Managers will forward tests, with the validation documentation and expected results, to the QA Section Supervisor.
- 17.5.6.4.2 On receipt of a test, the QA Section Supervisor will initiate its tracking sheet and test file, and forward the test, accompanying paperwork, and assignment memo to the appropriate individual.
- 17.5.6.4.3 The assigned individual will perform the test and forward the results in the prescribed format (an email scan and original documentation in a red interagency envelope) together with all supporting documentation to the designated QA staff. As detailed in the assignment memo/email, any other personnel identified will be notified of the completion of the test.
- 17.5.6.4.4 The QA Section Supervisor will review the individual's results, and supporting documentation as necessary, and forward the results and documentation to the Program Manager, as necessary, for review.
- 17.5.6.4.5 The QA Section Supervisor shall discuss the review with the Program Manager, as necessary.
- 17.5.6.4.6 The QA Section Supervisor shall notify the individual in writing of their performance on the test.
- 17.5.6.4.7 The QA Section Supervisor shall notify the CODIS administrator in the event of non-administrative discrepancies that affect the typing results and/or conclusions.

17.5.6.5 Blind Tests

- 17.5.6.5.1 A reexamination will require coordination between the QA Section Supervisor and the appropriate Section Supervisor/Group Supervisor. They will determine the individual whose case will be reexamined, the case to be reexamined, and the individual who will perform the reexamination.
- 17.5.6.5.2 The QA Section Supervisor will initiate the test's tracking sheet and test file. The reexamination proficiency shall be performed as follows:
- The Supervisor shall select the case and forward the FS Lab#, name of the original examiner, name of the re-examiner and technical reviewer for the reexamination to the QA Section Supervisor for the assignment memo.
 - The evidence for the selected case will be held by the original examiner until the assignment memo is sent out. This memo shall direct the examiner conducting the reexamination to obtain the evidence and to perform the analysis as though it was the initial examination of the evidence as well as assign the technical reviewer.
 - The original Certificate of Analysis shall be generated, reviewed and mailed. The Supervisor may make notification to the agency regarding the disposition of the evidence as necessary.
 - On completion of the reexamination the designated QA staff and any other personnel identified as directed by the assignment memo will be notified of the completion of the test.
 - The Supervisor shall scan the Internal/Reanalysis Proficiency Report Form, supporting documentation (including the TRF), as well as a copy of the original case file into the "dropbox" as directed by the assignment memo.
 - The QA Section Supervisor shall compare the originally reported results/documentation with the reexamination report/documentation.
 - Once compared, the QA Section Supervisor shall forward the complete proficiency test file to the Program Manager.
 - If there are no nonconformities identified, the successful completion memo shall be sent to both examiners, directing the evidence to be returned.
 - The reexamination report form and supporting documentation shall be retained in the original case file and a copy is retained in the Proficiency Test file.
- 17.5.6.5.3 Information about the initial examination and its results will not be available to the individual performing the reexamination.
- 17.5.6.5.3.1 Reexaminations which satisfy all technical review criteria will be documented on a TRF and by the reviewer's initials appearing on the *Internal/Reanalysis Proficiency Report Form* under the Examiner Signature/Date entry.
- 17.5.6.5.3.2 The original TRF will be kept in the case file and a copy will be kept in the corresponding Proficiency Test file.
- 17.5.6.6 Observational Tests
- 17.5.6.6.1 Observational tests will be scheduled by the Program Manager.

- 17.5.6.6.2 The observer will assess the examiner's associated decision making, work practices, and examination documentation. They will record their observations and comments on the appropriate form.
- 17.5.6.6.3 The observer should minimize interaction with the examiner, unless they perceive potential significant noncompliance.
 - 17.5.6.6.3.1 In that event, the observer should stop the test, and discuss the perceived noncompliance.
 - 17.5.6.6.3.2 The discussion and any follow up should be recorded on the form.
- 17.5.6.6.4 The observer will forward the completed form to the designated QA staff, and the examiner will inform the designated QA staff of the completion of the test.
- 17.5.6.6.5 The QA Section Supervisor shall discuss the form with the Program Manager.
- 17.5.6.6.6 The QA Section Supervisor shall notify the individual in writing of their performance on the test.
- 17.5.6.6.7 The QA Section Supervisor shall notify the CODIS administrator in the event of non-administrative discrepancies that affect the typing results and/or conclusions.

17.5.7 Practices

- 17.5.7.1 PTs will be performed in the same manner as casework or on an evidentiary breath alcohol instrument certified by the individual being proficiency tested. This includes use of the appropriate procedures, generation of supporting documentation, and, when prescribed, the involvement of other personnel, such as independent sequence assembly in mitochondrial DNA analysis, a second examiner's verification of latent print matches, or the assistance of scientific support staff. Also, all PT files will undergo technical review, documented on a Technical Review Form maintained with the original supporting documentation.
 - 17.5.7.1.1 Reexamination tests will be performed in full compliance with all evidence handling requirements.
- 17.5.7.2 Involvement of other personnel, when not prescribed, is not prohibited, but must be done in such a manner as to not compromise the primary aim of the test, which is the assessment of the individual examiner. This does not preclude an examiner from soliciting opinions concerning the test samples as when examining actual evidence. However, PTs are generally straightforward; any test on which an examiner requires more than minor input from another examiner will be brought to the attention of the QA Section Supervisor. Also, because of the restriction in ¶ 17.5.7.3, below, such input may not be obtained from another examiner who has taken, is taking, or will/may take the same test.
- 17.5.7.3 Any individual significantly involved in the performance of another's test, e.g., as a verifier or reviewer, generally may not take the same test. Such an individual may be involved at multiple points in the performance of a test, e.g., may verify and review a single test, and may verify or review the same test from multiple individuals taking that test.
- 17.5.7.4 One obvious difference between a test and a case is the absence of a CoA for a test. For external tests, the CoA is replaced by the test provider's reporting forms. For internal tests, an *Internal/Reanalysis Proficiency Reporting Form* will be completed by the assigned individual, unless otherwise specified in the assignment email.

- 17.5.7.5 Internal tests shall be prepared at the direction of the appropriate Program Manager in conjunction with the QA Section Supervisor. The preparation shall be documented in sufficient detail to allow for preparation of an identical test, if necessary. An examiner other than the one who prepared the test shall perform the validation.
- 17.5.7.6 A toxicology test will be generally assigned to the supervising Toxicologist at the laboratory receiving the test to best mimic the way cases are managed. The Toxicologist will assign analyses to ensure that each section member participates in the test. If an individual does not perform any analysis because of the nature of the test samples, then an internal or reexamination test will be assigned directly to that individual.

17.5.8 Documentation

17.5.8.1 The QA Section Supervisor will maintain all original PT files. Files will be retained pursuant to the Library of Virginia Specific Schedule Number 778-001 (Quality Assurance: Program Accreditation 100272 series).

17.5.8.2 PT files shall contain the following:

- *Proficiency Tracking Sheets* identifying each test, including the discipline, laboratory and evaluation of results
- Appropriate originals or copies of documentation received from external test providers, including preparation records and records of distribution of such documentation
- Preparation and validation records for internal tests
- The expected results
- Copies of assignment memos or other documentation identifying the individuals taking the tests
- Copies of completion memos
- Copies of results forwarded to external test providers (or originals if results were forwarded electronically)
- Proof of delivery to external providers
- Completed Department reporting forms for internal test results
- Supporting (“examination and administrative”) documentation including dates of analysis and TRFs
- For blind proficiency tests, the supporting documentation will be stored in the case file with a reference to its location in the proficiency file
- Records of notification of individuals of test outcomes
- Documentation of any nonconformities and corrective action records, as appropriate

17.5.8.3 Individuals being tested may maintain copies of their test results and supporting documentation until they are informed of their performance. After that, each regional laboratory may maintain only the following documentation:

- A copy of the assignment memo
- A copy of the completion memo
- A copy of the performance memo

17.5.9 Corrective Action

- Failure to meet the due date on any test will be reported to the DTS.
- Nonconformities identified at any point in testing will be handled in accordance with ¶ 10, “Nonconformities and Corrective Actions”.

18 **CERTIFICATION AND CALIBRATION****18.1 Policy**

18.1.1 The Department is charged with the responsibility to maintain, repair and certify breath test instruments used by law enforcement personnel throughout the Commonwealth.

The Department shall test the accuracy of breath testing equipment at least every six months pursuant to the Code of Virginia (§ [9.1-1101](#)). The issuing examiner shall be responsible for the accuracy and completeness of the CoIA in consonance with its service as a legal document acceptable as evidence in criminal proceedings in lieu of testimony under provisions of the Code of Virginia (§§ [9.1-1101](#) and [18.2-268.9](#)).

18.1.2 Certifications and calibrations will be performed utilizing NIST traceable standards and controls.

18.1.3 The Breath Alcohol Database (BrAD) is the official location for maintenance, repair and certification records and duplicates the supporting information as described below.

18.1.4 For purposes of Breath Alcohol instrument certifications, the calibration will be verified pursuant to Department requirements listed in the SOP.

18.1.5 Instruments shall be identified by the manufacturer's serial number.

18.1.6 Instruments must be handled in a manner that prevents deleterious change, loss or damage during storage, handling and transport. This includes instruments waiting to be calibrated or awaiting delivery to the customer.

18.1.6.1 Access to Section secured storage is to be limited to designated personnel as defined by the Central Regional Operating Procedures.

18.2 Certification Documentation

Certification documentation must contain sufficient detail to allow another examiner, analyst or technician, in the absence of the initial examiner, analyst or technician, to evaluate what was done and interpret the data. The records shall include the identity of personnel responsible for the sampling, performance of each test, certification and/or calibration and checking of results.

18.2.1 The following supporting information shall be included in the instrument folder:

- Name and address of the location where the certification was carried out, if different from the address of the laboratory
- Name and address of the customer
- Appropriate quality control documentation

18.2.2 Each page of certification documentation will be labeled with the Instrument Serial Number and the technician's signature or initials. The signature or initials of the technician must be either handwritten or a secure electronic equivalent.

18.2.3 All certification documentation will be restricted to one side of a sheet of paper only.

18.2.4 All handwritten notes will be in ink.

18.2.5 When any corrections are necessary, the text shall be crossed out, not erased, made illegible or obliterated. The new text shall be entered alongside. Changes, alterations and additional notations, including interlineations shall be initialed and dated by the person making the change.

- 18.2.6 Nonstandard procedures must be described in sufficient detail to allow another examiner, technician and/or analyst to review and, if necessary, to repeat the procedure. Appropriate literature references should be included when available.
- 18.2.7 Notes shall be made contemporaneously with the repairs/certifications they document.
- 18.2.7.1 Notes shall be identifiable to the specific task and will include a description of the condition of the instrument to be certified, as necessary.
- 18.2.7.2 Certification and/or calibration documentation shall be such that another qualified technician could repeat the test or calibration under conditions as close as possible to the original, including identification of factors affecting the uncertainty.
- 18.2.8 The issuing examiner shall review and initial each page of certification documentation prepared by another individual.
- 18.2.9 Certification and/or calibration documentation shall reflect the date that any repairs began (if different from the certification date).
- 18.2.10 Administrative documentation includes copies of court orders, subpoenas (testimony subpoenas optional), records of discovery, and other pertinent information which are related to the calibration records. Administrative documentation must be labeled with at least the instrument serial number and certification date, as appropriate. Multi-paged administrative documents which are bound together, in some manner, may be identified on the front page of the document.
- 18.2.10.1 Substantive telephone conversations regarding testimonial support and/or calibration related issues shall be documented by each Breath Alcohol Section staff member.
- 18.2.11 Certification and calibration documentation, including CoIAs, shall be maintained pursuant to the Library of Virginia Specific Schedule Number 778-001 (Breath Alcohol Analysis 100264 series).

