# LVMPD FORENSIC LABORATORY QUALITY MANUAL

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>Table of Contents</td>
</tr>
<tr>
<td>3.0</td>
<td>Definitions</td>
</tr>
<tr>
<td>4.1</td>
<td>Impartiality</td>
</tr>
<tr>
<td>4.2</td>
<td>Confidentiality</td>
</tr>
<tr>
<td>5.0</td>
<td>Structural Requirements</td>
</tr>
<tr>
<td>6.1</td>
<td>General</td>
</tr>
<tr>
<td>6.2</td>
<td>Personnel</td>
</tr>
<tr>
<td>6.3</td>
<td>Facilities and Environmental Conditions</td>
</tr>
<tr>
<td>6.4</td>
<td>Equipment and Reagents</td>
</tr>
<tr>
<td>6.5</td>
<td>Metrological Traceability</td>
</tr>
<tr>
<td>6.6</td>
<td>Externally Provided Products and Services</td>
</tr>
<tr>
<td>7.1</td>
<td>Review of Requests, Tenders and Contracts</td>
</tr>
<tr>
<td>7.2</td>
<td>Selection, Verification and Validation of Methods</td>
</tr>
<tr>
<td>7.3</td>
<td>Sampling</td>
</tr>
<tr>
<td>7.4</td>
<td>Handling of Evidence (Test Items)</td>
</tr>
<tr>
<td>7.5</td>
<td>Technical Records</td>
</tr>
<tr>
<td>7.6</td>
<td>Evaluation of Measurement Uncertainty</td>
</tr>
<tr>
<td>7.7</td>
<td>Ensuring the Validity of Results</td>
</tr>
<tr>
<td>7.8</td>
<td>Reporting of Results</td>
</tr>
<tr>
<td>7.9</td>
<td>Complaints</td>
</tr>
<tr>
<td>7.10</td>
<td>Nonconforming Work</td>
</tr>
<tr>
<td>7.11</td>
<td>Control of Data and Information Management</td>
</tr>
<tr>
<td>8.1</td>
<td>Options / General</td>
</tr>
<tr>
<td>8.2</td>
<td>Management System Documentation</td>
</tr>
<tr>
<td>8.3</td>
<td>Control of Management System Documents</td>
</tr>
<tr>
<td>8.4</td>
<td>Control of Records</td>
</tr>
<tr>
<td>8.5</td>
<td>Actions to Address Risks and Opportunities</td>
</tr>
<tr>
<td>8.6</td>
<td>Improvement</td>
</tr>
<tr>
<td>8.7</td>
<td>Corrective Actions</td>
</tr>
<tr>
<td>8.8</td>
<td>Internal Audits</td>
</tr>
<tr>
<td>8.9</td>
<td>Management Reviews</td>
</tr>
</tbody>
</table>

### Administrative

- Appendix A: Organization in The LVMPD
- Appendix B: Performance Standards
- Appendix C: Duty Hours
- Appendix D: Leave
- Appendix E: Dress Code
### Appendix F
**Visitors and Tours**

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix G</td>
<td><strong>Vehicles</strong></td>
</tr>
<tr>
<td>Appendix H</td>
<td><strong>Budget</strong></td>
</tr>
<tr>
<td>Appendix I</td>
<td><strong>Purchasing Requests</strong></td>
</tr>
<tr>
<td>Appendix J</td>
<td><strong>Inventories</strong></td>
</tr>
<tr>
<td>Appendix K</td>
<td><strong>Record Sealing</strong></td>
</tr>
<tr>
<td>Appendix L</td>
<td><strong>Communications</strong></td>
</tr>
<tr>
<td>Appendix M</td>
<td><strong>Outside Employment</strong></td>
</tr>
<tr>
<td>Appendix N</td>
<td><strong>Interns and Volunteers</strong></td>
</tr>
<tr>
<td>Appendix O</td>
<td><strong>Subpoenas</strong></td>
</tr>
<tr>
<td>Appendix P</td>
<td><strong>Requests for Documentation Production/Outside Experts</strong></td>
</tr>
<tr>
<td>Appendix Q</td>
<td><strong>Re-examination of Evidence</strong></td>
</tr>
<tr>
<td>Appendix R</td>
<td><strong>Testimony to Reports by Outside Laboratories</strong></td>
</tr>
<tr>
<td>Appendix S</td>
<td><strong>Statistical Reports</strong></td>
</tr>
</tbody>
</table>

**NOTE:** Hyperlinks were accurate at the time of manual publication.
3.0 Title: DEFINITIONS

**Adjustment of a Measuring System** - Set of operations carried out on a measuring system so that it provides prescribed responses corresponding to given values of a quantity measured.

**Administrative Records** - Records, whether electronic or hard copy, that do not constitute data or information resulting from testing, such as case related conversations, chain of custody records, corrective action reports, and other pertinent information.

**Association** – A determination that a relationship exists between individuals and/or objects.

**Audit** – A systematic, independent, documented process for obtaining records, statements of fact or other relevant information and assessing them objectively to determine the extent to which specified requirements are fulfilled.

**Calibration** - A specified procedure with established measurement uncertainty that is a series of measurements establishing the response of a known reference and then comparing the response of the item being calibrated. With the exception of Breath Alcohol, all calibrations are performed by an external vendor.

**Quality Assurance (QA) Workflow** – A Workflow developed in Qualtrax to record and track any identified or potential quality issues.

**Case File** - Administrative records, examination records, and any other applicable technical records, whether electronic or hardcopy, generated or received by a laboratory pertaining to a particular case, which are stored together as a packet in the file room.

**Case Record** - Administrative records, examination records, and any other applicable technical records, whether electronic or hardcopy, generated or received by the laboratory pertaining to a particular case, which may be stored in one or more locations.

**Certified Reference Material** - Reference material accompanied by documentation issued by an authoritative body and providing one or more specified property values with associated uncertainties and traceabilities, using valid procedures.

**Communication Log** - A button located in the ribbon at both the Lab Case Record and Unit Record levels in LIMS where comments, information, pertinent discussions, etc. pertaining to a particular Lab Number can be entered. If information applies to and/or affects multiple Units, the Communication Log located at the Lab Case Record Level should be used.
Competency Test - The evaluation of a person's knowledge and ability prior to performing independent work in forensic casework. Prior to December 17, 2012, the LVMPD Forensic Laboratory referred to competency tests as qualifying tests.

Contract – The agreement between the laboratory and the customer.

Controlled Document – A document that is made available in such a manner that ensures that the most current policies and/or procedures are used.

Critical Consumables, Supplies and Services - A consumable, supply or service which must meet one or more crucial specifications to ensure the quality of the test result. In this context, “crucial” means significant or important.

Customer – A person or organization which requests the testing services of the laboratory.

Discipline - A major area of casework as specified by ANAB for which a laboratory may seek accreditation.

Disposables – Designated to be thrown away after use (e.g., latex gloves).

Document Control – The process of ensuring that documents that prescribe quality affecting activities or specify quality requirements (controlled documents), including revisions, are reviewed for adequacy, approved for release by authorized personnel, and made available for use by personnel performing the prescribed activities.

Examination Records - The documentation, whether hard copy or electronic, of procedures followed, tests conducted, standards and controls used, diagrams, printouts, photographs, observations and results of testing and examinations. Examination records constitute part of “technical records,” for the purposes of interpreting and applying 4.13.2.

Expiration Dates- The date of expiration for chemicals and/or reagents is defined as midnight (2400 hours) of the listed date. If the expiration date is listed in LIMS, the expiration date in LIMS is set to midnight (0000 hours) of the listed date. To keep chemicals and/or reagents from expiring one day early in LIMS the expiration date is listed one day later than the determined expiration date (e.g., 04/09/2014 expiration is listed as 04/10/2014).

Forms – A document used to facilitate the completion of specific tasks and complete documentation.

Good Laboratory Practice - The process, conditions, and operating procedures under which laboratory analyses are planned, performed, monitored, recorded, and reported in order to maintain the quality and integrity of the work product.

Impartiality – Presence of objectivity.
**Interlaboratory comparison** – Organization, performance and evaluation of measurements or tests on the same or similar items by two or more laboratories in accordance with predetermined conditions.

**Intralaboratory comparison** – Organization, performance and evaluation of measurements or tests on the same or similar items within the same laboratory in accordance with predetermined conditions.

**International System of Units (SI)** - System of units, based on the International System Quantities, founded on these seven base units:
- Length - meter (m)
- Mass - kilogram (kg)
- Time - second (s)
- Electrical current - ampere (A)
- Thermodynamic Temperature - kelvin (K)
- Amount of substance - mole (mol)
- Luminous intensity - candela (cd)

**Lab Case Record** - An area in LIMS that includes information associated to a particular Lab Number viewable by all of the Detail/Units. The Lab Case Record contains the following tabs: Details, Unit Records, Evidence, Related LAB cases, LAB Requests and Extended Data.

**Lab Number** - Number automatically generated by LIMS that is used as the unique identifier for each case and report (e.g. 14-02742.4). The first six/seven digits are unique to each case. The number after the decimal place represents a specific Unit Record and is unique to each report.

**Laboratory Activities** – Includes testing, calibration, and sampling associated with subsequent testing or calibration.

**Laboratory Proper (DNA Annex)** – All areas of the DNA Annex building beyond the front lobby.

**Laboratory Proper (Forensic Laboratory building)** – Detail/Unit specific areas of the Forensic Laboratory building.

**Laboratory System Software** – Software installed on computers used to control analytical instruments (this does not include dynamic reference databases such as instrument libraries or individual characteristic databases).

**LIMS** - Laboratory Information Management System.

**Management System** - The organizational structure, responsibilities, procedures, processes, and resources for implementing quality management; includes all activities which contribute to quality, directly or indirectly.
Manual – A compilation of controlled documents related to a specific Detail/Unit or type of document, such as Technical Manuals and the Forensic Laboratory Quality Manual.

Nonconforming Work - When any aspect of laboratory testing, or the results of the testing, do not conform to laboratory procedures.

Object Repository- An area in LIMS that houses documentation associated with a particular Lab Number or Resource. There are six Object Repositories located in LIMS, the Lab Case Details Object Repository, the Unit Record Object Repository, the Lab Request Object Repository, the Resource Manager Object Repository, the Evidence Object Repository and the Communication Object Repository. If information applies to and/or affects multiple Units the Lab Case Details Object Repository should be used. If information applies to a particular Unit, the Unit Record Object Repository should be used. If information applies to a Forensic Laboratory resource (e.g. chemical, reagent, equipment, instrument) the Resource Manager Object Repository should be used.

Performance Check - A set of operations to determine if a piece of equipment or instrumentation is working correctly within manufacturer’s specifications or LVMPD Forensic Laboratory specified parameters.

Proficiency Test time intervals:
- Semi-annual – Twice a year
- Annual – Once every year
- Biennial – Every other year

Quality Assurance - A management tool to ensure that quality control measures are being followed and the final product meets defined quality standards.

Quality Control - The day to day activities, techniques, and procedures used to monitor the quality of analytical data and to ensure that it satisfies specified criteria.

Quality Control Check – All-encompassing term for the following: Calibration, Verification and/or Performance Check.

The following are definitions in reference to time intervals listed for quality control checks:
- Weekly- Once every week. The time frame between checks shall be no greater than one week and two days.
- Biweekly - Once every two weeks. The time frame between checks shall be no greater than two weeks and three days.
- Monthly - Once every month. The time frame between checks shall be no greater than one month and one week.
- Quarterly - Once every three months. The time frame between checks shall be no
greater than three months and two weeks.

Semi-annually- Twice a year. The time frame between checks shall be no greater than seven months.

Annually - Once every year. The time frame between checks shall be no greater than 14 months.

Every 10 Years – The time frame between checks shall be no greater than 10.5 years

**Reference Collection** - A collection of objects maintained for the purpose of identification, comparison or interpretation purposes (e.g., firearms, ammunition, ignitable liquids).

**Reference Material** - Material, sufficiently homogenous and stable with respect to one or more specified properties, which has been established to be fit for its intended use in a measurement process (e.g., drugs, drug mixes in a variety of matrices, Arson Test Mixture).

**Reference Standard** - Measurement standard designated for the calibration of other measurement standards for quantities of a given kind (e.g., ASTM 1 Weights).

**Regulatory Authority** – A public authority or government agency responsible for codifying and enforcing rules and regulations and imposing supervision or oversight for the benefit of the public at large.

**Request** – Process utilized by a customer when seeking analysis by the laboratory.

**Resource Manager**- A module in LIMS that contains information for resources utilized by the Forensic Laboratory. These resources include, but are not limited to, chemicals, reagents, equipment and instrumentation.

** Sampling** - Taking a part of a substance, material or product for testing in order to reach a conclusion or make an inference about, and report on the whole. Sampling should only be used when there is a reasonable assumption of homogeneity of the whole.

**Sampling Plan** - For an item that consists of a multi-unit population (e.g. tablets, baggies, bindles), a sampling plan is a statistically valid approach to determine the number of sub-items that must be tested in order to make an inference about the whole population.

**Sampling Procedure** - A defined procedure used to collect a sample or samples from the larger whole, to ensure that the value obtained in the analysis is representative of the whole. The sampling procedure may include details about size and number of sample(s) to be collected, locations from which to collect the sample(s), and a method to ensure the homogeneity of the larger whole (or to make it so).
Sample Selection - A practice of selecting items to test, or portions of items to test, based on training, experience and competence. In sample selection, there is no assumption about homogeneity.

Secondary Reference Material - Reference material obtained from a secondary provider (not directly from the source or manufacturer); used as what it is purported to be and/or verified with a reliable source (e.g., duct tape purchased from a home improvement store for the purposes of Trace comparison, pharmaceutical tablet purchased from a pharmacy).

Subcontracting – Utilizing another testing laboratory to perform analysis on evidence when the LVMPD Forensic Laboratory has the capability to perform the requested analysis and has accepted the evidence to test (agreed to perform the requested analysis). Court ordered reanalysis is NOT subcontracting.

Substantive - Potentially having a significant bearing on the quality of work of the laboratory, even if for a short period of time (see Level 1 definition).

Technical Records - Accumulations of data and information which result from carrying out tests and/or calibrations and which indicate whether specified quality or process parameters are achieved. They may include forms, contracts, work sheets, work books, work notes, control graphs, external and internal test reports and calibration certificates, customers’ notes, papers and feedback.

Tender – Laboratory’s response to the customer regarding their request. This may include an automated notification.

Testimony Module- A module in LIMS that contains information for all the subpoenas received by the Forensic Laboratory. It also contains information regarding testimony provided.

Traceability - The property of a result of a measurement whereby it can be related to appropriate standards, generally international or national standards, through an unbroken chain of comparisons.

Uncontrolled Copy – A copy of a controlled document furnished for informational purposes. Any individual that uses a printed or downloaded copy from a manual is responsible for ensuring that actions based on the policy/procedure are in compliance with the controlled copy.

Unit Record- An area in LIMS that includes information associated to a particular Lab Number viewable by the assigned Unit only. The Unit Record contains the following tabs: Details, Requested Exams, Worksheet, LAB Report, Specimen Count, Transfer History and Extended Data.

Until Consumed - LIMS does not allow for an expiration date of “Until Consumed”. 9/9/9999 will be used to signify an “Until Consumed” expiration date for chemicals/reagents in LIMS.
**Verification** – Provision of evidence that a given item fulfills specified requirements.

**Working Measurement Standard** - Measurement standard that is used routinely to calibrate or verify measuring instruments or measuring systems (a working measurement standard is usually calibrated with respect to a reference standard).
4.1 Title: IMPARTIALITY

4.1.1 Laboratory activities shall be undertaken impartially and structured and managed to safeguard impartiality.

**Code of Conduct**

The Department has a code of conduct to help ensure that personnel will not be involved in any activities that would diminish confidence in the Forensic Laboratory’s competence, impartiality, judgment or operational integrity (see Department Manual 4/103.00 – Prohibited Acts While on Duty for further details).

4.1.2 The Forensic Laboratory Director, the Forensic Laboratory Managers, and the Forensic Laboratory Supervisors are committed to impartiality.

4.1.3 Undue Internal and External Pressures

The Laboratory Director, Forensic Laboratory Managers, and Forensic Laboratory Supervisors make every effort to shield Forensic Laboratory personnel from internal and external pressures and influences (including commercial and financial) that could affect the quality of their work. If any questionable outside influence occurs (e.g. media request, time and/or request pressures from a detective or attorney), the analysts are directed to notify their Forensic Laboratory Manager, Forensic Laboratory Supervisor or the Laboratory Director immediately. Forensic Laboratory Managers and Forensic Laboratory Supervisors have the responsibility and authority to receive and take action on concerns that arise within their Details. Any deviation from the management system must be approved by the Laboratory Director, a Forensic Laboratory Manager, Forensic Laboratory Supervisor or the DNA Technical Lead.

To help ensure Laboratory members are not experiencing undue casework pressure for non-routine forensic analysis (e.g. rush request), these requests are filtered through the appropriate Forensic Laboratory Manager. When possible, the Laboratory Director, a Laboratory Manager, Laboratory Supervisor, Forensic Database Administrator (CODIS, NIBIN or AFIS), or DNA Technical Lead will handle case-related communications with detectives, investigators, and/or legal representatives. Communications will documented/summarized in the LIMS under the appropriate case number. If needed, the Laboratory Director has the authority to incorporate staff adjustments to manage case workloads.

4.1.3.1 Code of Ethics

All laboratory members are expected to adhere to the highest standard of professional ethics, conducting themselves with integrity and honesty (see 4.1.2 – Code of Conduct). The following ethical obligations will specifically apply to laboratory members:
• Ethical Obligation in the Examination of Evidence and Property
  o The integrity of all items in the analyst’s care and custody will be properly maintained.
  o The analyst will use techniques and methods that have been proven accurate and reliable and will employ the appropriate standards and controls.
  o Members of the laboratory will refrain from providing misrepresentation of data upon which an expert opinion or conclusion is based, and all conclusions and opinions will be supported by the appropriate facts and analyses.

• Ethical Obligations in Court Testimony and Depositions
  o Members of the laboratory will not misrepresent their education, training, experience, or specialty area, nor will they extend their expertise beyond their field of competence.
  o Analysts will discuss their findings and the significance of the results in an unbiased, scientific manner.
  o Testimony rendered will be pertinent to the case at hand and will adhere to the scientific facts and interpretations as supported by the analyses.

During their first year of employment, Forensic Laboratory members will participate in ethics training.

a) The Forensic Laboratory follows the Guiding Principles of Professional Responsibility for Forensic Service Providers and Forensic Personnel document located in Qualtrax.
b) The Guiding Principles of Professional Responsibility for Forensic Service Providers and Forensic Personnel document will be reviewed annually by all Forensic Laboratory members. The review will be documented, and the documentation will be maintained in Qualtrax.
c) Any violations of the ethical principles listed in the Ethics document(s) or in the LVMPD Department Manual will be investigated and appropriate action will be taken. If necessary, a Statement of Complaint will be initiated.

4.1.4 Risks to Impartiality
The Forensic Laboratory identifies risks to impartiality on an on-going basis through discussions, policy review, the Management Review, and other areas in the purview of the management system.

Any Forensic Laboratory member involved in a laboratory case with a potential conflict of interest related to the case must immediately notify their Forensic Laboratory Manager, Forensic Laboratory Supervisor or the Laboratory Director. A Forensic Laboratory member is considered to have a potential conflict of interest in the following situations:
- A personal relationship with a victim, suspect, officer (however named), or witness involved in the case exists and extends beyond a professional relationship.
- The member has a financial interest in the case.

4.1.5 Minimizing Impartiality
If a risk to impartiality is identified, steps will be taken to minimize or eliminate the risk. Upon being informed of a potential conflict of interest, the Forensic Laboratory Manager, Forensic Laboratory Supervisor or the Laboratory Director will reassign the case and ensure that the member with the conflict of interest is not involved in the analysis, technical or administrative review of the case.
4.2 Title: CONFIDENTIALITY

4.2.1 Dissemination of Forensic Laboratory Reports
Dissemination of LVMPD and certain outside jurisdiction Laboratory Reports is accomplished by LIMS. Upon the publishing of a report in LIMS, LIMS automatically generates and sends an email to the listed requestor. The email states:

“This message has been automatically generated by the Forensic Laboratory’s Information Management System. DO NOT RESPOND TO THIS EMAIL.

A Forensic Lab Report has been completed for:

Agency Case Number(s): 140101-0001
Agency: LVMPD
Case #: 13-02449
Section: Firearms
Persons of Interest: Doe, JOHN

You may obtain the report by one of the following methods:

LVMPD Employees – the final report of examination will be available in OnBase by end of business day. If you have any questions call 702-828-3292.

Clark County School District PD, Nevada Highway Patrol, Boulder City PD, Nye County Sheriff’s Office, Henderson PD, Clark County District Attorney’s Office reports must be retrieved from the web portal FA Web. They will be available for 30 days from receipt of this email notification. Your agency has designated an individual(s) to retrieve those reports on your behalf. You MUST contact them to obtain your reports. If you have any questions call 702-828-3292.

All other NON-LVMPD employees – the final report of examination will be mailed to you. If you have any questions call 702-828-3292.

****YOUR FEEDBACK IS IMPORTANT TO THE FORENSIC LABORATORY – PLEASE TAKE OUR ONLINE SURVEY AT https://www.surveymonkey.com/s/LVMPDForensicLaboratory”

The clerical support staff is responsible for mailing the reports to the outside jurisdictions that do not receive their reports via the FA Web portal.
The original report of LVMPD cases or event numbers is maintained in OnBase by the Records and Fingerprint Bureau. The LVMPD Records and Fingerprint Bureau does not maintain a copy of outside jurisdiction reports.

When a forensic analysis has been requested of an outside laboratory by the LVMPD Forensic Laboratory, the report will be maintained in LIMS.

Copies of LVMPD reports may be disseminated to other law enforcement or legal agencies (e.g., District Attorney’s Office) with an official need for the information. Copies may be sent by fax, e-mail, inter/intra-department mail, or public and private postal services (USPS, FedEx, UPS, etc.).

4.2.1.1 Dissemination of Forensic Laboratory Documentation

Results shall not be released in any written or printable format (including e-mail) prior to the release of the formal report. If a situation necessitates release of results prior to completion of a formal report, results may be released verbally by the analyst working the case, or their Supervisor/Manager/Technical Leader or the Laboratory Director, provided the conclusions released are limited to the results completed and/or confirmed/verified to date.

- The release of the verbal information must be approved by the appropriate Supervisor/Manager/Technical Leader or the Laboratory Director. This approval must be documented and maintained in the appropriate Object Repository (e-mail) or memorialized utilizing the appropriate Communication Log in LIMS under the appropriate Lab Number.
- A technical review must be performed on the technical documentation pertaining to the results prior to the results being verbally released. Documentation of the Technical Review will be recorded in the appropriate area in LIMS (utilizing the review function) or in the case notes as applicable per Detail/Unit.
- Details/Units that require verification will perform the verification prior to the release of the results. This verification serves as the required review and no further technical review is necessary prior to the verbal release of the results. The verification will be documented in the appropriate area in LIMS (utilizing the review function) or in the case notes as applicable per Detail/Unit.
- The specific results released shall be recorded in the case record utilizing the appropriate Communication Log.
- Verbal results will only be released to the requestor or other law enforcement or legal personnel with an official need for the information.
- A formal report will be generated at the conclusion of the analysis.

Draft copies of LVMPD reports and the associated completed case file may be sent to an outside accredited Forensic Laboratory for the purpose of technical review prior to release. These reports may be sent via e-mail or through public and private postal services (USPS, FedEx, UPS, etc.).
For dissemination of all other types of forensic laboratory documentation (notes, raw data, etc.), see Requests for Documentation Production/Outside Experts in this manual.

No case specific information generated by the Forensic Laboratory is placed in the public domain by the Forensic Laboratory. The release of case specific information to the public domain is handled by the LVMPD Public Information Office in coordination with other appropriate LVMPD parties (e.g., Investigative detail, Office of General Counsel).

4.2.2 Release of Confidential Information
When the Forensic Laboratory is required by Court Order or Subpoena Duces Tecum to release confidential information (as determined by LVMPD Office of General Counsel), the requested documents will be released to the appropriate parties as outlined in the Nevada Revised Statutes. This only applies to those Forensic Laboratory records that are within the Forensic Laboratory’s purview.

When the Forensic Laboratory is required to release confidential information to the accrediting body for accreditation activities, the required documents will be provided in the manner required by the accrediting body.

4.2.3 Information about the customer obtained from sources other than the customer shall be confidential between the customer and the laboratory. The source of this information shall remain confidential to the laboratory and shall not be shared with the customer, unless agreed by the source.

4.2.4 In accordance with Department policy 4/105.09 – Police Business Confidential, Forensic Laboratory personnel will maintain the confidentiality of information gained in the performance of their duties. All information received or generated in the process of laboratory activities must be held at the highest level of confidentiality. Volunteers, interns, and other non-Department individuals with potential access to sensitive Forensic Laboratory information will be required to sign a Confidentiality Agreement. The agreements will be stored in Qualtrax.

Forensic Laboratory documentation should be generated utilizing Department computers. No information will be stored on personal computers. Electronically generated files may be temporarily stored on a Department issued, secure thumb drive while in the process. Immediately upon completion, the information will be transferred from the thumb drive to a Department network that is backed-up by the Information Technologies Bureau (ITB).
5.0 Title: STRUCTURAL REQUIREMENTS

5.1 Legally Responsible Entity
The Las Vegas Metropolitan Police Department (LVMPD) was created by legislative action (see NRS 280). A basis for establishment of the LVMPD is contained in the Department Manual 1/000.00 – Basis in Law for Establishment of Department / Basis in Law for Authority to Act. The Forensic Laboratory is a publicly funded forensic laboratory and is operated by the LVMPD.

5.2 Overall Responsibility for the Forensic Laboratory

Top Management and Key Management
Top Management – Management with laboratory wide responsibility (Laboratory Director and Quality Manager)

Key Management – Management with Detail/Unit specific responsibility (Forensic Laboratory Managers, Forensic Laboratory Supervisors and the DNA Technical Leader) includes top management.

The Forensic Laboratory Managers and the Forensic Laboratory Supervisors, with the exception of the Biology/DNA Detail, have the overall responsibility to ensure the quality of the technical procedures performed in their Details/Units and have the authority to delegate responsibility of implementing the quality system within their Details/Units.

A “Forensic Laboratory Manager” (LVMPD classification title) designated as the Quality Manager for the Forensic Laboratory is responsible for the implementation and operation of the quality program.

The duties and responsibilities for these positions are located in the Class Specifications maintained by the LVMPD Office of Human Resources.

NOTE: In this Manual, the title “Forensic Laboratory Supervisor(s)” encompasses both the Forensic Laboratory Supervisor and Forensic Database Administrator (CODIS, NIBIN or AFIS) positions.

5.2.1 Director of Laboratory Services
The Director of Laboratory Services is responsible for the operations of the Forensic Laboratory to include but not limited to the provision of needed resources through the budget process.

The Sheriff of the LVMPD appoints the Director of Laboratory Services. The Forensic Laboratory Director’s duties are defined in the Class Specification for
Director of Laboratory Services. The Class Specifications are maintained by the LVMPD Office of Human Resources.

5.3 Laboratory Activities in Conformance with ISO/IEC 17025:2017

All Forensic Laboratory activities that are in conformance with ISO/IEC 17025:2017 are listed on the Scope of Accreditation provided by the Forensic Laboratory’s accrediting body, ANAB (ANSI (American National Standards Institute) National Accreditation Board) and listed below:

- Firearms
  - Collection
  - Physical Comparison
  - Determination of Functionality
  - Length Measurement
  - Trigger Pull Force Measurement
  - Distance Determination
  - Serial Number Restoration
  - Individual Characteristics Database (NIBIN)

- Fire Debris and Explosives
  - Qualitative Analysis

- Friction Ridge
  - Collection
  - Enhancement
  - Physical Comparison
  - Individual Characteristics Database (AFIS)

- Materials (Trace)
  - Physical Determination
  - Chemical Determination
  - Physical/Chemical Comparison

- Seized Drugs
  - Collection
  - Qualitative Analysis

- Toxicology
  - Qualitative Determination
  - Quantitative Measurement

- Biology
  - Collection
  - Body Fluid Identification
  - DNA – STR
  - Individual Characteristics Database (CODIS)

In the event work is conducted that is not in conformance with ISO/IEC 17025:2017, it will be noted on the Forensic Laboratory Report.

5.4 In order to assist the LVMPD in accomplishing its mission the laboratory will provide professional forensic services within the limits of its capability to the LVMPD and other law enforcement agencies including the scientific examination and analysis of evidentiary material and property, supervision and management of specific technical
programs, assistance in scientific investigations, expert testimony concerning the analyses performed, the interpretation of technical data and laboratory findings, and other related forensic services and activities.

The forensic services provided shall meet all the requirements of the ANAB accreditation program. This includes conformance with the requirements in the following documents:

- ISO/IEC 17025:2017 – General requirements for the competence of testing and calibration laboratories
- Quality Assurance Standards for Forensic DNA Testing Laboratories
- Quality Assurance Standards for DNA Databasing Laboratories
- Minimum Required Operating Standards for National Integrated Ballistic Information Network (NIBIN) Sites

Permanent, Temporary and Mobile Facilities
All policies and procedures apply to work performed both at and away from the Forensic Laboratory. Laboratory work conducted outside of the Forensic Laboratory is addressed in the following manuals:

- Seized Drugs Technical Manual
- Firearms Technical Manual
- Biology/DNA Quality Manual
- Breath Alcohol Technical Manual

National DNA Index System (NDIS)
The DNA Detail conforms to the requirements in the NDIS Operational Procedures Manual, the Quality Assurance Standards for Forensic DNA Testing Laboratories and the Quality Assurance Standards for DNA Databasing Laboratories. See the Biology/DNA Quality/Procedures Manual for further information.

5.4.1 Use of ANAB Accreditation Symbols
The Forensic Laboratory does not make reference to accreditation in any communication by use of an accreditation symbol, business name, business acronym or ILAC mark.

5.4.2 Activities Performed under the Authority of a Statute, Regulation or Other Legal Requirement
The Forensic Laboratory performs testing under the authority of a statute, regulation or other legal requirement as outlined below:

- a) NRS 176.0911 and subsequent subsections: Preservation of Biological Evidence and Genetic Marker Analysis
- b) NRS 200.3786: Sexual Assault Forensic Evidence Kits: Submission to Forensic Laboratory; Testing; Report to Legislature or Legislative Commission; Contents of Report
- c) NRS 484.600 and subsequent subsections: Committee on Testing for Intoxication
5.5 **Forensic Laboratory Organization and Responsibilities**

a) The LVMPD organizational chart is located at [http://metroweb.lvmpd.int/services/DepartmentDepartment/PaR/Policy%20and%20Research/Forms/Organization%20Chart.aspx](http://metroweb.lvmpd.int/services/DepartmentDepartment/PaR/Policy%20and%20Research/Forms/Organization%20Chart.aspx) and illustrates the position of the Forensic Laboratory within the Department structure. The internal organization and personnel assignments are illustrated by the Forensic Laboratory organizational chart located in Qualtrax.

An Administrative Assistant is assigned under the CSI Section and is not in the Forensic Laboratory chain of command.

The Forensic Laboratory is divided into six Details:

- Administrative/Quality Detail
- Biology/DNA Detail
- Chemistry Detail
- Firearms Detail
- Latent Print Detail
- Toxicology Detail

b) The LVMPD Office of Human Resources maintains detailed job descriptions entitled Class Specifications for all Forensic Laboratory staff.

The Laboratory Director has the overall authority and responsibility for the Forensic Laboratory's activities, including the quality program. The Quality Manager assumes responsibility for the implementation and operation of the quality program. The duties of the Quality Manager include:

- Maintaining and updating the LVMPD Forensic Laboratory Quality Manual.
- Proposing corrections and improvements in the quality system.
- Ensuring compliance with the ANAB ISO/IEC 17025 accreditation program.
- Evaluating instrument calibration and maintenance records.
- Monitoring Forensic Laboratory practices to verify continuing compliance with established policies and procedures.
- Ensuring adherence to established schedules for inventories, safety inspections, manual revisions, audits, etc.
- Scheduling and coordinating quality audits.
- Evaluating results of management system audits and annual reviews.
- Selecting, training and evaluating internal auditors.
- Ensuring validation of new technical procedures.
- Investigating technical problems, proposing remedial actions and verifying their implementation.
- Soliciting feedback from the law enforcement and legal communities.
- Administering proficiency tests, evaluating results, and determining corrective action.
- Maintaining Qualification Files for Forensic Laboratory members which contain training records and documents pertaining to educational background.
- Recommending training of Forensic Laboratory members to improve the quality of Laboratory services.
- Proposing corrections and improvement in the management system.

**Note:** A Forensic Scientist (Quality Assistant) may be delegated to assist, or act as designee, for the Quality Manager.

The Forensic Laboratory Managers, the Forensic Database Administrators (CODIS, NIBIN or AFIS) and the Forensic Laboratory Supervisors are responsible for the day to day operations of each of the Details. The Forensic Laboratory Managers must possess the necessary skills and technical knowledge to effectively manage their individual Details/Units. If a Manager of a Detail/Unit does not have sufficient technical expertise in a specific Unit within their Detail, they may rely on an individual designated as the technical responsible person to address inquiries regarding the tests and the assessment of the tests performed in the Unit.

The DNA Technical Leader is responsible for the day to day technical operations of the Biology/DNA Detail and for ensuring the quality of the technical procedures performed in the Biology/DNA Detail.

Forensic Laboratory Managers, Forensic Laboratory Supervisors, Forensic Database Administrators (CODIS, NIBIN or AFIS), and the DNA Technical Lead are responsible for:

- Maintaining and updating the technical and training manuals for their Details/Units.
- Continually improving the effectiveness of the management system.
- Ensuring that established quality assurance procedures and quality control practices are followed by their Details/Units.
- Ensuring compliance with the ANAB ISO/IEC 17025 program.
- Ensuring that new technical procedures are properly validated.
- Assisting in the investigation and remediation of technical problems.
- Recommending training of their staff and proposing corrections and improvements in the quality system.

The technical staff (Forensic Scientist Trainee, Forensic Scientist I and Forensic Scientist II), having independent responsibility for casework, is accountable for:

- Reviewing and being familiar with the applicable technical manuals and implementing the procedures in their work.
- Being familiar with the LVMPD Forensic Quality Manual and implementing the policies and procedures in their work.
- Conducting selected quality control checks and documentation according to established technical procedures.
- Participating in proficiency testing and quality audits.
- Assisting in the investigation and remediation of technical problems.
- Proposing corrections and improvements to the quality system.
- Testifying as an expert witness.

The technical support staff (Laboratory Technologists, Laboratory Aides, Part-Time Forensic Laboratory Assistants, Police Officers and Investigative Aides- Part-Time (NIBIN Technicians)) are responsible for:

- Conducting selected quality control checks required in the quality control plans in accordance with Class Specifications.
- Being familiar with the LVMPD Forensic Quality Manual and implementing the policies and procedures in their work.
- Reviewing and being familiar with the applicable technical manuals and implementing the procedures in their work.
- Participation in proficiency testing as required.
- Assisting in remediation of technical problems.
- Proposing corrections and improvements to the quality system.

The clerical support staff (Evidence Technician, Senior Law Enforcement Support Technician [Sr. LEST], and Law Enforcement Support Technician [LEST]) is responsible for:

- Being familiar with the LVMPD Forensic Quality Manual and implementing the policies and procedures in their work.
- Proposing corrections and improvements to the quality system.

The LVMPD offers an Internship Program for students attending college. Interns may be assigned to the Forensic Laboratory if projects and resources are available. The Office of Human Resources does not have a Class Specification for interns or volunteers.

In addition, all members of the Forensic Laboratory are responsible for bringing any data or issue which appears to indicate quality control problems to the immediate attention of the appropriate Forensic Laboratory Manager/Forensic Laboratory Supervisor/DNA Technical Leader and the Quality Manager.

c) Forensic Laboratory Procedures

The Forensic Laboratory has established a management system in conjunction with the LVMPD. The procedures are documented in the Department Manual, the Forensic Laboratory Quality Manual, Safety Manual and in accompanying Details/Units Technical Manuals. These manuals assure that the quality of the test results will conform to requirements of the ANAB ISO/IEC 17025 accreditation program. All the above referenced manuals have been implemented and are available to all Forensic Laboratory members. The Department manual is available on the LVMPD intranet.

5.6 Authority and Resources
All members of the Forensic Laboratory are committed to a quality system in order to provide law enforcement, legal communities and citizens utilizing laboratory services confidence that results are accurate, relevant, and impartial. The Forensic Laboratory personnel have the authority and resources to carry out their duties to include, but not be limited to the following:

a) All members of the Forensic Laboratory are responsible for implementation, maintenance, and improvement of the management system.

b) All members of the Forensic Laboratory have the training and experience to identify departures from the management system. Any deviations from protocols or procedures regarding laboratory activities need to be approved by the Forensic Laboratory Manager or Forensic Laboratory Supervisor. Deviations from the Biology/DNA procedures need to be approved by the DNA Technical Leader in the Biology/DNA Detail.

c) All Forensic Laboratory members have the authority to initiate actions to prevent recurrence to minimize departures from protocols or procedures regarding laboratory activities.

d) Any area appearing to need improvement or questionable situation/incident must be brought to the immediate attention of the Forensic Laboratory Manager, Forensic Laboratory Supervisor, Quality Manager or the Director. This will allow for the determination of risk and the required course of action.

e) The following methods are used to ensure the effectiveness of laboratory activities:
   - Management Reviews
   - Audits
   - Corrective Actions
   - Technical Reviews

See the appropriate Class Specifications for further information regarding responsibilities, authorities, and resources.

5.7 Communication and Changes to the Management System
The Forensic Laboratory Director, Quality Manager, Forensic Laboratory Managers and Forensic Laboratory Supervisors shall be able to clearly demonstrate that:

a) Communication takes place regarding the effectiveness of the management system. The importance of meeting ANAB ISO/IEC 17025 accreditation requirements and the requestors’ testing requirements. These discussions should be initiated during Managers/Supervisors meetings, Forensic Laboratory staff meetings, and Detail/Unit meetings.

Forensic Laboratory staff meetings
Forensic Laboratory staff meetings will be held on a routine basis to remind Forensic Laboratory members of the importance of their roles in the management system, to keep Laboratory members informed of matters of
mutual concern, to provide training opportunities and to provide an open forum for discussion of policies and relevant issues.

The Forensic Laboratory staff meeting will be held every other month, schedules permitting. Staff meetings are mandatory, and members are to arrange their work day accordingly. The Sr. LEST or another member of the clerical support staff will create the minutes of the meeting which will be maintained on the Forensic Laboratory SharePoint site. An agenda prepared by the Laboratory Director/designee may be uploaded to SharePoint along with or in lieu of the meeting minutes. Any Laboratory member who misses a staff meeting will bear the responsibility of reviewing the agenda and/or minutes.

**Detail/Unit meetings**
Detail/Unit meetings will be held at least every other month. Documentation, through the use of an agenda, handwritten notes or minutes of these meetings is to be maintained by the Detail Manager, Supervisor or Technical Leader.

A Laboratory member who feels that a pressing issue requires an open forum for discussion can request a meeting through his or her respective Manager/Supervisor. Meetings, both formal and informal, may be held at any time at the request of the Laboratory Director, Forensic Laboratory Managers, Forensic Laboratory Supervisor or Technical Leader.

**Importance of Meeting Customer Requirements**
Effective communication is essential to provide professional quality service to the LVMPD and other user agencies. The importance of providing confidence that the results are accurate, relevant and impartial to law enforcement, legal communities, and citizens utilizing Laboratory services is communicated to the Laboratory members in the Laboratory Commitment Statement (see 8.2.3), by adhering to a quality assurance program, and through maintaining forensic laboratory accreditation.

b) Changes to the management system shall be planned and implemented by the Forensic Laboratory Director, Quality Manager and/or Forensic Laboratory Managers/Supervisors. Management will also ensure that the integrity of the management system is maintained when the changes are implemented. This is accomplished through Detail/Unit discussions and by a document control program (Qualtrax) that creates awareness of all approved changes to the management system. Once approved, notification of the change to the management system document will be routed to the appropriate members of the Forensic Laboratory.
6.0 Title: RESOURCE REQUIREMENTS - Personnel

6.1 General
The Forensic Laboratory has the personnel, facilities, equipment, systems and support services necessary to manage and perform its laboratory activities.

6.2 Personnel

6.2.1 All Forensic Laboratory personnel, internal and external, are expected to act impartially and in accordance with the policies and procedures in the Department Manual, Forensic Laboratory Safety and Quality Manuals and in the Details/Units Technical Manuals. All personnel performing any aspect of technical work are continually proven to be competent through the use of proficiency tests and technical review.

Contract Workers
The Forensic Laboratory shall use personnel who are employed by, or under contract to the LVMPD. Contract workers may be utilized by the Forensic Laboratory to provide training, complete a specific project (to include outsourcing), or temporarily fill a vacant position in a Detail/Unit in which they are proficient. Contract workers are subjected to a background investigation. Contract workers, if performing casework analyses, are assigned to a Detail/Unit supervised by a Forensic Laboratory Manager or a Forensic Laboratory Supervisor and are subject to all the same requirements of the quality system as a Forensic Scientist, including the successful completion of a competency test(s) prior to beginning casework analyses.

6.2.2 Competence Requirements
The competence requirements, including education, qualifications, technical knowledge, skills and experience, for each Forensic Laboratory position influencing the laboratory activities, are documented in the Class Specifications maintained by the Office of Human Resources. Training requirements are documented in the Detail/Unit Training Manuals.

6.2.2.1 Education Requirements
Forensic Laboratory members who authorize results, opinions and/or interpretations shall meet the minimum education requirements below:

Biology/DNA Detail
A baccalaureate or an advanced degree in a chemical, physical, or biological science or forensic science.

In addition to the above requirement, Forensic Scientists in the Biology/DNA Detail must also meet the education requirements for analyst established in the Quality
Assurance Standards for Forensic DNA Testing Laboratories and the Quality Assurance Standards for DNA Databasing Laboratories issued by the FBI.

Chemistry and Toxicology Details
A baccalaureate or an advanced degree in a chemical, physical, or biological science or forensic science.

In addition to the above requirement, Forensic Scientists in the Chemistry and Toxicology Details shall have successfully completed 24 college credits in chemistry.

Firearms and Latent Prints Detail
Meet the educational requirements specified in the appropriate Class Specifications for their date of hire.

6.2.2.2 Training Program
The Detail/Unit Training programs are documented in the Detail/Unit Training Manuals. The training program, to the extent necessary based on job function, shall include:

a) The knowledge, skills, and abilities needed to perform work;
   Past work experience and training may be substituted for portions of the training program to the extent that it has been demonstrated to be relevant and sufficient. This will be documented in a gap analysis review and retained in Qualtrax.

b) General knowledge of forensic science;

c) The application of ethical practices in forensic science;

d) Criminal law, civil law, and testimony;

e) Provisions for retraining
   Retraining may be required when an employee is away for an extended time and returns and/or is reassigned to the area with the expectation of casework analyses. Examples of employees that may require refresher training are those absent for illness, injury, FMLA, etc. In this instance, retraining may simply consist of one or more of the following: reading assignments, analysis of a representative number of case samples, and/or a competency test.

Remedial training may be necessary as a result of a proficiency testing irregularity, or other documented issues. The remedial training may include completion of training exercises/samples or may be provided an outside source. The remedial training program will be tailored to the individual’s needs. Any portion of the Detail/Unit Training Manuals may be used for remedial training, if needed. The analyst will typically be required to successfully complete a competency test prior to performing independent casework analysis. An evaluation period may apply.
Remedial training may be included in the formal Laboratory training program at any time, if warranted.

f) Provisions for maintenance of skills and expertise:
Keeping abreast of new techniques, trends, and analyses is an important component for technical competence in the forensic field. Employee training and development in the functional area of assignment is necessary. As such, management is committed to providing training to members of the Forensic Laboratory in accordance with Department regulation (Department Manual 5/108.06 – Advance Training Program), laboratory needs, and fiscal responsibility. It is advantageous for members of the Laboratory to meet an annual training goal of eight training hours per year, which may be achieved through in-service training or from external sources as funding allows. Members of the Biology/DNA Detail will ensure compliance with the continuing educational requirements as outlined in the Quality Assurance Standards.

Members will submit their training requests for outside technical training opportunities, meetings and seminars specifically applicable to the forensic services they conduct, and for in-service training through their respective Forensic Laboratory Managers/Supervisors. Forensic Laboratory Managers/Supervisors will also determine the amount and type of training required to fulfill the missions of the Laboratory and Department and advise the Laboratory Director of their ongoing assessment.

Outside Training
Forensic Laboratory members will follow the procedures for travel and training outlined in the Department Manual 5/103.04 – Travel/Training Requests. In addition, the following policy will be adhered to when requesting training and travel from outside sources:

1. Preferably, at least two months prior to the requested training, members will submit their request to the Forensic Laboratory Manager/Supervisor. Early submittal of training requests allows for better preparation from a planning and budgetary standpoint.

2. The Laboratory Director may approve the requested training based on a number of criteria including, but not limited to: if it is deemed applicable, of benefit to the Laboratory and goals of the LVMPD, if adequate funding is available, and if workload permits. Laboratory members will be advised as to whether the training was approved or denied by their respective Forensic Laboratory Manager/Supervisor or the Laboratory Director.

3. The Laboratory Director may also request that the member make certain tentative arrangements (such as room reservations, with a confirmation number) to ensure availability at the training site. Such
arrangements will be coordinated with the Travel Office, whose normal duties are to plan the travel of all Department employees.

4. Members of the Laboratory will also note “training given” and “training received” in Employee Self Service (ESS). Any training received at the employee’s own expense may be added to the employee’s records.

5. With the exception of overnight trips, the training/travel request process does not apply to routine trips to accomplish LVMPD business, such as breath instrument calibration runs.

In-service Training

All new employees are required to attend a civilian orientation established to acclimate them to the LVMPD environment. This training is designed and scheduled by the Training Section.

The Training section also holds a variety of in-service classes for both the civilian and commissioned members of the Department. If a Forensic Laboratory member wishes to attend a specific type of in-service training, the request must be made through and approved by the respective Forensic Laboratory Manager/Supervisor. Registration for the in-service training can be accomplished through UMLV. Failure to attend previously reserved training may result in sanctions from the Training Section.

Training Records and Programs

There are two Qualtrax Training Evaluation Workflows utilized by the Forensic Laboratory.

• Internal Training Evaluation Workflow
  o Shall be completed for all Forensic Laboratory formal training.
  o This includes training provided by members of the Forensic Laboratory, such as Qualtrax Training, Internal Auditor Training, Ethics Orientation, Firearms 101, or any part of the formal training program that requires completion of a competency test.

• External Training – Forensic Lab Workflow
  o Shall be completed for any training provided by someone external to the Forensic Laboratory, or by an external vendor.
  o This would include voluntary training provided by LVMPD (e.g., UMLV offered courses), training provided by an instrument vendor, or training attended at a technical conference or another jurisdiction (e.g., AAFS or HPD).
  o This workflow will require an update to the Curricula Vitae for all external technical training received.

Required routine training, such as UMLV mandatory courses, CJIS, EVOC, any safety training (Clandestine Laboratory Response Refresher, Bloodborne Pathogens, Chemical Hygiene), or CODIS/NDIS annual training does not require an evaluation.
The Workflows are used to rate the effectiveness of the training and will be forwarded to the appropriate Detail/Unit Forensic Laboratory Manager/Supervisor for completion of the Workflow. Instructions for completion of the Workflow are available in Qualtrax.

Copies of training certificates or other training documents (e.g., syllabus, etc.) will be scanned by the employee and uploaded into Qualtrax for inclusion in the employee’s Qualification File. Every Forensic Laboratory employee has a designated Training Certificates folder in Qualtrax with the appropriate rights to upload into their designated folder. Certificates obtained from external training will be attached to the External Training – Forensic Lab Workflow in the appropriate step.

It is recommended to update the CV and uploading the Training Certificate prior to starting the External Training – Forensic Lab Workflow.

In the Biology/DNA Detail, the training certificates or other training documents (e.g., syllabus, etc.) will be provided to the DNA Technical Leader for approval before being uploaded into Qualtrax.

Employees will record their training hours in ESS for all training.

Hosting Meetings and Seminars
Las Vegas is a particularly good place to hold meetings and seminars, and frequently it is in the best interest of the Laboratory to act as the host laboratory for various forensic groups. However, putting on such events requires much time and energy on the part of the host laboratory. Laboratory Managers and the Laboratory Director will be advised prior to members volunteering to host a meeting to ensure that the effort will not conflict with case output or meeting Department and Laboratory goals.

Professional Development
It is this Department’s policy to provide career development as outlined in LVMPD Department Manual 5/101.50 – Career Development Program. Further, due to the professional and scientific nature of the work performed by Forensic Laboratory members, additional emphasis is placed on training and development in order to assure technical competency. The continued professional development of Laboratory members can occur in many ways and may include:

- Attendance at professionally sponsored classes, seminars and conferences
- Seminars/classes offered by the LVMPD Training Bureau or by the Laboratory in conjunction with training providers
- Payment of dues for membership in a professional organization related to job duties (suspended)
- Attendance at meetings held by professional forensic organizations
• Exchange of information with other Forensic Laboratories through visiting scientist opportunities or internet group lists
• Mentoring by another LVMPD employee or by a Forensic Scientist from another Laboratory
• Payment for pursuit of peer-based individual certification related to job function, as offered by an appropriately credentialed certifying body (non-mandatory certification payment has been suspended)
• Opportunities for research
• Availability of a library of various texts and journals and access to the internet
  o The Forensic Laboratory library contains books, general reference and resource materials, and journals that apply to forensic science and related topics. Materials obtained by employees as a result of training received at Department expense are the property of the LVMPD and should be placed in the library or the specific Detail/Unit for the benefit of the other Laboratory employees.

• Routing journals, publications or articles of forensic interest through the Laboratory
  o It is important that the Laboratory maintains the most current information regarding the multiple specialty areas of forensic science. Employees are encouraged to request the latest reference materials and relevant publications through the purchasing process.
• Opportunities to act in place of Forensic Laboratory Managers, the Quality Manager, the DNA Technical Leader, Forensic Laboratory Supervisors or the Laboratory Director during their absence

Members are encouraged to participate in Department committees related to their job function or in the strategic planning process. Members are also urged to become active in professional forensic organizations, through committee involvement, holding offices in the organization, or research opportunities. Involvement in the field provides opportunities for growth of both the seasoned professional and the new Forensic Scientist.

g) Criteria for acceptable performance for the Detail/Unit training program and the competency tests are documented in the Detail/Unit Training Manuals.

6.2.3 Competence of Forensic Laboratory Personnel
Forensic Laboratory Managers, Forensic Laboratory Supervisors and/or the DNA Technical Leader will ensure the competence of all staff performing laboratory activities for which they are responsible (e.g., operation of instruments/equipment, performing testing, evaluating results and significance of deviations, and reporting) by requiring successful completion of training requirements as specified in the Detail/Unit Training Manuals. Personnel shall be qualified on the basis of
appropriate education, training, experience and/or demonstrated skills, as required. Appropriate supervision for those undergoing training shall be provided.

6.2.3.1 Competency Testing
Each analyst, regardless of academic qualifications or past work experience, must pass a competency test(s) by achieving the intended result(s) prior to performing supervised or independent casework. These tests are to be completed without the assistance from other Laboratory personnel or individuals from outside the LVMPD Forensic Laboratory.

The competency test(s) shall, at a minimum include:
- Practical examination(s) that cover the spectrum of anticipated tasks related to the assigned duties and to evaluate the individual’s ability to perform proper testing methods and appropriate note taking;
- A test report to demonstrate the individual’s ability to properly convey results and/or conclusions and the significance of those results/conclusions; and
- Providing testimony (moot court).

Upon successful completion of a competency test, the analyst will receive a Certificate of Competency.

All analysts will perform a period of supervised casework before performing independent casework analyses.

The successful completion of a competency test will satisfy that component of the proficiency test requirement for the current year for that individual with the exception of Biology/DNA Detail. DNA members must enter the proficiency testing cycle according to the timeframe designated in the Quality Assurance Standards for Forensic DNA Testing and the Quality Assurance Standards for DNA Databasing Laboratories documents.

6.2.3.2 Competence of Reviewers
Analysts who perform the following tasks are authorized based on expertise in the discipline and by successful completion of a competency test(s) or a competency memo (for technical personnel hired prior to the competency test requirement in 2018):
- Review and authorize results
- Review and authorize an opinion or interpretation
- Perform technical review of results
- Perform technical review of testimony

6.2.4 Duties, Responsibilities and Authorities
Various Class Specifications can be assigned to the Forensic Laboratory. These Class Specifications are:
- Director of Laboratory Services
- Forensic Laboratory Manager
- DNA Technical Leader
• Forensic Laboratory Supervisor
• Forensic Database Administrator (CODIS, NIBIN, or AFIS)
• Forensic Scientist I or II
• Forensic Scientist Trainee
• Forensic Laboratory Technologist
• Forensic Laboratory Aide
• Evidence Technician
• Senior Law Enforcement Support Technician (Sr. LEST)
• Law Enforcement Support Technician (LEST)
• Police Officers – may perform NIBIN functions
• Part-time Laboratory Assistant – may perform Lab Aide functions
• Part-time Investigative Aide – may perform NIBIN functions
• Part-time Support Assistant – may perform latent print support functions, clerical functions or provide general assistance

Forensic Laboratory personnel’s duties, responsibilities and authorities are documented in this manual and in the Class Specifications maintained by the Office of Human Resources. Further documentation may be in the Performance Standards and the Detail/Unit Technical Manuals.

NIBIN Technician
The following job description was developed by the Forensic Laboratory. NIBIN Technicians may be assigned to the Forensic Laboratory operating in an Investigative Aide Class Specification, or in a TDY or permanent function in a different Class Specification. Regardless of the Class Specification the employee currently falls under, the following Job Description shall be used to describe the duties, responsibilities and authorities for anyone temporarily or permanently assigned to support the NIBIN program.

The National Integrated Ballistic Information Network (NIBIN) is an electronic database of firearm related images managed by the Bureau of Alcohol, Tobacco, Firearms and Explosives (BATFE). NIBIN allows for the comparison of ballistic evidence from crime scenes and impounded firearms to aid in solving and preventing firearms related violent crimes.

The primary job of the NIBIN Technician is to test fire eligible impounded firearms for the entry of cartridge cases into the NIBIN Database as part of the Las Vegas Metropolitan Police Department’s ballistic imaging program.

The typical job duties of a NIBIN Technician are:
• Handle, examine and test fire a variety of impounded firearms following all safety procedures, and laboratory protocols, and NIBIN Unit protocols.
• Use time and other available Department provided resources in a reasonable and cost efficient manner.
• Conduct and complete assigned tasks with a level of independence requiring some guidance but not repeated in same or similar
circumstances. Document pertinent data and examination results in the Forensic Laboratory’s Information Management System

- Microscopically screen and enter test fired cartridge cases into NIBIN
- Issue Forensic Lab Reports pertaining to work performed.

6.2.5 Personnel Records

a) Procedures for determining competence requirements are documented in the Detail/Unit Technical Manuals. The records (e.g., Certificates of Competency and Competency documentation) are maintained in Qualtrax and LIMS.

b) Records (e.g., diplomas and transcripts) and procedures for the selection of personnel are maintained by the Office of Human Resources. Copies of diplomas and transcripts are also stored in Qualtrax.

c) Forensic Laboratory Training Programs

Those classifications which allow for entry level employees will have formal training programs designed to prepare the trainee for meeting the performance standards of competent casework analysis in particular areas of expertise. Training programs for all Details/Units will be established in written format. The program will include mechanisms for documenting the training received.

In the event employees are hired with previous experience, the formal technical training programs in these areas of expertise may be abbreviated to the extent that the past experience has been demonstrated to be relevant and sufficient. Documentation of the relevance and sufficiency of the previous experience must be maintained.

Internal Training Evaluations will be completed for all formal, technical internal training to evaluate the effectiveness of the training. The completed evaluations will be reviewed by the Quality Manager and stored in Qualtrax.

Procedures for training of personnel are located in the Detail/Unit Training Manuals. Training records (e.g., technical training certificates, training documentations, and Curricula Vitae) are maintained in Qualtrax and LIMS.

- The Curricula Vitae are maintained by the employee. The Curricula Vitae detail the education, training, and experience of each employee. All technical employees are required to complete the Curricula Vitae in detail and upload it into Qualtrax for approval by the appropriate Forensic Laboratory Manager/DNA Technical Leader/Supervisor.
- The Curricula Vitae will be reviewed annually, to ensure that they are complete and up to date.
- The Curricula Vitae will be used to meet the legislation requiring the district attorney’s office to provide an expert’s qualifications to the defense. The Curricula Vitae can be sent electronically by a Forensic Laboratory employee to any prosecutors upon request.
d) Procedures for the supervision of personnel are located in the LVMPD Department Manual, this manual, and in documents provided by Labor Relations. Records are maintained by Forensic Laboratory management and by Labor Relations.

e) Procedures for the authorization of personnel are located in this Quality Manual. The authorization records (e.g., Authorization Memos) are maintained in Qualtrax.

f) The procedures for monitoring the competency of personnel are located in the Quality Manual (proficiency testing, technical review of casework, technical review of testimony, audits). The proficiency test records are maintained in Qualtrax and LIMS. The testimony review and audit records are maintained in Qualtrax. The technical review of casework records are maintained in LIMS.

6.2.6 Authorization

Based on appropriate education, training experience and the demonstration of necessary skills through competency testing and monitoring, the Laboratory Director, Detail/Unit Forensic Laboratory Managers/Supervisors and/or the DNA Technical Leader authorizes personnel to perform specific laboratory activities, including but not limited to, the following:

a) Development, modification, verification and validation methods;

b) Analysis of results, including statements of conformity or opinions and interpretations;

c) Report, review and authorization of results;

d) Use of equipment

e) Development and administration of competency and proficiency tests

This authorization is documented on a LVMPD Memorandum. These Authorization Memos are maintained in Qualtrax.

In the Biology/DNA Detail, the Authorization Memos are issued by the DNA Technical Lead.
6.3 Title: FACILITIES AND ENVIRONMENTAL CONDITIONS

6.3.1 Forensic Laboratory Facilities
The accommodations and environmental conditions of the Laboratory are suitable for instrumentation/equipment and proper performance of tests. This will be maintained through the proper performance and operation of heating/cooling, electrical systems and the implementation of safety policies and procedures.

6.3.2 Environmental Condition Requirements
Requirements for environmental conditions associated with a particular protocol, method, or reagent are documented in Detail/Unit Technical Manuals, if required.

6.3.3 Monitoring Environmental Conditions
Environmental conditions will be monitored and records maintained for those procedures as required in the Detail/Unit Technical Manuals. If environmental conditions are observed which jeopardize the results of testing, the testing will be halted and the appropriate Forensic Laboratory Manager/Supervisor/DNA Technical Leader will be notified.

6.3.4 Forensic Laboratory Control and Security
The measures to control Forensic Laboratory facilities are listed below. The measures are monitored and reviewed through audits and the Management Review.

a) Forensic Laboratory Security
Laboratory Security is crucial to ensure the preservation and integrity of evidence in Laboratory custody, to protect the assets and records within the Laboratory, to ensure the safety of Laboratory personnel, and to meet Laboratory accreditation standards. The Forensic Laboratory building is secured with an intrusion alarm system, an LVMPD wide computerized network, known as the Millennium System, interior push button combination locks and locks on all exterior doors.

The DNA Annex and Firearms Annex are secured with an intrusion alarm system, the Millennium System, and locks on all exterior doors.

The Millennium System is programmed by the Facilities Section of the Logistics Bureau and maintained by the Administrative Assistant or the Quality Manager/designee of the Forensic Laboratory. The Laboratory Director determines who has access to secure doors with the exception of LVMPD Executive Staff who has access to every door on the Department.
**Intrusion Alarm System/Entrance and Exits**

All exterior Forensic Laboratory doors are locked. Entry into the building perimeter is controlled by the Millennium System. The Millennium System utilizes electronic readers located at specific exterior doors, which can recognize electronic devices known as proximity cards and fobs.

Security will be maintained to prevent unauthorized access to the Laboratory. Certain exterior doors are not to be used for routine access including the "Breath Alcohol", "Clan Lab", and "West Hallway" (door between Toxicology and Chemistry) doors. All doors are equipped with emergency panic bars and may be used for emergencies and/or equipment access.

The Forensic Laboratory will be properly alarmed and secured whenever it is vacant during off-duty hours. The Forensic Laboratory building is secured with an alarm system which utilizes key pads for arming and disarming, motion detectors, glass breaks and a cellular relay to the monitoring company in the event that power is cut to the system.

Four digit alarm codes are chosen by each employee, and are to be kept strictly confidential and not to be shared or released. Alarms are monitored by a contracted company who maintains a list of employees specific codes. In the event an alarm is set off by a Forensic Laboratory employee in error, the employee will immediately call the alarm company and supply the alarm dispatch center with their name and code. If an alarm sounds in an area that is unoccupied and there is no call from an employee, the monitoring company will dispatch a private security vehicle and notify LVMPD Communications Bureau (Dispatch) who will dispatch a Police Officer to investigate. Meanwhile, a Laboratory member will be contacted to respond to the Laboratory to address any security issues.

The last member to leave at the close of the work day is responsible for setting the perimeter intrusion alarm and ensuring all other sections of the building are vacant.

**Emergency Access**

Emergency contact information will be provided by the Bureau Commander to the Communications Bureau detailing the emergency contacts for the Criminalistics Bureau buildings.

Those members of the Laboratory called out for an emergency associated with the facilities will prepare a memorandum for the Laboratory Director briefly describing the circumstances surrounding the call out.

**Accountability of Proximity Cards/Fobs and Keys**

- **Proximity Cards/Fobs**
  Each proximity card/fob bears a unique number and is assigned to a specific employee. Upon assignment to the Forensic Laboratory,
employees will sign the LVMPD Proximity Card/Proximity fob Receipt/Return Form annotating their corresponding card/fob number. Individually assigned proximity cards/fobs are not to be shared. Visitor proximity cards are available for checkout from the Quality Manager/designee and/or a Forensic Laboratory Manager in the event an employee’s proximity card/fob is not available (at home, not working, lost). The use of a visitor proximity card will be documented by the Quality Manager or Forensic Laboratory Manager on the Proximity Card Sign-out Log in the Quality Manager’s Office or located in the Manager’s folder on the H:drive. See 6.3.4.1 Laboratory Security and Access in Testing Areas for further details.

Cards and fobs are to be safeguarded against loss or use by unauthorized persons. In the event that a card or fob loss occurs, the Quality Manager and/or Laboratory Director will be notified immediately.

- **Keys**
  There are three categories of keys.
  - Secure Keys – keys assigned to an individual with a required signature of receipt
  - Shared Secure Keys – keys to unassigned evidence lockers/areas used when the need arises
  - General Keys – keys assigned to an individual with no signature required.

Individual evidence locker keys, keys to DNA and Latent Print analysts personal lockable evidence storage, and keys to secure areas within the Laboratory fall under the category of secure keys and are distributed by the Quality Manager/designee, Laboratory Director, Forensic Laboratory Managers or Forensic Laboratory Supervisors, at which time the key log must be signed. Each key is labeled with a unique number.

Community evidence locker keys, DNA exam room keys, and the Firearms Annex keys are considered shared secured keys. The keys for the DNA exam rooms are kept in the DNA evidence vault until needed. If an analyst stores evidence in a DNA exam room, the key will be kept in their possession until the evidence is removed. For more information, refer to the Biology/DNA Procedures/Quality Manual. Community evidence lockers in the DNA Annex will contain a digital lock with the ability for the code to be changed by the user upon each use. When a community evidence locker is in use, the analyst will enter a code chosen by them and the code will be kept confidential and will not be shared. Once the community evidence locker becomes vacant it will be available for use by the next user and
a new code will have to be chosen. A master code will be available to the management team, if needed. Firearms Annex building keys are only used by those who have received and signed for the security code to the building.

With the exception of the overhead bins in the Latent Prints Detail bullpen, desk keys are considered general keys. No evidence will be placed in general key locations. The overhead bins in Latent Prints Detail are secure key areas and may house evidence.

An audit of all secure keys and shared secure keys, including unissued and spare keys, will be conducted annually by the Quality Manager/designee. A database showing the location of all general keys will be maintained, however an inventory of general keys is not required.

Where deemed necessary by the Laboratory Director, keys and entry codes will be assigned to Laboratory members. All keys are to be safeguarded against loss or use by unauthorized persons and are not to be duplicated unless authorized. In the event that a key loss occurs, the Quality Manager and/or Laboratory Director will be notified immediately.