18.3 Certificates of Instrument Accuracy

- 18.3.1 The Certificate of Instrument Accuracy (CoIA) is the official Department document used as a calibration certificate for our customers ([Appendix I](#)). CoIAs will be issued each time an instrument is certified for accuracy.
- 18.3.2 The results of each successful certification carried out by the laboratory shall be reported accurately, clearly, unambiguously and objectively. Supporting information which is not listed on the CoIA shall be readily available in the instrument folder or within the Breath Alcohol Section.
- 18.3.3 The author of a CoIA shall have conducted, participated in, observed, supervised, or scientifically reviewed the certification process.
- 18.3.4 Format of the CoIA
- 18.3.4.1 The title of the calibration certificate is “Certificate of Instrument Accuracy”.
- 18.3.4.2 Certificates of Instrument Accuracy are uniquely identified by a combination of the instrument serial number and the date of the certification.
- 18.3.4.2.1 In the case of two certifications occurring in one day, a CoIA will be issued to the customer only for the final certification.
- 18.3.4.3 The format of page 1 of the CoIA is generated by BrAD including (see [Appendix I](#)):
- The name and address of the laboratory

- Serial Number of the instrument
- Date Certification method was performed
- Date of next certification as specified per § [9.1-1101](#)
- The uncertainty of measurement
- The name, title and signature of the person authorizing the CoIA (issuing examiner)
- A statement to the effect that the results relate only to the items certified

18.3.4.4 An attest statement shall be below the certification information on page 1 of the CoIA, followed by the issuing examiner's signature, name, and title.

18.3.4.4.1 Attest statement: The above listed instrument was found to meet all requirements for accuracy and performance established by the Department of Forensic Science as required by §9.1-1101 (B)(3). Measurement traceability is established through the use of reference materials supplied by an ISO/IEC 17025 accredited calibration laboratory.

18.3.4.5 Page 2 of the Certificate of Instrument Accuracy is the Intox EC/IR II Certification Worksheet which includes:

- The condition of the instrument
- Certification and/or calibration results with, where appropriate, the units of measurement
- Certification and/or calibration results prior to instrument adjustment, if applicable
- Any environmental conditions, if results were affected

18.3.5 The department does not issue amendments or supplements to CoIAs.

18.4 Procedure for Dissemination of Certificates of Instrument Accuracy

18.4.1 A copy of the notarized Certificate of Instrument Accuracy should be delivered to the customer designated as the primary agency for that instrument in BrAD and the original will be maintained by the Breath Alcohol Section.

18.4.2 Delivery is typically accomplished by hand.

18.4.3 The transmission of the information contained within the CoIA by telephone, facsimile, or other electronic means shall be documented. The documentation shall be maintained in the Breath Alcohol Section.

18.5 Examiner's Responsibility

18.5.1 Prior to the signing of the CoIA, the CoIA and supporting data will be subjected to review by the issuing examiner. Upon completion, the examiner's initials will appear on each page of the supporting documentation and the examiner's signature will appear on the CoIA.

18.5.2 The examiner shall forward the signed CoIA to the technical reviewer.

18.6 Notarization

All original CoIAs shall be notarized prior to release.

18.7 Documentation of Evidentiary Breath Tests

18.7.1 The Department does not conduct evidentiary breath tests.

18.7.2 The Department provides Certificate of Blood Alcohol Analysis forms ([Appendix L](#)) to be used by the operators of the evidential breath test instruments to document the test results.

19 PERSONNEL AND TRAINING

19.1 Policy

- 19.1.1 The knowledge, skills, abilities, education and experience of personnel are essential to achieving quality results. Laboratory management shall ensure the competence of all who operate specific equipment, perform tests and/or calibrations, evaluate results, and sign Certificates of Analysis and calibration certificates.
- 19.1.2 Appropriate supervision shall be provided to any staff who are undergoing training.
- 19.1.3 When using personnel who are under contract to the laboratory, the laboratory shall ensure that such personnel are supervised, competent and work in accordance with the laboratory's quality system.
- 19.1.4 Personnel performing specific tasks shall be qualified on the basis of appropriate education, training, experience and/or demonstrated skills, as required.
- 19.1.5 The goal of training is to qualify all employees to meet the responsibilities outlined in their Employee Work Profile (EWP).
- 19.1.6 Personnel will be adequately trained and knowledgeable in their tasks and will have requisite authority and resources needed to carry out their duties.
- 19.1.7 The Department shall identify training needs of personnel. Training programs shall be relevant to the present and anticipated tasks of the laboratory. New personnel will participate in a documented, formalized training program and demonstrate their competency before beginning independent work. Experienced laboratory personnel will participate in a program of continuing education.
- 19.1.8 Each laboratory will maintain the training record for each assigned person.
- 19.1.9 Effectiveness of the training program shall be evaluated.
- 19.1.10 Department management will ensure that appropriate communication processes are established within the laboratory and that regular communication takes place regarding the progress of staff in training programs.
- 19.1.10.1 Section Supervisors or Training Coordinators shall provide regular training progress reports (using the Qualtrax Workflow) to the appropriate Program Manager and Laboratory Director.
- 19.1.10.1.1 The contents of this report shall minimally include training milestones accomplished, anticipated goals, and other information as specified in the section Training Manual. The author is to discuss the content of the report with the trainee prior to forwarding it to the appropriate parties. Any relevant comments by either the trainee or author are to be included with the report.
- 19.1.11 Laboratory Directors are responsible for ensuring and documenting that all staff members have reviewed the *Code of Professional Responsibilities and Ethics*. This shall be accomplished and documented in Qualtrax and shall be maintained pursuant to the Library of Virginia Specific Schedule Number 778-001 (Quality Assurance: Program Accreditation 100272 series).

19.2 Position Requirements and Job Descriptions

- 19.2.1 Department management, through the use of EWPs, establishes the following for each position:
- Knowledge, skills and abilities (KSAs)
 - Minimum educational requirements
 - Level and type of experience

- Certifications required, if any
- Core job responsibilities and measures for performance ratings

19.2.2 Each laboratory will maintain a copy of the current EWP for each position. The original of each EWP will be maintained by the Department's Human Resource Section.

19.2.3 All employees shall meet the educational requirement(s) specified in their EWP.

19.2.3.1 All Forensic Biology personnel shall meet the FBI Quality Assurance Standards for education, experience, and training requirements in effect on their date of hire/appointment/promotion, as applicable.

19.3 Personnel Evaluations

An annual performance evaluation is required for each employee. The evaluation of full-time employees will be documented in the Performance Evaluation portion of the EWP.

19.4 General Training

19.4.1 All Department technical personnel (examiners and laboratory support) must complete a documented training program before being assigned independent work. Although the form and content of training will vary by position and person, the goal of all training is to ensure that an individual has the requisite KSAs to perform their assigned tasks. Although the majority of this section is geared toward the certification of examiners, some of the training requirements are applicable to other personnel, and will be noted as necessary. Personnel in training are authorized to utilize laboratory equipment at the direction of their training coordinator.

19.4.1.1 Prior to handling evidence/performing supervised work-alongs on casework, the trainee shall demonstrate competence in performing that process/method (e.g., successful pipetting with blank blood, proper handling of simulated evidence) and be authorized to perform the specific task(s). While the competency test may be conducted by observation or review of results by the training coordinator or designee, the intended result must be achieved. The subsequent authorization shall be in writing and retained in the training file.

19.4.2 Trainers will provide periodic, written, objective evidence of an individual's training to the appropriate Program Manager and Laboratory Director. Laboratory Directors will maintain these training records.

19.4.3 The goal of the Department's training programs for examiners is to produce individuals with the following traits:

- Possess the necessary KSAs to perform the work they are assigned,
- Follow Department and Section policies, procedures and guidelines in their work,
- Perform examinations of evidence,
- Develop scientifically valid conclusions from the results of those examinations, and
- Testify in court as to the procedures used and conclusions derived there from.

19.4.4 Core Training

19.4.4.1 All newly hired employees must be introduced to information such as the LIMS, the criminal justice system in Virginia, general knowledge of forensic science, ethics, safety and chemical hygiene.

19.4.4.1.1 Departmental PowerPoint presentations are available on many of these topics. Completion of each shall be documented on the Department Training Documentation form, to be maintained in the employee's training file.

19.4.4.2 In addition, all Department employees must be informed of and know how to access the

administrative policies and procedures of DFS, the Office of the Secretary of Public Safety and Homeland Security, and the Commonwealth.

19.5 Training of Forensic Scientists

- 19.5.1 Program Managers are responsible for the establishment and maintenance of a formalized technical training program for each discipline in their program area. Each training program will be described in a Section Training Manual. Program Managers are responsible for periodic review and update of their Training Manuals (§ 4, “Quality System Documents”).
- 19.5.2 Section Training Manuals must address the following:
- 19.5.2.1 The materials which must be presented to and mastered by a trainee before they may be certified to perform independent work. Materials should be described in sufficient detail to demonstrate that the program addresses all aspects of the work performed in the discipline.
 - 19.5.2.2 How those materials are presented, e.g., books, formal lectures, videotapes, outside classes, or hands-on demonstrations of techniques. The list should be segregated into presentations which must be covered, e.g., hands-on training, required reading and those which would be useful, e.g., “recommended reading”, but are not necessary for certification.
 - 19.5.2.3 The means by which a trainee’s command of the materials is assessed, i.e., tests. These may include verbal discussions, oral or written exams, or examinations of simulated evidence.
 - 19.5.2.4 Objective definitions of what constitutes acceptable results on an assessment; the “correct answer” to a test. This may be a demonstration of knowledge during a verbal question and answer period, “yes/no” answers or numerical percentage scores on a written test, or the expected result on a simulated examination within the specified uncertainty of measurement.
 - 19.5.2.5 The content, format, and maintenance of records that document the complete training process.
 - 19.5.2.6 It is recommended that Training Manuals be developed in a “modular” format. A module consists of a single training “unit” (material or small, related group of materials), the associated method(s) of presentation and assessment, and the expected assessment results. The modular format allows definition of the order in which materials should be presented to ensure that basic materials are mastered before more advanced ones are presented. The beginning and completion dates of each module should be recorded and signed by the appropriate training officer.
 - 19.5.2.7 Procedures for training in the estimation of uncertainty of measurement, where applicable.
 - 19.5.2.8 Procedures for training in the presentation of evidence in court.
 - 19.5.2.9 Procedures for training in the application of sampling plans, as appropriate.
 - 19.5.2.10 Procedures for demonstrating competence prior to handling evidence/performing supervised work-alongs and how this shall be documented.

19.5.3 Competency Exam

Regardless of academic qualifications or past work experience, all Forensic Scientists shall satisfactorily complete a competency exam, in each (sub-) discipline, prior to assuming casework responsibility or Breath Alcohol responsibilities.