Access to Individual Characteristic Database Samples
Access to individual characteristic database samples associated with AFIS, CODIS and NIBIN is restricted to those individuals having a legitimate purpose related to their job function. Authorization to individual characteristic database samples under the control of the Laboratory is granted by the Laboratory Director (see the Individual Characteristic Database Authorization memo).

b) Contamination
Appropriate measures will be taken while handling evidence to prevent loss, degradation, contamination and cross contamination. Refer to the Detail/Unit Technical Manuals for further details.

c) Separation of Incompatible Laboratory Activities
The design of the Forensic Laboratory areas used for testing will take into account the type of testing performed and separate any laboratory activities procedures that are not compatible. The separation may be accomplished by physical space and/or time. Steps will be taken to prevent any cross contamination of evidence (refer to the Detail/Unit Technical Manuals for further details, if applicable).

6.3.4.1 Laboratory Security and Access in Testing Areas

Interior Access
Entry into Laboratory areas and Laboratory evidence vaults is also controlled by the Millennium System.

Entry to the various areas of the Laboratory is governed by job assignments and work days and hours. Employees will be notified of their access limitations. It is each employee’s responsibility to ensure that they are entering authorized areas during authorized times. In addition to the assigned cards and fobs, there are a set of visitor cards that are available for temporary assignment to trainees, new employees, and other qualified personnel. The Forensic Laboratory Manager of each Detail/Unit has access to a visitor card granting appropriate access to their Detail. The Quality Manager/designee has access to two visitor cards. One allowing generic access to the building (no vault access) and one allowing full access to the Forensic Laboratory building. The full access visitor card will only be signed out to a member of the management team.

Entry into the Laboratory evidence vaults is limited to LVMPD Executive Staff and those Forensic Laboratory members requiring access as determined by Detail/Unit of assignment and Class Specification (e.g., Forensic Laboratory members assigned to the Chemistry Detail have access to the Chemistry vault, but not the Latent Print Detail vault). See 7.4.4 – Evidence Security and Storage for further details.

The Information Technologies (IT) Bureau has been granted unescorted access in the Forensic Laboratory building Forensics IT Room by the Laboratory Director. Members of the IT Bureau must still log in as Visitors and be escorted to the Forensics IT Room. Access to the Laboratory Proper from the Forensics IT Room cannot be gained without proximity card access.

All Information Technologies (IT) Bureau members will be escorted at all times in the DNA Annex.

**Laboratory Testing Areas (Laboratory Proper)**

Interior areas in the Forensic Laboratory building specific to a Detail/Unit are secured by locking doors and/or push button combination locks. Entry codes for combination locks on interior doors will be given to authorized personnel with the understanding that they are to be kept confidential. Signatures of Laboratory members provided with entry codes for designated areas will be recorded and maintained by the Quality Manager/designee.

The DNA Annex Laboratory Proper is secured by the Millennium System.

Any individual other than Laboratory members, or those granted access as described in Appendix F – Visitors and Tours, will sign in as a “visitor”. Visitors will be monitored by Laboratory member(s) during their stay.

### 6.3.5 Laboratory Activities Performed Outside of Forensic Laboratory Facilities

Work conducted outside the Forensic Laboratory permanent facilities (main laboratory building, DNA Annex building, and Firearms Annex building) will follow all
requirements related to facilities and environmental conditions addressed in this Quality Manual.
6.4 Title: EQUIPMENT AND REAGENTS

6.4.1 Equipment – General
Forensic Laboratory members will have access to equipment required for the quality performance of laboratory activities. This includes measuring instruments, software, measurement standards, reference materials, reference data, reagents, consumables or auxiliary apparatus.

6.4.2 Equipment out of Forensic Laboratory’s Control
When equipment that affects the quality of work goes outside the direct control of the Laboratory and is used for testing by someone outside of the control of the Laboratory (e.g., substation balances), Forensic Laboratory personnel will verify that the equipment conforms to specified requirements before being returned to service within the Laboratory. This does not apply to equipment that is sent to an approved external vendor for calibration.

6.4.3 Handling, Transportation, Storage, Use and Planned Maintenance of Equipment
Procedures for the safe handling, transportation, storage, use and planned maintenance of equipment are documented in Manufacturer/Instrument Manuals and/or in the Detail/Unit Technical Manuals, if applicable to ensure proper function and to prevent contamination or deterioration.

*NIST Traceable Thermometers*
The NIST traceable thermometer will be handled carefully to avoid being dropped and damaged. The spare NIST thermometers, with the exception of the spares designated for Biology/DNA Detail, will be stored in the Quality Manager’s office. The spare NIST thermometers designated for the Biology/DNA Detail will be stored in the DNA Technical Leader’s office. If transported outside of the Forensic Laboratory, the thermometer will be packaged with appropriate packing material in an appropriate container. The thermometer may be used for the biweekly performance checks of the refrigerator, freezer, heat block, etc. thermometers or for new equipment prior to use. The thermometer will only be used in its rated temperature range.

All NIST thermometers in use are manufactured by Control Company unless otherwise approved by the Quality Unit.

*All Other Reference Standards and Reference Materials*
Procedures for safe handling, transportation, storage and use of all other reference standards and reference materials are outlined in the appropriate Detail/Unit Technical Manual.
Reagent Reliability Testing
The individual Details/Units of the Forensic Laboratory will establish the formulations and necessary quality control checks for reagents and standards particular to that Detail/Unit. The formulations will be contained in the Detail/Unit Technical Manuals. Quality control checks of those reagents, standards, and materials called for in each specific Detail/Unit Technical Manual will be performed prior to, or if appropriate concurrent with, use in casework.

6.4.3.1 Laboratory Prepared Reagents
Reagent Preparation Logs
Preparation of reagents, buffers, standards and solutions will be documented in a Reagent Preparation Log stored in the Resource Manager Object Repository.

Logs will contain the following information:
- Identity of reagent (including concentration or molarity if applicable);
- Ingredients and their lot numbers (water may not require a lot number, but should be listed as an ingredient);
- Internal lot number;
  - The lot number will begin with the letter corresponding to the appropriate Detail/Unit (Crime Scene Investigation’s reagent preparation are located in a logbook):
    - DNA – D
    - Seized Drugs – C
    - Trace Materials – A
    - Toxicology – T
    - Latent Prints – LP
    - Firearms – F
    - Crime Scene Investigations – CS
  - The letter will be followed by a 6 digit number indicating the date of preparation (mmddyy). The 6 digit number will be followed by a dash. All reagents made on a certain day per Detail/Unit will be sequentially numbered (which follow the dash).
    - Example: Sodium Nitroprusside is made up for the Seized Drugs Unit on November 21, 2001. It is the second reagent made for Seized Drugs Unit that day. The lot number would be C112101-2.
  - In the Biology/DNA Detail the dash will be followed by letters indicating the type of reagent that was prepared:
    - 1X 3130 Buffer – 1XB
    - Acid Phosphatase Overlay Stock Step I – ASP1
    - Acid Phosphatase Overlay Stock Step II – APO2
    - Acid Phosphatase Overlay Working Solution – WS
    - Blood Presumptive Standard – BL
    - DTT – DTT
    - EZ1 carrier RNA – cRNA
    - NaCl – SC
    - PBS – PBS
- Phenolphthalein Stock Solution – PTS
- Phenolphthalein Working Solution – PT1
- Phenolphthalein Working Solution (Peroxide) – PT2
- Quantifiler Trio Standards – TRIO
- Saliva Presumptive Standard – SAL
- Semen Presumptive Standard – SL
- Example: Quantifiler Trio Standards are made up for the Biology/DNA Detail on January 21, 2008. The lot # would be D012108-TRIO.

- Quality control checks performed (if required by the Detail/Unit Technical Manual) and results;
- Name or P# and initials of person preparing the reagent;
- Expiration date or “until consumed” if no expiration date has been established.
- Storage requirement

When a solution is prepared to be used in a single examination, then the preparation need not be placed in the reagent preparation log. Instead, information that would normally be recorded in the log will be recorded with the case documentation.

**Container Labeling**
At a minimum, all laboratory preparations will be labeled with the following information:
- Identity of the reagent
- Laboratory assigned lot number
- Expiration date
- Initials of the preparer

For each preparation, physical and health hazard symbol warnings will be displayed on the container or within the respective Laboratory Detail/Unit.

**Manufacturer Chemicals**
Policies regarding the labeling of chemicals that have undergone no preparation are detailed in 3.3.5 – Labeling in the Safety Manual.

Chemicals that have undergone no preparation, but have been transferred to a secondary container must bear:
- Identity of the substance
- Name of the manufacturer
- Lot number
- Expiration date

For each product, physical and health hazard symbol warnings will be displayed on the container or within the respective Laboratory Detail/Unit when warranted.

**Secondary Reference Materials**
For tracking purposes, secondary reference materials will be assigned secondary lot numbers. These lot number assignments will be maintained by individual Detail/Units. Documentation will include the identity of the substance, the manufacturer and the Laboratory defined secondary lot number (see below). Other information such as verification against a primary reference material can also be recorded.

**Assigning Secondary Lot Numbers:**
The lot number will begin with “2S”. The next characters will be the letter used by the Detail/Unit from the above internal lot number procedure followed by a sequential number. Example: The Trace Materials Unit acquires some gasoline to be used as a secondary reference material. It is the third reference material the Unit has received since the implementation of this procedure; its secondary lot number would be “2SA3”.

Breath Alcohol solutions will be numbered as described in the Breath Alcohol Technical Manual.

6.4.3.2 Reference Collections
Reference Collections of data or materials which are maintained for identification, comparison, or interpretation purposes shall have each entry in the collection documented, uniquely identified and handled properly to protect the characteristic(s) of interest. Specific instructions regarding reference collections are detailed in each Detail/Unit Technical Manual, as applicable.

6.4.4 Equipment Performance Check Prior to Initial Use
A quality control check (calibration, validation, verification and/or performance check) shall be conducted on all Laboratory equipment before being initially placed into service or being returned to service to establish it meets Forensic Laboratory requirements.

Procedures shall be established for the quality control checks (external calibration, verification, and/or performance checks) for equipment producing quantitative and/or qualitative data. The methods employed to ensure proper calibration and maintenance of Laboratory equipment are delineated in Detail/Unit Technical Manuals). Each Technical Manual contains a **Quality Control Plans** which is prepared in a table format to enable easy reference. **Quality Control Plans** contain information for measuring equipment, measuring standards, instrumentation, and auxiliary apparatus and will include the following, if applicable:

- Identity of equipment
- Manufacturer’s name
- Model number
- Serial number
- Unique identifier (e.g., Tox #1)
- Frequency of the quality control checks (both internal and external)
- Acceptable criteria for the quality control checks
- Reference to the location of the quality control logs
- The corrective action needed if quality control criteria are not met

NOTE: Not all equipment requires both internal and external quality control checks. If an internal and/or external quality control check is not documented in the Quality Control Plan, it is presumed that an internal/external check is not required. All required checks will be documented in the Quality Control Plan.

The frequency of these checks will be determined by the Detail/Unit Forensic Laboratory Manager/Supervisor/DNA Technical Leader in concert with the Quality Manager/designee.

The Biology/DNA Detail will define and perform quality control checks as established in the Quality Assurance Standards for Forensic DNA Testing Laboratories and the Quality Assurance Standards for DNA Databasing Laboratories issued by the FBI (see the Biology/DNA Procedures/Quality Manual for further details).

6.4.5 Measuring Equipment
Equipment used for measurement will be capable of achieving the measurement accuracy and/or measurement uncertainty required to provide a valid result. Each Detail/Unit Technical Manual lists information regarding measuring capability of equipment, as applicable.

6.4.6 Calibration of Measuring Equipment
Measuring equipment shall be calibrated when the measurement accuracy or uncertainty affects the validity of the reported results and/or when the calibration of the equipment is required to establish the metrological traceability of the reported results.

The uncertainty of measurement from the calibration (listed on the calibration certificate) will be accounted for in the appropriate uncertainty budget used for the determination of uncertainty of a quantitative method, unless it has been established that the associated contribution from the calibration contributes little to the total uncertainty of the test result. The Forensic Laboratory shall ensure the equipment used can provide the uncertainty of measurement needed.

6.4.7 Calibration Program
Procedures for calibration of equipment shall be established depending on the specific requirements of the casework being performed. The established calibration program shall be reviewed and adjusted as necessary to maintain confidence in the status of calibration. The procedures for calibration checks are outlined in the Detail/Unit Technical Manuals’ Quality Control Plans. Calibration checks shall be performed after any shut down and following service or substantial maintenance. Calibration check intervals shall not be less stringent than the manufacturer’s recommendations.

Calibration checks in the Biology/DNA Detail will be performed in compliance with the standards established in the Quality Assurance Standards for Forensic DNA
Testing Laboratories and the Quality Assurance Standards for DNA Databasing Laboratories issued by the FBI.

Reference Standards
All in house NIST traceable primary reference standards shall be periodically replaced or calibrated by an external vendor to maintain their NIST traceability. The external vendor must meet all requirements detailed in 6.5.1.1 Suppliers of External Calibrations Services.

- NIST traceable thermometers will be calibrated and/or replaced every two years or when certificate expires, whichever is sooner
- ASTM class 1 weights will be calibrated annually
- 1” micrometer standard will be calibrated and/or replaced every three years
- 1mm gauge block will be calibrated or replaced every five years
- Sound level calibrator will be calibrated annually

All secondary reference standards used in the routine check of equipment will be checked annually against a primary standard or using externally calibrated equipment (balance).

With the exception of Breath Alcohol, the Forensic Laboratory does not perform calibrations; therefore the primary and secondary standards listed above can be used for purposes other than for performing calibrations. The primary standards may be used for calibration checks, performance checks and/or in casework analyses. The secondary reference standards may be used for monitoring environmental conditions of equipment or in casework analyses.

6.4.7.1 Calibration Program Details
The established calibration program is structured as follows:

a) A list of the equipment requiring calibration is outlined in the Quality Control Plan in the Detail/Unit Technical Manuals.

b) Specifications for the calibration laboratory are located in 6.5.1.1 External Calibration Laboratories.

c) Specified requirements for the calibration are outlined in the Quality Control Plan in the Detail/Unit Technical Manuals.

d) The interval of calibration are outlined in the Quality Control Plan in the Detail/Unit Technical Manuals.

6.4.8 Calibration Status
A label indicating the last date of calibration and the next calibration due date shall be located on all equipment requiring calibration.

6.4.9 Equipment Issues
It is the responsibility of the user to ensure that the equipment is functioning correctly, calibrated and adjusted for the task at hand.

If any laboratory prepared reagent does not meet required quality standards or is found to be prepared in error, use of the preparation will cease immediately, a
notation will be made in the Reagent Preparation Log and the appropriate Forensic Laboratory Manager/Supervisor/DNA Technical Leader will be notified. If the reagent was utilized in the examination of casework, a Quality Assurance Workflow will be initiated.

If any reagent or material received from a supplier does not meet required quality standards, use of the reagent/material will cease immediately and the appropriate Forensic Laboratory Manager/Supervisor/DNA Technical Leader will be notified. If the reagent or material was utilized in the examination of casework, a Quality Assurance Workflow will be initiated.

Reagents, reference materials, and/or chemicals which have a manufacturer’s expiration, use by, or retest date may be used in analyses past these dates, as determined by each Detail/Unit. If expired materials, reagents, and/or chemicals are used, they must pass quality control procedures before use or, if appropriate, concurrent with use. The procedures for the use and quality control checks of expired materials, reagents, and/or chemicals will be defined in Detail/Unit Technical Manuals. If a Detail/Unit determines that expired materials, reagents, and/or chemicals will not be used, they must be disposed of in a safe manner or clearly marked if they are retained for research/training purposes.

If it is suspected that a primary reference standard is not performing properly, the standard will be removed from service and either be sent to an external vendor for calibration or be replaced.

If a problem or a nonconformance is noted, the equipment shall be taken out of service and clearly labeled “Out of Service” until it is repaired and either calibrated or verified to ensure correct performance. A Quality Assurance Workflow will be initiated if casework was affected.

The effect the problem had on previous tests shall be examined and the Control of Nonconforming Testing and/or Calibration Work procedures shall be instituted if warranted.

6.4.10 Intermediate Performance Checks

When quality control checks are needed to maintain confidence in the performance of the equipment (e.g., monthly check of balances in Seized Drugs, Latent Prints and Toxicology), these checks will be carried out as defined in the Detail/Unit Technical Manuals.

The frequency of intermediate checks of calibrated equipment are defined in the Quality Control Plans located in the Detail/Unit Technical Manuals.

Quality control checks of reagents, controls and solutions will be performed prior to, or if appropriate concurrent with, use in casework.
Quality control checks on reference materials will be performed as designated in the appropriate Detail/Unit Technical Manuals. Due to the limited use of reference standards between calibrations, intermediate checks will only be performed if a problem is suspected.

Once established, any extension in the interval of intermediate checks shall be based on empirical data and an evaluation of risk. Documentation of the empirical data and the evaluation of the risk shall be maintained.

6.4.11 Correction Factors
Whenever calibration/calibration checks give rise to a set of correction factors (± °C for thermometers), the forms maintained in the Forensic Laboratory shall be updated to reflect the correction factor.

6.4.12 Unintended Adjustments
Test equipment that has calibration settings that can be adjusted by Laboratory staff will be safeguarded against unintentional changes by at least one of the following methods:

- Use of positive, negative, or known controls
- Assigned authorized individual(s) to operate/adjust the instrument
- Limited access to Laboratory areas
- Password protection

6.4.13 Equipment Records
Records of each item of equipment and its software shall be maintained. The following lists the information that shall be recorded in regards to all equipment and the location the information is recorded:

a) The identity of the item of equipment, including software or firmware version, if warranted, (Quality Control Plan located in the Detail/Unit Technical Manuals, Property Control Inventory, Equipment/Instrumentation Receipt and LIMS Resource Manager).

b) Manufacturer’s name, model number and serial number or other unique identification (Quality Control Plan located in the Detail/Unit Technical Manuals, Property Control Inventory, Equipment/Instrumentation Receipt and LIMS Resource Manager).

c) Evidence of verification (quality control checks) that equipment conforms with specified requirements (LIMS Resource Manager, Qualtrax or Equipment Logbooks).

d) Current location (Property Control Inventory and LIMS Resource Manager).

e) Calibration dates, results of calibrations, adjustments, acceptance criteria, and the due date of the next calibration or the calibration interval (Equipment Logbooks, LIMS Resource Manager, Quality Assurance Schedule and/or labeling on equipment, Quality Control Plan in the Detail/Unit Technical Manual).

f) Documentation of reference materials, results, acceptance criteria, relevant dates and the period of validity (Housed within each Detail/Unit, in the LIMS Resource Manager, or in the Detail/Unit Technical Manual)
g) Maintenance plan (Quality Control Plan located in the Detail/Unit Technical Manuals) and maintenance carried out to date (Equipment logbooks, Qualtrax, or LIMS Resource Manager).

h) Details of any damage, malfunction, modification to or repair of, the equipment (Equipment Logbooks, Qualtrax or LIMS Resource Manager).

**Equipment Manuals and Logs**

Manufacturer’s Manuals received with equipment must be kept by the Forensic Laboratory.

If logbooks are established for specific equipment, their location will be designated by the appropriate Technical Manual and/or Quality Control Plan. All pertinent documentation will be placed in this log or in the LIMS Resource Manager Object Repository, including corrective action reports, regularly scheduled preventative maintenance performed on the equipment by company technicians, and quality control checks.

Prior to 2014 and the use of the Object Repository in LIMS, relevant quality control data from a number of different items of equipment may be maintained in a common logbook. For example, one logbook may be used for all of the balances in the Forensic Laboratory. In these cases, either the Quality Unit or the respective Detail/Unit houses the appropriate documentation.
6.5 Title: METROLOGICAL TRACEABILITY

6.5.1 Metrological traceability shall be established and maintained for its measurement results. This shall be documented in an unbroken chain of calibrations, each contributing to the measurement uncertainty, linking them to an appropriate reference.

External calibrations shall be performed for all reference standards and where the calibration of the equipment has a significant effect on:
- The accuracy or validity of sampling or a test result, or
- The total uncertainty of the test result

Calibration certificates issued by the external calibration laboratory must contain the following:
- Measurement results;
- Measurement uncertainty and/or a statement of compliance with an identified metrological specification.

Calibration certificates will be maintained in LIMS or Qualtrax.

The uncertainty of measurement from the calibration (listed on the calibration certificate) will be accounted for in the appropriate uncertainty budget used for the determination of uncertainty of a quantitative method, unless it has been established that the associated contribution from the calibration contributes little to the total uncertainty of the test result. Determination of the insignificant contribution shall be maintained.

6.5.1.1 Suppliers of External Calibration Services

If available, suppliers of external calibration services for measuring equipment and/or reference standards, and certified reference materials used to establish or maintain metrological traceability shall either be:

a) A National Metrology Institute that is a signatory to the BIPM (International Bureau of Weights and Measures) – CIPM Mutual Recognition Arrangement with the calibration of measuring equipment and/or reference standard to be performed 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 calibration of measuring equipment and/or reference standard to be performed 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.

NOTE: The BIPM KCDB, Appendix C is available at – http://kcdb.bipm.org/appendixC/ and more information regarding ILAC is available at – www.ilac.org.

6.5.1.2 **Supplier of External Calibration Services Meeting 6.5.1.1 Not Available**

If a supplier of external calibration services that meets 6.5.1.1 is not available, the Forensic Laboratory shall confirm competence, capability, and metrological traceability for the supplier and the external product or service being purchased. Objective evidence of the above confirmation shall be documented and maintained.

6.5.1.3 **Internal Calibration for Establishing Traceability of Measurement**

The Forensic Laboratory does not calibrate its own equipment.

6.5.1.4 **Altered Certified Reference Material**

If a certified reference material is changed in a way that alters the traceable measurement value, then the equipment used to alter the certified reference material shall be evaluated for applicability of measurement traceability accreditation requirements.

6.5.2 **Utilizing External Calibration Services**

The Forensic Laboratory shall ensure that measurement results are traceable to the International System of Units (SI) through:

a) Calibration provided by a competent laboratory;

b) Certified values of certified reference materials provided by a competent producer with stated metrological traceability to the SI; or

c) Direct realization of the SI units ensured by comparison, directly or indirectly, with national or international standards.

Reference standards, reference materials, and calibrations of equipment and reference standards used to establish or maintain measurement traceability shall be viewed as critical. See Detail/Unit Technical Manuals for those supplies and services deemed critical by the Details/Units.

Equipment without internal calibration capability (e.g., pipettes, balances, ASTM 1 weights) will be calibrated by an appropriate external vendor. Equipment that is automatically calibrated internally (e.g., GC/MS) will be verified using reference materials and/or reference standards which are traceable to national, international, or certified references, where available.

6.5.3 **Metrological Traceability to the SI Unit Not Technically Possible**

Where traceability of calibration materials cannot be made strictly in SI units, traceability to appropriate measurement standards shall be established by the use of certified reference materials from a supplier, or the use of specified methods,
published standards, and/or consensus standards, or participation in interlaboratory comparisons.

*Reference Materials and Collections*

In those cases where certified reference materials or reference materials traceable to national or international standards are not available, an untraceable reference material or a Laboratory prepared standard may be used. The Detail/Unit will ensure that the properties and characteristics of the untraceable reference material or Laboratory prepared standard are suitable for its intended purpose.

Reference collections that are maintained for the purposes of identification, comparison, or interpretation shall be documented, uniquely identified and properly controlled (e.g., drug samples, cartridges, gasoline).
6.6 Title: EXTERNALLY PROVIDED PRODUCTS AND SERVICES

6.6.1 Products and Services that Affect Forensic Laboratory Activities
The Forensic Laboratory ensures only suitable externally provided products and services are used when the products and services:
   a) Are incorporated into the Laboratory’s own activities;
   b) Are provided directly to the customer by the Forensic Laboratory as received from the external provider of the product (specialized kits, etc.);
   c) Are used to support the operation of the Forensic Laboratory (standards, equipment, reagents, etc.)

Proficiency Test Vendors
Where available and appropriate for the testing conducted, the Forensic Laboratory will use a proficiency test provider accredited to ISO/IEC 17043 with the applicable proficiency test(s) on its scope of accreditation.

Assessment/Auditing Services
Assessments and audits will be conducted by Forensic Laboratory’s accrediting body, ANAB, members of the LVMPD Forensic Laboratory or CSI Section who have received appropriate audit training or by external personnel who are qualified to conduct assessment/audits in the various Details/Units in the Forensic Laboratory.

Subcontractors
If available, the subcontractor will be accredited to an appropriate international standard by an accrediting body that is a signatory to the ILAC Mutual Agreement Recognition Arrangement with a Scope of Accreditation covering the services being subcontracted.

The Forensic Laboratory is responsible for the quality of the work product of the subcontractor, except in the case where the requestor or a regulatory authority (court) specifies which subcontractor is to be used.

Seized Drugs Supplies
Special ordering procedures established by the DEA are necessary when ordering certain controlled substances and these orders typically take extra time. DEA forms bearing the Laboratory Director’s signature must accompany the order and orders for certain controlled substances cannot be placed online or over the phone. The special DEA forms, Form 222, are maintained in the Chemistry Laboratory Manager’s office. Upon receipt, controlled substances must be added to the Inventory (see section Appendix J – Inventories) and the DEA form must be annotated.
Ammunition
Ammunition may be purchased from a local vendor as the need arises. Specialty ammunition may also be purchased from other sources. Use of ammunition for anything but Department related matters is strictly forbidden.

Office Supplies
A LEST/designee handles ordering of office supplies directly from the vendor in accordance with procedures set by the Logistics Bureau. Employees requiring office supplies should place their order on the Supply Order Form located in the mail room or notify the appropriate LEST/designee who will submit the necessary paperwork.

Calibration Services
External calibration vendors for all calibrations of equipment where the calibration of the equipment has a significant effect on the accuracy or validity of sampling or a test result, or the total uncertainty of the test result will be accredited to ISO/IEC 17025 by an IAAC or ILAC MRA signatory and the type of equipment being calibrated must be listed on their scope of accreditation. This applies to the Forensic Laboratory equipment listed below:

- ASTM 1 Weights – Seized Drugs and Latent Prints Details
- Balances – Seized Drugs and Toxicology Details’ analytical balance
- Digital Thermometer – Breath Alcohol Unit
- Driftcon® - Biology/DNA Detail Micrometers – Firearms Detail
- Pipettes – Seized Drugs and Toxicology Details
- Pipettor/Dilutors – Toxicology Detail Rulers – Firearms Detail
- Sound Meter – Firearms Detail
- Thermal Cycler Thermometer & Probe – Biology/DNA Detail
- Thermometers – Quality Unit, Biology/DNA, Toxicology, and Seized Drug Details
- Trigger Pull Weights – Firearms Detail

6.6.2 Forensic Laboratory Supplies and Materials

a) All staff members are to note when Laboratory supplies are getting low and should be re-ordered and report this information as soon as possible to personnel in charge of for their Detail (or supply room ordering form for office supplies. Employees are encouraged to periodically inventory the supplies they use to ensure that adequate stock is on hand.

Supplies which are needed on a routine basis should be maintained with adequate stock and not permitted to reach critical levels. This includes the various kits utilized by the Department – blood alcohol, sexual assault, buccal swab, convicted offender and urine cups. Supplies of these items are especially critical because they are special order custom items which can take months to receive.
Routine Laboratory supplies such as chemicals and disposables are usually ordered through the use of the blanket purchase order system. The Sr. LEST maintains a list of those companies holding blanket purchase orders and a file is created for each vendor that has been assigned a blanket purchase order at the beginning of each fiscal year. This file is used to maintain copies of all invoices, packing slips and vendor information (phone number, account number, purchase order number). Any order(s) placed must be recorded on the “Blanket PO’s” spreadsheet which is maintained in the following location: H:\CB\Forensics\General\Blanket Purchase Orders. Any conversations held as a follow-up to an order may be recorded on a case communication log, a memo, and/or an email and should be placed in the vendor file or added as a comment on the spreadsheet.

The following details the ordering and receiving process:

Ordering process

- Orders should be approved by the Forensic Laboratory Manager/designee prior to ordering.
- For vendors with blanket purchase orders – place the order and annotate the “Blanket PO’s” spreadsheet in its entirety.
- Purchase of items from a vendor which do not have a blanket PO can be accomplished by submitting supply and equipment requests to the Forensic Laboratory Managers/Supervisors with the following information:
  - Item description
  - Catalog and/or model numbers of the items for purchase
  - Quantities
  - Unit cost
  - Shipping charges
  - Address and phone number of the vendor
  - Contact person who quoted the prices
  - Date of the price quote
  - If approved, the pertinent information will be forwarded to the Sr. LEST who will place the request in the SAP system.

Credit Card Purchases

The use of the Department credit card is reserved for emergencies and can only be used for items that cost less than $200. The Laboratory Director must approve all purchases on the Department credit card prior to usage.

Receiving process

- Receive supplies by opening boxes and checking the enclosed packing slips against what was ordered and items received for correctness.
  - Inspect the item(s) for obvious damage
    - Any breakage or discrepancies (issues) are to be noted on the packing slip.
Any discrepancies between the item(s) and the packing slip shall be reported to the appropriate Forensic Laboratory Manager/Supervisor and the Sr. LEST. A Laboratory Aide/designee will follow up with the vendor to correct any issues noted. The item(s) shall not be placed into service unless the issue is resolved.

- Initial and date the packing slip.
- The packing slip is then immediately passed on to the Sr. LEST.
- Items received will be stored in the appropriate location (e.g., refrigerator, freezer, supply room).
- Chemicals received must be dated with received and expiration dates on the label and the chemicals must be added to Resource Manager in LIMS.

- If the chemical is new to the Forensic Laboratory or the maximum amount on hand has increased, notify the Detail/Unit Safety Assistant to update the required safety information.
- MSDS/SDS should be filed and forwarded to the Safety Detail, if necessary.
- If an item(s) that has been put into service is subsequently found to be defective (e.g., not the expected quality), the appropriate Forensic Laboratory Manager/Supervisor/DNA Technical Leader shall advise all possible users of the item(s) and halt the use of the item(s) until it is assessed for suitability.

b) Criteria for Critical Supplies and Services

Each Detail/Unit will determine the critical supplies for their area, if applicable, and note the critical supplies in their Detail/Unit Technical Manual.

The Detail(s)/Unit(s) will maintain a list of vendors that have been approved for purchasing of critical supplies. Prior to adding a vendor to the list, a review of the supplier/service provider will be conducted. This review will include a review on the following criteria:

- ISO accreditation.
- Known experience of the vendor’s products and/or services determined from past performance.
- Quality of product/service provided by vendor as related to requirements in documented procedures (verification).
- Ability of vendor to provide service/product in a necessary time frame.
- Service or description of supplies/materials vendor is approved to provide.

If a critical supply vendor is not ISO accredited, the Forensic Laboratory Manager/Supervisor/DNA Technical Leader whose Detail/Unit will be utilizing
the critical supply will sign off on a memo attesting to the appropriateness of the vendor. The memos will be maintained as a part of and/or with the vendor list.

The criteria for calibration services is documented above in 6.6.2 a).

The evaluation of vendors for supplies and services is performed during the budget preparations for the fiscal year using the above defined criteria. The re-evaluation of vendors for calibration services and critical supplies is performed as part of the Management Review.

Each Detail/Unit Technical Manual contains a Quality Control Plan that details the calibration and maintenance of the equipment/instrumentation utilized in their Detail/Unit.
<table>
<thead>
<tr>
<th>Instrument</th>
<th>Frequency</th>
<th>Criteria</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>VWR/Control Company Model # 15551-284 SN: 170786098</td>
<td>External: None Internal: None Replace when calibration certificate expires. Spare NIST Thermometers assigned to Biology/DNA Detail will be replaced every year per QAS.</td>
<td>Within +/- 1° Celsius Calibration certificates will be stored in Qualtrax or Resource Manager. The Manufacturer Instruction Manual can be found on VWR website (<a href="http://www.vwr.com">www.vwr.com</a>) or in Qualtrax.</td>
<td>If the thermometer appears to be damaged or exhibits any characteristics that may affect its accuracy: 1. Tag out of use. 2. Replace with a NIST Thermometer that meets the criteria. 3. Properly dispose of the original NIST thermometer.</td>
</tr>
<tr>
<td>VWR/Control Company Model # 15551-284 SN: 170786113</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VWR/Control Company Model # 61161-310 SN: 181080024</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VWR/Control Company Model # 61161-364 SN: 181096079</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VWR/Control Company Model # 61161-364 SN: 181096081</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VWR/Control Company Model # 61161-364 SN: 181096085</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instrument</td>
<td>Frequency</td>
<td>Criteria</td>
<td>Corrective Action</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-----------</td>
<td>----------</td>
<td>-------------------</td>
</tr>
<tr>
<td>VWR/Control Company Model # 61161-364 SN: 181096100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VWR/Control Company Model # 61161-310 SN: 181098645</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VWR/Control Company Model # 76204-528 SN: 181175752</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VWR/Control Company Model # 10048-684 SN: 181191775</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VWR/Control Company Model # 10048-684 SN: 181215998</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VWR/Control Company Model # 76204-528 SN: 181232871</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**c) Inspection and Verification of Supplies and Reagents**

The Forensic Laboratory will ensure that purchased equipment, supplies, reagents and consumable materials that meet the above listed criteria (6.6.1 a) – c)) are not used until they have been inspected and/or verified to ensure they comply with standard specifications or requirements in Detail/Unit Technical Manuals.
Inspection is defined as ensuring by review that the item ordered has been received and is not visibly defective or damaged. Documentation of inspections will be recorded on the packing slip. The inspection will include the initials or signature of the person performing the inspection and the date.