All technical training programs will culminate in a three-part assessment of the individual’s readiness to perform independent work. The format of the assessment will vary from Section to Section, but must be addressed in Section Training Manuals, and contain the following three elements:

19.5.3.1 Technical Final

- 19.5.3.1.1 The technical final is an oral investigation of the breadth and depth of the trainee's technical knowledge. The heart of this inquiry should be addressed in an informal question and answer period.
- 19.5.3.1.2 The trainee must clearly demonstrate sufficient technical knowledge to perform most examinations unaided and to draw correct conclusions from those examinations.
- 19.5.3.1.3 Breath Alcohol trainees must clearly demonstrate sufficient technical knowledge relating to issues associated with breath test operational procedures and results.
- 19.5.3.1.4 Minimally, the Program Manager and Training Coordinator shall be in attendance.

19.5.3.2 Practical Test

- The practical test is a mock case provided to the trainee to work as though it were a real case, but without assistance or consultation.
- The case should simulate an "average" case in difficulty and complexity.
- The trainee shall not know the expected outcome of the case.
- The expected outcome should be clear-cut, or allow only a very limited number of acceptable conclusions.
- The preparation shall be documented in sufficient detail to allow for preparation of an identical test, if necessary.
- The test shall be validated by a qualified examiner and approved by the Program Manager before it is presented to the trainee.
- The trainee must both obtain the expected conclusion, and generate an associated case file, including a mock Certificate of Analysis or Certificate of Instrument Accuracy, that is in compliance with Section/Department policies.
- For Breath Alcohol Forensic Scientists, the practical test is outlined in the Breath Alcohol Training Manual.
- The practical test may also serve as the employee's proficiency test in their discipline for that calendar year (§ 17.5.3).

19.5.3.3 Mock Trial

- 19.5.3.3.1 The mock trial is a formal simulated court exercise, at which the trainee (candidate) will play the part of a witness to testify to all aspects of the practical test. The players, primarily the "defense attorney," should be trained in the same discipline and chosen to ensure that the candidate's ability to testify under pressure is tested. The "defense attorney" shall not be the Training Coordinator.

19.5.3.3.2 Evaluation Committee (EC).

19.5.3.3.2.1 The Evaluation Committee in the mock trial shall consist of:

- Training Coordinator
- Section Supervisor (and Group Supervisor, if in the supervisory chain of command)
- Laboratory Director (If the LD is unavailable, another LD may serve as alternate)
- Program Manager

- 19.5.3.3.2.2 The Director, Deputy Director, DTS, QA Section Supervisor and/or supervisor(s) in the applicable discipline but who are not in the supervisory chain may join the EC if in attendance.
- 19.5.3.3.2.3 The EC should meet and discuss the candidate’s mock trial performance in the absence of the candidate and any other attendees immediately following the exercise.
- 19.5.3.3.2.4 Verbal performance critiques should be offered to the mock trial candidate by the EC after other attendees are excused, subsequent to 19.5.3.3.2.3.
- 19.5.3.3.3 Evaluation
 - 19.5.3.3.3.1 Each member of the EC shall offer their opinion as to whether the candidate successfully completed the exercise. The candidate must clearly demonstrate their ability to present and defend the practical test results on the stand in a manner that meets Department testimony standards. At least one Mock Trial Evaluation Form shall be completed and signed by each member of the EC to document the candidate’s performance.
 - 19.5.3.3.3.2 After discussion, the EC should be in full agreement that the candidate has successfully completed the exercise or needs to repeat it after additional training.
- 19.5.3.3.4 Recording Performance
 - 19.5.3.3.4.1 Mock Trials should be recorded.
 - 19.5.3.3.4.2 The Supervisor/Training Coordinator should review the performance with the candidate irrespective of the outcome of the Mock Trial exercise.
- 19.5.3.3.5 Attendance
 - 19.5.3.3.5.1 Mock trial attendance should be offered to examiners/trainees at the laboratory in which it is being held, with permission from the attendee’s section supervisor.
- 19.5.3.3.6 Location
 - 19.5.3.3.6.1 The Mock Trial may be held in a regional laboratory.
 - 19.5.3.3.6.2 It is the expectation that new scientific staff members (previously qualified or full trainees) will tour through and meet the staff in the DFS headquarters offices (e.g., Director’s office, Finance, Procurement, HR) and Technical Services staff during their “training” or “orientation” period. If this tour has not been performed prior to the mock trial, the mock trial shall be held in Richmond so that these events may occur concurrently.

19.5.4 Assessment/Training of Experienced Personnel

The Department may hire personnel who have been examiners at other forensic laboratories, returning examiners who were previously Department personnel but had left for some period of time, and personnel who have significant applicable technical education, training and/or experience but have not

been formally qualified/certified as examiners. Section Training Manuals must provide for the assessment and documentation of the KSAs of such personnel in order to appropriately modify their training, yet ensure that they will have the same body of knowledge, on completion of their training, as an individual who has completed the entire training process. This modified training program shall be developed by the Training Coordinator/Supervisor in conjunction with the appropriate Program Manager.

19.5.5 Training Program Evaluation

Examiners are required to evaluate the training program approximately 4 – 6 months after qualification. The Section Supervisor should direct new examiners to submit the form at the appropriate time. The Program Manager will review the completed evaluation form and use the information to improve the training program. The *Training Program Evaluation* workflow shall be used for this purpose. Completed forms should be returned to the appropriate Laboratory Director and retained with the training records.

19.6 DFS Certification and Authorization to Work

Laboratory Directors shall authorize specific personnel, including appropriate contracted personnel, to perform particular types of sampling, tests and/or calibration, to issue Certificates of Analysis and calibration certificates, to give opinions and interpretations, and to operate particular types of equipment.

- 19.6.1 Upon an individual’s successful completion of the training process, the appropriate Program Manager shall forward a written recommendation for certification to the Department Director (see [Appendix K](#)) for signature; thus, certifying the individual.
- 19.6.2 The Program Manager will forward the training file to the QA Section Supervisor or designee, who will assess the file and ensure that it is complete. The QA Section Supervisor will make and retain a copy of the practical test documentation, including the preparation information, expected results, Program Manager approval and TRF, with the PT records for the applicable year.
- 19.6.3 Graduates of the Virginia Institute of Forensic Science and Medicine (VIFSM) underwent the same training program as Department trainees and, therefore, meet all necessary requirements for certification.
- 19.6.4 The QA Section Supervisor will distribute copies of the certifying document to appropriate parties and forward the original to the Director of the laboratory to which the examiner will be assigned, for inclusion in the individual’s training file.
- 19.6.5 The Laboratory Director of an employee’s assigned laboratory shall issue an “Authorization to Work” (see [Appendix J](#)), to authorize the employee to perform casework (calibration) duties, which include the analysis of results, opinions and/or interpretations, and to utilize associated equipment. If the capability to perform a category listed on the Work Authorization changes, a new Work Authorization will be issued by the appropriate Laboratory Director effective the date on the authorization. Previous authorizations will be retained in the employee’s training file.
- 19.6.5.1 When a superseding Work Authorization is issued, utilize the following language:
- This work authorization is effective {date issued}. For prior authorization(s), please refer to the employee’s training file.” directly under the Work Authorization heading.
 - “{Employee name}, a {Insert Generic Position name} in the _____ Section in the {Central/Eastern/Northern/Western Laboratory/Division of Technical Services} with the Department of Forensic Science, has demonstrated competence. Based on training, education and experience, {employee name} is authorized to receive and handle {evidence/the evidential breath test device}, perform {testing/calibrations}, evaluate results, author and issue Certificates, testify to the results and perform technical and administrative review related to the following procedures/methods and to utilize all related equipment and instrumentation as delineated in the {SECTION} Procedures Manual:
 - {Insert the section specific categories from the Work Authorization spreadsheet located in the Qualtrax Resources – Work Authorizations folder and mark the applicable boxes}

- De-Authorization of duties (date and laboratory director initials):
 - _____ Handle {evidence/the evidential breath test device}
 - _____ Perform {testing/calibrations}
 - _____ Evaluate results, author and issue Certificates
 - _____ Perform technical and administrative review
 - _____ Utilize all related equipment and instrumentation

19.7 Technical Support Staff

- 19.7.1 Technical support staff training will generally be a subset of that received by examiner trainees. Such training should, therefore, be addressed in Section Training Manuals.
- 19.7.2 Technical support staff, regardless of academic qualifications or past work experience, shall satisfactorily complete a Practical Test prior to assuming independent responsibility for any task that could reasonably be expected to affect the outcome of any test reported by the laboratory. Support staff may also be given a Technical Final, but generally, will not undergo a formal Mock Trial, as those personnel will rarely, if ever, be called to testify.
- 19.7.3 Breath Alcohol technical support staff, regardless of academic qualifications or past work experience, shall:
- satisfactorily complete a Practical Test prior to assuming independent responsibility for any task that could reasonably be expected to affect the outcome of any calibration reported by the laboratory;
 - shall be certified as a Breath Test Operator;
 - successfully complete a formal mock trial.

19.8 Continuing Education and Training

- 19.8.1 The Department supports continuing education to maintain skills and expertise of personnel by providing training and access to literature, and encouraging personnel to continually develop/enhance relevant knowledge, skills and abilities. To maintain competency and meet requirements such as those imposed by the FBI Quality Assurance Standards for Forensic DNA Testing Laboratories, employees must participate in continuing education and review current discipline-specific scientific literature.
- 19.8.1.1 Both the Department and employees must set aside time and resources toward continuing education, which can take the form of the following:
- Attendance at meetings and seminars
 - Participation in study groups and technical working groups
 - Review of the current literature
 - The preparation and submittal of journal articles for publication
 - The presentation of papers at technical meetings
 - Participation in college courses and other specialized courses
- 19.8.1.2 Such activities depend on the availability of Department resources, and specific plans must be coordinated with management to benefit both the employee and the Department. In some cases it may be necessary to break up activities into several sessions to accommodate caseload requirements.
- 19.8.1.3 It should also be recognized that some meetings and training seminars will require time beyond the normal work hours, and the exempt employee provides whatever time is necessary without asking for additional compensation beyond reimbursement for approved expenses. Further, when attending some meetings and training seminars outside of one's duty station, regular work activities may be interrupted by travel or other related offsite functions. When on approved overnight travel, the exempt employee may receive agency approval to report their regularly scheduled hours in the state electronic system.

- 19.8.1.4 Upon returning to the Department, the employee should report on the proceedings to the other individuals who were unable to attend. The employee should complete the *Report of Training/Conference Attendance* workflow.
- 19.8.2 Personnel time out of the laboratory will be considered as one factor in all meeting requests. Generally, no more than two requests to attend a meeting will be considered per employee per fiscal year. Time requested must include travel time.
- 19.8.3 Funding for all requests will be evaluated based upon benefits to the Department, budgetary constraints and the following factors:
- 19.8.3.1 Generally, no more than one professional meeting per employee per year will be recommended for reimbursement of any expenses. Membership in the professional organization will be a prerequisite for funding consideration (when applicable).
- 19.8.3.2 The maximum reimbursement that will be funded will be negotiated prior to approval of the employee's travel request. Full reimbursement of expenses will be provided if the employee is directed to attend by the Department Director.
- 19.8.3.3 Requests for attendance must be submitted through supervisory channels utilizing the External Activity General Request (EAGeR) workflow.
- 19.8.4 The Department Director may appoint an individual as meeting coordinator for all requests for a single meeting. The meeting coordinator will:
- Receive all applications
 - Review each for completeness and reasonableness of cost estimates
 - Negotiate with the Department Director a total amount of funding for the meeting
 - Allocate a portion of the funding to each selected applicant as appropriate
 - Present the package to the Department Director for final approval
- 19.8.5 Requests should be submitted not later than 45 days prior to the continuing education or training event.
- 19.8.6 Requests must include estimated costs and an agenda when available in the EAGeR workflow. The State Travel Regulations will be used to determine what expenses are valid for possible reimbursement. As a minimum, cost estimates for each of the following categories will be shown on the travel request: Transportation, Lodging, Meals and Registration Fees. Use of the state car is a transportation expense and its mileage cost will be shown in the estimate. Applications will be reviewed for reasonableness of cost estimates; those that are found to be unreasonable will not be considered for funding.
- 19.8.7 Staff Development Seminars
- 19.8.7.1 This category includes training seminars given by the Department, DHRM and other organizations with similar topic programs.
- 19.8.7.2 Approval for time out of the laboratory will be considered for not more than five working days per employee per fiscal year.
- 19.8.8 Technical Training Courses
- 19.8.8.1 This category includes specialized training in technical specialties such as those provided by the Federal Bureau of Investigation (FBI) training schools, Drug Enforcement Administration (DEA) seminars, and instrument operator courses.
- 19.8.8.2 Each request will be evaluated individually with emphasis on curriculum and benefit to or need of the employee and the Department.

19.8.8.3 Time requirements for technical training courses attended by an individual during the fiscal year will be a factor in consideration of requests for time for other categories of training.

19.8.9 Seeking Office/Presentation/Publishing

19.8.9.1 Employees are encouraged to participate in professional forensic organizations by seeking/holding office, giving presentations, and/or publishing. Prior approval by the DTS is required through the EAGeR workflow.

19.8.9.2 To seek/hold an office, an employee must forward the request form (electronically is acceptable) through appropriate supervisory channels as indicated on the form. The request must include the name of the organization, office employee is seeking, and approximate amount of time that will be required during normal work hours.

19.8.9.3 To give a presentation to a professional forensic organization or publish an article, an employee must forward the request form (electronically is acceptable) through appropriate supervisory channels. The request must include the name of the organization, a copy of the presentation/abstract/article to be published/explanation of the presentation (in the case of a poster presentation) and a completed EAGeR workflow, if appropriate.

19.8.10 Laboratory/Section Meetings

19.8.10.1 Laboratory Directors should hold regional laboratory staff meetings.

19.8.10.1.1 Laboratory Directors shall ensure that their personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the objectives of the management system.

19.8.10.1.2 Laboratory Directors shall communicate to regional laboratory personnel the importance of addressing contributor requests and complying with statutory and regulatory requirements, as well as working in accordance with the Quality System.

19.8.10.1.3 The meeting(s) shall be documented.

19.8.10.2 Program Managers should organize Supervisors' meetings for each discipline in their program area at least once a year. In addition, each Section may hold an annual Department-wide Section meeting at which all the Section's examiners should attend.

19.8.10.3 The Program Manager will publish an agenda and a summary of the outcome of each meeting. A copy should be distributed to attendees, laboratory directors and the DTS. A copy will be maintained by the Program Manager.

19.8.11 Retraining

If retraining is deemed necessary, a specific plan for that individual shall be developed by the Supervisor and approved by the Lab Director, appropriate Program Manager and the Director of Technical Services. This plan will include, at a minimum, the scope of the training required, a plan of action to accomplish the training and the trainer assigned to coordinate/provide the training. Any training of this type or associated competency testing performed will be documented in the examiner's training file.

19.9 Qualification Documentation

Individual records of education and training will be maintained by the appropriate laboratory or in Qualtrax as part of the permanent training record. For those individuals who completed their training and competency testing prior to the implementation of current documentation practices, some records may not exist to demonstrate the basis of departmental certification as a forensic examiner. With this exception, an individual's record will generally include copies of the following:

- The employee's qualification documentation forwarded by the trainer, e.g., modular training signoffs as in 19.5.2.6.
- The results of the competency exam (19.5.3)
- DFS certification document (for examiners)
- Authorization to Work
- Authorization to access ICD samples, as appropriate
- Records of each employee's training activities (completed "Report of Training/Conference Attendance" Workflow/form) or Summary List of training
- Statement of Qualifications, updated annually
- Educational qualifications (diplomas, transcripts)
- Inspection/Assessor/Auditor certifications
- Discipline specific certifications (e.g., ABC, IAI, ABFT)

19.10 Literature Resources

Each laboratory shall maintain or provide access to relevant books, journals, and other forensic literature dealing with each discipline.

20 **FACILITIES, SECURITY AND SAFETY****20.1 Policy**

The Department will provide adequate, appropriate, safe and secure facilities for its employees, equipment, supplies and evidence. Environmental conditions which can influence the quality of results will be addressed in Section Manuals. Facility functions such as lighting, energy sources and environmental conditions will be monitored by facility maintenance staff to ensure correct performance.

20.2 Building Criteria

- 20.2.1 Employees will have adequate workspace appropriate for the job to be performed.
- 20.2.2 Sufficient space will be provided near work areas for storage of supplies, equipment, and tools.
- 20.2.3 Adequate space will be available for long and short-term storage of records, and for reference works and other literature.
- 20.2.4 Appropriate space will be available for each instrument, and for the nearby storage of accessories and supplies.
- 20.2.5 Work areas will be designed so as to permit the efficient flow of evidence from the time of its receipt until its return.
- 20.2.6 Airflow will be designed to minimize or prevent cross contamination. If possible, bio-vestibules will be used to separate laboratory areas from common areas. Otherwise, laboratories will establish a means of ensuring and preserving a definite distinction between laboratory areas and common areas.
- 20.2.7 Effective separation will be provided between neighboring areas in which there are incompatible activities.
- 20.2.8 Adequate exhaust hoods and biological safety cabinets will be provided and will have sufficient airflow to provide a safe environment.
- 20.2.9 Adequate lighting will be provided for all work areas.
- 20.2.10 Adequate plumbing and wiring will be available and accessible for all tasks.
- 20.2.11 Heating, cooling, humidity control, and general ventilation will be adequate.
- 20.2.12 A fire detection system must be in place.
- 20.2.13 All laboratory entrance and exit points will be controlled.
- 20.2.14 The laboratories must be secured during vacant hours by means of an intrusion alarm and security monitoring.
- 20.2.15 Measures shall be taken to ensure good housekeeping. Special procedures shall be addressed in SOPs or the Safety Manual.

20.3 Physical Security

- 20.3.1 Personnel access to, and within, the interiors of Department laboratories is controlled by access systems employing keys, combination locks, access codes, or access cards. The presence of security alarms, and Forensic Evidence Specialists, as well as closed circuit television and remote control of certain doors in some laboratories augment these controls.

- 20.3.2 Facility security monitoring is addressed in the Regional Operating Procedures (ROPs).
- 20.3.3 Laboratory Directors are responsible for determining the extent and type of access for each employee. The Laboratory Director or designee will maintain logs of the keys, combinations, codes, and cards for all access control points, and the employee(s) to whom access at each point has been granted. They will store any unassigned keys or cards in a secure area to which only they have access.
- 20.3.4 To ensure continued physical security, the following practices must be followed:
- 20.3.4.1 Employees are strictly forbidden to loan/give their assigned keys, combinations, codes, and/or cards to any other person.
 - 20.3.4.2 The loss, theft, or other compromise of a DFS key, card, or written or electronic record of combination or code shall be reported in a timely manner to the person who issued the access medium. Appropriate action will be taken to prohibit further access using that medium.
 - 20.3.4.3 Lost or stolen access media to critical control points such as building entrances and evidence lockers require an appropriate response as soon as possible.
 - 20.3.4.4 Resignation by, or termination of, an employee, shall require the immediate return of all DFS access media. Appropriate locks, combinations and codes shall be changed as necessary.
 - 20.3.4.5 Employees who use access codes shall submit new codes to their Laboratory Director or designee as needed. Codes may also be requested or assigned as deemed necessary by the Laboratory Director.
 - 20.3.4.6 Employees working outside normal weekday hours or on a holiday or weekend shall sign into and out of a laboratory in an employee logbook.

20.4 Personnel Security

20.4.1 Security Clearances

- 20.4.1.1 Each person selected to work at the Department, to include interns, students and volunteers, must pass a background investigation by Virginia State Police. Once an applicant has accepted an offer of employment, the appropriate Laboratory Director will have the employee complete and return the Department's *Release of Information Authorization* form and the *Background Data Questionnaire* form and will have the employee fingerprinted. The completed form and fingerprint card should be forwarded to the Deputy Director prior to the employee's start date.
- 20.4.1.2 The Deputy Director will initiate the investigation. The extent of the investigation will be determined on a case by case basis.
- 20.4.1.3 The Deputy Director will receive the results of the investigation and make a determination of the suitability of the employee to (continue) work at the Department. The appropriate Laboratory Director will be informed of that determination.

20.4.2 Employee Identification

Each employee shall be issued an individual identification badge. The badge will be worn when in a laboratory, except in situations where contamination of the badge or personal injury could result.

20.4.3 Contractors

20.4.3.1 Employees of the Department's operations and maintenance (O&M) contractors who work full-time in a laboratory will:

- Be subjected to a background investigation as for an employee,
- Be granted access as determined necessary by the Laboratory Director or designee, and
- Wear recognizable uniforms and/or prominently displayed identification badges.

20.4.3.2 Employees of other contractors must sign into and out of a laboratory in a logbook and wear prominently displayed contractor identification badges supplied by the Department. Such personnel may be granted temporary limited unaccompanied access to controlled areas to perform their work.

20.4.4 Visitors

20.4.4.1 All persons other than Department employees, contractors, and individuals submitting or retrieving evidence, who enter a controlled access area of a laboratory are considered visitors.

20.4.4.2 A Department employee will appropriately escort visitors at all times.

20.4.4.3 Visitors must sign into and out of a laboratory in a visitor logbook and wear prominently displayed visitor identification badges supplied by the Department.

20.4.4.4 Laboratory Directors may choose to relax the logging and badging requirements for certain visitors, such as Academy and Breath Alcohol class members and large tour groups.

20.5 Safety

20.5.1 The QA Section Supervisor will have defined responsibility for ensuring that the Safety Program documented in the Safety Manual is implemented.

20.5.2 The Laboratory Directors shall have the authority to ensure that the Safety Program is followed at all times.

20.5.3 All laboratory personnel shall follow the Safety Program.

20.5.4 Each regional laboratory shall appoint an individual to serve as a Safety Officer.

21 EQUIPMENT

21.1 Policy

The Department will ensure that it has equipment that is sufficient and adequate for the work to be performed and that it is maintained and calibrated.

21.2 General Requirements

- 21.2.1 Program Managers, Supervisors, and system administrators, as appropriate, will be responsible for developing the specifications to be used in contracting for equipment. Equipment provided by the selected vendor must meet or exceed the specifications.
- 21.2.2 Upon receipt, the equipment will be inspected and inventoried against the packing slip and purchase documents. Discrepancies will be brought to the attention of the vendor immediately. If vendor installation is required, the shipment will be secured as received until the vendor arrives.
- 21.2.3 Equipment not requiring calibration against a known standard will be verified to be in proper working order.
- 21.2.4 All equipment, including computers will be maintained in good operating order and according to the manufacturer's and/or Program Manager's/system administrator's maintenance requirements. Repairs will be made in a timely manner.
- 21.2.5 The Department will maintain an equipment inventory. The inventory will be in sufficient detail to allow it to be sorted by laboratory and by Section within a laboratory. The Financial Management Services Fixed Asset Policy will specify the format and data fields to be used for the inventory and the documentation required to effect a change in the inventory.
- 21.2.6 The Department will ensure that the requirements of the accrediting body are also met in those cases where it is necessary to use equipment outside of permanent DFS control.