If the inspection fails, the item will not be placed into service and the Forensic Laboratory Manager/Supervisor/DNA Technical Leader will be notified. The vendor will be contacted to arrange for a resolution of the issue.

Verification
Verification is defined as ensuring by testing or quality control check that an item ordered complies with requirements defined in a test method. An inspection shall be included as a part of verification.

Each Detail/Unit defines which equipment, supplies, reagents, and/or consumables that they use require verification (all critical supplies require verification). The quality control measures used for the verification will be delineated in the appropriate Detail/Unit Technical Manual. Verification documentation shall be maintained by the appropriate Detail/Unit.

Any equipment, supplies, reagents and/or consumables that affect the quality of tests conducted that do not meet Laboratory established quality standards will not be used for casework and will be reported to the appropriate Forensic Laboratory Manager/Supervisor/DNA Technical Leader. Any issues noted will also be reported to the vendor. Documentation detailing the issue will be maintained by the appropriate Detail/Unit. This documentation will be taken into account when preparing the review of critical supplies.

Calibration certificates will be checked to ensure they conform to the requirements listed in the Quality Control Plan in the Detail/Unit Technical Manuals.

The Laboratory Director/designee will maintain documentation of all subcontractors that the Forensic Laboratory uses for forensic testing and will maintain a record of compliance with ISO/IEC 17025 standards for the work in question.

d) Action
If any issues are noted with the vendor, or the items or services provided by the vendor, the issues will be documented and action will be taken as determined to best rectify the issue (e.g., replacement of items from the vendor, further service by the vendor, discontinue use of vendor or supply, etc.).

6.6.3 External Provider Requirements
Requirements for the following are communicated to the vendor:

a) Products and Services Provided
This accomplished through the use of purchase requests.

b) Acceptance Criteria

Acceptance criteria for calibration services is communicated to the vendor when calibration services are requested using forms provided by the vendor or through communication with the vendor. The criteria used are documented in the Quality Control Plan in the Detail/Unit Technical Manuals.

c) Competence of Service Providers

- **Calibration Services**
  - Is determined by only selecting and approving vendors that are accredited to ISO/IEC 17025 by an IAAC or ILAC MRA signatory and the type of equipment being calibrated listed on their scope of accreditation. This is verified through the vendor’s accrediting body.

- **Subcontractors**
  - If the Forensic Laboratory subcontracts forensic testing to other testing laboratories, the Forensic Laboratory will determine competence based on the following criteria:
    - The subcontracted testing laboratory is accredited to ISO/IEC 17025 standards to perform the testing required, or
    - By documented review of any of the following:
      - Accreditation or certification, if applicable
      - Most recent external audit
      - Site visit documentation

- If any Biology/DNA analyses are being subcontracted, the policies delineated in the Biology/DNA Quality Manual will be followed.

d) Activities performed at the External Provider's premises

The Forensic Laboratory does not perform activities at any external provider's premises.
7.1 Title: REVIEW OF REQUESTS, TENDERS AND CONTRACTS

7.1.1 Forensic Laboratory Examination Requests for Analysis

a) Department policy regarding requests for analysis is delineated in the Department Manual 5/209.03 – Laboratory Examination of Evidence.

For LVMPD cases, Property Connect is the main method for requesting an analysis on a particular case. Verbal communication will still be accepted for Priority 0 and 1 cases. See 7.1.7 Service to the Customer - Case Prioritization. All other priorities should utilize Property Connect. For all attorneys and outside jurisdictions, the LVMPD 63, Forensic Laboratory Examination Request, is the main method for requesting an analysis on a particular case and will be manually entered into LIMS by Laboratory personnel. Completion of the request will typically be performed by the detective or officer having primary investigative authority as determined by Department organization or policy. The request must be completed in its entirety or it may be rejected and/or returned to the requestor.

LVMPD 547, Forensic Lab Toxicology Request, will be used and submitted with the blood or urine kits.

Property Connect is an external component of LIMS. Any request entered into Property Connect is automatically delivered to LIMS after approval. LVMPD 63 requests may be presented to the Laboratory by inter-Department mail service, fax, email (Forensic Lab) or hand delivery. The request form is available electronically over the wide area network on the LVMPD templates. Requests received via LVMPD 63 or LVMPD 547 will be entered into LIMS by Laboratory personnel. The request will be scanned into the RFLE Tab within the Lab Request of LIMS and the paper copy will be destroyed.

Case assignment and prioritization are delineated in the Department Manual 5/209.03 – Laboratory Examination of Evidence; Case Assignment and Prioritization. A "Rush Request" is one where there is a critical need for an analysis, usually immediate, to assist in an ongoing investigation or for presentation in court. All rush requests must first be discussed with the Laboratory Director or appropriate Forensic Laboratory Manager/Supervisor before analysis can proceed. Rush requests can be communicated orally, but should be followed with a request initiated through Property Connect or a completed LVMPD 63. See 7.1.7 – Service to the Customer.

Entry of the request into LIMS is documentation of the contract for testing between the requestor (customer) and the Forensic Laboratory. All request
will be reviewed by a member of the Forensic Laboratory staff prior to acceptance into LIMS.

Submission of the request by the customer to the Forensic Laboratory is considered acceptance of the contract by the customer.

A determination can be made by an investigative unit that a case has a potential for confidentiality risks and therefore should not follow our normal distribution and storage processes. The Laboratory Director has the discretion to authorize special requests of this nature. Requests for analyses of a sensitive or confidential nature will be funneled through the Laboratory Director or the Forensic Laboratory Managers/Supervisors. These cases (files, business records, etc.) will be marked as “Confidential Files” in LIMS. Individuals will be defined for each case as to who will have access in the future. A Confidential Log with a numbering system has been established for this purpose and is maintained by the Laboratory Director.

b) Requests will be reviewed by the appropriate Forensic Laboratory Manager/Supervisor or assigned Laboratory personnel to determine if the request is appropriate and to ensure the Forensic Laboratory has the capability and resources needed to meet the request. In some instances, for example DUI cases, the request represents ongoing and routine work performed for the LVMPD and other law enforcement agencies. In these instances, review by the Manager/designee is unnecessary.

Laboratory management reserves the right to refuse any request for examination which it deems unreasonable or beyond the technical expertise of the Laboratory.

The methods typically used by the Forensic Laboratory Details/Units in the analysis of evidence are documented on the LVMPD intranet on the Forensic Laboratory page located at the following web address:
http://metroweb.lvmpd.int/services/investigative/criminalistics/forensics/default.aspx
For the Forensic Laboratory outside jurisdiction requestors, they are also documented on the LVMPD internet website on the Forensic Laboratory page located at the following web address:
http://www.lvmpd.com/en-us/Pages/ForensicLaboratory.aspx

Detectives or jurisdictions requesting analysis involving expertise which is beyond the scope of the Laboratory will be advised about laboratories or agencies that can provide meaningful examinations in these areas (mitochondria DNA). If the requestor wishes to have the examination performed and the evidence belongs to the LVMPD, the Laboratory may forward the evidence to the outside laboratory for examination. Use of an outside laboratory for analysis of LVMPD evidence is governed by
Department Manual 5/210.20 – Release of Evidence and requires the approval of the Laboratory Director.

Occasionally, the LVMPD is asked to assist other agencies by collecting or disseminating evidence. These types of requests will be evaluated on a case by case basis with emphasis placed on establishing a cooperative effort between agencies.

c) The Laboratory Director/designee will review all contracts with subcontractors prior to award to ensure that the subcontractor has the capability and resources to perform the service requested, and the appropriate test method is selected by the subcontractor which is able to meet our needs. Subcontracted work that involves Biology/DNA analysis will be handled in conjunction with the DNA Technical Leader and the policies delineated in the Biology/DNA Quality Manual will be followed.

The following is documented on the LVMPD intranet on the Forensic Laboratory web page advising the LVMPD Requestors about subcontracting their evidence: “The Forensic Laboratory reserves the right to subcontract out any laboratory service. By submitting a request for analysis to the Forensic Laboratory, the requestor agrees to the outsourcing.”

If the Forensic Laboratory determines that it is necessary to subcontract out any laboratory services requested by an outside jurisdiction, approval will be solicited from the person requesting the testing through documented phone conversation, email or formal letter. The documentation of the approval will be maintained in LIMS under the appropriate Lab Number.

If an outside jurisdiction grants authorization to send sexual assault kits for analysis to an outside laboratory, the outside jurisdiction Agency Authorization form documenting the authorization will be maintained in Qualtrax.

If a contract exists with an outside jurisdiction (e.g., NHP) and the outside jurisdiction is not charged by the subcontractor for the work conducted by the subcontractor, prior approval for the subcontracting does not need to be sought.

d) The appropriate method used to complete the analysis will be determined by the Forensic Scientist assigned the request. The following is documented on the LVMPD intranet and internet on the Forensic Laboratory web page “Based on the type of evidence, information provided and the request received, the LVMPD Forensic Laboratory will select the appropriate method(s) of analysis. A summary of methods used is detailed in each Detail/Unit specific webpage located under the Forensic Laboratory heading.”
7.1.2 The Forensic Laboratory will select the appropriate analysis based on the type of evidence submitted and the information provided by the customer. If the customer requests any services considered inappropriate or out of date, the Detail/Unit Manager/designee shall inform the customer of that fact and that the service requested will not be performed (see 7.1.1 for further details).

7.1.3 Statement of Conformity
The Forensic Laboratory does not issue any statement of conformity.

7.1.4 Differences Between Requests and Contract
Errors on requests will either be corrected by the person reviewing the request or the request will be rejected depending on the type of error encountered.

Correcting Errors on Requests
The corrections are accomplished in Property Connect at the time of review.

The following errors will be corrected by a member of the Forensic Laboratory:

1. In the Details Tab – Requesting Officer will be changed to requesting officer’s name if Goto LVMPD is selected.
2. In the Details Tab Biology/DNA questions section – If “yes” is entered in the box under “Is this request a buccal swab submission for CODIS hit follow-up?” and the request is not for a CODIS hit follow-up, the selection will be changed to “no”.
3. In the Detail Tab Biology/DNA questions section – If “yes” is entered in the box under “Has this case ever been processed for DNA analysis before?” and the case has not been previously processed for DNA, the selection will be changed to “no”.
4. In the Evidence/Property Tab – buccal swab will be selected for the requestor if the requestor forgot to select the buccal swab(s).
5. In the Persons Tab – Persons first and last names will be corrected if they are entered in the wrong fields (first name in the last name field and vice versa) or if the names are not capitalized.
6. In the Persons Tab – If the requestor selects and enters a victim’s and/or subject’s name in both the Persons from external systems and Additional Persons tables. The victim/subject’s name will be removed from the Persons from external systems table.
7. In the Evidence/Property Tab – If it can be determined that the wrong exam type was selected based on other information provided in the request (e.g., a Latent Print Comparison is selected for a buccal swab), the exam type will be corrected.

Once the correction(s) has been made and the request has been approved, the requestor will be notified via an “Approval” email of the request approval and correction(s). The email will include an explanation as to why the correction(s) was made to the request. A copy of the email will be filed in the Lab Case Object Repository (OR) and a note will be entered in the Lab Case Comments field directing the reader to the OR for the email.
Example: 12/30/2015 See object repository for email to requestor notifying him/her of correction or selection made to request. m8168m

Rejecting Requests
Rejections for LVMPD submissions are accomplished in Property Connect at the time of review.

Requests will be rejected based on the following errors:
1. Related event(s) have not been requested. All related events must have their own request.
2. The evidence is not available in Property Connect.
3. Sample Limitations have been exceeded; normally applies to DNA for exceeding the number of items to be analyzed.
4. CODIS eligibility has not been properly established.
5. Duplicate request (request already exists for same event number) without additional analyses requested.
6. Incomplete LVMPD 63 requests from the District Attorney’s Office.
7. Toxicology requests received through Property Connect. Toxicology request must be made utilizing LVMPD 547.

The requestor is sent a rejection email notifying them of the reason(s) the request was rejected and detailing how to fix the issue(s). The rejection email also contains a link to their request along with the following information:

Your forensic Laboratory request under Event Number XXXXXXXXXXXX has not been approved. Please open and edit your original request in Property Connect. Once the following changes have been made, please re-submit the edited request for approval.

The following link will allow you to open and edit your request:

Rejecting Requests – outside jurisdictions
Outside jurisdiction (OJ) rejections are primarily performed after correspondence with the requestor has been unsuccessful. There are two exceptions. Seized Drugs requests that contain a hypodermic needle or other safety hazard and Toxicology requests for cases in which a valid breath test was performed can be terminated immediately.

Prior to rejecting a request from a OJ, the requestor will be given two weeks to respond to emails and/or phone calls.
1. If there is no reply to the first query, a second request for additional information will be made one week after the initial correspondence.
2. If there is no reply after the second week, the OJ will be notified that the request has been terminated.
After the requestor has been notified, the request will be entered into the LIMS, terminated, and notated. The notation will be documented in the Unit Record Communication Log and/or the Unit Record or Lab Case OR. Notations will vary depending on each situation.

If there is ongoing communication with the requestor concerning the issue(s), the request will not be terminated. However, if the communication from the requestor ceases, the two week notification process, described above, will begin again.

Rejection Emails
At the end of each month, rejection emails will be archived in the H: Drive at (H:\CB\Forensics\General\Property Connect Rejections-All) and in the PC (Property Connect) – Reject Archive folder located in the Forensic Lab email. The PC – Reject Archive folder only reflects the current and previous month’s rejection emails.

Information from the emails will also be entered on an excel spreadsheet located at (H:\CB\Forensics\General\Property Connect Rejections-All) with the event number, requestor, reason for the rejection, and the result.

7.1.5 Deviation from Requests
If the Forensic Laboratory Manager, Forensic Laboratory Supervisor, DNA Technical Leader, or Forensic Scientist assigned the request determines that a deviation from the request is needed, the requestor will be notified by phone, memo or email prior to commencement of the analysis. Any communication that is of particular importance to a case shall be maintained in the appropriate Object Repository (email) or memorialized utilizing the appropriate Communication Log in LIMS under the appropriate Lab Number. Only emails of a professional nature should be added to the appropriate Object Repository. If an email contains both communications of particular importance to the case as well as non-relevant communications, the case pertinent portion of the email should be memorialized utilizing the Communication Log in LIMS under the appropriate Lab Number.

7.1.6 Amending a Request
When necessary, Forensic Laboratory personnel may add or cancel analyses to a particular case. Requests for additional analyses may also be received from the requestor. If either the requestor or analyst assigned to the case requests a change in services, this must be discussed with the requestor and documented in LIMS under the appropriate Lab Number. Such documentation should be notated in the case lab comments with P##/Initials and date.

7.1.7 Service to the Customer
The following analytical services are offered to the Southern Nevada Law Enforcement community and may be performed on evidentiary items and property submitted to the Forensic Laboratory:

BIOLOGY/DNA DETAIL
1. **Collection of biological material** – the swabbing and/or cuttings of items for the presence of epithelial cells (skin cells) and biological fluids/materials.

2. **Presence of biological material** – examination of items for the presence of biological fluids and materials such as blood, hair roots, semen, etc.

3. **DNA** – the extraction of DNA from items and the subsequent typing and comparison, including short tandem repeats (STRs).

4. **Combined DNA Index System (CODIS)** – administration of the local CODIS database, including the maintenance of the system. The analysis and entry of offender and case generated DNA profiles into CODIS for forensic DNA database samples to develop potential investigative leads in cases.

**CHEMISTRY DETAIL**

1. **Seized Drugs** – weight, analysis and identification of pills, powders, liquids, plant material and other suspected contraband for the presence of controlled and non-controlled substances and dangerous drugs; response and assistance in the investigation of clandestine drug laboratories.

2. **Trace Materials** – examination, identification and comparison of tear gas/pepper spray, general unknowns, physical matches, and fire debris.

**FIREARMS DETAIL**

1. **Firearms** – test firing of weapons to determine operational ability; comparison of bullets and cartridge cases; determination of the make and model of a firearm from fired bullets and/or cartridge cases; chemical and/or mechanical restoration of obliterated serial numbers; distance determinations.

2. **National Integrated Ballistic Information Network (NIBIN)** – search eligible cartridge case images through the NIBIN database to develop potential investigative leads in cases.

**LATENT PRINT DETAIL**

1. **Enhancement** – develop, document, and recover latent prints from items of evidence.

2. **Comparison** – compare latent prints recovered from crime scenes and items of evidence to exemplar prints of individuals.

3. **Automated Fingerprint Identification System (AFIS)** – search eligible latent prints through AFIS databases to develop potential investigative leads in cases.

**TOXICOLOGY DETAIL**

1. **Blood and urine alcohol** – the examination of blood or urine by headspace gas chromatography to determine alcohol concentration.

2. **Breath alcohol** – the maintenance of the state mandated breath alcohol program which includes the calibration and maintenance of breath instruments, training and certification of breath instrument operators, preparation of simulator solutions, and repair of breath instruments and simulators.

3. **Toxicology (Drug Screen/Confirmation)** – examination of blood and urine for the presence of prohibited and controlled substances.
The Forensic Laboratory values and encourages communication and cooperation with the members of the law enforcement community (customers) utilizing the Laboratory’s services. The customers may meet with the Detail/Unit Manager/Supervisor and/or Forensic Scientist assigned to their case to discuss potential testing, a court appearance, or to review results, interpretation and opinions of the testing. In order to preserve the confidentiality of other customer’s cases and preserve the flow of the testing, the Forensic Laboratory will not normally permit the customer to be present during testing.

The customer is responsible for communicating any need for expediting case analysis. The process for case prioritization is detailed below.

**Case Prioritization**

When necessary, to meet the demands of an investigation, a judicial deadline, or evidence preservation, certain cases may be given priority status when resources permit and are warranted by the seriousness of the case. All remaining cases with merit will be prioritized on the basis of the date the request was received by the Laboratory. The analysis priority initially assigned to the case can change as the situation of the case changes, if the investigator relays the appropriate information to the Laboratory.

Cases requiring a quick response are referred to as “rush” requests. There are three levels of rush requests: Priority 0, Priority 1, and Priority 2 which are delineated in the Department Manual 5/209.03 – Laboratory Examination of Evidence; Case Assignment and Prioritization.

Cases may also be prioritized based on the nature of the case. For example, a violent crime against a person may receive a higher priority than a crime against property case. An item of evidence that requires handling and analyses by multiple sections of the Laboratory may receive a higher priority as delaying the analyses may result in a loss of evidence.

**7.1.8 Records of Forensic Laboratory Examination Request Review**

Records generated by the review process, including any significant changes will be maintained. All pertinent discussions relating to the request or the results of the analyses will be maintained in the appropriate Object Repository (email) or documented (phone conversation) in the appropriate Communication Log in LIMS (see 7.1.1 – Forensic Laboratory Examination Requests for Analysis for further details).

**7.1.9 Communication of Database Searches**

The extent of database (e.g., CODIS, AFIS, NIBIN) searches shall be communicated to requestors and updated as needed. See Detail/Unit Technical Manuals for further details.
7.2 Title: SELECTION, VERIFICATION AND VALIDATION OF METHODS

7.2.1 Selection and Verification of Methods

7.2.1.1 Technical Procedures

To ensure that laboratory activities are carried out in a planned, systematic and controlled manner, approved procedures must be available to the analysts in the form of a technical procedures manual for each Detail/Unit of the Forensic Laboratory. The technical procedures utilized must be based on sound scientific principles, good laboratory practice, be appropriate for the evidence type and types of requests routinely submitted and wherever possible, generally accepted in the field. Technical procedures should take into account accuracy, reliability, flexibility, and to the extent practicable, cost.

When appropriate, technical procedures will include the following information:

- Instructions for the logical progression of the analysis or examination
- Instrumentation requirements and protocol
- Standards and controls as required and/or calibration procedures
- Sampling techniques and procedures to be performed on evidence, if applicable
- Reference to forms, run sheets, or logs as required
- Safety precautions peculiar to the procedure
- Statistical techniques and calculations as required
- Guidelines for conclusions, interpretation of the analytical results and limitations of the analysis
- If appropriate, references to literature and/or methods validation records

Manufacturer/Instrument Manuals needed for the use and/or operation of instruments or equipment will be referenced in the appropriate Detail/Unit Technical Manual, if needed.

Plans for the estimation of measurement uncertainty for quantitative analyses are listed in the appropriate Detail/Unit Technical Manual and/or in the documentation containing the determined estimation of uncertainty.

The handling, transportation, storage and preparation of evidence are documented in 7.4 – Handling of Test or Calibration Items.

Procedures for test data interpretation are located in the Detail/Unit Technical Manuals.
7.2.1.1 Comparison of an Unknown to a Known
Test methods involving the comparison of an unknown to a known shall require 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). Specific test methods for the comparison
of an unknown to a known are located in the Detail/Unit Technical Manuals.

7.2.1.2 Technical/Instructions Manual Access and Review
Quality/Technical Manuals
All current versions of authorized Detail/Unit Quality/Technical Manuals are
maintained in Qualtrax. Qualtrax is accessible by all Forensic Laboratory members.
Detail/Unit Quality/Technical Manuals will be reviewed and, where necessary,
revised to ensure continuing suitability and compliance with applicable requirements
at least annually.

Manufacturer/Instrument Manuals
The location of these documents will be referenced in the Detail/Unit
Quality/Technical Manuals. Manufacturer/Instrument Manuals are added upon the
addition of new equipment used to perform technical functions.

7.2.1.3 International/Regional/National Standards
The Forensic Laboratory primarily utilizes methods widely accepted by the Forensic
Science community; however the Laboratory can develop new analytical procedures.
All Laboratory developed procedures shall be properly validated before use in
casework. All methods utilized by the Forensic Laboratory are documented in the
Detail/Unit Quality/Technical Manuals.

7.2.1.4 Selection of Methods
In Forensic Science, well established procedures are found in a variety of sources –
peer reviewed literature, conference proceedings and procedure manuals from
training classes or those developed by other forensic laboratories – all of which may
be appropriate for use in the LVMPD Forensic Laboratory Details/Units once the
procedures have been demonstrated as capable of producing valid results in the
LVMPD Forensic Laboratory Details/Units. Approved methods will be added to the
appropriate Detail/Unit Technical Manuals.

The following is documented on the LVMPD internet (for outside jurisdiction
customers) at: http://www.lvmpd.com/en-us/Pages/ForensicLaboratory-
LaboratoryRequestGuidelines_LEonly.aspx
and on the LVMPD intranet (for LVMPD customers) at:
http://metroweb.lvmpd.int/services/investigative/criminalistics/forensics/Pages/Labora
toryRequestGuidelines.aspx Forensic Laboratory web page under the heading
Selection of Test Method:

“Based on the type of evidence, information provided and the request received, the
LVMPD Forensic Laboratory will select the appropriate method(s) of analysis. A
summary of methods used is detailed in each Detail/Unit specific webpage located under the Forensic Laboratory heading.”

7.2.1.5 Method Verification (Performance Check)

Newly acquired instrumentation (similar to existing configurations) or casework-associated software changes/upgrades will require a performance check before use in casework analyses. Performance checks will serve to evaluate existing validated technical procedures used by the Laboratory to ensure conformity to specifications. Testing considerations may include studies on functionality, reproducibility and sensitivity. When the new instrumentation is replacing, or is alternate to, instrumentation currently in use for casework samples, efforts will be made to compare results against the existing instrumentation (i.e., parallel testing).

Performance checks may also be required in the event of relocation or reassignment of instrumentation.

Once the performance check is complete, a Validation/Performance Check Acknowledgement will be completed by the respective Laboratory Manager/Supervisor/DNA Technical Leader and forwarded to the Quality Manager. Documentation of performance checks will be maintained in the corresponding equipment logbook, in the Resource Manager Object Repository, if applicable, or in Qualtrax.

Should any new equipment (or the resulting performance check) prompt a method change or modification to a procedure, an internal validation may be required. This will generally be decided upon by the Detail/Unit Manager/Supervisor/DNA Technical Leader. If a significant modification to instrumentation or an existing procedure is made, validation studies will be required.

Procedure modifications and/or performance checks in the Biology/DNA Detail will be conducted in compliance with the standards established in the Quality Assurance Standards for Forensic DNA Testing Laboratories and the Quality Assurance Standards for DNA Databasing Laboratories issued by the FBI.

7.2.1.6 Method Development

Laboratory developed procedures may be utilized if properly validated and authorized. Validation of Laboratory developed methods shall be a planned activity. A validation plan will be created and utilized for any Forensic Laboratory method development. The respective Detail/Unit Managers/Supervisor/DNA Technical Leader and Laboratory Director is responsible for review and authorization of the validation plan. The method development will be assigned to competent personnel. The approval to perform a method development will be documented in an Authorization Memo. The person assigned to the method development will be provided adequate resources to ensure proper completion.
During the method development, periodic reviews will be performed. Any modifications to the validation plan will be approved and authorized by the Detail/Unit Managers/Supervisors/DNA Technical Leader.

**7.2.1.7 Deviations from Technical Procedures**

Deviations from documented procedures will be discussed with the respective Laboratory Manager/DNA Technical Leader. Any procedure deviations will have the documented approval of the appropriate Laboratory Manager/DNA Technical Leader prior to use on casework. Deviations shall be documented in the case file and technically justified. For all deviations from the method, a statement explaining the deviation will be documented in the Detail/Unit report.

The following is documented on the LVMPD internet (for outside jurisdiction customers) at: http://www.lvmpd.com/en-us/Pages/ForensicLaboratory-LaboratoryRequestGuidelines_LEonly.aspx and on the LVMPD intranet (for LVMPD customers) at: http://metroweb.lvmpd.int/services/investigative/criminalistics/forensics/Pages/LaboratoryRequestGuidelines.aspx Forensic Laboratory web page under the heading Deviation from Standard Operating Procedures:

“Laboratory requests for analysis will be worked according to analytical procedures specified in Detail/Unit specific Technical Manuals. Any deviations from these procedures will be approved by a Forensic Laboratory Manager and documented in the case file. Deviations from DNA procedures will be approved by the DNA Technical Leader in the Biology/DNA Detail.”

**7.2.2 Validation of Methods**

**7.2.2.1** New technical procedures, to include non-standard methods, laboratory-developed methods, and standard methods used outside their intended scope or otherwise modified, shall be validated to prove their effectiveness in analyzing evidence items before being implemented on casework. The validation shall be as extensive as necessary based on risk assessment.

Techniques used for method validation can be one of, or a combination of, the following:

a) Calibration or evaluation of bias and precision using reference standards or reference materials
b) Systematic assessment of the factors influencing the result
c) Testing method robustness through variation of controlled parameters, such as incubator temperature, volume dispensed
d) Comparison of results achieved with other validated methods
e) Interlaboratory comparisons
f) Evaluation of measurement uncertainty of the results based on an understanding of the theoretical principles of the method and practical experience of the performance of the sampling or test method
Since a variety of scientific procedures may validly be applied to a given situation, standards and criteria for assessing procedures need to remain flexible.

Proper validation will include, if applicable:
- A validation plan
- Identification and scope of method
- Procedure used for the validation (see 7.2.2.4 a)
- An understanding of the theoretical basis for the method
- Testing known samples
- Testing known samples designed to mimic actual casework samples
- Specificity, limitations, or sources of error associated with the testing process (see 7.2.2.3)
- Preparation of a written procedure for addition to the technical procedures manual after proper approval
- Literature references used in method validation will be cited in the validation records
- A statement as to whether the method is fit for use (see 7.2.2.4 e)

Once the validation is complete, a Validation/Performance Check Acknowledgement will be completed by the respective Forensic Laboratory Manager/Supervisor/DNA Technical Leader and forwarded to the Quality Manager. This acknowledgement will record details of the validation and reference the location of pertinent documentation. A copy of the acknowledgement will be maintained with the referenced documentation and in Qualtrax.

Validations in the Biology/DNA Detail will be performed in compliance with the standards established in the Quality Assurance Standards for Forensic DNA Testing Laboratories and the Quality Assurance Standards for DNA Databasing Laboratories issued by the FBI.

7.2.2.1.1 Method validation procedures/plans shall:
- a) Encompass the test process to include data interpretation
- b) Establish the data required to report results, opinions, or interpretations
- c) Identify limitations of the method, reported results, opinions and interpretations

7.2.2 Changes to a Validated Method
If changes are made to a validated method, the influence of the changes will be examined to determine the extent the changes affect the original validation. This examination will be documented and a new validation will be performed, if warranted.

7.2.2.1 If changes are made to the data interpretation portion of a validated method, then 7.2.2.2 – Changes to a Validated Method applies.

7.2.2.3 Validation Testing Methods Range and Accuracy
Where appropriate, the Forensic Laboratory shall determine the range and accuracy of the values obtained from the validated method as related to:

- Limits of detection
- Linearity in quantitative methods
- Uncertainty of results
- Limit of repeatability and/or reproducibility
- Cross-sensitivity/selectivity

7.2.2.4 Validation Records

The following records will be maintained for all validations performed by the Forensic Laboratory:

a) The validation procedure used;
b) Specification of the requirements;
c) Determination of the performance characteristics of the method;
d) Results obtained;
e) A statement on the validity of the method, detailing its fitness for the intended use.
7.3 Title: SAMPLING

7.3.1 Sampling Plan
For an item that consists of a multi-unit population (e.g., tablets, baggies, bindles), a sampling plan is a statistically valid approach to determine the number of sub-items that must be tested in order to make an inference about the whole population.

The process of sampling of forensic items submitted is unique for each Detail/Unit. Sampling procedures will be documented in Detail/Unit Technical Manuals, if any sampling takes place. When appropriate, sampling procedures shall be based on an appropriate statistical model.

7.3.2 Sampling Procedure
Sampling is a defined procedure used to collect a sample or samples from the larger whole, to ensure that the value obtained in the analysis is representative of the whole. The sampling procedure may include details about size and number of sample(s) to be collected, location from which to collect the sample(s), and a method to ensure the homogeneity of the larger whole (or to make it so).

The sampling procedure shall describe:
   a) The selection of samples or sites;
   b) The sampling plan;
   c) The preparation and treatment of sample(s) from a substance, material or product to yield the required item for subsequent testing.

7.3.2.1 Sampling Plan Procedure Requirements
The sampling plan procedure(s) shall:
   a) Require an evaluation of the selected population for homogeneity;
   b) Require the population to have a reasonable expectation of homogeneity to use a sampling plan;
   c) Require that the sampling plan makes use of probability and provides an opinion or interpretation with a minimum confidence level of 95.45% (often referred to as approximately 95%);
   d) Require each item selected to meet the sampling plan level of confidence to be tested completely;
   e) Provide instruction regarding the course of action to take if one or more selected items demonstrate a lack of homogeneity.

7.3.3 Records of Sampling
The Laboratory shall retain records of sampling data that forms part of the testing that is undertaken. These records shall be documented, where relevant, as follows:
a) A reference to the sampling procedure used, including the statistics the sampling procedure was based upon, shall be documented in the case report or an attachment to the report.
b) The date and time of sampling is located in the case record in LIMS.
c) The data to identify and describe the sample (e.g., number, amount, name) is located in the case record in LIMS.
d) The identification of the person performing the sampling is located in the case record in LIMS.
e) The identification of the equipment used is located in the case record in LIMS.
f) Environmental conditions, if relevant will be documented in the case record in LIMS.
g) If drawings, diagrams or photographs are generated to document the sampling location(s), they shall be included in the case record in LIMS.
h) Any deviations to the sampling procedure will be documented in the case record in LIMS. If a customer requests a deviation from the standard sampling procedure, the appropriate Forensic Laboratory Manager or Forensic Laboratory Supervisor must be notified and approve prior to any deviation. Documentation of this request and approval shall be maintained in the case record in LIMS.
7.4 Title: HANDLING OF EVIDENCE (TEST ITEMS)

7.4.1 Evidence Transportation, Receipt, Handling, Protection, Storage, Retention and Disposal

The nature of forensic work is related to the recognition, collection, preservation and examination of physical evidence. Therefore, evidence must be collected, received, handled, sampled and stored so as to maintain its identity, condition and security. Testing of evidence samples should be conducted to provide the maximum information with the least consumption of the sample feasible. At all times, evidence shall be handled in such a fashion so as to ensure its integrity, maintain chain of custody, protect if from deleterious change and contamination and to protect the interests of the Forensic Laboratory and its customers.