21.3 Technical Equipment

- 21.3.1 The requirements of this section apply to all equipment/instruments used in testing and calibration except for the breath test instruments which are covered by ¶ 18. The terms, "equipment" and "instrument", are used interchangeably throughout this section.
- 21.3.2 Each piece of equipment and associated software, which are significant to the result, shall be uniquely identified, when practicable.
- 21.3.3 Measuring equipment shall be handled, transported and stored in a manner to prevent contamination or deterioration.
- 21.3.4 All equipment and associated software having an effect on the accuracy, precision or validity of a test method will be appropriately calibrated, if possible, before being put into use. For equipment that cannot be calibrated, its ability to provide the necessary uncertainty of measurement will be documented before use.
 - 21.3.4.1 When possible and relevant, calibrations and measurements will be traceable to the International System of Units (SI). This applies to calibrations and measurements of fundamental physical properties such as length and weight.
 - 21.3.4.2 When calibrations or measurements cannot be traceable to SI units, their validity will be ensured by traceability to certified reference materials obtained from competent suppliers, or by use of specified methods and/or consensus standards. The validity will be further assured by the Department's proficiency testing program.

- 21.3.4.3 When external calibrations are performed, the service provider shall be either:
- a National Metrology Institute that is a signatory to the BIPM - CIPM Mutual Recognition Arrangement with the calibration to be performed listed in Appendix C of the BIPM key comparison database (KCDB), or
 - a service supplier accredited to ISO/IEC 17025 by an accrediting body that is a signatory to the ILAC Mutual Recognition Arrangement, with the calibration to be performed listed in a scope of accreditation.
- If no such providers exist, a service provider that demonstrates competence, measurement capability and traceability will be used.
- 21.3.4.3.1 Calibration certificates from providers will contain the measurement results, including the measurement uncertainty and/or a statement of compliance with an identified metrological specification.
- 21.3.4.3.2 Copies of the provider's accreditation/competence determination documentation will be maintained by the QA Section Supervisor.
- 21.3.4.4 Once the interval of calibration has been established, any extension in the interval of calibration shall be based on empirical data and an evaluation of risk. Records will be maintained by the appropriate Program Manager.
- 21.3.4.5 When necessary, intermediate checks will be carried out on calibrated equipment according to the appropriate procedure.
- 21.3.4.5.1 The procedure will define the frequency of the intermediate checks.
- 21.3.4.5.1.1 Once the frequency of an intermediate check is established, any extension to the interval will be based on empirical data and an evaluation of risk. Records will be maintained by the appropriate Program Manager.
- 21.3.4.6 Laboratory equipment requiring calibration shall be labeled or otherwise identified to indicate the calibration status, including the date when last calibrated and the date or expiration criteria when recalibration is due.
- 21.3.5 Equipment that has been subjected to overloading or mishandling, gives suspect results, or has been shown to be defective or outside specified limits, shall be taken out of service.
- 21.3.5.1 This equipment shall be isolated to prevent its use or clearly labeled as being out of service until it has been repaired and shown by calibration or test to perform correctly.
- 21.3.5.2 The effect of the defect or departure from specified limits on previous tests and/or calibrations will be examined, and any non-conforming work will be addressed (pursuant to ¶10).
- 21.3.6 Newly purchased or acquired equipment, as well as equipment that was taken offline for repair and is ready to go back on line, will be verified (or validated, if appropriate) for its intended use before being put (back) into service.
- 21.3.7 When, for whatever reason, equipment goes outside the direct control of a laboratory, the laboratory shall ensure that the function and calibration status of the equipment are checked and shown to be satisfactory before the equipment is returned to service.
- 21.3.7.1 Laboratory staff shall ensure that test and calibration equipment, including both hardware and software, is safeguarded from adjustments which would invalidate test and/or calibration

results. Equipment will be used in a manner to ensure proper functioning and to prevent contamination or deterioration.

21.3.8 Program Managers and Section Supervisors are responsible for the following:

- 21.3.8.1 Section Supervisors shall ensure that up-to-date instructions on the use of equipment, including any relevant manuals provided by the manufacturer of the equipment, will be readily available for each instrument, for use by the appropriate laboratory personnel.
- 21.3.8.2 Calibrations, calibration checks, maintenance frequencies and maintenance procedures, where applicable, will be incorporated into Section Technical Procedures Manuals. Calibration and check procedures will be commensurate with the intended use of the data and will provide criteria for deciding if a calibration or check was satisfactory.
 - 21.3.8.2.1 Calibration checks will be performed after equipment is taken out of and subsequently returned to service, and following any substantial maintenance or repair. Technical Procedures will also specify the frequency of calibration. Calibration check intervals shall not be less stringent than manufacturers' recommendations.
- 21.3.8.3 Section Supervisors will ensure that all maintenance, calibration and validation actions are recorded in a manner accessible to appropriate laboratory personnel. Such records must be readily retrievable at a later date should the need arise, e.g., responses to discovery motions.
- 21.3.8.4 Section Supervisors will ensure that a complete record of installation, maintenance, and repair is preserved for each instrument.
- 21.3.8.5 Procedures for validation of equipment will be included in each section's Technical Procedures Manuals.

21.3.9 Documentation

- 21.3.9.1 Records shall be maintained of each item of equipment and its software significant to the tests and/or calibrations performed (see also ¶ 21.3.4). These records shall include the following, where applicable:
 - the identity of the item of equipment and its software/firmware version
 - the manufacturer's name, type identification and serial number or other unique identification
 - checks that the equipment complies with laboratory specifications
 - the current location, where appropriate
 - the manufacturer's instructions, if available, or reference to their location
 - dates, results and copies of reports and certificates of all calibrations, adjustments, acceptance criteria, and the due date of next calibration
 - the maintenance plan, where appropriate, and maintenance carried out to date
 - any damage, malfunction, modification or repair to the equipment

21.3.10 When an instrument is retired from service, maintenance and repair records will be maintained in the Section pursuant to the Library of Virginia Specific Schedule Number 778-001 (Quality Assurance: Equipment, Standards, and Instruments 200500 series).

22 STAFF IDENTIFICATION INDICES

22.1 Background

The Department is a Public Safety entity and must take extreme precautions to ensure accuracy in the analysis of evidence and the reporting of the results of the analysis of that evidence. The sensitivities of our methods, such as in DNA and latent fingerprint examinations, are such that we are capable of detecting even minor contributions by our own examiners and/or anyone handling evidence, despite QA measures in place to minimize that risk. Thus, when a search of the databases of convicted felons, arrestees, fingerprints, etc., does not match any entry in these databases, there still remains the possibility that the unidentified profile, fingerprint, etc., may belong to someone on our own staff who came into contact with the evidence and/or the location/equipment/supplies that were used in the analysis. To detect this possibility, DFS maintains Staff Identification Indices so that scientists may identify any such minor contributions either prior to the search of the database or as part of the search process.

22.2 Staff Identification Indices

- 22.2.1 As a condition of employment and/or to routinely work in any of the Department's laboratories in any capacity, all individuals are required to provide appropriate samples for inclusion into the Staff Identification Indices.
- 22.2.2 The requirement to provide appropriate samples for inclusion into the Staff Identification Indices is in addition to the required security background check (§ 20.4.1).
- 22.2.3 Each individual required to provide these samples will receive and sign a Virginia Department of Forensic Science (DFS) Staff Identification Indices Sample Collection Form (108-F659). The original Sample Collection Form will be forwarded to Human Resources for retention or for Contract Employees to their respective Laboratory Director. The individual will be provided a copy of the signed Sample Collection Form if requested.

22.3 Procedure for Staff DNA Index

- 22.3.1 The individual's buccal sample shall be profiled and entered into the Staff DNA Index. Upon request, the employee will be provided with their DNA profile.
- 22.3.2 Once the individual's sample has been profiled and entered into the Staff DNA Index, the individual's sample will be retained and marked with an anonymous personal identifier code.
- 22.3.3 The individual's DNA profile in the Staff DNA Index will be identified by the same anonymous personal identifier code.
- 22.3.4 The person entering the individual's profile into the Staff DNA Index will provide the Department's Senior Legal Assistant (CF738) with the name of the individual whose profile was entered and the anonymous personal identifier code assigned to that individual's profile/sample.
- 22.3.5 The Senior Legal Assistant shall maintain the only record which correlates personal identifier codes with individuals' names.
- 22.3.6 If an individual's DNA profile is identified when the Staff DNA Index is searched, the examiner shall notify the Biology Program Manager.
 - 22.3.6.1 The Senior Legal Assistant (or designee) may release the individual's name to the Biology Program Manager (or designee) for technical review.
 - 22.3.6.2 If the individual cannot be eliminated the Biology Program Manager (or designee) will then notify via email the DTS and the Laboratory Director where the profile was identified.
- 22.3.7 The Staff DNA Index can only be searched within the Department.

22.4 Procedure for Staff Fingerprint Index

- 22.4.1 The individual's fingerprint card will be sent to the Virginia State Police (VSP) after being entered into AFIS.
- 22.4.2 DFS will assign a personal identifier code to the individual's fingerprints that are entered into AFIS.
- 22.4.3 The VSP will retain the fingerprint card.
- 22.4.4 The Department's Senior Legal Assistant (CF738) shall maintain a list of each employee and their personal identifier code.
- 22.4.5 If an individual's fingerprint is identified via AFIS, the VSP will notify the Director/Deputy Director/DTS.

22.5 Corrective Action

Identification of an individual in a Staff Identification Index will be treated in accordance with ¶ 10, Nonconformities and Corrective Actions.

23 LABORATORY INFORMATION MANAGEMENT SYSTEM (LIMS)

23.1 Entering Subpoenas

23.1.1 Witness Subpoenas

- 23.1.1.1 Verify that the person listed on the subpoena is still employed by the Department before accepting the subpoena and entering the information into the Department LIMS.

NOTE: Do not accept a subpoena for an employee who no longer works for the Department. Document this in the subpoena log when such an event occurs.

- 23.1.1.2 If employee works in any of the Department's laboratories, accept the subpoena and enter the information into the Department's LIMS. Forward the original subpoena to the employee via interoffice mail.
- 23.1.1.3 Contact the employee who is subpoenaed if the court appearance is within one week of the delivery. If the employee cannot be contacted then notify the employee's supervisor.
- 23.1.1.4 In FA, enter the FS Lab # in the Court Case # field, Subpoena Type (i.e., Defense, Federal Court, Normal) and the Defendant(s) if listed on the subpoena. In the Comments field enter the date range if the Subpoena has multiple dates listed.

23.1.2 Subpoenas Duces Tecum

- 23.1.2.1 If the subpoena is for the Breath Alcohol Section, assign it to the Breath Alcohol Section Supervisor. Forward the subpoena to the Breath Alcohol Section via interoffice mail as soon as possible.
 - 23.1.2.1.1 Contact the Breath Alcohol Section if the response for the subpoena is due within the same week of the delivery. If someone in the section cannot be contacted then notify the Director of Technical Services.
- 23.1.2.2 All other Subpoenas Duces Tecum will be assigned to the Department's Legal Counsel in the LIMS system. Forward the original Subpoena Duces Tecum to the laboratory's Office Manager.
- 23.1.2.3 In FA, enter the FS Lab # in the Court Case # field, Subpoena Type (i.e., Subpoena Duces Tecum) and the Defendant(s) if listed on the subpoena.

24 GLOSSARY**24.1 Purpose**

This Glossary establishes uniform definitions of terms, acronyms and abbreviations commonly used in the Department.