Detail/Unit Technical Manuals describe the marking of evidence and evidence storage requirements specific to the Detail/Unit.

Ordering Evidence from the Evidence Vault

With the exception of latent prints, DNA extracts created during analysis by the Forensic Laboratory, and test fires from 2013 and prior which are stored by the Forensic Laboratory, the LVMPD Evidence Vault controls the long-term storage, retention and disposal of the Department’s evidence and is maintained at a physical location separate from the Forensic Laboratory. The method of choice for receipt into and release of evidence from the Forensic Laboratory is through the LVMPD Forensic Evidence Vault, which physically transport evidence through Evidence Vault Technicians.

Evidence needed for examination purposes by Laboratory analysts will be found in the ACE (Active Control of Evidence) database and saved onto an electronic list under the initials and P # of the author (e.g., L1471K). There are 31 folders named 1-31 corresponding to the days of the month. The evidence list will be saved in the folder corresponding to the date the analyst wants the evidence delivered. These folders are located in the Forensic Lab folder in the ACE “Lists”.

- For the Forensic Laboratory building – Network \cl-f10-app1\app2\Winace\AceLive\Lists\00001 FORENSIC LAB\00001 FORENSIC LAB\FORENSIC LAB\.
- For the DNA Annex – Network \cl-f10-app1\app2\Winace\AceLive\Lists\00001 DNA\00001 DNA\DNA\.

Because Evidence Technicians at the Evidence Vault will refer to these lists to determine what evidence is brought to the Laboratory, this will in effect be the way the Laboratory will “order” evidence. When there is immediate need for evidence receipt due to a rush or priority request, a request email can be sent to all Evidence
Vault Supervisors and the Evidence Vault Director. A request email should not be a routine method for requesting evidence. Though latent prints are stored in the Forensic Laboratory, they are still entered into and tracked by ACE. Because of this, latent prints do not need to be “ordered” as detailed above. Latent print packets are internally moved via ACE when needed for analysis (see 7.4.1.1 – Chain of Custody ACE Evidence Locations).

Since latent prints are entered into ACE, they will be included in the disposal orders initiated by the Evidence Vault. At least one Evidence Technician assigned to the Forensic Laboratory will be responsible for the physical disposal of latent prints.

Receiving Evidence from the Vault

The Evidence Vault will perform a run to the Laboratory Monday through Thursday, excluding holidays. Evidence Technicians will pick up evidence that has been analyzed and relinquish evidence that has been requested to the appropriate analyst or Evidence Technician/designee.

Evidence coming into the Forensic Laboratory from the Evidence Vault can be received by anyone with an ACE password. The Evidence Vault representative will secure move the evidence to an ACE user who will receive the evidence into their custody and place it into a secure physical location (see 7.4.1.1 – Chain of Custody ACE Evidence Locations).

Biological Sample Runs

The Laboratory Evidence Technician(s)/designee will routinely pick up evidence, mostly of a biological nature from a specific LVMPD authorized sample drop locations and transport it directly to the Laboratory. A cooler is used during the transportation process in order to maintain the appropriate environmental conditions required for certain biological evidence (blood/urine drug kits). This occurs in the interest of expediting the analyses of certain samples requiring toxicology services, such as blood and urine specimens, and to ensure proper sample handling of the biological materials. All retrieved samples are data entered into ACE.

Other biological samples, such as LVMPD sexual assault kits, are stored in the Evidence Vault after data entry (either the LVMPD Evidence Vault or the Forensic Laboratory Evidence Vault). Outside jurisdiction sexual assault kits are held at the Forensic Laboratory for at least 60 days pending a receipt/forensic lab generation of a Forensic Laboratory Request for Examination. If prior authorization to analyze sexual assault kits has been provided by the outside jurisdiction, the sexual assault kits are held at the Forensic Laboratory until the analysis is completed. Outside jurisdiction authorization forms for analysis of sexual assault kits are located in Qualtrax in the DNA folder. If prior authorization to analyze sexual assault kits has not been provided and a request is not received, the Biology/DNA Detail will work with the outside jurisdiction to establish authorization to test the sexual assault kit in order to comply with NRS 200.3786.
Evidence may be left unattended in the evidence run vehicle for short periods of time while subsequent items of evidence are being picked up during the run. The vehicle will be kept locked at all times when evidence is located in the vehicle and the vehicle is left unattended.

If needed, the vehicle may be fueled while evidence is located in the vehicle. The vehicle must be locked and the Evidence Technician/designee must remain in the immediate vicinity of the vehicle.

Food may be picked-up while transporting evidence as long as the Evidence Technician/designee does not leave the vehicle (drive-thru).

In the event of an accident, the Evidence Technician/designee will remain in the vehicle unless doing so is not prudent (fire). Dispatch will be advised by the Evidence Technician/designee immediately and a Patrol unit will be requested to respond to standby if the vehicle contains evidence. The Quality Manager/Quality Assistant will be advised. If needed, another Evidence Technician/designee will respond to the scene to transfer and transport any evidence.

The handling of biological samples submitted to the Forensic Laboratory for Department drug testing is outlined in the Toxicology Technical Manual.

**Evidence Receipt under Special Circumstances**

Typically, LVMPD Personnel wishing to submit evidence to the Laboratory will be directed to the LVMPD Evidence Vault to deposit their evidence and, upon request by Laboratory personnel, the evidence will be transported to the Laboratory by an Evidence Vault Technician during the routine evidence run. LVMPD Priority 0 cases may be hand delivered directly to the Forensic Laboratory and will be handled on a case by case basis, according the direction of Laboratory Director.

Evidence from outside jurisdictions can be received through the United States Postal Service or other common carriers such as Federal Express. Evidence may also be hand delivered directly to the Laboratory and presented to a Laboratory Evidence Technician/designee for ACE entry. To receive evidence from other jurisdictions, the following steps must be completed:

- Each package must be logged onto a LVMPD 126 Temporary Evidence/Property Control Log if it is a LVMPD case or on an LVMPD ISD 22 Evidence Log for Outside Agencies for outside jurisdictions. This form must be completed by the individual submitting the evidence or the Forensic Laboratory will not accept it.
- All packages must be appropriately sealed, and pertinent information required on the package must be completed: event number or applicable outside agency case number, item descriptions, impounding officer, relevant dates, etc. Since evidence can be received from a variety of sources and outside agencies, the presence of an LVMPD event number is not a mandatory requirement. However, all items submitted to the Laboratory should bear some marking or numbering system for identification purposes. Special
Handling instructions must be annotated on the package (e.g., keep frozen, refrigerate, biohazard).

- At the time of evidence delivery, a Forensic Laboratory Examination Request, LVMPD 63 or a Toxicology Request (547) will be completed by the submitting personnel, if a request has not been submitted previously. (LVMPD requests will not be made using the LVMPD 63. These requests will be submitted through Property Connect.)
- Evidence Technician/designee receiving the evidence will verify that the information on the evidence log matches the information on the package(s), and then will initial (LVMPD log) or sign (outside jurisdiction log) the log acknowledging receipt of the evidence.
- A copy of the signed evidence log will be made and provided to the individual delivering the evidence. The original log, the evidence package(s), and the Laboratory request will be forwarded to the Forensic Laboratory Evidence Technician. The Forensic Laboratory Evidence Technician/designee will perform the database entry of the evidence into the ACE system, where the item history automatically records the fact that the evidence was received directly through the Laboratory.
- After the data entry of the evidence is completed, the Evidence Technician will ascertain who will be assigned the evidence for analysis and a secure move in ACE will be performed.

Evidence submitted directly to the Laboratory will be maintained by the Laboratory Evidence Technician on a temporary basis only.

Evidence Processing
The following general evidence processing guidelines will be adhered to:

- Evidence will be handled in a manner to ensure its integrity is maintained during the testing process.
- It is common for a single item of evidence to be examined and tested by several Details/Units of the Laboratory. For example, a bullet may retain traces of blood which will be examined by the DNA Detail before being examined by the Firearms examiner. It is important that the examinations be conducted in a sequence that maximizes the forensically significant information from each item. Forensic Scientists should be familiar with the proper analytical sequence and it is expected that the different Details/Units will consult and coordinate their activities. In most cases, the proper analytical sequence is:
  1. Trace Materials
  2. Biology/DNA
  3. Latent Prints
  4. Firearms

The analyst's case notes will be documented to reflect the consultation and coordination of their activities regarding to these types of evidence (see 7.4.1.1 – Evidence Intra-Lab Transactions and Splits Analysts Working Concurrently on Evidence for further details).
• Any evidence requested for analysis should be inventoried immediately after the envelope, bag or other evidence package is opened. If significant alteration of the evidence is anticipated due to sampling or the sample selection process, the analyst will record the evidence in its original condition according to the designated Detail/Unit Quality/Technical Manual prior to the alteration. A diagram and/or photography may be used to document the condition of the evidence.

• In all evidence, except for latent print packets and prepared boxed kits such as blood alcohol and urine kits, the original seals will remain intact where possible. The evidence package should be entered in an area different than where the impounding officer sealed it. In some instances due to the unusually shaped or heavy items, this would only serve to destroy the original packaging. In that case, the impounding officer’s seals can be broken and a notation will be made in the case notes documenting this situation.

• Analysts will confine examination of their evidence as much as possible to their own assigned work areas or those areas specifically designated for evidence screening.

• Exam tables and benches may be covered with clean paper before the examination begins. Clean paper should be laid down under each item examined for trace or biological evidence as this will prevent cross transfer of materials from one item to another.

• Any significant loss or damage to an item or package must be recorded. This does not refer to the routine use of a sample during analysis, but rather refers to a significant change, such as breaking a vial of blood, consuming a whole tablet during Seized Drugs analysis, or tearing an evidence bag during handling.

• Although it may be necessary to consume a sample in order to complete the analysis properly, unnecessary alteration or consumption of the evidence shall be avoided. If items are consumed, the appropriate procedures outlined in the Detail/Unit Manuals will be followed and the case notes documented.

**Returning Evidence to the Vault**

With the exception of latent prints and DNA extracts created during analysis by the Forensic Laboratory, the Forensic Laboratory cannot maintain evidence for any significant length of time after the analysis has been completed. The LVMPD Evidence Vault is the Department’s storage facility. Once analysis is complete or evidence is no longer needed by Laboratory personnel it will be returned to the main evidence vault. A secure move is performed to move items from the Laboratory node to an Evidence Vault node. This requires two authorized ACE users with passwords.

The Forensic Laboratory and Evidence Vault are not a long term storage facility for evidence belonging to an outside jurisdiction. Evidence from outside agencies also cannot be destroyed by the LVMPD Evidence Vault, even if they request it. Therefore, at the completion of analysis of evidence from outside jurisdiction, the outside agency will retrieve the evidence from the Forensic Laboratory and Evidence Vault.
Releasing Evidence to outside jurisdiction Directly from the Forensic Laboratory

Evidence may be retrieved directly from the Laboratory by the originating agency.

The release will occur through ACE and two copies of an evidence receipt document will be printed. One copy will be maintained by the LVMPD and must bear the signature of the representative of the outside jurisdiction who took control of the evidence. Following the evidence release, the signed copy of the receipt document will be maintained in the Forensic Laboratory case file. The second copy of the receipt document will be provided to the representative of the outside jurisdiction.

Temporary Release of Evidence/Shipping Evidence

As per Department Manual 5/210.20 – Release of Evidence Temporary Release of Evidence For Outside Laboratory Analysis, a LVMPD 17 Authority for Temporary Release will be completed for all evidence that is sent to a location outside of the Department at the instruction of an individual not part of the Forensic Laboratory (e.g., for analysis by an outside laboratory). LVMPD 17 forms are not necessary for outsourcing cases that are initiated by the Forensic Laboratory to send out for testing.

The Laboratory maintains an account with Federal Express and this private courier is used most frequently for sending evidentiary materials and/or perishable substances. This type of service should be used Monday through Thursday to prevent evidence or perishable from sitting over the weekend pending delivery. Suitable packaging materials exist in the Laboratory for this purpose and care should be taken to package the items so as not to compromise the evidence. Utilizing this service is coordinated through the support staff.

The US Postal Service does not accept ammunition. Special considerations exist for sending ammunition through private carriers. It is best to consult these carriers prior to preparing a package of ammunition for shipment.

All transfers of evidence are documented in ACE. The following lists Departmental and Laboratory specific procedures regarding the transfer of evidence to an outside location:

- For LVMPD evidence, the original LVMPD 17 will be forwarded to records and a copy will be included in the case record. For outside jurisdiction evidence, original LVMPD 17 will be maintained in the forensic Laboratory case record.
- Subsequent to the transfer of evidence via ACE, an evidence withdrawal receipt will be produced – the recipient of the evidence will be asked to sign this receipt and it will be scanned into OnBase. A copy will be included in the case record.
- If evidence is shipped to the outside laboratory, the evidence withdrawal receipt, along with a self-addressed stamped envelope, will be included with
the evidence. The letter to the outside agency will request that the withdrawal receipt be signed and returned to the LVMPD in the envelope. Once returned, the signed receipt will be scanned into OnBase. A copy will be included in the case record.

- Evidence will be sent utilizing the ‘signature required’ option offered by the shipping company.

If the volume or size of the evidence packages being shipped precludes the use of the shipping containers supplied by the shipping vendor (FedEx Express envelopes and/or boxes), the following guidelines will be followed:

- The Forensic Laboratory will not use large boxes to help deter the possibility of the box being used as a stacking box.
- Each box will be wrapped with pallet wrap to provide extra strength to the box, as well as provide a barrier to prevent the items from falling out of the box.
- A stronger shipping vessel, such as, a plastic storage type bin may be used to ship evidence instead of a box. Pallet wrap can be used on the storage bin to help prevent the lid from being removed.
- Using Federal Express Custom Critical, a truck will be reserved for the delivery of the evidence. This only applies in certain circumstances for large shipments where funding allows.

7.4.1.1 Procedures for Handling of Evidence

All evidence received and handled by the Forensic Laboratory, to include items tested and not tested, will be documented in the Chain of Custody Report generated from ACE, as well as on the Detail/Unit worksheet and/or in the case record. See Detail/Unit Technical Manuals for requirements related to the documentation of the evidence received by the analyst in the Forensic Laboratory (to include evidence items tested and not tested) in the case record.

See section 7.4.2 – Laboratory System on how the Forensic Laboratory unique identifier, the Lab #, is related to items received in the Laboratory by the analyst in ACE.

Evidence and Property Sealing

All evidence containers and packages must be sealed in a manner to preserve the integrity of the evidence and to prevent inadvertent addition or removal of items. An evidence container or package is properly sealed when its contents cannot readily escape and if entering the package would result in obvious damage or alteration to the container or its seals.

All evidence will be sealed in accordance with the Department Manual 5/210.02 – Booking Evidence and Property.

If LVMPD evidence and/or property is accepted into the Laboratory in a condition that does not meet the Department policy defined above, the evidence package will be brought to an Evidence Technician/designee for resolution.
The proper sealing procedures established by the LVMPD do not apply to evidence belonging to other jurisdictions since their evidence sealing procedures may differ from those established by the LVMPD. However, if the evidence is in an unsealed condition, it may be refused.

If outside jurisdiction evidence is accepted into the Laboratory in a condition that would allow items to enter or exit the package, a proper seal will be established. This supplemental seal will be initialed and dated in a manner so as not to obscure any seals that may be present. In the event that additional tape is added, the analyst's notes shall reflect that this action was taken.

Certain items (e.g., firearms or other cumbersome articles) that are not suitable for packaging can be accepted into the Forensic Laboratory without being sealed in a container (Department Manual 5/210.02). The item must be protected with regard to the nature of the requested examination.

Evidence Not in the Process of Examination
All evidence will be kept in a sealed condition in a secure location until the analysis begins.

Evidence in the Process of Examination/Analysis
While evidence is in the process of examination/analysis it may be stored temporarily in an unsealed condition. Evidence that is actively in progress shall be stored in a secure location such as a personal evidence locker, personal lockable evidence cabinet, Detail/Unit evidence vault, a Detail/Unit refrigerator/freezer or in a locked examination room. The only exception to this policy is for large and/or cumbersome items that will not fit in the aforementioned locations. In these instances, evidence may be stored temporarily in an unsealed condition in a secure (controlled) Laboratory area.

Any evidence that is not under active examination/analysis will be properly sealed and secured.

Unattended Evidence
In access controlled Laboratory areas, the analyst may allow evidence to be out of direct control for short periods of time (e.g., lunch breaks). The analyst may temporarily place a note alongside of the work in progress while unattended for a short period of time to alert other Laboratory members that evidence is in process of being analyzed. The last person that leaves the Detail/Unit is responsible for assuring that appropriate doors are secured in that Detail/Unit.

Chain of Custody
ACE serves as an electronic chain of custody record of every transaction performed on the evidence once it was entered into the ACE database. The documentation of the chain of custody of all evidence received in the Forensic Laboratory will include both, items tested and not tested, as well as items that are created and used or could
be used for future testing. ACE references each individual who participated in a transaction.

Another account of the chain of custody is affixed to or preprinted on the evidence package itself. It is the policy of the Department (Department Manual 5/210.02 – Booking Evidence and Property) to sign the chain of custody affixed to the package only when the package has been physically opened to handle, analyze or view the contents. The chain will be signed and dated by the analyst who opened the evidence at the time when the evidence is resealed. Evidence Technicians or analysts handling a package for the sole purpose of package transfer are not required to sign the chain of custody located on the evidence package.

ACE (Active Control of Evidence)
Evidence transactions performed between the Evidence Vault and Forensic Laboratory personnel are documented in the Evidence Vault’s ACE computerized database system. Each item of evidence handled through ACE has an ACE number that is assigned upon entry to the database.

Evidence moved through ACE is placed from one individual’s custody into another’s by a “secure move”. In order to execute a secure move, two user passwords are required (a “relinquisher” and a “receiver”) at the time of the transaction. These ACE passwords are distinct from the password the Department requires for logon to the network. In the secure move, the passwords serve as electronic signatures and eliminate the need for a handwritten signature to authorize the transaction. Each secure move performed is electronically documented referencing the items of evidence, the names of the receiving and relinquishing individuals as well as the date and time of the transaction. A hard copy receipt of any given transaction can be produced by referencing the transaction (by LVMPD Event #, ACE #, suspect name, etc.) and reprinting the receipts from the item history.

The transaction used to move evidence into or out of the custody of an individual from/to a general location (e.g. refrigerator, Remstar) is called an “internal move”. An internal move requires the individual relinquishing or receiving custody of the evidence to be logged into ACE. Each internal move performed is electronically documented referencing the items of evidence, name of the individual performing the transaction and the date and time of the transaction.

The transaction used to relinquish and receive evidence entered into the ACE system from or to a person without an ACE user password is called a “transfer”. This transaction only requires one ACE user password. Transfer transactions executed through ACE will electronically document the items of evidence, the individual who transferred the evidence, to whom it was transferred, the reason why it was transferred and the date and time the transaction occurred. Transfer receipts require a signature from any individual involved in the transaction who does not have an ACE password.

ACE Evidence Locations
An important aspect of ACE is the manner in which it tracks the “location” of each item of evidence. The “location” may describe the actual physical location of the evidence and/or the status of the evidence. The location is broken down into three levels: the node, the primary location and the secondary location. The Laboratory and Evidence Vault are on two separate nodes due to their separate physical sites and the separate computer pathways that are employed at these facilities. During any evidence move conducted in ACE, the user is required to enter a primary and secondary location. The primary location must be selected from a list of predetermined sites established by the ACE administrator. The node is determined upon initial entry of the evidence item into ACE (i.e., items initially entered at the Forensic Laboratory will show the noted as LAB). According to Forensic Laboratory policy, the secondary location is defined as the P# of the Laboratory personnel receiving the evidence.

Evidence that has been ordered by an analyst assigned to the Forensic Laboratory (see 7.4.1 - Evidence Transportation, Receipt, Handling, Protection, Storage, Retention and Disposal Ordering Evidence from the Vault for further details), will be pulled from its storage location at the Evidence Vault and placed in the LABR LAB location (node = EV; primary designation = LABR; secondary designation = DNA) for transport to the DNA Annex by Evidence Technicians from the Evidence Vault.

Once arriving at the Laboratory, an Evidence Technician from the Evidence Vault will secure move evidence that has been ordered to either a Forensic Laboratory Evidence Technician/designee or the requesting analyst. The Evidence Technician/designee will change the evidence location from LABR LAB or LABR DNA to a location that will reflect a specific Detail/Unit in the Laboratory and a particular individual’s custody. Primary locations and the corresponding sections associated with the LAB node are as follows:

- FLV  Forensic Lab Vault
- DNA  Biology/DNA
- CHM  Chemistry Seized Drugs
- FTM  Firearms
- LPT  Latent Prints
- TOX  Toxicology
- TRA  Trace Materials

The secondary designation will be the assigned individual’s five digit P#. Since the secondary designation will allow the user to input any five digit code, care must be taken that the appropriate P# is entered. An example of a location after evidence has been secure moved from LABR LAB would be CHM0 5418. This particular location would indicate that Tom Melville (P# 05418) from the Chemistry Detail has the evidence in his custody.

In the case of DNA evidence delivered to the DNA Annex, the primary location would be DNA0 and the secondary location would be VLT.
In the case of biological samples delivered directly to the Toxicology refrigerator, the primary location would be TOXI and the secondary location would be FRIG.

In the case of clandestine (clan) laboratory samples recovered by a member of the clan lab team and delivered directly to the Chemistry refrigerator, the primary location would be CHM0 and the secondary location would be FRIG. The FRIG location is utilized while evidence is temporarily stored in a refrigerator in the Toxicology and/or Chemistry Details while awaiting analysis.

In the case of Latent Print Packets received by the Evidence Technicians/designee and delivered directly to the Remstar, the primary location would be LPT0 and the secondary location would be REMS. The REMS location is utilized to house Latent Print Packets for the current five years approximately. Older Latent Print Packets from non-statute cases (e.g., homicides) which must be stored indefinitely, are stored in the Latent Print Vault. The secondary location for these packets is VLT. Older Latent Print Packets, other than non-statute cases, are stored in the Forensic Laboratory storage room and will list a secondary location of ARCV.

**Chain of Custody for DNA Extracts**
Effective May 16, 2018, DNA extracts created during the course of DNA analysis are maintained and tracked using an internal chain of custody within the Biology/DNA Detail. Refer to the Biology/DNA Quality Manual for further details.

**Evidence Intra-Lab Transactions and Splits**
When items of evidence require different types of analysis by several Details/Units in the Laboratory, the evidence packages containing those items can be moved from analyst to analyst without sending the package back to the vault first. When this type of intra-laboratory transfer occurs, the evidence packages will be secure moved in ACE from one analyst to another.

In rare instances, usually associated with a rush analysis, several items in one package require simultaneous examination by two different analysts. In these situations, evidence items that are entered into ACE individually under separate ACE numbers may be secure moved on an item by item basis. In these cases, it is not required that the individual item of evidence be in a formal sealed condition prior to examination. The analyst who originally opened the package will attest to its sealed condition; however both analysts’ case notes must reflect the manner in which the evidence was handled. The second analyst receiving just the singular item will sign the chain of custody and indicate specific item(s) examined. In certain circumstances an analyst may collect evidence from an item that is being analyzed in another section (see below – Analyst Working Concurrently on Evidence).

In cases where evidence needs to be transported between the Forensic Laboratory building and the DNA Annex, the evidence will be transported in a secure receptacle (e.g., rolling cart with lockable cage).

*Analysts Working Concurrently on Evidence*
It is common for a single item of evidence to be examined and tested by several Details/Units of the Laboratory, and, in some cases, analysts may be working concurrently on the same item of evidence.

This type of interaction is considered a “significant interaction” and the following must occur:

- Examinations must be conducted in a sequence that maximizes the forensically significant information from each item. For example, a bullet bearing traces of blood can be examined by the Biology/DNA Detail, to collect evidence of biological importance, while in the possession of a Firearms analyst.
- Both analysts’ case notes shall document the consultation and coordination of their activities.
- In instances where only evidence collection is performed, the analyst collecting the evidence will complete case notes and an Officer’s Report. One copy of the Officer’s Report will be maintained in the Unit Record Object Repository in LIMS and one will be forwarded to the primary investigator; the original will be forwarded to the Records Bureau. This provides investigators and other interested parties with important information regarding the availability of evidence in the case.
- If matter is derived from the original evidence (such as a blood swabbed from a weapon), it must be placed into a separate container (such as a Petri dish or coin envelope).
- The packet of derived evidence must be placed in an additional evidence envelope/bag.
- Items will be data entered as a new item in ACE.
- When an analyst handles an item of evidence when it is in the primary custody of someone else, the analyst must annotate it on the evidence package. The annotation shall be made on the front of the evidence package (if possible) outside the specific “chain of custody” lines. The annotation shall indicate the specific item(s) examined. This provides an accurate depiction of the handling of the evidence.

Evidence Collected by Photography

When evidence can only be recorded or collected by photography and the impression itself is not recoverable, the photograph or negative of the image shall be treated as evidence (see Latent Print and Documentation Photographs in the Latent Prints Technical Manual for further details).

Crime Scene Evidence Collected by Laboratory Personnel

Evidence collected from a crime scene by Laboratory personnel (clandestine laboratories) shall be protected from loss, cross transfer, contamination and/or deleterious change during transportation to the Laboratory. The evidence shall be appropriately identified, packaged and entered into ACE as soon as practical (see Clandestine Laboratory Response in the Seized Drugs Technical Manual for further details).
Individual Characteristic Databases
The Forensic Laboratory participates in several databases with crime solving capabilities including:
- AFIS – Automated Fingerprint Identification System
- CODIS – Combined DNA Index System
- NIBIN – National Integrated Ballistics Information Network

CODIS is maintained by the FBI and NIBIN is supported by the ATF. In some instances Laboratory participation is guided by a Memorandum of Understanding with these law enforcement partners. Procedures for the operation of the individual characteristic databases are located and/or referenced in the appropriate Detail/Unit Technical Manuals.

Designation of Individual Characteristic Database Samples
The designation of individual characteristic database samples as evidence, reference materials, or examination records is defined in the appropriate Detail/Unit Technical Manual.

Individual Characteristic Database Samples Treated as Evidence
Individual database samples treated as evidence shall meet ANAB ISO/IEC 17025:2017 7.4.1.1 a) – h) and 7.4.2.

Individual Characteristic Database Samples Not Treated as Evidence
Individual characteristic database samples not treated as evidence shall meet ANAB ISO/IEC 17025:2017 7.4.1.1 f).

Handling of Individual Characteristic Database Samples
Individual characteristic database samples under the control of the Laboratory are handled in such a manner to protect them from loss, cross transfer, contamination and/or deleterious change. The samples are handled in a manner that reasonably ensures their utility as comparison materials.

Disposition of All Items Received
Disposition of all items received and created in the Forensic Laboratory to include both, tested and not tested, will be documented on the Formal Laboratory Report.

7.4.2 Laboratory System for Test Item Identification
The Forensic Laboratory uses both ACE and LIMS as the laboratory system. ACE provides the official chain of custody that documents and tracks the location and transfer of items of evidence received in the laboratory. LIMS documents and tracks the case record related to the Event #, and accommodates the subdivision of items.

The Forensic Laboratory unique identifier, the Lab #, will be entered in the "Lab Number" field in ACE to correlate the ACE # (red box), Event # (white box) and the Lab # (yellow box) to items received by the laboratory. This entry will only be done on items received by the analyst in the Forensic Laboratory and will include items
tested, not tested, and/or created. If an item was released, the field to add the Lab # is locked down. The Lab # will be added to the Notes/Calls in ACE for that item.

Evidence Marking
Any evidence examined by members of the Laboratory must be marked in some manner so that it can be identified in court. Items examined must bear the Event #, the initials of the examining analyst, the LIMS designated item number and the Lab Number, if practical. To avoid the possibility of several Lab Numbers existing on a single item of evidence, the Unit Record designator portion of the Lab Number does not need to be utilized when marking items of evidence (e.g., 14-02742.2 may be documented 14-02742). All markings or identifiers will be made in such a manner that the evidentiary value of the item is not compromised. If a proximal container is added by the analyst, the proximal container must be marked as outlined above. Under the following circumstances, the identifying markings may be placed on the proximal container only:

- If the evidence is too small for an identifying mark.
- Marking the item will damage the evidence (e.g., a small fragment of a bullet where the rifling characteristics must be observed).
- Marking the item may interfere with another Detail/Unit’s examination.
- The nature or texture of the item prevents it from being marked.
- Items with irregular or absorbent surfaces.
- Where markings may compromise an item’s value and/or may be returned to the owner, such as a piece of jewelry.

When working on evidence that is not in the analyst’s sole care and custody, (e.g., recovering derived matter from an item of evidence located in another analyst’s custody), the item of evidence does not need to be marked with unique identifier or initials. The marking of evidence applies only to the analyst who maintains the physical custody of the evidence. However, the outside of the evidence package must be marked by the analyst working on the evidence as described in 7.4.1.1.
Multiple like items which were examined may be taped together with clear tape and marked as one. Unusual items which can be conveniently stapled together or attached, such as a pair of socks, can be marked with one label.

Evidence marks should be made with permanent ink, waterproof marker, paint pen, labels or by scribing. If due to the nature of the evidence, it appears that the marking may be at risk for rubbing off, a piece of clear tape can be placed over the markings for protection.

See Detail/Unit Technical Manuals for requirements specific to that Detail/Unit.

### 7.4.2.1 Uniquely Identifying Evidence Items

Each item of evidence and/or its proximal container will be marked with a unique identifier and be traceable to an Event # and Lab Number (see 7.4.2 – Evidence Marking and Detail/Unit Manuals for further details).

The LIMS generated Item Number is developed for each ACE Item that is entered into LIMS. Items can be further identified by creating sub-items. Numbering convention to indicate sub-items will include the original item followed by sequential numbers (e.g. Item designator 2, Sub-item designator 2.1). The creation of sub-sub-items will be addressed by specific Detail/Unit Technical Manuals, if applicable.

Identification of items received in the Forensic Laboratory but not tested will be documented in the case record. The documentation will be addressed by specific Detail/Unit Technical Manuals.

**Unique Identification of Individual Characteristic Database Samples**

Individual characteristic database samples under the control of the Laboratory shall be uniquely identified. Designation for the unique identification of individual characteristic database samples is defined in the appropriate Detail/Unit Technical Manual.

### 7.4.3 Evidence Discrepancies

Individuals receiving evidence will ensure that the description of the evidence on the package (i.e., the event number, or applicable agency identifier, evidence amount and evidence type - controlled substances, firearms, etc.) matches the description of the item ordered through ACE. If a discrepancy exists between the items of evidence listed on the outside of the package and those items actually received, the respective Forensic Laboratory Manager/Forensic Laboratory Supervisor will be notified and the impounding officer or agency may be contacted by technical staff to inform them of the discrepancy. The discrepancy will be documented in the case notes. In Seized Drugs cases, if a discrepancy exists the Internal Affairs Bureau may be notified.

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 requestor before proceeding and shall record the discussion in LIMS.
If a result could be affected by a deviation from a specified condition (e.g. improper packaging of fire debris evidence) and this has been acknowledged by the requestor prior to the testing, a disclaimer will be included on the report.

7.4.4 Evidence Security and Storage

While evidentiary articles are in the Laboratory they will be stored in the Laboratory evidence vaults, individual lockers, DNA personal lockable evidence cabinets, Latent Print overhead bins or Laboratory evidence refrigerators/freezers. Large and/or cumbersome items may be stored in limited access areas.

During the examination process, evidence will be handled in such a way as to prevent loss, contamination or deleterious change. The last person that leaves the Detail/Unit (e.g., lunch, breaks or the end of the day) is responsible for assuring that appropriate doors are secured in that Detail/Unit.

Evidence must not be removed from the Laboratory except for legitimate purposes such as transferring it to an officer for court, returning it to the Evidence Vault/submitting agency, or conducting examinations outside of the Laboratory (e.g., firearms range).

General Evidence Storage Guidelines

- With the exception of Latent Print Packets and DNA extracts created by the Forensic Laboratory, the period during which evidence is stored at the Laboratory will be minimized; therefore Laboratory members will promptly facilitate the return of evidence to the main or laboratory evidence vault upon completion of examination.

- Biological evidence will be stored in a manner which will ensure that its evidential value is prolonged and that degradation is minimized. Temperatures for refrigerator/freezers that house evidence are monitored and recorded in Resource Manager (see Quality Control Plans in the Detail/Unit Technical Manuals for further details).

- Unusually large or valuable drug submissions should be analyzed as soon as possible to avoid any long term storage in the Laboratory.

- Certain types of evidence may be removed from evidence and maintained in the Laboratory and placed in a reference collection (such as the firearms and pill collections).

- The Biology/DNA Detail maintains DNA database samples, bloodstain standards, substrates and DNA extracts according to the Biology/DNA Procedures/Quality Manual.

- LVMPD latent lift packets/cards from the current year and four (4) previous years will be maintained within the Laboratory in the secured latent file (Remstar). Archived latent lift packets/cards are stored in the secure storage room or in the Latent Prints Evidence Vault.

- Fire Debris evidence may require alternate overnight storage. See the Trace Materials Technical Manual for further details.
7.5 Title: TECHNICAL RECORDS

7.5.1 Technical (Case) Records
The procedures in this section address the compilation of case documents that should be prepared at the time of the analytical process or during a supplemental analysis.

The compilation of documents shall contain sufficient information to establish an audit trail and to enable an independent, competent Forensic Scientist and/or Forensic Laboratory Manager/DNA Technical Leader/Supervisor to evaluate the analysis done and interpret the data. The documentation shall include the date and identity of personnel responsible for each laboratory activity and for checking data and results. An accurate retest may not be possible, so it is essential that a complete case record is compiled, should a review be required.

The group of documents prepared at the time of analysis is referred to as the case record and contains original observations, data, and/or calculations. All LVMPD incidents (cases) are assigned a unique event number. Event numbers are computer generated numbers that are created when a call is dispatched. Event numbers consist of twelve digits. The first four digits represent the year, month (YYMM). The remaining eight digits are computer generated and begin with 00000001 at midnight each night and are sequentially issued.

LIMS generates a unique number (Lab Number) for each case worked by the Forensic Laboratory. The Forensic Laboratory uses the Lab Number as the unique identifier for the case.

Technical Case Record Requirements
Each technical record shall:
   a) be traceable to a unique identifier (Lab Number):

   For cases worked in LIMS
   The unique identifier (Lab Number) is located on each LIMS screen for the Unit Record associated with that case.

   Files stored in the Unit Record Object Repository shall include at least the following information within the file name: a Detail/Unit designator followed by a space and the Lab Number, (e.g., FA 13-05962 photo) if the Lab Number is not already recorded on the file itself. The approval of the file locks the file, and identifies the person who approved it.
Due to data being automatically associated to several Lab Numbers in LIMS as a result of batching, standards packets in the Toxicology Detail are exempt from the above listed naming convention. 

For cases worked and stored outside of LIMS

Each page or document (including the front of a page and the back of the page, if the back side exhibits case information) must bear the following:

- **Event Number, Case Number, or Other Identifier**
  The event number, outside jurisdiction case number, or other identifying number (e.g. confidential case number) must appear on each page contained within the case file. If the case or event number is automatically printed on the page (e.g. on an instrument printout) this requirement is met.

- **Initials of the Examiner**
  Each page must bear the handwritten initials, the first initial/ P# /last initial or signature of the analyst. Initials should be placed on the bottom right hand corner of each page or form. Unlike the event number, examiner’s initials automatically printed on a page are not sufficient - the initials must be handwritten.

- **Page Number**
  All case file documentation generated prior to the completion of the technical and/or administrative review of the report will be page numbered. Pages will be numbered sequentially and no subdivisions or letters are permitted (e.g., 2a and 2b cannot be used). The first page of the notes or case documentation will use the format X/Y or X of Y where Y is the total number of pages. For example, 1/26 indicates that it is the first page out of 26 total pages. Only the first page need indicate the total number. Subsequent notes or documentation need only bear the specific page number. Page numbers associated with a supplemental examination must be annotated as such (see 7.8.8.3 for further details). Administrative pages added after a case file has been completed and filed, such as a memo or letter, need not be page numbered but must bear the event/case number and must be initialed.

- **Documents added to the case file by the clerical support staff (Case Cross Reference Sheet, ODV memos, e-mails, the LVMPD Forensic Lab Case Tracking Form, etc.) require applicable case numbers (if not already present) and member’s initials.

b) reflect the dates the testing was performed:
Testing dates may be reflected as a range of dates or the date of individual test performance. The recording and documentation of dates associated with an analysis may also be Detail/Unit specific. If a Detail/Unit determines specific dates must be recorded, these relevant dates will be recorded according to the established technical manual protocol.
The start and end date of performance of the laboratory activity will be defined in the Detail/Unit Technical Manual. The date(s) may be reflected as a range of dates or the date of each test.

Case Notes
Notes must be prepared in order to document the examination and handling of a case, to aid the analyst in recall of details regarding the case, and to allow adequate review of work performed. Case notes are located in worksheets in LIMS or are prepared outside of LIMS and imported into the Lab Case or Unit Record Object Repository associated to the appropriate Lab Number.

Handwritten or typed notes or worksheets detailing the analytical process shall be prepared at or near the time of the event or observation being recorded. Should an event be recorded later, a notation (including the date) must indicate the reason for the delay. Notes can be maintained on a working form, however the forms shall be consistent within a given Detail/Unit and approved by the respective Forensic Laboratory Manager/Supervisor/DNA Technical Leader.

Handwritten notes may be subsequently typed, however all original handwritten notes must be maintained by scanning into the Unit Record Object Repository and associated to the appropriate Lab Number. Once the original notes have been scanned into the Unit Record Object Repository they will be verified by comparing the original to the scanned copy to ensure every page scanned in properly. Once it is verified that the scanned copy is an accurate copy of the original, the original notes shall be destroyed.

The following list of information is to be included within the case notes or worksheets:

- **Description of the evidence associated with the case, including booking officer, package numbers, and item numbers, if applicable.** The evidence must be described in sufficient detail in the case notes to aid the analyst in recall or testimony. Unusual characteristics can be described, or may be photographed or diagramed.

- **Loss or damage to an item or package** deemed as significant must be recorded. This does not refer to the routine use of a sample during analysis but rather refers to a significant change, such as breaking a vial of blood, consuming a whole tablet during seized drugs analysis, or tearing an evidence bag during handling.

- **Significant interactions** with other technical staff members or Bureau members (such as Crime Scene Analysts) must be recorded. An example of such an interaction would be the collection of biological material by a DNA analyst from a bullet in the possession and control of a firearms examiner.

7.5.1.1 All technical records related to a case are maintained.

Case Record
A case record may include the following document types:
- Formal Laboratory Report of Examination (see 7.8.2)
- Case notes (see 7.5.1)
- Technical documentation
- Administrative documentation

**Technical Documentation**

Technical Documentation is generated during an analysis and may include, but is not limited to the following items:

- Tests conducted
- Standards and controls used
- Diagrams
- Spectra
- Photographs (digital images)
- Printouts
- Charts

Technical documentation may be stored in LIMS or in other locations as detailed in Detail/Unit Technical Manuals. Applicable Lab numbers, page numbers and analysts' initials must appear on technical documentation that is generated as a hardcopy and uploaded into LIMS or stored outside of LIMS.

Digital images associated with cases that were worked prior to the implementation of LIMS, are stored by event number in a secure folder in the following location: H:\CB\Forensic Data Archive utilizing the breakdown of the subfolders as detailed below:

- Forensic Data Archive
  - Detail
  - Analyst Name
    - LVMPD
    - outside jurisdiction (OJ)

For supplemental analyses the digital images are stored with the addition of the word supplemental to the name of the folder (e.g. 12 0913-1234 Supplemental, 12 0913-1234 Supplemental-2, etc.).

Digital images associated with cases worked in LIMS are stored in the Unit Record Object Repository under the appropriate Lab Number.

**Administrative Documentation**

Administrative documentation may include, but is not limited to the following items:

- Technical review forms
- Forensic Laboratory Examination Request (LVMPD 63)
- Forensic Lab Toxicology Request (LVMPD 547)
- Correspondence such as related letters, Memoranda, and/or e-mails received or sent
7.5.1.2 Abbreviations/Symbols
Abbreviations or symbols are acceptable in examination documentation as long as they are readily comprehensible, or a key is included with the notes or detailed in the appropriate technical manual (see 7.5.1 – Case Notes for further details).

7.5.1.3 Records to Support a Report
Case records shall include adequate documentation so that in the absence of the case analyst, another competent analyst or supervisor could evaluate what was done and interpret the data. In addition to the requirements listed in this procedure, Detail/Unit Technical Manuals may list case documentation and report guidelines specific to that area. When indicated, requirements listed in technical manuals will be followed.

7.5.1.4 Records in a Permanent Manner
Records are either created in a permanent manner (e.g., written in pen or typed) or maintained in a permanent manner (e.g., sketches in OR in LIMS).

Notes shall be handwritten in ink or typed and must be legible to facilitate review. Pencil (including colored pencils) or colored ink may be appropriate for diagrams or tracings or for highlighting specific written material (see 7.5.1 – Case Notes for further details). Any documentation captured in a non-permanent manner (pencil) will be rendered permanent by copying or scanning.

Unless worked prior to the implementation of LIMS, LIMS is the official storage location for case files. Some supporting records may also be stored in Qualtrax. Refer to specific Detail/Unit Technical Manuals for types of records and locations.

Scanning Original Records for Electronic Storage
Hardcopy case documentation may be maintained by scanning into the Lab Case or Unit Record Object Repository associated to the appropriate Lab Number. Once the original hardcopy documentation has been scanned into the Lab Case or Unit Record Object Repository, a verification will be performed by comparing the original to the scanned copy to ensure every page scanned in properly. Once it is verified that the scanned copy is an accurate copy of the original, the original hardcopy document will be destroyed.

7.5.1.5 Documentation of Rejected Data
If an observation, data, or test result is rejected, the reason, the identity of the individual(s) taking the action and the date shall be recorded in the case record.

7.5.1.6 This is not applicable as the Forensic Laboratory does not perform calibrations.

7.5.2 Corrections to Case Documentation

**Hard Copy Case Documentation**

Corrections (additions and/or deletions) made to hard copy documentation prepared outside of LIMS require the initials of the analyst making the correction. Deletions are indicated with a single line strikeout over the incorrect data or information, the addition of corrected material, the initials of the analyst making the correction, and the date of the correction. Any corrections in either handwritten or typed notes found as a part of the technical or administrative review process will be handled in the above described manner. Corrections and/or deletions are not considered redactions. Correction fluid/tape is prohibited!

**Electronically Stored Documentation**

Any change made to examination records stored in LIMS, including those as a result of verification, technical or administrative review, are automatically tracked through a version history in LIMS.

LIMS maintains versions of the approved items in the Object Repository. LIMS also maintains versions of the worksheet that can be downloaded and compared if necessary. Only the latest version is directly accessed from the Unit Record. To find all the previous versions, highlight the Worksheet banner, right click and select Worksheet Document Properties and click on the Version History.

Electronic changes to uploaded case record documentation that do not affect the results or conclusions after it has been released (i.e. for discovery or court purposes), do not necessitate a new report to be issued. Errors discovered on the documentation/notes should be either printed, hand-corrected (see **Hard Copy Case Documentation**), or similarly corrected using PDF software, and re-uploaded to the case record in LIMS. A technical reviewer, preferably the original technical reviewer, must document in the case record that the changes were reviewed, either by initialing and dating the changed pages, or uploading a memo to the Unit Record Object Repository. The technical reviewer will also add a comment to the Unit Record comment box. For discovery or court purposes, the updated case records must then be disseminated to the original recipient(s) of the released records.
7.6 Title: EVALUATION OF MEASUREMENT UNCERTAINTY

7.6.1 Important Uncertainty Components
The estimation of uncertainty of measurement shall include, at a minimum, the identification and assessment of the major sources of uncertainty in the procedure which are of importance to the process. This may include, but not be limited to, the following:

- Instruments/Equipment
- Test methods
- Special environmental conditions
- Reference standards
- Test operator

7.6.1.1 Estimation of Uncertainty Procedures
The method of analysis for evaluation of measurement uncertainty shall:

a) Require the specific measuring device(s) or instrument(s) used for a reported test result to have been included in or evaluated against the estimation of measurement uncertainty for that test method (e.g., balance, thermometers, rulers)

b) Include the process of rounding the expanded uncertainty (e.g., Microsoft Excel was used to perform all calculations. Microsoft Excel carries the maximum number of significant figures in the background. Standard rules of rounding were applied to round numerical values to one decimal place.)

c) Require the coverage probability of the expanded uncertainty to be a minimum of 95.45% (often referred to as approximately 95%);

d) Specify the schedule to review and/or recalculate the measurement uncertainty.

7.6.2 Estimation of Uncertainty for Calibrations
Required calibrations of Forensic Laboratory equipment (balances, pipettes, ASTM 1 weights, etc.) are performed by external vendors and are not performed internally.

Estimation of uncertainty for breath testing instruments will not be performed by the Forensic Laboratory at this time.

7.6.3 Estimation of Uncertainty for Forensic Testing
The Forensic Laboratory will estimate the uncertainty of measurement for the following:

- Blood alcohol results
- Quantitative Blood/Urine drug results
- Weights in drug analysis testing
- Quantitative drug analysis results (not a currently offered service)
• Barrel lengths
• Distance Determination
• Trigger Pull

Estimation of uncertainty is not required when the results of testing are qualitative and estimation of uncertainty will also not be determined for the following:
• Sound suppression (reported as an approximation)

7.6.3.1 Estimation of Uncertainty for Quantitative Results
The Forensic Laboratory will estimate the uncertainty of measurement for all reported quantitative test results that are not used solely as an item descriptor.

7.6.4 Estimation of Measurement Uncertainty Records
The following records for each estimation of measurement uncertainty shall be maintained
a) statement defining the measurand;
b) statement of how traceability is established for the measurement;
c) the equipment (e.g., measuring device(s) or instrument(s) used);
d) all uncertainty components considered;
e) all uncertainty components of significance and how they were evaluated;
f) data used to estimate repeatability, intermediate precision, and/or reproducibility;
g) all calculations performed; and
h) the combined standard uncertainty, the coverage factor, the coverage probability, and the resulting expanded uncertainty.
7.7.1 Ensuring the Validity of Results
Each Detail/Unit will have quality control procedures to monitor analytical testing appropriate to the type and frequency of the tests conducted. The quality control procedures shall be documented and the results retained to show whether the quality control results were acceptable or not, and if not, that remedial action has been taken. These quality control procedures and methods of documentation will be found in the Detail/Unit Technical Manuals. The following techniques may be used to demonstrate quality assurance of the test performed:

a) Regular use of positive and negative controls; use of internal standards; regular use of certified reference materials or internally generated reference materials; use of reference collections.

Quality control procedures to ensure the validity of tests undertaken shall be specified in the test method and the result of each quality control activity shall be recorded. Procedures are located in the Detail/Unit Technical Manuals.

b) Use of alternative instrumentation that has been calibrated to provide traceable results (e.g., use two different instruments to test the same thing, or using a NIST ruler and a NIST laser to measure distance).

c) Functional check(s) of measuring and testing equipment. The procedure for the performance checks of equipment is documented 6.4 – Equipment and Reagents in this manual and in the Quality Control Plan in the Detail/Unit Technical Manuals. The procedure for quality control checks of reagents are documented in Detail/Unit Technical Manuals and 6.4 – Equipment and Reagents in this manual.

d) Use of check or working standards with control charts, where applicable (e.g., internal standards or another weight set to verify instead of ASTM weights).

e) Intermediate checks on measuring equipment. Refer to the Quality Control Plan in the Detail/Unit Technical Manuals and 6.4 – Equipment and Reagents in this manual.

f) Replicate testing.

g) Retesting of retained items (verification of a test result). The purpose of the verification process is to evaluate the validity of a test result/opinion reached by re-performing the comparison between the unknown and the known. Specific test methods for the comparison of an unknown to a known are located in the Detail/Unit Technical Manuals.
1. When a verification of a test result is carried out:
   a) This verification shall be conducted by individuals authorized to perform the testing. The authorization to perform verifications is documented on the Authorization Memos located in Qualtrax.
   b) The record of the verification can be found in LIMS. The record shall identify who performed the verification, when it was performed and the results of the verification.
   c) The resolution of any discrepancy shall be recorded. The record of the discrepancy can be found in LIMS. See 7.7.1.1 h – Technical Review of Technical Records and Test Reports.

h) Correlation of results for different characteristics of an item. Procedures are located in the Detail/Unit Technical Manuals.

i) Technical review of reported results. The procedure for the review of case files and reports is documented below in 7.7.1 i).

j) The Forensic Laboratory participates in intralaboratory comparisons through the use of internal proficiency tests. The procedure for internal proficiency tests is documented below in 7.7.4, 7.7.5, and 7.7.8.

k) Testing of blind sample(s).

l) **Technical Review of Technical Records**
   The purpose of the technical review process is to ensure that appropriate examination of the evidence takes place in regards to the choice of procedure, methodology, and documentation; to confirm that the results or interpretations of the analyses are documented and support the stated conclusions; to verify identifications made and to ensure that Laboratory defined documentation procedures are followed. Technical review is a vital step to ensuring a quality work product.

Forensic Laboratory Managers/Forensic Laboratory Supervisors will select cases for technical review. The method for selecting the cases is left to the discretion of the Forensic Laboratory Managers/Supervisors.

Technical review will be undertaken as soon as practical after the case is completed.

**Responsibility of the Analyst**
It is the analyst’s responsibility to ensure that the notes and other case documentation accompanying the formal report are complete and legible to the reviewer. The analyst must work with the reviewer to facilitate the process and maintain an open frame of mind if discrepancies are brought to the analyst’s attention. Requirements defined in 7.5 – *Technical Records* must
be met before the case proceeds to technical review and it is the analyst’s responsibility to ensure that the work product reflects these requirements.

**Responsibility of the Reviewer**

The purpose of the technical review is to ensure that the conclusions are reasonable and that the documentation and case notes substantiate the conclusions. The reviewer will follow the guidelines on the Technical Review form and/or the technical review questions in LIMS for that specialty area. Reviewers are to keep in mind that variation in approach to casework is part of the discretion left to the individual analysts, thus the focus of the review process will be on “substance” rather than “style”. However, the technical requirements defined in 5.7 - Technical Records must also be met before the Technical Review is completed by the reviewer and the case is forwarded for Administrative Review.

The technical review process shall:

1. Be conducted by individuals that have been competency tested in the task(s) that the review is encompassing. The technical reviewer shall have knowledge of the appropriate technical procedures. The authorization to perform technical reviews is documented on the Authorization Memos located in Qualtrax.

Technical reviews may be completed by an analyst not employed by the LVMPD Forensic Laboratory. The performance of technical reviews by an outside agency is considered a critical service.

When technical reviews are performed by an analyst from another accredited Forensic Laboratory the following criteria must be met:

- The reviewing analyst must be employed by a Forensic Laboratory that is accredited to ISO/IEC 17025 in the applicable Category of Testing (e.g. Fire Debris).
- A current Statement of Qualifications and/or a Curriculum Vitae must be on file for the reviewing analyst.
- The reviewing analyst must have an Authorization Memo sanctioning the performance of technical review for the specified casework (e.g. Fire Debris) on file at the LVMPD Forensic Laboratory.
- The reviewing analyst will be provided the appropriate portions of the Technical Manual and Forensic Laboratory Quality Manual for the casework being technically reviewed.

When technical reviews are performed by an analyst from an agency that is not accredited in the applicable Category of Testing, a competency review of the technical reviewer will be conducted. This review will include the following:
- Previous work experience in a Forensic Laboratory that was accredited to ISO/IEC 17025 in the applicable Category of Testing during their tenure
- Quality of service provided determined from past use as a Technical Reviewer
- Expertise in the Category of Testing established by training and experience in that Category of Testing
  - Determined through review of a current Curriculum Vitae
  - Determined through past successful completion of proficiency tests in that Category of Testing
- The reviewing analyst must have an Authorization Memo sanctioning the performance of technical review for the specified casework (e.g. Fire Debris) on file at the LVMPD Forensic Laboratory.
- The reviewing analyst will be provided the appropriate portions of the Technical Manual and Forensic Laboratory Quality Manual for the casework being technically reviewed.

See the Trace Materials Technical Manual for further details.

2. Not be conducted by the author or co-author(s) of the casework under review. A verifier is not considered a co-author.

An individual who performs a verification can also perform a technical review.

3. Ensure a representative sample of technical records and test reports in each discipline are subjected to technical review.
   - All Biology/DNA Detail cases and database samples will be subjected to technical review by current or formerly qualified analysts and performed in accordance with the Quality Assurance Standards issued by the FBI.
   - All Seized Drugs, Trace Materials and Toxicology cases will be subjected to technical review.
   - All Firearms cases where verifications are performed or which involve proximity analysis (distance determinations) will be subjected to technical review. All Firearms cases will be subjected to technical review.
   - All Latent Print cases where verifications are performed will be subjected to technical review. Refer to the Latent Print Technical Manual for verification procedures.

4. See section for **Technical Review of Testimony** below.
5. Utilize a technical review checklist prepared by each Detail/Unit. These checklists can be found in Qualtrax or in LIMS.

In the Biology/DNA Detail, the technical review checklist will include all of the requirements set forth in the Quality Assurance Standards issued by the FBI.
The technical review documentation will be maintained as a part of the case record.

6. At a minimum include a review of the Formal Laboratory Reports and all associated case documentation to ensure:
   - Accuracy of the formal report
   - The results, opinions and/or interpretations in the formal report are accurate, properly qualified and supported by the technical record
   - The formal report contains all required information

7. Ensure conformance with proper technical procedures and applicable Laboratory policies and procedures.

8. Allow the reviewer to request changes in the notes and/or report and/or additional work. Methods for dealing with any noted discrepancies are detailed below in 7.7.1.2 – Conflict Resolution of Technical and Administrative Review.

Technical Review of Testimony

Presenting testimony regarding scientific examinations conducted by members of the Forensic Laboratory is one of the most important functions of the Forensic Scientist. Laboratory members will at all times present testimony that is truthful and based on the analysis at hand. At no time will a member testify as an expert to subjects beyond the scope of their experience and expertise.

The technical review process shall ensure that:

1. The testimony will be reviewed by an individual that has been competency tested in the task(s) that the review is encompassing.
2. The review of testimony must be performed by someone other than the person providing the testimony.
3. The review applies to technical records review only. See technical record review heading above.
4. Technical review will be conducted on at least (1) one testimony for every analyst who testifies in a calendar year.

Testimony review may not be necessary in certain situations. For example, an analyst may not render expert testimony during the course of a year. In these situations, the Quality Manager or designee will annotate the witness critique records, indicating that the affected employee is exempt from testimony review.

5. The technical review of testimony will be performed by one of the following methods:
   - Observation of testimony (preferred method)
   - Review of transcripts of the testimony
   - Review of video of the testimony
Review of testimony will be recorded on an *Technical Testimony Review Form* and should be completed during or shortly after the testimony has been rendered. The *Expert Witness Critique Forms* are located in Qualtrax separately for each Detail/Unit.

6. The technical review of testimony will ensure the results, opinions and interpretations presented during testimony are accurate, properly qualified and supported by the technical record. This will be documented on the *Technical Testimony Review Form*.

7. The technical review of testimony will also ensure the testimony conform to test methods and applicable policies and procedures. This will be documented on the *Technical Testimony Review Form*.

8. Any comments, feedback, or deficiencies mentioned on a critique will be addressed by the Laboratory Director or the appropriate Forensic Laboratory Manager/Technical Leader/Forensic Laboratory Supervisor and annotated utilizing the Witness Critiques Workflow in Qualtrax.

If a deficiency is noted, the Laboratory Director or appropriate Forensic Laboratory Manager/Technical Leader/Forensic Laboratory Supervisor will meet with the analyst to discuss the deficiency and planned course of action. The planned course of remedial action intended to resolve any noted deficiency(ies) will be addressed in the Witness Critiques Workflow. The course of action will vary depending on the deficiency and will be determined by the Laboratory Director or appropriate Forensic Laboratory Manager/Technical Leader/Forensic Laboratory Supervisor.

Completed testimony review documentation will be uploaded into and maintained in Qualtrax. The Witness Critique Workflow will also be used to track the monitoring of testimony.

### 7.7.1.1 Administrative Review of Technical Records

Forensic Laboratory Managers, Forensic Laboratory Supervisors or a Forensic Scientist/designee will perform administrative review on Formal Laboratory Reports/Declarations issued by their respective Details/Units. Administrative reviews shall be conducted on all cases. Administrative reviews shall not be conducted by the author(s) of the report. The administrative review, which is conducted prior to the release of the report, is an integral part of ensuring a quality product. The administrative review will be documented on an Administrative Review checklist or in LIMS.

**Administrative Review Checklist**

The administrative review will address, but is not limited to, the following:

- That the event numbers, Lab Number, agency name, offense and subject names are consistent between formal report, case notes, and charts, graphs, etc. Subject names and offense may differ on items not produced by the
Forensic Laboratory (evidence versus request); therefore, these details only need to be consistent on all items generated by Laboratory personnel. The differences observed may be noted in the case record.

- When applicable, information transferred from a paper request (found in the Lab Request of the Case Record within the RFLE tab) will be compared to the data entered in the appropriate fields.
- That notes are understandable and relevant dates are reflected when applicable.
- That evidence identifiers such as item number, and results are properly transcribed from notes to report especially for disciplines that complete work or notes outside of LIMS.
- That nomenclature is appropriate, and conclusions and report formats are understandable and consistent with Laboratory policy.
- That all administrative requirements defined in 7.5 – Technical Records are properly met.
- That all key information is included in the report.
- That grammar and spelling are correct.
- That the report is completed.
- That the files within the Unit Record Object Repository properly reflect the Lab Number.

After the administrative review is complete and satisfactory, the administrative reviewer will complete the Admin Review list and release (publish) the report for distribution.

In the Biology/DNA Detail all cases will undergo an administrative review performed in accordance with the Quality Assurance Standards issued by the FBI prior to dissemination.

The reviewer may request changes in the report or request additional work to clarify an issue.

### 7.7.1.2 Conflict Resolution of Technical and Administrative Review

The case review processes provide an additional level of checking for any technical and administrative shortcomings or errors prior to the issuance of results. Occasionally, situations of opposing viewpoints, uncertainty, or dissenting opinion will exist between reviewers and analysts. In these situations, the guidelines listed below will be followed.

**Administrative Problems**

Administrative problems consist of instances of a clerical nature (name, event number, requesting officer, etc.) or transcription errors, insufficient documentation and/or faulty review procedures. If one of these problems is noted during administrative or technical review, the report and associated notes will be returned to the analyst for research and/or correction.
If the reviewer feels a grammatical error exists in a Formal Laboratory Report or if the wording of a report does not seem adequate or understandable, the reviewer will confer with the analyst first. If agreement is reached between the reviewer and analyst, changes may be made in the report. In situations involving the Forensic Laboratory Manager/Supervisor as reviewer, the Laboratory Director or another Forensic Laboratory Manager/Supervisor may act as a “third opinion.” In the Biology/DNA Detail, the Technical Leader has the ultimate authority over scientific discrepancies.

**Technical, Analytical or Interpretive Problems**

During technical review, if the reviewing analyst does not agree with the case analyst on a result, opinion and/or interpretation (including statistics), it must be documented in the comment/note section of the Technical Review list prior to discussing the results with the case analyst.

If the case analyst concurs with the reviewing analyst, the case analyst can simply document that they agree with the reviewing analyst and update the notes and/or report with the revised result, opinion and/or interpretation and date. This documentation can either be placed in the notes or it can be documented in the comments section of the Technical Review list.

If the case analyst does not concur and a discussion is needed to arrive at a result, opinion and/or interpretation, the Forensic Laboratory Manager/Supervisor will be notified. In the Biology/DNA Detail, the DNA Technical Leader will be notified. The Forensic Laboratory Manager/Supervisor/DNA Technical Leader will determine the appropriate course of action. If resolution cannot be reached, it will be brought to the attention of the Laboratory Director. In the Biology/DNA Detail, the Technical Leader has the ultimate authority over scientific discrepancies.

If an actual error in result, opinion and/or interpretation is noted which may indicate a deficiency in the training or abilities of the analyst, the report will be submitted to the respective Forensic Laboratory Manager/Supervisor/DNA Technical Leader if the problem was noted during technical review or to the Laboratory Director if the error was noted during administrative review. In the Biology/DNA Detail, the Technical Leader will be notified of such issues. The Forensic Laboratory Manager/Supervisor/DNA Technical Leader will evaluate the situation and determine the needed course of action.

### 7.7.2 Proficiency Testing Program

Regular participation in an external proficiency testing program is an important part of the Forensic Laboratory’s Quality Assurance Program. External proficiency testing is an important part of monitoring performance by comparison of results from other forensic science providers. Proficiency tests provide the Laboratory with a means for continuing self-evaluation in the areas of forensic science and are therefore considered a part of the employee’s personnel records. It provides management with a means for identifying problem areas of analysis and provides a means to monitor the technical skills of the analyst.
7.7.2.1 External Proficiency Tests
The process for monitoring performance by comparison with results from other forensic service providers shall at a minimum:

- The Forensic Laboratory shall successfully complete at least one external proficiency test from an approved provider, if an approved provider is available, for each discipline in which application for accreditation has been made. Established disciplines in the Forensic Laboratory that require completion of a proficiency test are:
  - Firearms
  - Fire Debris and Explosives
  - Friction Ridge
  - Trace Materials
  - Seized Drugs
  - Toxicology
  - Biology

- The Forensic Laboratory shall successfully complete, per calendar year, at least one external proficiency test for each discipline (see above) in which accredited services are provided, with authorized release of the test results to ANAB from the test provider for each location on the scope of accreditation. The locations on the scope of accreditation are:
  - Main Laboratory
  - DNA Laboratory

NOTE: Fore proficiency tests taken at the end of one calendar year, evaluation of these tests can occur in the subsequent calendar year.

7.7.3 Monitoring the Validity of Results
Monitoring of Laboratory activities is recorded in a variety of ways depending on the Detail/Unit in which it is compiled. Data collected as a result of monitoring described in 7.7.1 a) – l) will be analyzed. This data will be used to improve Laboratory performance. Documentation and appropriate actions as a result of data being outside defined criteria is detailed throughout this manual and/or in respective Detail/Unit manuals.

7.7.4 Proficiency Test Participation
Analysts shall successfully complete at least one internal or external proficiency test per calendar year in each discipline on the scope of accreditation in which they routinely perform casework.

Technical support staff working in the Administrative AFIS program will be required to successfully complete a proficiency test in Individual Characteristic Database (AFIS) annually. Technical support staff working in the NIBIN program will be required to successfully complete a proficiency test in Individual Characteristic Database (NIBIN) annually. Other types of examinations not listed above may be proficiency tested if a need arises.
The Body Fluid Identification category of testing proficiency test may be conducted concurrently with the DNA STR category of testing proficiency test.

Note: Internal proficiency tests may include internally created practical tests, previously worked or older unworked commercially provided practical tests (provided the answers cannot be traced (see 7.7.5 Monitoring Proficiency Test Performance), testing reanalysis and when appropriate, observation based tests.

Observation based proficiency tests
The following Details/Units utilizes observation based proficiency tests:
- Biology/DNA Detail – Collection
- Firearms Detail – Collection and Determination of Functionality

The proficiency test will be observed by an authorized person at the discretion of the Detail Manager and/or Quality Manager who has been authorized based on training, casework experience and the knowledge of the technical procedures detailed in the Detail/Unit Technical Manuals.

The creation of the mock evidence samples will be performed by an authorized person at the discretion of the Detail Manager and/or Quality Manager who has been authorized based on training, casework experience and the knowledge of the technical procedures detailed in the Detail/Unit Technical Manuals.

Forensic Laboratory Managers/Supervisors/DNA Technical Leader are responsible for assigning the observational based proficiency tests to the members in their Details/Units.

7.7.5 Monitoring Proficiency Test Performance
The process for monitoring the performance of proficiency tests to include observation based tests is documented below.

a) The Forensic Laboratory shall not use past proficiency test samples for in-house proficiency tests, unless the following requirements are met. The proficiency test results are expected to not be known or readily available to the test taker. All past external proficiency test results are available online, therefore, readily available to the test taker. Prior to re-purposing, any unused external proficiency test samples must be rendered to be untraceable, to be known only by the test creator and appropriate management or quality personnel.