24.2 Definitions

- 24.2.1 ANALYST: An employee who performs testing or calibration activities.
- 24.2.2 CASE: That part of a submission that is assigned to an examiner for examination and the subsequent generation of a report.
- 24.2.2.1 COMPLETED CASE: A case for which the report has been released in LIMS.
- 24.2.2.2 PENDING CASE: An unfinished (open) case.
- 24.2.3 CASE COMPLETION DATE: The date the report is released in LIMS, which is used to calculate turn around time.
- 24.2.4 CASE FILE: The administrative documentation and technical record generated or received by the Department pertaining to a criminal event which has been uniquely identified by the submitting law enforcement agency. The designator of the case file is the Forensic Science Laboratory Number (FS Lab #) and is comprised of hardcopy records and corresponding case information in LIMS, including chain of custody records and the contents of the object repository. The case file may also be called the case record or test record.
- 24.2.5 CHAIN OF CUSTODY: A chronological record of those individuals who have had custody of the physical evidence from its initial receipt until its final disposition by the Department.
- 24.2.6 CONTAINER: A receptacle (e.g., a paper bag, manila envelope, cardboard box) that contains item(s) of evidence. Typically, containers are sealed upon transfer between individuals and laboratories.
- 24.2.7 CONVENIENCE PACKAGE: An unsealed receptacle (e.g., a paper bag, large manila envelope or cardboard box) used to hold sealed evidence, or to submit unsealed evidence for instrument support if the transfer is hand to hand within a DFS laboratory. The convenience package will be conspicuously labeled as such. It may be closed (taped or stapled) but it will not be sealed. It will have the FS Lab # placed on it but will not be marked with the initials of individuals who have handled it.
- 24.2.8 CUSTODY
- 24.2.8.1 ADMINISTRATIVE CUSTODY: Administrative custody is group custody of evidence in each section, including evidence placed into a lockbox for transfer between laboratories.
- 24.2.8.2 PERSONAL CUSTODY: Personal custody is individual custody by a section member.
- 24.2.9 CRIME: An act committed or omitted in violation of law.
- 24.2.10 CRIMINAL EVENT: The occurrence of one or more crimes that has been uniquely identified by a submitting law enforcement agency.
- 24.2.11 DISPOSITION OF EVIDENCE: The act of either returning the evidence to the submitting agency or other authorized person or entity, or destroying it as authorized or required by law.
- 24.2.12 DEPARTMENT: The Department of Forensic Science

24.2.13 DOCUMENTATION

24.2.13.1 ADMINISTRATIVE DOCUMENTATION: Administrative documentation includes copies of RFLEs, internal chain of custody documents, notes, and Memorandums for Record reports of case-related conversations, subpoenas (testimony subpoenas optional), records of discovery, and other pertinent information which is related to the case file but does not support the conclusions drawn.

24.2.13.2 EXAMINATION DOCUMENTATION: Examination documentation includes references to procedures followed, tests conducted, standards and controls used, diagrams, printouts, photographs, spectra, chromatograms, observations, hand written notes and other material used by the examiner to reach a conclusion.

24.2.14 EVIDENCE CONTAINER: The sealed packaging provided by the submitting agency containing an evidence item (or items). The outer packaging is bar-coded, properly marked, and tracked with DFS chain-of-custody.

24.2.15 EVIDENCE STORAGE

24.2.15.1 SHORT TERM STORAGE: Storage used for evidence in the process of examination.

24.2.15.2 LONG TERM STORAGE: Storage used for evidence that is pending analysis or waiting for return, or where the examination process has been temporarily halted/delayed.

24.2.16 EXAMINATION: The act or process of conducting or evaluating analytical procedures and tests that contribute to reaching a finding.

24.2.17 EXAMINER: An employee who performs calibrations or examinations on and/or develops findings/conclusions concerning physical evidence, and prepares and signs reports, and testifies in court as required.

24.2.18 FORENSIC SCIENCE LABORATORY NUMBER (FS Lab #): A unique identifier of all submissions of physical evidence related to a single criminal event.

24.2.19 INSTRUMENT SUPPORT: Instrumental analysis performed by someone qualified to perform such testing but who is not the examiner issuing the CoA. The issuing examiner requests the instrument support and will interpret the data/results in conjunction with other examinations they have performed in the case. Instrument support does not include typical batch analysis within a laboratory's Forensic Biology or Toxicology Sections.

24.2.20 INSTRUMENT SUPPORT REPORTS: Any internal report issued in support of other examinations.

24.2.21 ITEM: A component of physical evidence within a submission that was individually specified in a laboratory report; e.g., a bullet or bottle of 1,000 tablets.

24.2.22 LABORATORY: Any one of the Department's laboratories.

24.2.23 LIMS: The Department's laboratory information management system commonly referred to as FACE or Forensic Advantage (FA).

24.2.24 MAILING PACKAGE: The outer package used to receive or return evidence via carrier service.

24.2.25 ORIGINATING LABORATORY: The laboratory at which the first submission of physical evidence and assignment of the original FS Lab # occurred.

24.2.26 PHYSICAL EVIDENCE: Material submitted to the laboratory for examination as part of an investigation into a criminal event.

- 24.2.27 **PRIMARY EXAMINER:** The examiner who coordinates the transfer of physical evidence when multiple examiners are involved with a submission and ensures that all cases are completed before the evidence is transferred to Evidence Receiving for return to the submitter. (¶ 14.4.7)
- 24.2.28 **REQUEST FOR LABORATORY EXAMINATION FORM (RFLE):** The form provided by DFS and used by a submitting agency to request laboratory examinations, provide pertinent information, describe the physical evidence being submitted, and to provide a chain of custody from the submitting agency to the laboratory and back.
- 24.2.29 **REPORT:** The official written findings/conclusions of an examiner (Certificate of Analysis or Certificate of Instrument Accuracy). Copies of all issued reports are retained as technical records.
- 24.2.29.1 **AMENDED REPORT:** A report that has been issued to make a change in a previously issued report.
- 24.2.29.2 **SUPPLEMENTAL REPORT:** A report that concerns items of evidence that have been addressed in a previous report by the same examiner or section.
- 24.2.30 **REVIEWS**
- 24.2.30.1 **ADMINISTRATIVE REVIEW:** A proofreading; a review of the final report, the signed Certificate of Analysis/CoIA, for administrative issues (i.e., formatting, spelling, grammar, etc.) as part of the Technical Review process.
- 24.2.30.2 **TECHNICAL REVIEW:** An in-depth review of the examination documentation used as the basis for the findings/conclusions stated in the signed Certificate of Analysis/CoIA.
- 24.2.31 **SEAL:** A proper seal (evidence seal) as defined in ¶ 14.7.
- 24.2.32 **SHALL:** A requirement.
- 24.2.33 **SHOULD:** A requirement unless there is a valid, articulable reason for proceeding otherwise.
- 24.2.34 **SPECIMEN:** A singular unit of physical evidence within an item; one of multiple identical units; e.g., a capsule out of a bottle of 1,000 capsules.
- 24.2.35 **SOP:** Standard Operating Procedures as defined in ¶ 5.3.3.
- 24.2.36 **SUBMISSION:** A Request for Laboratory Examination form or forms from a submitting agency listing one or more items of evidence pertaining to a criminal event and requesting one or more examinations.
- 24.2.37 **SUBSEQUENT SUBMISSION:** A submission that is assigned to an existing FS Lab #. A subsequent submission may contain evidence that had been included in an earlier submission.
- 24.2.38 **SUBMITTING OFFICER:** The individual who submits the evidence and the corresponding Request for Laboratory Examination form to the laboratory, either in person or via a carrier.
- 24.2.39 **SUSPECT:** An individual who is suspected of committing a crime.
- 24.2.40 **TECHNICAL RECORD:** Examination documentation and all issued reports. For Breath Alcohol, certification documentation and all issued reports.
- 24.2.41 **TEST:** A physical or chemical measurement or an observation used to identify a unique or discrete property of an item.
- 24.2.42 **TURNAROUND TIME:** The time taken to complete a case. The number of calendar days from the date of submission of the physical evidence until the release date of the report in LIMS.

24.2.43 **VALIDATION:** The confirmation by examination and the provision of objective evidence that the particular requirements for a specific intended use are fulfilled.

24.2.44 **VICTIM:** A person or entity who is injured or suffers a loss as the result of an alleged crime.

24.3 Acronyms and Abbreviations

24.3.1 **ANAB:** ANSI National Accreditation Board

24.3.2 **ASCLD/LAB:** American Society of Crime Laboratory Directors / Laboratory Accreditation Board

24.3.3 **AFIS:** Automated Fingerprint Identification System

24.3.4 **BrAD:** Breath Alcohol Database

24.3.5 **CA:** Commonwealth's Attorney

24.3.6 **CAR:** Corrective Action Report

24.3.7 **CoA:** Certificate of Analysis

24.3.8 **CoIA:** Certificate of Instrument Accuracy

24.3.9 **CODIS:** Combined DNA Index System

24.3.10 **COV:** Code of Virginia

24.3.11 **DCJS:** Department of Criminal Justice Services

24.3.12 **DFS:** The Department (Department of Forensic Science)

24.3.13 **DTS:** Director of Technical Services

24.3.14 **EWP:** Employee Work Profile

24.3.15 **LD:** Laboratory Director

24.3.16 **MFR:** Memorandum for Record

24.3.17 **NIBIN:** National Integrated Ballistic Information Network

24.3.18 **NGI:** Next Generation Identification

24.3.19 **PAR:** Preventive Action Report

24.3.20 **PERK:** Physical Evidence Recovery Kit

24.3.21 **PM:** Program Manager

24.3.22 **PR:** Primer residue

24.3.23 **RFLE:** Request for Laboratory Examination form

24.3.24 **SOP:** Standard Operating Procedure

24.3.25 **ROP:** Regional Operating Procedure

24.3.26 UoM: Uncertainty of Measurement

24.3.27 ¶: Section within document

24.3.28 §: Section from the Code of Virginia

24.3.29 TRF: Technical and Administrative Review Form

Appendix A – Example Certificate of Analysis (1 Page)

{Printed on Certificate of Analysis form}

Central Laboratory
700 N. 5th Street
Richmond, VA 23219

March 11, 2019

Tel. No.: (804) 786-4707
Fax: (804) 786-6907

TO: STEVEN JONES
CITY POLICE DEPARTMENT
123 MAIN STREET
CITY, VA 12345

FS Lab # C18-60000

Your Case #: 2018-0922

Victim(s): - - -

Suspect(s): - - -

Evidence Submitted By: Steven Jones

Date Received: 10/25/2018

Item 1 One sealed plastic evidence bag containing one plastic bag containing crystalline material

RESULTS AND INTERPRETATIONS:

Item 1 4.50 grams of material including innermost packaging, found to contain Methamphetamine (Schedule II). [Methods: CT, TLC and GC-FID-MS]

Methods: Color Tests (CT), Thin Layer Chromatography (TLC) and Gas Chromatography-Flame Ionization Detection-Mass Spectrometry (GC-FID-MS)

Date(s) of testing: 03/07/2019-03/11/2019. Supporting examination documentation is maintained in the case file. The above listed methods are those approved for use at the time of analysis. Current methods can be found in the Controlled Substances Procedures Manual which can be found at www.dfs.virginia.gov/documentation-publications/manuals/.

Attest:

I certify that I performed the above analysis or examination as an employee of the Department of Forensic Science and that the above is an accurate record of the results and interpretations of that analysis or examination.