More than one analyst in a Detail/Unit may be assigned the same proficiency test. Results of proficiency tests will be held confidential by Forensic Laboratory members. Discussions regarding proficiency tests and results are prohibited unless prior approval of the Director or Quality Manager is obtained. Revealing test information defeats the purpose of the testing program.
b) The methods from the Detail/Unit Technical Manuals shall be used when participating in observational, internal and external proficiency tests.

c) Proficiency test records are maintained by the Quality Manager/designee, in LIMS and/or in Qualtrax. See 7.7.8 for records maintained.

d) Successful completion of a proficiency test is defined as either obtaining the correct response(s) or completing corrective actions pursuant to Laboratory policy. See Detail/Unit Technical Manuals for further criteria. If the criteria is not detailed in the Technical Manuals, the predefined criteria must be outlined in the proficiency test answer key or related documents prior to test assignment.

e) Internally created proficiency tests shall be quality control checked to verify the validity of the test prior to issuing the test. This could be done by:
   - creating an extra test to complete utilizing the same items and methods (internal proficiency tests)
   - creating an answer key that identifies all items of evidence that must be collected and any further testing requirements as it pertains to those items (observation based tests)

   See Detail/Unit Technical Manual or Training Manual for mechanism used.

f) This is not applicable. The Forensic Laboratory does not perform calibrations at this time.

7.7.6 Proficiency Test Plan

The Forensic Laboratory shall utilize a proficiency test plan that ensures:

a) At least one (1) external proficiency test will be completed each calendar year in the disciplines within each location on the scope of accreditation and all technical personnel complete at least one (1) internal or external proficiency test per calendar year in each discipline in which the individual conducts testing.

b) The inclusion of a representative sample of the components/methods and key equipment/technologies within each discipline listed on the scope of accreditation. This information can be found on the Scope of Accreditation located in Qualtrax.

The following components of testing within each discipline are:

- Firearms
  - Collection (DNA Swabbing)
  - Physical Comparison
  - Determination of Functionality
  - Length Measurement
  - Trigger Pull Force Measurement
  - Distance Determination
  - Serial Number Restoration
  - NIBIN Entry and Reporting

- Fire Debris and Explosives
  - Qualitative Analysis

- Latent Prints (Friction Ridge)
• Collection
• Enhancement
• Physical Comparisons
• AFIS
• Trace Materials
  o Physical Determination
  o Chemical Determination
  o Physical/Chemical Comparison
• Seized Drugs
  o Collection (Clan Lab Response)
  o Qualitative Analysis
• Toxicology
  o Qualitative Determination
  o Quantitative Measurement
• Biology
  o Collection
  o Body Fluid Identification
  o DNA-STR
  o Individual Characteristics Database

Note: Refer to the Quality Assurance Standards for Forensic DNA Testing Laboratories and the Quality Assurance Standards for DNA Databasing Laboratories for further information related to proficiency test requirements for the Biology/DNA Details/Units.

For each category of testing within a discipline that is not routinely performed, analysts will successfully complete a proficiency test at least once during each four-year accreditation cycle. Component of testing within our Scope of Accreditation that require completion of a proficiency test biennially are:

• Firearms (Forensic Scientists)
  o Serial Number Restoration
  o Collection (DNA Swabbing)**
  o Determination of Functionality
  o Length Measurement
  o Trigger Pull Force Measurement
  o NIBIN Entry and Reporting**
• Latent Prints (Friction Ridge)
  o Collection**
  o Enhancement
  o AFIS
• Seized Drugs
  o Collection (Clan Lab Response)
• Trace Materials
  o Physical Determination
  o Chemical Determination
  o Physical/Chemical Comparison
• Biology
**Collection**

**Note:** Forensic Laboratory technical support staff performing work in the Latent Print Processing and AFIS category of testing are required to successfully complete a proficiency test in Latent Print Processing annually. Forensic Laboratory Technologists performing collection on DNA evidence are required to successfully complete a proficiency test in DNA Collection annually. Members of the NIBIN Unit performing collection on firearm evidence, test fire of firearms and entry into NIBIN are required to successfully complete a proficiency test in Firearm Collection, Determination of Functionality and NIBIN annually.

7.7.7 External Proficiency Test Provider Requirements

The Forensic Laboratory shall:

a) Where available and appropriate for the testing conducted, use a proficiency test provider that is accredited to ISO/IEC 17043 by an accreditation body that is a signatory to the APLAC MRA or IAAC MLA and has the applicable proficiency test(s) on its scope of accreditation.

b) Where not available or not appropriate for the testing conducted, gain approval from ANAB for alternative means by which the laboratory’s performance can be assessed.

c) External proficiency test results shall be submitted to the external test provider on or before the agreed upon due date.

7.7.8 Proficiency Test Records

The Forensic Laboratory shall maintain records for all proficiency testing conducted. The maintained records include:

a) The disciplines tested. This is tracked in the Proficiency Test Workflow.

b) How samples were obtained or created (Manufacturer’s Information). This is tracked in the Proficiency Test Workflow.

b) Expected proficiency test results. This is located in the proficiency test packet in LIMS and/or Qualtrax.

c) Location where the proficiency test was taken. This is tracked in the Proficiency Test Workflow.

d) Records submitted to an external proficiency test provider. This is located in the proficiency test packet in LIMS and/or Qualtrax.

f) Evaluation of Proficiency Test Results

- **Observation Based Proficiency Tests**
  An authorized person will evaluate the test using the criterias listed in 7.7.5 d) and the Detail/Unit Technical Manual. They will be evaluating the results for a determination of pass or fail and any issues noted will be documented and rectified. Documentation is located in Qualtrax and/or LIMS.

- **External/Internal Proficiency Tests**
  The Quality Manager/designee will assess the results upon receipt from the test provider. The assessment will include the determination if any corrective action or additional training is necessary.
The Quality Manager or appropriate Forensic Laboratory Manager/Supervisor/DNA Technical Leader will review the Laboratory’s response in comparison to the proficiency test manufacturer’s expected or average results, and those results reported by the test respondents. A notation of the status of results (satisfactory, unsatisfactory, etc.) will be made in the Proficiency Test Workflow. It is the responsibility of the Quality Manager/Forensic Laboratory Manager/Supervisor/DNA Technical Leader to ensure that conflicting results are acknowledged and any corrective action is documented.

Discrepancies in results will be evaluated on an individual test basis. Reviews of the tests will conform to the technical and administrative capabilities associated with the casework performed by the Laboratory. Therefore, there may be instances where the proficiency test results and current testing capabilities of the Laboratory do not mesh. It is recognized that samples provided by external sources may be prepared to present novel analyses or research situations and an educational challenge to the Laboratory. Special consideration will be given to these unusual situations when reviewing results. Discrepancies not found to be significant do not invalidate a proficiency test.

In the Biology/DNA Detail, the Technical Leader will determine whether an error in interpretation or typing will be classified as an analytical error. If inconclusive results are obtained, the Technical Leader will document if they are in compliance with Laboratory guidelines.

Assessment results will be routed to the appropriate Forensic Laboratory Manager/Forensic Laboratory Supervisor and analyst for review.

- Proficiency tests performed by the Biology/DNA Detail will also be routed to the Technical Leader and Forensic Database Administrator (CODIS) for documented review. All proficiency tests assigned and performed by the Biology/DNA Detail will be in compliance with the Quality Assurance Standards issued by the FBI. Refer to the Biology/DNA Procedures/Quality Manual for detailed information regarding proficiency tests.

**g) Proficiency Test Feedback**

Feedback for all proficiency tests will be provided utilizing the Proficiency Test Summary form. This form contains a section to notate the status of the results and a section for comments. The completed form is signed by the appropriate Forensic Laboratory Manager, Forensic Laboratory Supervisor (if applicable), DNA Technical Leader (for Biology/DNA Detail), the analyst who completed the proficiency test and the Quality Manager. The completed form is uploaded and maintained in the proficiency test packet in LIMS and/or Qualtrax.
The Forensic Laboratory Proficiency Test Workflow in Qualtrax is utilized by the Quality Manager/designee to track the required information. When a proficiency test is received, the Quality Manager/designee will initiate the Proficiency Test Workflow.

h) Test set identifier (e.g., CTS 10-534). This is tracked in the Proficiency Test Workflow.

i) Identity of the person taking the test. This is tracked in the Proficiency Test Workflow.

j) Date of analysis and completion. This is tracked in the Proficiency Test Workflow and in LIMS.

k) Originals or copies of all data and notes supporting the conclusions. This is located in Qualtrax and/or LIMS.

l) Details of corrective actions taken (when necessary).

Corrective Action Associated with Proficiency Tests

Proficiency test taking is not normally subject to disciplinary action as the purpose is self-assessment, however exceptions may apply:

- If a proficiency test is performed in error in a purposeful fashion to avoid performing a particular type of casework, disciplinary action will be pursued.
- Repeated inability to turn in proficiency tests in a timely manner will be dealt with through the progressive discipline guidelines established in the collective bargaining process.
- Repeated inability to successfully complete proficiency tests as compared with national respondents will be dealt with as a performance issue.
LVMPD FORENSIC LABORATORY QUALITY MANUAL

7.8 Title: REPORTING OF RESULTS

7.8.1 General
The results of each test carried out by the Forensic Laboratory shall be documented in a report.

7.8.1.1 Authorization and Review of Results
The authorizer of results is the analyst and the technical reviewer. No report will be issued prior to the completion of technical and/or administrative review. Reports shall be signed by the analyst assigned to write the report. The analyst signature constitutes an authorization to release the report.

7.8.1.1.1 The analyst will ensure that the case record is complete before releasing the case record for technical and/or administrative review.

The technical reviewer shall complete and document the review of all relevant pages of examination documentation in the case record by documenting the review on a checklist (e.g. Technical Review form) or some other form.

7.8.1.2 The results of each test carried out by the Laboratory shall be reported accurately, clearly, unambiguously and objectively in a Laboratory report. The case record shall include all information necessary for the interpretation of the results. Reports should be “user friendly” without sacrificing accuracy and completeness. A Formal Laboratory report may not be necessary in certain circumstances. This is addressed below in 7.8.1.2.2. No Laboratory report will be issued prior to the completion of technical and/or administrative review. All issued reports are retained as technical records in LIMS.

7.8.1.2.1 Results shall be provided in a written report or through electronic access. See above in 7.8.1 and 4.2.1 Dissemination of Forensic Laboratory Reports.

7.8.1.2.2 Reporting of Results
Below is the procedure for reporting of results:

a) All items received in the laboratory by the analyst/technologist, including items not tested, items collected or created from the evidence that were or could be tested (e.g. DNA swab) and for all testing performed (partial and complete) will be documented on a Formal Laboratory Report. Items examined are documented in a table located at the top of the report. Items not examined for the purpose of the report are documented in a table located at the bottom of the report.

Note: Toxicology Detail reports do not require tables summarizing the evidence items received or not examined at this time.
Instances When a Formal Laboratory Report is Not Necessary

The creation and dissemination of a formal laboratory report may not be necessary in certain circumstances. In these circumstances documentation in the form of a notation on the request, a(n) memo/email, or an Officer’s Report saved in the Object Repository in LIMS and indicating the reason may suffice. The following lists some of the circumstances in which a Formal Laboratory Report may not be produced:

- The request for analysis was cancelled by the requestor prior to the analysis being performed (closed without analysis).
- No evidence is booked at the vault under the submitted event/case number.
- The evidence was not properly preserved for the type of analysis requested (e.g., latent print request on evidence that was not placed in a package).
- The evidence was already processed (e.g., latent print request on evidence that was processed by the CSI section).
- Render safe requests – Firearms cases involving rendering firearms safe/confirming firearms are not loaded.
- When drug samples are retained for Department drug related operations, then documentation in LIMS will suffice.
- An analyst is handling an item to collect a specific kind of evidence (such as fibers or hairs), repackaging an item for safe keeping or preservation or to view an item for investigatory purposes.

If an Officer’s Report is prepared, the report should always be forwarded to the Record’s Bureau. The Officer’s Report or memo should also be sent to the primary detective.

b) When associations are made, the significance of the association shall be communicated clearly and qualified properly in the report. See Detail/Unit Technical Manuals for further details.

- Example: The paint found in item 1 is similar to the paint in item 2 in color, layer structure and chemical composition. Therefore, item 1 may share a common origin with item 2 or any other paint with the same distinct characteristics.

When comparative analysis examinations result in the elimination of an individual or object, the report shall clearly communicate the elimination. See Detail/Unit Technical Manuals for further details.

- Example: The evidence cartridges, cartridge cases and bullets were examined and microscopically compared to the test fired cartridge cases and bullets with the following results: The .40 S&W cartridge cases were not fired by either pistol.

c) When no definitive conclusion can be reached, the report shall clearly communicate the reason(s). See Detail/Unit Technical Manuals for further details regarding reporting inconclusive results.
Example: John Doe could not be excluded. Detail was found in agreement with the right middle finger of John Doe however, the quantity of detail in the latent print was insufficient to render a definitive conclusion.

d) When an initial database entry (e.g., CODIS, AFIS, NIBIN) is performed, the initial database entry shall be communicated clearly in the report. See Detail/Unit Technical Manuals for further details.

When an association resulting from a database search (e.g., CODIS, AFIS, NIBIN) is developed, this association shall be communicated clearly in the report. See Detail/Unit Technical Manuals for further details.

7.8.1.2.3 Report Results of Calibration

This is not applicable. The Forensic Laboratory does not perform calibrations.

7.8.1.3 Simplified Reports

When applicable, the content for simplified reports or an annex to the report will be documented in a Formal Laboratory Report or email format. See Detail/Unit Technical Manuals for further details.

7.8.1.3.1 When results are reported in a simplified way, the agreement with the requestor shall specify which information in 7.8.2 to 7.8.7 of ISO/IEC 17025:2017 will not be included in a written report or through electronic access.

7.8.2 Common Requirements for Reports

7.8.2.1 Report Requirements

Formal reports shall include at least the following information, unless a valid reason exists for not doing so:

a) **Title** – The following title is located in the header of the formal reports: Report of Examination followed by the name of the Detail/Unit issuing the report.

b) **Forensic Laboratory Name and Address** – The name and the address of the Forensic Laboratory is located on the bottom of the formal report.

c) See 7.8.2 b).

d) **Unique Identification** – The Lab Number is used as the unique identification of the report. If the report consists of more than one page, the Lab number will appear on each page and the last page will be documented by the wording “-END OF REPORT-”

e) **Name and Agency (Address) of the Requestor** – The name of the agency and the name of the person requesting the analysis shall be included in the header of the report. The addresses of the outside jurisdiction customers are located in LIMS. LVMPD requests contain the name and Bureau of the requestor. The Bureau is utilized as the address for LVMPD requests. The requests are contained in LIMS.
f) **Identification of the Method Used** – Identification of the analytical method(s) used shall be documented on the Formal Laboratory Report. See Detail/Unit Technical Manuals for further details.

g) **Description of Evidence** – The description and unambiguous identification of the items of evidence tested shall be documented on the formal report. The condition of the evidence, if needed (i.e. noted issues), will be documented in the case record in LIMS.

h) **Date of Receipt and Date of Sampling** – The date of receipt of the test item(s), and the date of sampling, where this is critical to the validity and application of the results. The date of receipt of the evidence is documented in ACE and the date(s) of sampling are recorded in the case record in LIMS.

i) **Date of Performance of the Laboratory Activities** – The date(s) of performance of the laboratory activity shall be documented on the Formal Laboratory Report. This can be reported as a date range or specific dates. The start date and end date of testing are defined in the Detail/Unit Technical Manuals.

j) **Date of Issue of the Report** – The date of issue of the report is the distribution date located at the top right corner of the report.

k) **Sampling Plan** - If sampling occurs, the report will clearly state what statistical sampling plan was used. Sampling plans and requirements are located in the Detail/Unit Technical Manuals.

l) **Results Relating to Items Tested** – If applicable, a statement to the effect that the results relate only to the items tested will be included on the formal report.

m) **Results** – Results, opinions, and interpretations related to the analysis shall be clearly annotated on the formal report. Where appropriate, units of measurement shall be included with the results.

n) **Deviations** – A statement explaining any deviation from, addition to, or exclusion from Detail/Unit technical procedures including any adverse environmental conditions that may have impacted the examination are located in the body of the report.

o) **Person Authorizing the Report** – Reports shall be electronically signed by the analyst(s) authorizing the report. The signature is electronically embedded onto the formal report when the report is published/distributed by LIMS. In Toxicology, confirmation reports will contain the electronic signature of each analyst that performed a confirmation analysis for that Lab Number. If a formal report contains more than one signature (i.e., Toxicology confirmation reports), the report will be generated by the last analyst to work on the case. The printed name of the analyst as well as their title will accompany their signature.

p) **Results from External Providers** – When a Laboratory report contains results of tests performed by subcontractors, these results shall be clearly identified. The subcontractor shall report the results in writing.

Subcontractor’s reports will be uploaded into the Unit Record Object Repository under the appropriate Lab Number. The reports will be approved by a member of the appropriate Detail/Unit. A copy of the report will be
disseminated to the requestor and be provided to the appropriate Section of the LVMPD for uploading into OnBase.

The Forensic Laboratory does not subcontract calibrations.

7.8.2.2 Reporting Information from a Customer (cross out external providers as this is already included above) External Providers

Any data or information provided by a customer that may affect the validity of the results shall be clearly identified in the Forensic Laboratory formal report.

For example, if the University of North Texas (UNT) provides DNA results, the LVMPD compares the results to data generated by the LVMPD. UNT’s results will be clearly delineated in the LVMPD report.

7.8.3 Specific Requirements for Test Reports

7.8.3.1 Additional Requirements

The information required in 7.8.3.1 shall be contained within the case record in LIMS. When necessary for the interpretation of results, the following shall be contained within the report:

a) **Information on Specific Conditions** - A statement explaining any deviation from, addition to, or exclusion from the test method including any adverse Laboratory environmental conditions that may have impacted the testing. See Detail/Unit Technical Manuals for further information.

b) **Statement of Conformance** – This is not applicable to the Forensic Laboratory.

c) **Measurement Uncertainty** - A statement on the estimated uncertainty of measurement shall be included in the formal report when it is relevant to the validity or application of the test results, when a requestor’s instruction so requires, or when the uncertainty affects compliance to a specification limit.

1) When reporting the uncertainty of measurement:

   o A statement on the estimated uncertainty of measurement shall be included on the formal report. In the Firearms Detail the expanded uncertainty of measurement will be reported when it impacts evaluation of a statute, legal requirement or upon requestor request.

   o The reported uncertainty statement shall include the measured quantity value, y, along with the associated expanded uncertainty, U, and the coverage probability.

   o The uncertainty statement shall be reported as y +/- U where U is consistent with the units y.

   o The rounded expanded uncertainty shall be reported to at the most two significant digits, unless there is a documented rationale for reporting additional significant digits.

   o The measurement result and the rounded expanded uncertainty shall be reported to the same level of significance.
The specific measuring device or instrument used for a reported result must have been evaluated in the estimation uncertainty for that test method.

d) **Results, Opinions and Interpretation** - A "Results, Opinions, and Interpretations" header is used in the formal laboratory report as the report may contain the results, opinions, and interpretations of the analyst whose signature appears on the report.

e) **Additional Information** - Additional information required by specific methods will be located in the case record. Any additional information specifically required by the requestor will be handled on a case by case basis.

## 7.8.3.1.1 Statute Requiring Specific Reporting Format

If a regulatory body, statute, case law or other legal requirement specifies the format for the reporting of a test result or prohibits including measurement uncertainty in the test report, the laboratory shall:

a) Have objective evidence of the regulation, statute, case law or other legal requirement.

b) Have a policy and procedure for applying the estimated uncertainty at the laboratory’s established level of confidence prior to reporting the test results. See Detail/Unit Technical Manuals for further details.

## 7.8.3.2 Reports shall meet the requirements listed in 7.8.5 where necessary for the interpretation of test results.

## 7.8.4 Specific Requirements for Calibration Certificates (7.8.4.1 – 7.8.4.4)

The Forensic Laboratory only performs calibrations, including the issuance of calibration certificates, in Breath Alcohol. The Forensic Laboratory is not accredited in Breath Alcohol at this time.

## 7.8.5 Reporting Sampling – Specific Requirements

Sampling plans and requirements are located in the Detail/Unit Technical Manuals. Where necessary for the interpretation of results, the report shall include the following:

a) **Date** - The date of the sampling shall be documented in the case record in LIMS.

b) **Unique Identification** - The item sampled will be given a unique identifier. See 7.4.2 – Evidence Marking for further details. The unique identifier of the item of evidence is located on the formal report.

c) **Location of Sampling** - The case record in LIMS contains the notes, drawings, sketches and photographs that may have been generated during the course of examination.

d) **Reference to the Sampling Plan** - A reference to the sampling plan used shall be documented on the formal report (e.g., hypergeometric method).
   1) If a sampling plan is used, the report shall contain information about the sampling plan, including confidence levels and corresponding inference(s) regarding the population.
e) **Environmental Conditions** - Any adverse environmental conditions that may have affected the sampling/selection will be documented in the case record in LIMS.

f) **Additional Information** – Any information required to evaluate measurement uncertainty for subsequent testing will be listed on the report.

7.8.6 **Reporting Statements of Conformity (7.8.6.1 – 7.8.6.2)**
The Forensic Laboratory does not report statements of conformity.

7.8.7 **Reporting Opinions and Interpretations**

7.8.7.1 The Forensic Laboratory reports may contain opinions and interpretation. The basis upon which the opinions and interpretations have been made will be documented in the case record in LIMS. Opinions and interpretations will be rendered by personnel authorized to do. The authorization will be documented on the Authorization Memo.

7.8.7.2 Forensic laboratory results, opinions and interpretations will be stated in Laboratory Reports under the header “Results, Opinions, and Interpretations”. The opinions and interpretations expressed in the report are based on the results obtained.

The following definitions apply:

**Results**: a scientific testing outcome.

**Opinion**: a formal expression of reasoning or advice provided by an expert.

**Interpretation**: the act or result of giving an explanation of the scientific analysis.

7.8.7.3 When opinions and interpretations are directly communicated by dialogue with the requestor, the dialogue shall be documented in a Communication Log. This documented communication shall be retained with the case record in LIMS.

7.8.8 **Amendments to Reports**

7.8.8.1 **Amended Reports**
An amended report occurs when information on a report needs to be added/removed/amended, but no additional analyses are being performed and the amendment is not due to an error (e.g. a profile is being removed from CODIS).

7.8.8.2 **Corrected Reports**
Whenever errors in a Laboratory report are discovered after distribution, a corrected report will be issued. The word “Amended” will precede “Report of Examination”. The first line of the body, will briefly describe the correction. The corrected report is uniquely identified by the addition of the word “Amended”. Such amendments shall meet all the requirements of this document.

7.8.8.3 If the corrected report is superseding the original report(s), the corrected report shall contain a reference to the original(s) that it replaces.
7.8.8.4 Supplemental Reports

A supplemental analysis occurs when a Detail/Unit completes an analysis for a case and subsequently performs an additional analysis(es) for the same case. It is not considered a supplemental analysis if different Detail/Units are performing analyses for the same case.

In the Toxicology Detail, drug screen/confirmation analysis and blood alcohol analysis on the same case are not considered supplemental analyses.

When a supplemental report is issued, the word “Supplemental” will be placed in the right column of the header under the “Lab Case #:” If more than one supplemental is completed, those which follow the first one will be numbered in sequence beginning with “2”.

Each page of the formal supplemental report must be identified as being associated with the supplemental to avoid any confusion with the original analysis and report and/or other supplements which may follow. Formal Laboratory Reports consisting of multiple pages will be annotated with the supplement number and page number.

Supplemental reports shall meet all the same requirements as the original reports.

7.8.9 Formats of Reports

Formal reports will follow the style accepted and approved for the various Details/Units and results, opinions, and interpretations will follow any guidelines established in the Detail/Unit Technical Manuals. Reports should be “user friendly” without sacrificing accuracy and completeness.

The formal laboratory reports should include the following formatting unless otherwise noted:

1. A table listing the evidence item(s) received and examined at the top under header “The following evidence item(s) was(were) received and examined:”
   NOTE: The header should be updated to grammatically reflect how many items are listed in the table.
   a. The table should include:
      i. Lab Item #
      ii. Impound Package #
      iii. Impound Item #
      iv. Description
      v. Results, Opinions, and Interpretations (if applicable)

2. “Results, Opinions, and Interpretations” header listed under the evidence examined table.

3. A table listing the evidence item(s) received, but not examined for the purpose of this report after the body of the report under header “The following evidence item(s) was (were) received, but not examined for the purposes of this report:”
NOTE: The header should be updated to grammatically reflect how many items are listed in the table.
   a. The table should include:
      i. Lab Item # (if applicable)
      ii. Impound Package #
      iii. Impound Item #
      iv. Description
      v. Results, Opinions, and Interpretations

4. The following statements should be added above the signature line:
   a. The evidence is returned to secure storage.
   b. Date of testing (start and end date).
      NOTE: Toxicology Detail may list their date of testing with the corresponding test as it is not unusual for multiple confirmation tests to be performed by different individuals in the Detail.
   c. This report does not constitute the entire case file. The case file may be comprised of worksheets, images, analytical data and other documents.

Note: Toxicology Detail reports do not require tables summarizing the evidence items received or not examined at this time.

Formal reports in the Seized Drugs Unit and Toxicology Detail will typically be prepared in the declaration format in accordance with NRS 53.045 and/or NRS 50.320 (if a given specialty has guidelines for reporting established in any section of the NRS or applicable state administrative code, these will be incorporated into the report format.).
Below are examples of Report of Examination general formats:

Toxicology Blood Alcohol Report of Examination (Declaration format included)

| Las Vegas Metropolitan Police Department | Distribution Date: |
| Forensic Laboratory | LVMPD |
| Report of Examination | Location: Traffic |
| Blood Alcohol Testing | Primary Case #: XXXXXXXXXXXX |
| Subject(s): | Incident: DUI |
| | Requester: Traffic Sgt |
| | Lab Case #: XX-XXXXXX.1 |

I, Dana C Russell, do hereby declare:

That I am a Forensic Scientist II employed by the Las Vegas Metropolitan Police Department;

That I am a "chemist", as defined in Nevada Revised Statute 50.320, and my duties include the analysis of the blood of a person to determine the presence or quantification of alcohol;

That on August 20, 1997, I first qualified in the Eighth Judicial District Court of Clark County, Nevada, as an expert witness, to testify regarding the presence and amount of alcohol in a biological fluid;

That I received sealed evidence in the above case from a secure refrigerator in the LVMPD Forensic Laboratory, containing a sample of whole blood;

Results, Opinions, and Interpretations

That I completed an analysis on the sample from BLOOD/ALCOHOL KIT SUSPECT, SUSPECT and determined that the blood contained a concentration of ethanol of 0.201 g/100ml \( \pm \) 0.010 g/100ml of blood;

NOTE: Limit of detection is 0.010 g ethanol/100 ml of blood.

NOTE: A coverage probability of 98.73% was utilized in the calculation of uncertainty (+/-) for the measurement(s) reported above.

That I sealed the evidence and placed it in a secure refrigerator in the LVMPD Forensic Laboratory;

That the evidence was in my custody from the time I first obtained it until I resealed the sample, at which time it was in substantially the same condition as when I first obtained it;

That the dates of testing were 02/14/99 – 02/16/99;

That each blood kit received was a standard blood kit containing two gray top tubes of whole blood. Only one blood tube per kit was used for analysis;

That blood alcohol analysis is performed by Dual Column Headspace Gas Chromatography/Flame Ionization Detection (GC/FID);

That this report does not constitute the entire case file. The case file may be comprised of worksheets, images, analytical data and other documents.

I declare under penalty of perjury that the foregoing is true and correct.

Dana C Russell, #7503, D-ABFT-FA
Forensic Scientist II

- END OF REPORT -
Toxicology Drug Screening/Confirmation Report of Examination (Declaration format included)

| Las Vegas Metropolitan Police Department | Distribution Date:              |
| Forensic Laboratory                      | LVMPD                           |
| Report of Examination                    | Location: Traffic               |
| Drug Screening/Confirmation              | Primary Case #: XXXXXXXXXXXXXX |
| Subject(s): Suspect                      | Incident: DUI                   |
|                                            | Requester: Traffic Sgt          |
|                                            | Lab Case #: XX-XXXXXX.2          |

I, Stacy A. Whitefield, do hereby declare:

That I am a Forensic Scientist I employed by the Las Vegas Metropolitan Police Department:

That I am a ‘chemist’, as defined in Nevada Revised Statute 50.320, and my duties include the analysis of the blood of a person to determine the presence or quantification of a controlled substance, chemical or prohibited substance;

That on November 10, 2018, I first qualified in the Justice Court of Clark County, Nevada, as an expert witness, to testify regarding the presence and amount of controlled substances in a biological fluid;

That I received a sealed blood sample in the above case from a secure refrigerator in the LVMPD Forensic Laboratory;

That an Immunoassay Screen was completed by Natasha Ortiz #14070, on the sample BLOOD/ALCOHOL KIT SUSPECT, SUSPECT COLLECTED @ 124HRS and the following was determined:

**Immunoassay Screen - Dates of Testing: 12/10/18 – 12/11/18**

<table>
<thead>
<tr>
<th>Drug Class</th>
<th>Results, Opinions, and Interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amphetamines</td>
<td>Further analysis performed, see Confirmation Analysis below</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>Further analysis performed, see Confirmation Analysis below</td>
</tr>
<tr>
<td>Cannabinoids</td>
<td>Further analysis performed, see Confirmation Analysis below</td>
</tr>
<tr>
<td>Carisoprodil</td>
<td>None detected</td>
</tr>
<tr>
<td>Cocaine</td>
<td>None detected</td>
</tr>
<tr>
<td>Opiates</td>
<td>None detected</td>
</tr>
<tr>
<td>Opiates - Oxycodone</td>
<td>None detected</td>
</tr>
<tr>
<td>Phencyclidine (PCP)</td>
<td>None detected</td>
</tr>
</tbody>
</table>

That I completed a Confirmation Analysis on the sample BLOOD/ALCOHOL KIT SUSPECT, SUSPECT COLLECTED @ 124HRS and the following was determined:

**Confirmation Analysis – Dates of Testing: 02/04/19 – 2/11/19**

<table>
<thead>
<tr>
<th>Drug Class</th>
<th>Drug</th>
<th>Results, Opinions, and Interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannabinoids</td>
<td>11-Hydroxy-THC (Marijuana metabolite)</td>
<td>None detected</td>
</tr>
<tr>
<td>Cannabinoids</td>
<td>Delta-9-tetrahydrocannabinol</td>
<td>None detected</td>
</tr>
<tr>
<td>Cannabinoids</td>
<td>THC-Carboxylic Acid (Marijuana metabolite)</td>
<td>9.0 ng/mL +/- 1.2 ng/mL</td>
</tr>
</tbody>
</table>

NOTE: A coverage probability of approximately 95% was utilized in the calculation of uncertainty (±) for the measurement(s) reported above.

That I sealed the evidence and placed it in a secure refrigerator in the LVMPD Forensic Laboratory;

That the evidence was in my custody from the time I obtained it until I ressealed the sample, at which time it was in substantially the same condition as when I first obtained it.

I declare under penalty of perjury that the foregoing is true and correct.

Stacy A. Whitefield, #14498
Forensic Scientist II

I, Natasha Ortiz, do hereby declare:

That I am a Forensic Scientist II employed by the Las Vegas Metropolitan Police Department;

That I am a “chemist”, as defined in Nevada Revised Statute 50.320, and my duties include the analysis of the blood of a person to determine the presence or quantification of a controlled substance, chemical or prohibited substance;

That I received a sealed blood sample in the above case from a secure refrigerator in the LVMPD Forensic Laboratory;

That I completed a Confirmation Analysis on the sample BLOOD/ALCOHOL KIT SUSPECT, SUSPECT COLLECTED @ 1245HRS and the following was determined:

**Confirmation Analysis – Dates of Testing: 02/14/19 - 03/19/19**

<table>
<thead>
<tr>
<th>Drug Class</th>
<th>Drug</th>
<th>Results, Opinions, and Interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amphetamines</td>
<td>Amphetamine</td>
<td>none detected</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>Methyleneoxyamphetamine (MDA)</td>
<td>none detected</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>Methyleneoxyamphetamine (MDMA)</td>
<td>none detected</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>Methamphetamine</td>
<td>142.0 ng/mL +/- 18.2 ng/mL</td>
</tr>
</tbody>
</table>

NOTE: A coverage probability of approximately 95% was utilized in the calculation of uncertainty (+/-) for the measurement(s) reported above.

That I sealed the evidence and placed it in a secure refrigerator in the LVMPD Forensic Laboratory;

That the evidence was in my custody from the time I obtained it until I resealed the sample, at which time it was in substantially the same condition as when I first obtained it.

I declare under penalty of perjury that the foregoing is true and correct.