(Examiner's Signature)
(Examiner's Typed Name)
Forensic Scientist

(Examiner's Typed Initials)

Appendix B – Example Certificate of Analysis (2 Pages)

{Printed on Certificate of Analysis form}

Western Laboratory
6600 Northside HS Road
Roanoke, VA 24019

March 11, 2019

Tel. No.: (540) 561-6600
Fax: (540) 561-6608

TO: JOE SMITH
A COUNTY SHERIFF’S OFFICE
P.O. BOX 9876
SMALL TOWN, VA 12345

FS Lab # W18-50000

Victim(s): - - -

Suspect(s): - - -

Evidence Submitted By: USPS - 7015 0640 0005 0000 0000

Date Received: 11/29/2018

Item 1 Nine (9) cartridge cases
Item 2 Two (2) cartridge cases
Item 3 Cartridge case

RESULTS AND INTERPRETATIONS:

The above items were microscopically examined and represent at least two (2) firearms.

Due to differences in class characteristics, Item 1 was eliminated as having been fired in the same firearm(s) as Items 2 and 3.

Item 1 contains nine (9) Blazer brand caliber 9mm Luger cartridge cases which were identified as having been fired in one (1) firearm. Firearms that produce class characteristics like these include Smith & Wesson M&P model caliber 9mm Luger pistols. This is not all encompassing; it is possible another brand of firearm produced these class characteristics and is not listed due to the content of the database searched.

Item 2 contains two (2) Federal brand caliber 9mm Luger cartridge cases which were identified as having been fired in one (1) firearm.

Item 3, a Hornady brand caliber 9mm Luger cartridge case, exhibits similar class characteristics as the Item 2 cartridge cases. Due to the lack of sufficient corresponding individual characteristics, Item 3 could not be identified or eliminated as having been fired in the same firearm as the Item 2 cartridge cases. Therefore, this comparison is inconclusive.

Items 1 through 3 exhibit markings that may be suitable for identification with the firearms in which they were fired and for entry into the NIBIN system.

One (1) each of the Item 1 and 2 cartridge cases and the Item 3 cartridge case were entered into the NIBIN system.

{Printed on Certificate of Analysis form}

A County Sheriff's Office
FS Lab # W18-50000
Your Case # 170929001
March 11, 2019

A potential association was made between the imaged Item 2 cartridge case and the Item 15 cartridge case submitted under FS Laboratory # W17-45000 (A County Sheriff's Office case # 170725007).

For confirmation of this potential association, the evidence from both cases will have to be resubmitted.

No associations were made at this time for the imaged Item 1 cartridge case and the Item 3 cartridge case; however, searches will be conducted periodically as new images are entered into the database.

Date(s) of testing: 03/04/2019-03/11/2019. Supporting examination documentation is maintained in the case file. The above listed methods are those approved for use at the time of analysis. Current methods can be found in the Firearms and Toolmarks Procedures Manual, which can be found at www.dfs.virginia.gov/documentationpublications/manuals/. The evidence is being returned by FedEx.

Attest:

I certify that I performed the above analysis or examination as an employee of the Department of Forensic Science and that the above is an accurate record of the results and interpretations of that analysis or examination.

(Examiner's Signature)
(Examiner's Typed Name)
Forensic Scientist

(Examiner's Typed Initials)

Appendix C – Example Certificate of Analysis (Amended Report)

{Printed on Certificate of Analysis form}

Central Laboratory
700 N. 5th Street
Richmond, VA 23219

March 19, 2022

Tel. No.: (804) 786-4707
Fax: (804) 786-6907

TO: JANE SMITH
CITY POLICE DEPARTMENT
123 MAIN STREET
CITY, VA 12345

AMENDED REPORT

FS Lab # C21-40000

This Certificate of Analysis amends the previous Certificate of Analysis dated June 27, 2021 to add suspect’s name - - - to the report per request of Officer Smith City Police Department, on March 16, 2022.

Your Case #: 2021-0225

Victim(s): - - -

Suspect(s): - - -

Evidence Submitted By: Jane Smith

Date Received: 03/25/2021

Item 1 One sealed plastic evidence bag containing one plastic bag containing off-white solid material

RESULTS AND INTERPRETATIONS:

Item 1 14.53 grams of material including innermost packaging, found to contain Cocaine (Schedule II). [Methods: CT, TLC and GC-FID-MS]

Methods: Color Tests (CT), Thin Layer Chromatography (TLC) and Gas Chromatography-Flame Ionization Detection-Mass Spectrometry (GC-FID-MS)

Date(s) of testing: 06/25/2021-06/27/2021. Supporting examination documentation is maintained in the case file. The above listed methods are those approved for use at the time of analysis. All methods can be found in the Controlled Substances Procedures Manual which can be found at www.dfs.virginia.gov/documentation-publications/manuals/.

Attest:

I certify that I performed the above analysis or examination as an employee of the Department of Forensic Science and that the above is an accurate record of the results and interpretations of that analysis or examination.

(Examiner’s Signature)
(Examiner’s Typed Name)
Forensic Scientist

(Examiner’s Typed Initials)

Appendix E – Example Letter of Evidence Transfer

{Printed on Letterhead}

Date

Submitter's Name
Submitter's Agency
Address 1
Address 2

Dear Sir:

The item(s) you submitted in the matter of (name) and identified with your number (number) was (were) received on (date) at the (region) Laboratory of the Department of Forensic Science. The item(s) was (were) transferred on (transfer date) to the Division of Consolidated Laboratory Services in Richmond where the requested examinations will be performed.

If you have any inquiries, please contact the Division of Consolidated Laboratory Services at 600 North 5th Street, Richmond, Virginia 23219, or by telephone at 804-648-4480.

Sincerely,

Name
Regional Forensic Laboratory Director

Appendix F – Example Certificate of Mailing

{Printed on Letterhead}

CERTIFICATE OF MAILING

Commonwealth v. John Doe
Case No.12345; FS Lab No. C02-6789

A Certificate of Analysis, dated 4/17/2002, was issued by the Department of Forensic Science as a result of post-conviction testing ordered by the Court in the above-referenced case. I hereby certify that, on this 18th day of April 2002, the results of this testing were mailed to the Clerk of the Court and to the parties as indicated:

The original Certificate of Analysis was mailed, {carrier} return receipt requested, to the Clerk of the Court at the following address:

Warren Circuit Court – Criminal Section
1 E. Main Street
Front Royal, VA 22630;

A copy of the Certificate of Analysis was mailed, {carrier} return receipt requested, to the attorney for the Commonwealth at the following address:

Walter E. Hibbard
Commonwealth’s Attorney
104 South Royal St.
Front Royal, VA 23630;

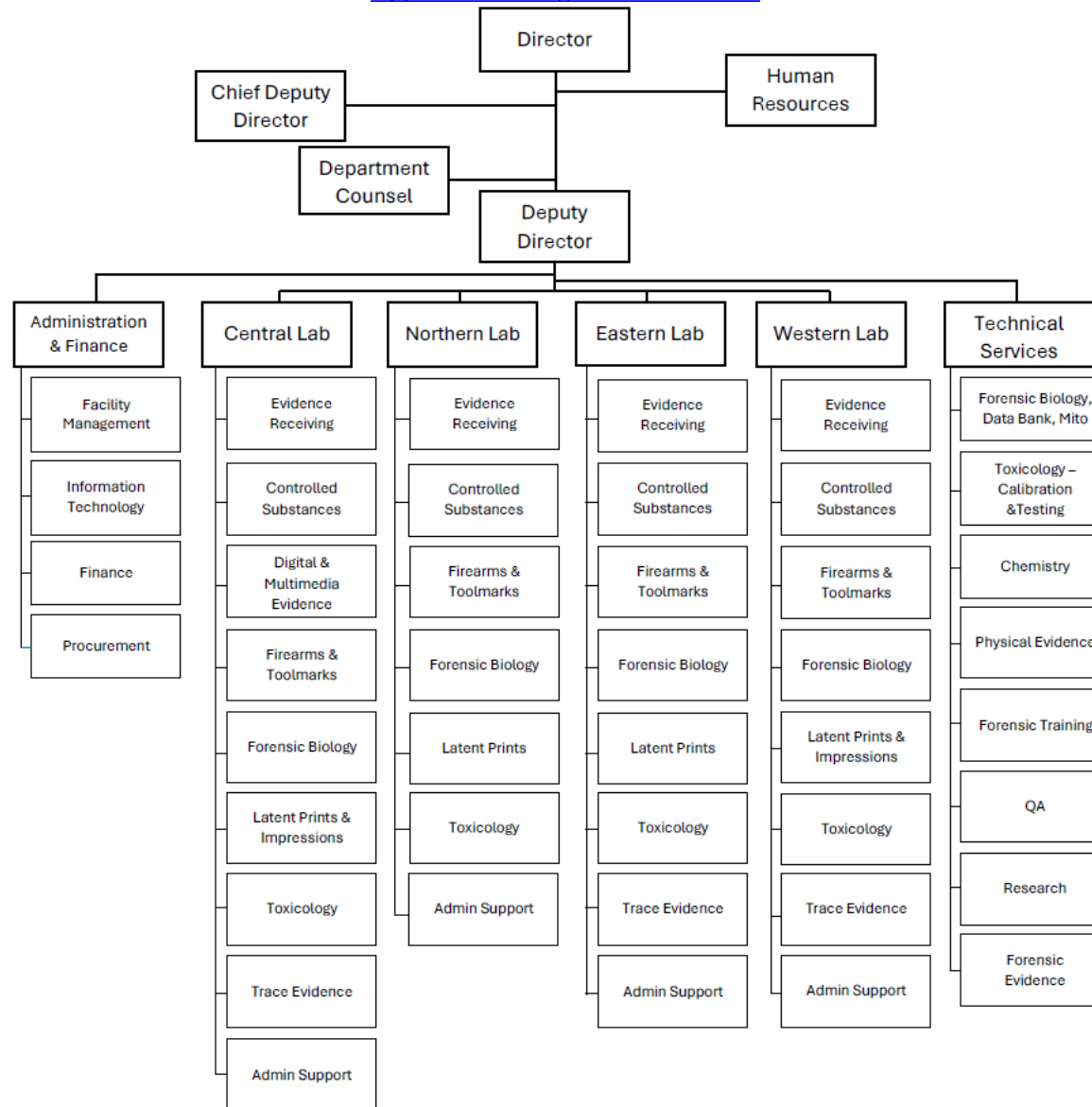
A copy of the Certificate of Analysis was mailed, {carrier} return receipt requested, to the attorney for the petitioner at the following address:

Katya K. Newton, Esquire
Newton & Herndon
100 W. Oak Ave.
Front Royal, VA 22631; and

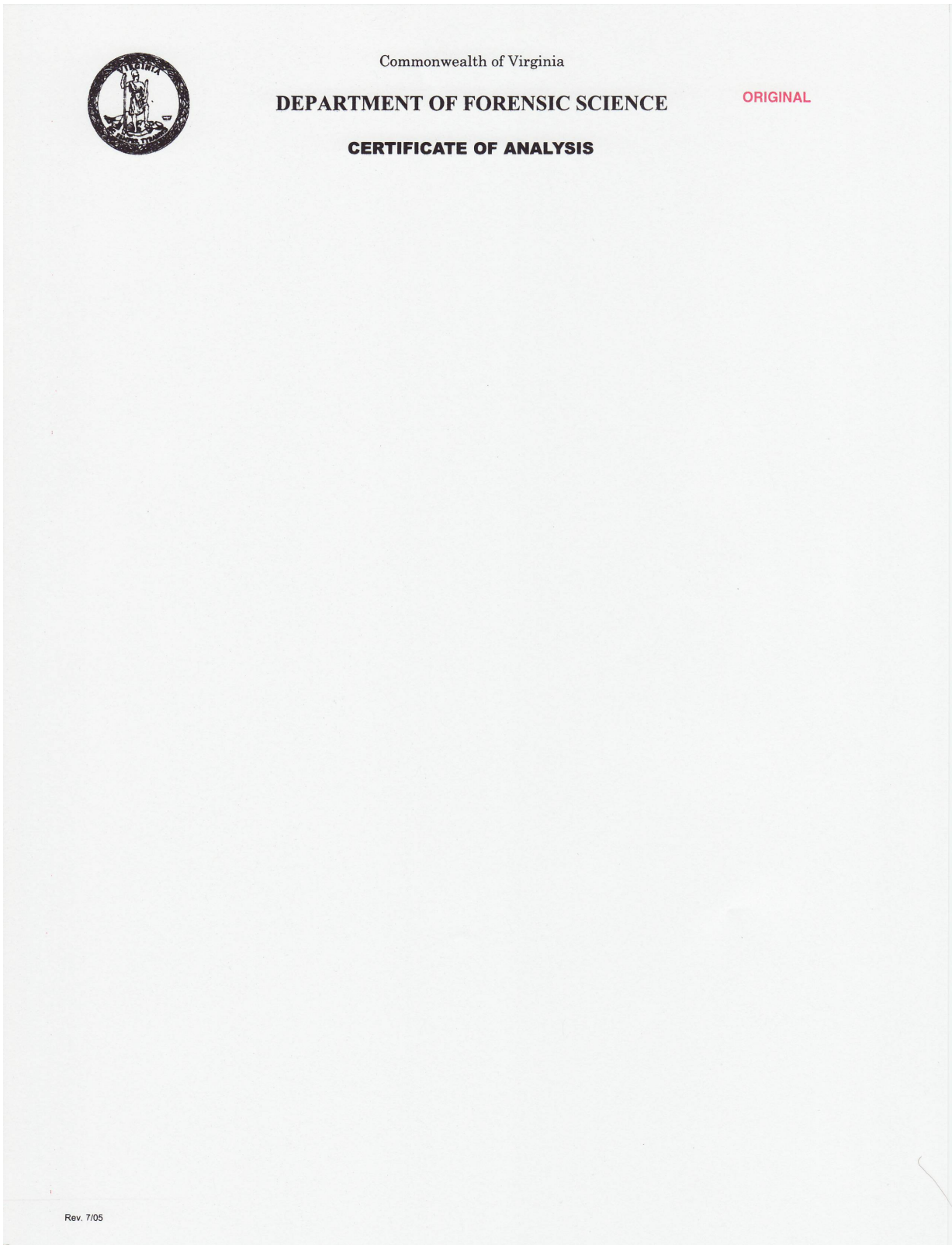
A copy of the Certificate of Analysis was sent to the petitioner in care of their attorney of record at the above address. The petitioner’s copy of the Certificate of Analysis was included with the copy sent via {carrier} to their attorney.

Name
Eastern Laboratory Director

Appendix G – Organizational Chart



Appendix H – Example Certificate of Analysis Paper



Appendix I – Example Certificate of Instrument Accuracy

{Printed on Letterhead}

CERTIFICATE OF INSTRUMENT ACCURACY

INSTRUMENT: Intox EC/IR II
 SERIAL NUMBER: 010000
 CERTIFICATION DATE: July 3, YYYY
 DATE RECERTIFICATION DUE: December 30, YYYY

The above listed instrument was found to meet all requirements for accuracy and performance established by the Department of Forensic Science as required by §9.1-1101 (B)(3). Measurement traceability is established through the use of reference materials supplied by an ISO/IEC 17025 accredited calibration laboratory. Estimation of Uncertainty of Measurement:

0.020 ± 0.004 g/210 L	0.150 ± 0.009 g/210 L
0.080 ± 0.004 g/210 L	0.250 ± 0.009 g/210 L

The Uncertainty of Measurement is reported at the 99.73% level of confidence and a coverage factor of k=3. The estimation of the Uncertainty of Measurement is calculated for the Certification process only. Supporting documentation is maintained by the Department.

(Signature) _____

(Issuing Examiner's Typed Name)

Issuing Examiner's Title

CITY OF RICHMOND
 COMMONWEALTH OF VIRGINIA

The forgoing was acknowledged before me this ____ day of

_____, _____ by (Issuing Examiners's Typed Name)

 Notary Public

My commission expires: (Current Expiration Date)

Page 1 of 2

Appendix J – Example Work Authorization Letter

{Printed on Letterhead}

{date}

WORK AUTHORIZATION

{Employee name}, a {Insert Generic Position name} in the _____ Section in the {Central/Eastern/Northern/Western Laboratory/Division of Technical Services} with the Department of Forensic Science, has successfully completed the Competency Exam. Based on training, education and experience, {employee name} is authorized to receive and handle {evidence/the evidential breath test device}, perform {testing/calibrations}, evaluate results, author and issue Certificates, testify to the results and perform technical and administrative review related to the following procedures/methods and to utilize all related equipment and instrumentation as delineated in the {SECTION} Procedures Manual:

{Insert the section specific categories from the Work Authorization spreadsheet located in the Qualtrax Resources – Work Authorizations folder and mark the applicable boxes}

{Typed Name}
{Region} Laboratory Director

De-Authorization of duties (date and laboratory director initials):

- _____ Handle {evidence/the evidential breath test device}
- _____ Perform {testing/calibrations}
- _____ Evaluate results, author and issue Certificates
- _____ Perform technical and administrative review
- _____ Utilize all related equipment and instrumentation

c: Employee

Appendix K – Example Certification Letter

{Printed on Letterhead}

(date)

MEMORANDUM

TO: _{Name}_____, Department Director

FROM: _{Name}_____, _____ Program Manager

SUBJECT: _{Section}___ Examiner Qualification - (Examiner Name)

{Examiner name} has successfully completed the Virginia Department of Forensic Science’s {name training program, e.g., Controlled Substances} training program by demonstrating competence in the technical final, practical test and mock trial. {Examiner name} possesses the appropriate education, training and experience to function competently as an examiner. Therefore, I recommend that {examiner name} be certified as a qualified examiner in {discipline} and be authorized to use all related equipment effective {date}.

Recommendation: _____ Date: _____
 {Name}
 {Area} Program Manager

Approval: _____ Date: _____
 {Name}
 Department Director

- c: Employee
- Supervisor
- (Group Supervisor)
- QA Section Supervisor
- Laboratory Director
- HR

[Appendix L – Example Certificate of Blood Alcohol Analysis Paper](#)



COMMONWEALTH OF VIRGINIA
DEPARTMENT OF FORENSIC SCIENCE

CERTIFICATE OF BLOOD ALCOHOL ANALYSIS
AS DETERMINED BY A CHEMICAL TEST OF THE ACCUSED'S BREATH

NAME OF ACCUSED	NAME OF COURT
-----------------	---------------

BREATH ANALYSIS

SAMPLE EXAMINED AND TEST CONDUCTED BY		AGENCY
DFS LICENSE NUMBER	LICENSE EXPIRES	DATE TEST CONDUCTED
TEST EQUIPMENT NUMBER		

RESULTS: TIME SAMPLE TAKEN _____

SAMPLE'S ALCOHOL CONTENT _____ GRAMS PER 210 LITERS OF BREATH

ATTEST:

I CERTIFY THAT THE ABOVE IS AN ACCURATE RECORD OF THE TEST CONDUCTED; THAT THE TEST WAS CONDUCTED WITH THE TYPE OF EQUIPMENT AND IN ACCORDANCE WITH THE METHODS APPROVED BY THE DEPARTMENT OF FORENSIC SCIENCE; THAT THE TEST WAS CONDUCTED IN ACCORDANCE WITH THE DEPARTMENT'S SPECIFICATIONS; THAT PRIOR TO ADMINISTRATION OF THE TEST THE ACCUSED WAS ADVISED OF HIS RIGHT TO OBSERVE THE PROCESS AND SEE THE BLOOD ALCOHOL READING ON THE EQUIPMENT USED TO PERFORM THE BREATH TEST, AND THAT I POSSESS A VALID LICENSE TO CONDUCT SUCH TEST, GIVEN UNDER MY HAND THIS _____ DAY OF _____, 20_____.

BREATH TEST OPERATOR

I HAVE RECEIVED A COPY OF THIS CERTIFICATE OF ANALYSIS _____
SUBJECT'S SIGNATURE

SUBJECT REFUSED TO SIGN FOR COPY OF CERTIFICATE OF ANALYSIS _____
OPERATOR'S SIGNATURE

[Appendix M – Example Transfer of Custody of DUI/DUID Blood Sample to Private Laboratory](#)

**DEPARTMENT OF FORENSIC SCIENCE
TRANSFER OF CUSTODY OF DUI/DUID BLOOD SAMPLE TO PRIVATE LABORATORY**

Virginia Code §§ 18.2-268.7 and 46.2-341.26:7

Defendant's Name:

FS Laboratory Number:

Evidence to be transferred: Vial # _____ and Vial # _____

Pursuant to the Court Order received for FS Lab # _____, the Department of Forensic Science hereby transfers custody of the above-mentioned item(s) of evidence to the following private laboratory:

NAME OF PRIVATE LABORATORY

STREET ADDRESS

CITY, STATE ZIP CODE

Relinquished by:

PRINTED NAME

SIGNATURE

Method of Transfer:

Date: _____

Tracking #:

Appendix N – Example Case Termination Letter

{Printed on Letterhead}

(date)

TO:

FS Lab #:

Your Case #:

Victim(s):

Suspect(s):

Evidence Submitted By:

Date Received:

The requested (Trace Evidence, Latent Print, etc.) examination was terminated at the request of (name and title) on (date).

The evidence is being retained for personal pickup. *(or other appropriate evidence disposition statement)*

(Examiner's Signature)
(Examiner's Typed Name)

Appendix O – Example Request for Laboratory Examination

**Virginia Department of Forensic Science
Request for Laboratory Examination**

Gray Areas are for DFS Use Only

Investigating Officer(s):

Telephone #: ()

Email Address:

Agency and Address:

FS Lab #:	Sub #:

Agency Case Number:

Previous Submission? If yes, previous FS Lab #:

Names of Victims (Last, First, Middle):

DOB:

Race/Sex:

Names of Suspects (Last, First, Middle):

DOB:

Race/Sex:

Date/Type of Offense:

Court Date: _____

District Circuit Juvenile Federal

Brief Statement of Fact (continue on separate page if necessary):

Jurisdiction of Offense: _____

Specify manner of return of evidence: Mail Personal Pick-up

Container	Evidence Submitted: Itemize and Describe Evidence and Designate Requested Examinations

This evidence is being submitted in connection with a criminal investigation and has not been examined by another laboratory. Tests performed utilize methods which are available on the Department website.

Submitting Officer (print):	Relinquished by (print):
Sign: _____ Date: _____	Sign: _____ Date: _____
Received by (print):	Received by (print):
Sign: _____ Date: _____	Sign: _____ Date: _____

Request for Laboratory Examination
Issued by: Deputy Director
Issue Date: 14-August-2008

DFS Document 100-F100
Revision Number 0
Page 1 of 1