______________________________

Natasha Ortiz, #14979
Forensic Scientist II

I, Jennifer Rattanaprasit, do hereby declare:

That I am a Forensic Scientist II employed by the Las Vegas Metropolitan Police Department;

That I am a “chemist”, as defined in Nevada Revised Statute 50.320, and my duties include the analysis of the blood of a person to determine the presence or quantification of a controlled substance, chemical or prohibited substance;

That on May 13, 2014, I first qualified in the Justice Court of Clark County, Nevada, as an expert witness, to testify regarding the presence and amount of controlled substances in a biological fluid;

That I received a sealed blood sample in the above case from a secure refrigerator in the LVMPD Forensic Laboratory;
That I completed a Confirmation Analysis on the sample BLOOD/ALCOHOL KIT SUSPECT, SUSPECT COLLECTED @ 1246HRS and the following was determined:

**Confirmation Analysis – Dates of Testing: 02/27/19 – 03/14/19**

<table>
<thead>
<tr>
<th>Drug Class</th>
<th>Drug</th>
<th>Results, Opinions, and Interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzodiazepines</td>
<td>Clonazepam</td>
<td>none detected</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>Diazepam</td>
<td>none detected</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>Lorazepam</td>
<td>none detected</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>Nordazepam</td>
<td>none detected</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>Oxazepam</td>
<td>none detected</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>Temazepam</td>
<td>none detected</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>Triazolam</td>
<td>none detected</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>Alprazolam</td>
<td>70.3 ng/mL +/- 9.1 ng/mL</td>
</tr>
</tbody>
</table>

*NOTE: A coverage probability of approximately 95% was utilized in the calculation of uncertainty (±) for the measurement(s) reported above.*

That I sealed the evidence and placed it in a secure refrigerator in the LVMPD Forensic Laboratory.

That the evidence was in my custody from the time I obtained it until I released the sample, at which time it was in substantially the same condition as when I first obtained it;

That each blood kit received was a standard blood kit containing two gray top tubes of whole blood. Only one blood tube per kit was used for analysis;

That this report does not constitute the entire case file. The case file may be comprised of worksheets, images, analytical data and other documents.

I declare under penalty of perjury that the foregoing is true and correct.

Jennifer Rattanaprasit, #14691, D-ABFT-FT
Forensic Scientist II

---“None detected” indicates the drug/metabolite is not present above the reporting threshold.---

---Reporting thresholds as applicable:---

**Immunopassay Screen by Enzyme-Linked Immunosorbent Assay (ELISA):**

<table>
<thead>
<tr>
<th>Drug Class</th>
<th>Reporting Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amphetamines</td>
<td>20 ng/mL</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>25 ng/mL</td>
</tr>
<tr>
<td>Cannabinoids</td>
<td>10 ng/mL</td>
</tr>
<tr>
<td>Carisoprodol</td>
<td>500 ng/mL</td>
</tr>
<tr>
<td>Cocaine</td>
<td>50 ng/mL</td>
</tr>
<tr>
<td>Opiates</td>
<td>10 ng/mL</td>
</tr>
<tr>
<td>Opiates - Oxycodone</td>
<td>10 ng/mL</td>
</tr>
<tr>
<td>Phenocyclidine (PCP)</td>
<td>10 ng/mL</td>
</tr>
</tbody>
</table>

**Confirmation Analysis by Gas Chromatography/Mass Spectrometry (GC/MS):**

<table>
<thead>
<tr>
<th>Drug Class</th>
<th>Reporting Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amphetamines</td>
<td>100 ng/mL</td>
</tr>
<tr>
<td>Amphetamine</td>
<td>100 ng/mL</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>100 ng/mL</td>
</tr>
<tr>
<td>Methylenedioxyamphetamine (MDA)</td>
<td>100 ng/mL</td>
</tr>
<tr>
<td>Methylenedioxyethylamphetamine (MDMA)</td>
<td>100 ng/mL</td>
</tr>
</tbody>
</table>
Benzodiazepines
- Alprazolam: 25 ng/mL
- Clonazepam: 25 ng/mL
- Diazepam: 25 ng/mL
- Lorazepam: 25 ng/mL
- Oxazepam: 25 ng/mL
- Nordiazepam: 25 ng/mL
- Temazepam: 25 ng/mL
- Triazolam: 25 ng/mL

Cocaine
- Cocaine: 50 ng/mL
- Benzylecgonine: 50 ng/mL

Opiates
- Codeine: 50 ng/mL
- Morphine: 50 ng/mL
- Hydrocodone: 25 ng/mL
- Phencyclidine (PCP): 10 ng/mL

Sedatives
- Carisoprodol: 1000 ng/mL
- Meperbamate: 1000 ng/mL

**Confirmation Analysis by Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS):**

<table>
<thead>
<tr>
<th>Drug Class</th>
<th>Reporting Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannabinoids</td>
<td></td>
</tr>
<tr>
<td>Delta-9-tetrahydrocannabinol (THC)</td>
<td>1 ng/mL</td>
</tr>
<tr>
<td>11-Hydroxy-THC (Marijuana metabolite)</td>
<td>1 ng/mL</td>
</tr>
<tr>
<td>THC-Carboxylic Acid (Marijuana metabolite)</td>
<td>5 ng/mL</td>
</tr>
</tbody>
</table>

- END OF REPORT -
Seized Drugs Report of Examination (Declaration format included)

Las Vegas Metropolitan Police Department
Forensic Laboratory

Report of Examination

Seized Drugs

Subject(s): John Doe (Suspect)

I, Joe Brown, do hereby declare:

That I am a Forensic Scientist employed by the Las Vegas Metropolitan Police Department; That on July 2nd, 1989, I first qualified in the Eighth Judicial District Court of Clark County, Nevada as an expert witness, to testify regarding the identity of a controlled substance;

That the following evidence item(s) was/were received and examined:

That reference source comparison indicated the presence of:

<table>
<thead>
<tr>
<th>Lab Item #</th>
<th>Impound Pkg #</th>
<th>Impound Item #</th>
<th>Description</th>
<th>Results, Opinions, and Interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>075214 - 4</td>
<td>4</td>
<td>7 white tablets, net weight 5.366 g ±0.005 g</td>
<td>Quetiapine*</td>
</tr>
</tbody>
</table>

NOTE: This determination was made from a comparison of the physical characteristics of the above listed commercially manufactured preparation(s) to a literature reference source(s). Conclusive testing must be completed prior to trial.

That conclusive analysis identified:

<table>
<thead>
<tr>
<th>Lab Item #</th>
<th>Impound Pkg #</th>
<th>Impound Item #</th>
<th>Description</th>
<th>Results, Opinions, and Interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>075214 - 3</td>
<td>1</td>
<td>3 yellow tablets and tablet fragments, total net weight 1.022 g ±0.005 g</td>
<td>Aspirin**, 1 tablet analyzed, net weight 0.257 g ±0.005 g</td>
</tr>
<tr>
<td>2</td>
<td>075214 - 3</td>
<td>2</td>
<td>24 packages containing an off-white crystalline substance</td>
<td>Methamphetamine, net weight 20.624 g ± 1.20 g</td>
</tr>
</tbody>
</table>

NOTE: A coverage probability of approximately 95% was utilized in the calculation of uncertainty (+/-) for the measurement(s) reported above.

Analysis was only performed on a limited sampling of Lab Item 1 listed above. Further testing may be required prior to trial. A hypergeometric statistical sampling plan was used to determine the number of samples to be tested for Lab Item 2. This plan provides a 95% confidence level that at least 50% of the samples contain the substance(s) reported.

Lab Item 1 was tested using Gas Chromatography-Mass Spectrometry (GC-MS).
Lab Item 2 was tested using Fourier Transform Infrared Spectroscopy-Absorbed Total Reflectance (FTIR-ATR).

That the following evidence item(s) was/were received, but not examined for the purposes of this report:

<table>
<thead>
<tr>
<th>Lab Item #</th>
<th>Impound Pkg #</th>
<th>Impound Item #</th>
<th>Description</th>
<th>Results, Opinions, and Interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>----</td>
<td>075214 - 3</td>
<td>3</td>
<td>One field test check list</td>
<td>Received, not examined</td>
</tr>
</tbody>
</table>

*not a controlled substance, prescription required
**not a controlled substance

That the evidence is returned to secure storage; That the start date of testing is 11/6/2018 and the end date of testing is 11/23/2018; That sampling took place between the start and end dates of testing; That this report does not constitute the entire case file. The case file may be comprised of worksheets, images, analytical data and other documents.

I declare under penalty of perjury that the foregoing is true and correct.

Joe Brown, #0005184
Forensic Scientist

- END OF REPORT -

LVMPD Forensic Laboratory | 5605 W Badura Ave Suite 120 B | Las Vegas, NV 89118
Trace Materials Report of Examination

Las Vegas Metropolitan Police Department
Forensic Laboratory

Report of Examination

Trace Materials

Distribution Date: XXXXXXXXXXX
Agency: XXX
Location: XXX
Primary Case #: XXXXXXXXXXX
Additional Cases: XXXXXXXXX
Incident: XXX
Requester: XXX
Lab Case #: XXX

Subject(s): 

The following evidence items were received and examined.

<table>
<thead>
<tr>
<th>Lab Item #</th>
<th>Impound Pkg #</th>
<th>Impound Item #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>001234-1</td>
<td>1</td>
<td>Clothing</td>
</tr>
<tr>
<td>2</td>
<td>001234-2</td>
<td>1</td>
<td>One (1) shoe</td>
</tr>
</tbody>
</table>

Arson Analysis

Results, Opinions, and Interpretations:

All items were extracted using passive adsorption/elution and were analyzed using Gas Chromatography/Mass Spectrometry (GCMS).

Lab Item 1: No Ignitable Liquids were identified.

Lab Item 2: No Ignitable Liquids were identified.

Evidence was received on January 28, 2019
Start date of analysis is January 28, 2019
End date of testing is January 29, 2019

The evidence is returned to secure storage.

This report does not constitute the entire case file. The case file may be comprised of worksheets, images, analytical data and other documents.

Forensic Scientist

- END OF REPORT -
Firearms Report of Examination

Las Vegas Metropolitan Police Department
Forensic Laboratory

Report of Examination

Firearms

Subject(s): None Listed

The following evidence items were received and examined:

<table>
<thead>
<tr>
<th>Lab Item #</th>
<th>Impound Pkg #</th>
<th>Impound Item #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1*</td>
<td>013576-1</td>
<td>1</td>
<td>One &quot;WIN&quot; 9mm Luger cartridge case</td>
</tr>
<tr>
<td>2*</td>
<td>013576-1</td>
<td>2</td>
<td>One &quot;WIN&quot; 9mm Luger cartridge case</td>
</tr>
<tr>
<td>3*</td>
<td>013576-1</td>
<td>3</td>
<td>One &quot;WIN&quot; 9mm Luger cartridge case</td>
</tr>
<tr>
<td>4*</td>
<td>013576-2</td>
<td>4</td>
<td>One Walther model PPS, 8mm Luger semiautomatic pistol, serial number 14675</td>
</tr>
<tr>
<td>5*</td>
<td>013576-2</td>
<td>4B</td>
<td>One magazine (fits and functions in Lab item 4)</td>
</tr>
</tbody>
</table>

*Previously examined: see the laboratory report generated under this event number for further information.

Results, Opinions, and Interpretations:

Firearm and Magazine

The Walther pistol was examined, test fired and found to be operational with no noted malfunctions. This pistol has a barrel length of approximately 3 3/16 inches, an overall length of approximately 6 9/16 inches, and has a trigger pull of 6 1/4 pounds. The submitted magazine has a capacity of eight cartridges.

Comparisons

The evidence cartridge cases were examined and microscopically compared to test fired cartridge cases from the Walther pistol with the following results:

- The three cartridge cases were identified as having been fired in the Walther pistol.

NOTE: A coverage probability of approximately 95% was utilized in the calculation of uncertainty (+/- 3/4 pounds) for the trigger pull measurement reported above.

The following evidence items were received, but not examined for the purposes of this report:

<table>
<thead>
<tr>
<th>Lab Item #</th>
<th>Impound Pkg #</th>
<th>Impound Item #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>013576-2</td>
<td>4A</td>
<td>One cartridge Received, previously examined</td>
</tr>
<tr>
<td>-</td>
<td>013576-2</td>
<td>4B</td>
<td>Three cartridges Received, previously examined</td>
</tr>
</tbody>
</table>

The evidence is returned to secure storage.

Date of testing: 03/08/2019
End date of testing: 03/14/2019

This report does not constitute the entire case file. The case file may be comprised of worksheets, images, analytical data and other documents.

Kathy M Geil, #15850
Forensic Scientist

- END OF REPORT -
Latent Prints Report of Examination (Casework – Comparison/Processing)

Las Vegas Metropolitan Police Department
Forensic Laboratory

Report of Examination

Latent Prints

Subject(s):  CROOK, Ima (Suspect)

The following evidence items were received and examined:

Latent Development and Recovery

<table>
<thead>
<tr>
<th>Lab Item #</th>
<th>Impound Pkg #</th>
<th>Description</th>
<th>Results, Opinions, and Interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>005588 - 1</td>
<td>One quarter, silver metallic 100% match</td>
<td>Two latent prints (L1 &amp; L2) recovered from the end cap</td>
</tr>
<tr>
<td>Item 2</td>
<td>005588 - 2</td>
<td>Two sonic screwdrivers</td>
<td>No latent prints were developed</td>
</tr>
</tbody>
</table>

Lab Item 1 was tested using visual examination, cyanoacrylate fuming, and R6G dye staining.

Lab Item 2 was tested using visual examination, cyanoacrylate fuming, and R6G dye staining.

Latent Print Examination

<table>
<thead>
<tr>
<th>Lab Item #</th>
<th>Impound Pkg #</th>
<th>Card #</th>
<th>Description</th>
<th>Results, Opinions, and Interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 4</td>
<td>10531 - 1</td>
<td>---</td>
<td>2 Photos</td>
<td>---</td>
</tr>
<tr>
<td>L1</td>
<td>One photograph of the neutralizer end cap (Lab Item 1)</td>
<td>One suitable print(s) marked A. A - Identified to the left palm of CROOK, Ima.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L2</td>
<td>One photograph of the neutralizer end cap (Lab Item 1)</td>
<td>No suitable latent prints.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Exemplar Prints

<table>
<thead>
<tr>
<th>Name</th>
<th>ID#</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>LVMPD Archive finger and palm prints dated 7/6/2017</td>
</tr>
</tbody>
</table>

All suitable latent prints for comparison in the case have been identified. No further action is warranted.

The following evidence items were received, but not examined for the purposes of this report:

<table>
<thead>
<tr>
<th>Lab Item #</th>
<th>Impound Pkg #</th>
<th>Impound Item #</th>
<th>Description</th>
<th>Results, Opinions, and Interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>005588 - 3</td>
<td>5</td>
<td>One cloak of invisibility</td>
<td>Received, not examined</td>
</tr>
<tr>
<td>N/A</td>
<td>005588 - 3</td>
<td>6</td>
<td>One babel fish</td>
<td>Received, not examined</td>
</tr>
</tbody>
</table>

The evidence is returned to secure storage.

Technical Reviewer: Forensic Scientist Norma Cerven Pe699999

Start date of testing: 01/31/2017  
End date of testing: 02/05/2017

This report does not constitute the entire case file. The case file may be comprised of worksheets, images, analytical data and other documents.

Unless otherwise specified, any latent prints listed above were analyzed utilizing the applicable components of the ACE-V method.
Emmett Brown, #19631
Forensic Scientist

- END OF REPORT -
### Latent Prints Report of Examination (Administrative AFIS)

**Las Vegas Metropolitan Police Department**  
**Forensic Laboratory**  
**Report of Examination**  

**Latent Prints**

| Subject(s): | Kirk HAVERSACK (AFIS)  
|            | Bao HWANG (AFIS) |

The following evidence item(s) were received and examined.

#### Latent Print Examination

<table>
<thead>
<tr>
<th>Lab Item #</th>
<th>Impound Pkg #</th>
<th>Card #</th>
<th>Description</th>
<th>Results, Opinions and Interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>017536 - 1</td>
<td>---</td>
<td>Five (5) Lift(s)/Photo(s) Exemplars</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q2</td>
<td>One lift card from on the exterior frame of the east non-broken front entry door (LP2)</td>
<td>One suitable print(s) marked A: A - LVMPD database searched with negative results. FBI database searched with positive results. Identified to the left middle finger of HWANG, Bao.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q5</td>
<td>One lift card from on the south (open) desk drawer in the central office (LP6)</td>
<td>One suitable print(s) marked A: A - LVMPD database searched with negative results. FBI database searched with positive results. Identified to the right index finger of HAVERSACK, Kirk.</td>
</tr>
</tbody>
</table>

#### Exemplar Prints

<table>
<thead>
<tr>
<th>Name</th>
<th>ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAVERSACK Kirk</td>
<td>XXXXXX</td>
<td>FBI fingerprints downloaded from FBI on 3/19/2019</td>
</tr>
<tr>
<td>HWANG Bao</td>
<td>XXXXXX</td>
<td>FBI fingerprints downloaded from FBI on 3/20/2010</td>
</tr>
</tbody>
</table>

This examination is limited to latent prints selected for AFIS search. Additional latent prints are available and can be requested for comparison in this case. If further comparisons are needed to the above listed individuals or additional individuals, please submit a Forensic Lab Request through Property Connect. Be sure to include the names and identifiers of all individuals to be compared.

If any of the above latent prints were searched through the AFIS with negative results and registered in the database, they will be deleted from AFIS when the case reaches the statute of limitations.

The following evidence item(s) were received but not examined for the purposes of this report:

<table>
<thead>
<tr>
<th>Lab Item #</th>
<th>Impound Pkg #</th>
<th>Card #</th>
<th>Description</th>
<th>Results, Opinions and Interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>017536 - 1</td>
<td>---</td>
<td>3 lift cards</td>
<td>Received, not selected for AFIS search</td>
</tr>
<tr>
<td></td>
<td></td>
<td>---</td>
<td>Exemplars</td>
<td>Received, not examined</td>
</tr>
</tbody>
</table>

The evidence is returned to secure storage.

Technical Reviewer: Forensic Scientist Clark Kent #4864

Start date of testing: 3/18/2019  
End date of testing 3/19/2019

This report does not constitute the entire case file. The case file may be comprised of worksheets, images, analytical data and other documents. Unless otherwise specified, any latent prints listed above were analyzed utilizing the applicable components of the ACE-V method.

Linda Carter, #10001  
Forensic Scientist II
Biology/DNA Report of Examination

Las Vegas Metropolitan Police Department
Forensic Laboratory

Report of Examination

Biology/DNA

The following evidence item(s) were received and examined:

<table>
<thead>
<tr>
<th>Lab Item #</th>
<th>Impound Pkg #</th>
<th>Impound item #</th>
<th>Description</th>
<th>Results, Opinions, and Interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>SAK – Dermanlian</td>
<td>Sexual Assault Kit from Victim</td>
<td>Reference standard</td>
<td></td>
</tr>
<tr>
<td>Item 2</td>
<td></td>
<td>Breast swabs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 3</td>
<td></td>
<td>Oral swabs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 4</td>
<td></td>
<td>Fingernail swabs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 4.1</td>
<td></td>
<td>Right hand fingernails swab</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 4.2</td>
<td></td>
<td>Left hand fingernails swab</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 5</td>
<td></td>
<td>Miscellaneous swab from left flank</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 6</td>
<td></td>
<td>Neck swabs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 7</td>
<td>013572-2</td>
<td>4 Swabbing from firearm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 8</td>
<td>0288-1</td>
<td>1 Swabs from bathroom door handle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 9</td>
<td></td>
<td>2 Swabs from bathroom floor</td>
<td>Positive presumptive blood test(s)</td>
<td></td>
</tr>
</tbody>
</table>

Tests for blood, semen, and/or saliva are presumptive in nature and therefore provide an indication, but not confirmation, of the presence of a body fluid.

Results, Opinions, and Interpretations

Male DNA Screening

The following evidence items were screened to identify samples containing male-specific DNA:

Male DNA was detected in the following sample. This sample was selected for further testing:
- Lab Item 2: Breast swabs

Male DNA was detected in the following sample; however, these items were not selected for further testing at this time:
- Lab Item 5: Miscellaneous swab from left flank
- Lab Item 6: Neck swabs

Male DNA was not detected in the following sample. This sample was not processed further:
- Lab Item 3: Oral swabs

Due to an insufficient amount of male DNA compared to the amount of total human DNA, this item was not selected for further testing at this time:
- Lab Item 4.1: Right hand fingernail swabs

Due to an insufficient amount of male DNA, this item was not selected for further testing at this time:
- Lab Item 4.2: Left hand fingernail swabs

DNA Screening

The following evidence items were screened to identify samples containing insufficient DNA for autosomal STR amplification:

Due to an insufficient amount of DNA being detected during quantitation, PCR amplification was not performed on these items:
- Lab Item 7: Swabbing from firearm
- Lab Item 8: Swabs from bathroom door handle
DNA STR Processing
The following items were subjected to PCR amplification at the following STR genetic loci: TH01, D3S1358, vWA, D21S11, TPOX, DYS391, D10S1656, D12S391, SEGS, D10S1240, D22S1045, D10S433, D6S1179, D25S1300, D25S441, D16S61, FGA, D19S533, CSF1PO, D13S317, D5S818, and D7S820. The sex-determining Amelogenin locus was also examined. Where applicable, STRmix was used for interpretation.

Lab Item 1: Reference standard from Victim
A full female profile was obtained.

Lab Item 2 EF: Epithelial fraction of breast swabs
Number of contributors: 1 female
Assumed contributor: Female Victim (Item 1)

Assuming Female Victim (Item 1) is a contributor to the DNA profile obtained, no foreign DNA was detected.

Lab Item 2 SF: Sperm fraction of breast swabs
Number of contributors: 1 male
Excluded: Female Victim (Item 1)

The DNA profile obtained is consistent with a single unknown male contributor (Male #1).

Lab Item 5: Swabs from bathroom floor
Number of contributors: 1 female
Individually included: Victim (Item 1; LR = approximately 1.50 x 10^30)

The probability of observing this DNA profile is approximately 1.50 nonillion (1.00 x 10^30) times more likely if it originated from Victim (Item 1) than if it originated from an unknown random contributor.

The following evidence item was received, but not examined for purposes of this report:

<table>
<thead>
<tr>
<th>Lab Item #</th>
<th>Impound Plg #</th>
<th>Impound Item #</th>
<th>Description</th>
<th>Results, Opinions, and Interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 10</td>
<td>0228-1</td>
<td>3</td>
<td>Swabs from side of toilet</td>
<td>Received, not examined</td>
</tr>
</tbody>
</table>

Notes
1) DNA extracts generated during the analysis of this case and/or cuttings taken from the evidence may be available for future testing.
2) Items with the EF/SF fraction results were extracted using a differential extraction technique. This technique attempts to separate non-sperm or epithelial cell fraction DNA (EF) from potential sperm cell fraction DNA (SF). This terminology does not imply the presence or absence of spermatozoa in this case.
3) In instances, in which contributors can be assumed, no statistical calculations will be reported for the assumed contributors.
4) As part of the analytical process, slides were prepared from Item 2 for possible sperm identification. These slides were re-packaged within the sexual assault kit; however, were not examined at this time.
5) Where applicable, likelihood ratios (LR) were calculated to assess whether each submitted reference standard is statistically included or excluded, individually, as a contributor to the reported DNA profile(s). The reported LR value for an “Individually Included” reference standard is reflective of the likelihood ratio calculation associated with the listed individual without being considered in combination with other reference standards, except where an “Assumed Contributor” is denoted.
6) The likelihood ratios referenced in this report are based upon propositions that can explain the evidence. This includes assumptions as to the number of contributors present in the DNA profile and, unless otherwise noted, that each unknown contributor is unrelated to the named reference standards. Since a range of propositions might explain the evidence, either interested party to this case, prosecution and/or defense, may request an additional likelihood ratio that incorporates an additional proposition that more accurately represents their position. All requests must be submitted in a timely
either interested party to this case, prosecution and/or defense, may request an additional likelihood ratio that incorporates an additional proposition that more accurately represents their position. All requests must be submitted in a timely manner, must be reasonable given the test results, and must be within the capability and validated application of the program used.

7) Statistical probabilities were calculated using the recommendations of the National Research Council (NRC II) utilizing the NIST database [Hill, C.R., Dassow, O.D.L., Kinne, M.C., Coble, M.D., Butler, J.M. (2013) U.S. population data for 20 autosomal STR loci. Forensic Sci. Int. Genet. 7: e82-e83 and Steffen, C., Coble, M., Guffey, K., Vallone, P. Corrigendum to “U.S. Population Data for 29 Autosomal STR Loci” [Forensic Sci. Int. Genet. 7(2013) e82-e83]. Forensic Sci. Int. Genet. 31: (2017) e38-e40]. The probability that has been reported is the most conservative value obtained from the US Caucasian (CAU), African American (BLK), and Hispanic (HSP) population databases. All likelihood ratios calculated by the LVMPD are truncated to three significant figures.

8) Evidence collected directly from the body or personal items removed directly from the body are intimate samples; therefore, the donor may be reasonably assumed to be present should the item produce a DNA profile that is suitable for comparison.

9) For comparison purposes, please collect reference buccal swab(s) from the consensual partner or individuals believed to be involved in (or who have had reasonable access to) this incident. When a reference buccal swab is obtained, please submit a Forensic Laboratory Request in Property Connect to complete the case.

The evidence is returned to secure storage.

Dates of laboratory testing: January 9, 2019 to January 18, 2019.

This report does not constitute the entire case file. The case file may be comprised of worksheets, images, analytical data and other documents.

Kimberly D. Dannenbarger, #13772
ForensicScientist II

END OF REPORT
LVMPD FORENSIC LABORATORY
QUALITY MANUAL

7.9 Title: COMPLAINTS

7.9.1 General
Complaints regarding Laboratory employees, Laboratory practices, analyses, etc., made by any user agency or other party will be brought to the attention of the respective Forensic Laboratory Manager(s)/Supervisor(s)/Forensic Database Administrators (DNA, NIBIN or AFIS). Depending upon the seriousness of the complaint, the Laboratory Director may be notified. Forensic Laboratory Managers/Supervisor(s) have the responsibility and authority to handle concerns within their Detail/Units. The complainant will also be contacted with a follow-up to their complaint, if identifying information is provided. The Quality Manager will maintain records of all investigations and actions taken by the Laboratory.

Dependent upon the severity of the complaint and the cause of the compliant, corrective action may be pursued.

7.9.2 The procedure regarding complaints will be provided to any involved party upon request. Any complaint related to laboratory activities will be handled by the Forensic Laboratory. Any complaints handled by the LVMPD Internal Affairs Bureau (IAB) are not the purview of the Forensic Laboratory. Input may be provided by the Forensic Laboratory, but the Forensic Laboratory is not responsible for -decisions made by IAB.

7.9.3 Process for Handling Externally Generated Complaints not being Handled by IAB
The process for handling complaints is as follows:

a) When a complaint is received (phone, email, in person, survey), the person receiving the complaint will document the complainant’s name, phone number, agency (if applicable), the date the complaint was received and a description of the complaint (nature of complaint) on the Complaint Form located in Qualtrax.

The Complaint Form will be forwarded to the appropriate Forensic Laboratory Manager/Supervisor to perform an investigation into the complaint. The Quality Manager will be informed of all complaints received. Forensic Laboratory Managers/Supervisors have the responsibility and authority to handle concerns within their Detail/Unit.

The Forensic Laboratory Manager/Supervisor will document the extent and details of the investigation in the Investigation box on the Complaint Form and document the extent and details of the action(s) taken to resolve the complaint in the “Action to Resolve the Complaint” box on the Complaint Form. After completion of each step the Forensic Laboratory
Manager/Supervisor will place their name, sign and date the Complaint Form in the appropriate locations. Upon completion, the Forensic Laboratory Manager/Supervisor will forward the Complaint Form to the Forensic Laboratory Director.

b) The tracking and recording of complaints, including actions undertaken to resolve them are documented on the Complaint Form. Completed Complaint Forms are maintained in Qualtrax.

c) The Forensic Laboratory Director will sign and date the Complaint Form upon determination that the investigation and action(s) taken were adequate.

7.9.4 The appropriate Forensic Laboratory Manager/Supervisor is responsible for gathering and verifying all necessary information to validate the complaint (see 7.9.3 a) above).

7.9.5 Acknowledging Receipt of Complaint
If the complaint is received via phone or in person, the acknowledgement of the complaint is real time as information is gathered for the complaint. If the complaint is received via email, or survey, the complainant will be contacted to gather further information (if needed) and to acknowledge receipt. This step may occur after the complaint has been resolved if the resolution can be accomplished quickly.

7.9.6 Complaint Review
Unless the Forensic Laboratory Director is the object of the complaint, the outcome of the complaint will be reviewed and approved by the Forensic Laboratory Director (see 7.9.3 a) above). If the Forensic Laboratory Director is the object of the complaint, the outcome of the complaint will be reviewed and approved by the Quality Manager.

7.9.7 Formal Notice
After the complaint is finalized, the complainant will be contacted and informed of the determined resolution. This notification will be documented on the Complaint Form by date and signature of the person providing the notification. The completed Complaint Form will be maintained in Qualtrax.

7.9.8 Forensic Laboratory Personnel Complaints
Employees are a valuable resource for ideas to improve Laboratory operations and services and are encouraged to share suggestions and/or complaints with Forensic Laboratory management. Employees should discuss constructive criticisms with Forensic Laboratory management and develop solutions to those issues that they feel are problematic or which can be performed in a more efficient manner. Such communication is important in helping to improve or maintain a positive work environment. The Complaint Form (located in Qualtrax- document number 5425) can also be filled out anonymously.

Any Forensic Laboratory member complaints will be handled similarly to customer complaints. The Quality Manager will maintain records of all investigations and actions taken by the Laboratory.
7.10 Title: NONCONFORMING WORK

7.10.1 Nonconforming Work

The inaccurate analysis of evidence and misinterpretation of data are serious errors which can have adverse effects on the results of a criminal investigation. All members of the Forensic Laboratory have an ethical obligation to report any wrongdoing or technical problems observed in the Laboratory, including those noted which occur outside their area of assignment, to the Quality Manager, and their respective Forensic Laboratory Manager/Supervisor/DNA Technical Leader or the Laboratory Director.

a) Responsibility for Managing Nonconforming Work – The Laboratory Managers/Supervisors/DNA Technical Leader, Quality Manager and/or Laboratory Director will be responsible for evaluating the problem. It is the responsibility of all Forensic Laboratory members to help determine the cause, and recommend, document and conduct any corrective measure deemed necessary.

b) Risk Assessment – A risk assessment will be undertaken to determine the impact of the problem or error. A course of action will be pursued and may include, but is not limited to: fact-finding, issuance of a corrected Forensic Laboratory Report of Examination, issuance of a Corrective Action Request, technical review by analysts experienced in the technical area of the error, technical procedure review, evidence reexamination, technical competency assessment, monitored casework, cessation of casework, and/or additional training. If warranted, corrective action may also include the use of the progressive disciplinary process defined through LVMPD regulation and collective bargaining agreement.

c) Evaluation of Nonconforming Work - To determine the appropriate action, an assessment of the severity is needed in addition to identifying the type of problem. The Forensic Laboratory Manager/Supervisor/DNA Technical Leader will arrange a discussion with the analyst to determine the extent of the problem and in conjunction with the Quality Manager will determine if the situation warrants notification of the Laboratory Director.

d) Acceptability of Nonconforming Work - A course of corrective action must be taken immediately if an error in the examination or interpretation of physical evidence is discovered. The Laboratory Managers/Supervisors/DNA Technical Leader, in conjunction with the Quality Manager, have the responsibility and authority to make a decision about the acceptability of the nonconforming work and its impact on current, past, and future work and/or the need to repeat testing.

e) Notification of Requestor(s) - If an error in the examination or interpretation of evidence requires completion of a Corrective Action Report, the requestor will be notified and documentation of the notification will be retained. If the deficiency has affected previously reported analyses, the Forensic Laboratory
Manager/Supervisor/DNA Technical Leader will determine any actions that may be necessary to address the problem including contacting the requestor of the affected analyses or the District Attorney’s Office. Documentation of the notification will be retained.

f) **Authorizing Resumption of Work** - If any of the corrective action taken included suspension of casework, the Laboratory Director along with the appropriate Forensic Laboratory Manager/Supervisor/DNA Technical Leader will authorize the resumption of casework based on the completion of the appropriate corrective action.

7.10.2 **Records of Nonconforming Work**
Records of nonconforming work and the associated actions are documented in case notes, on a Technical Review form or a Corrective Action Report and maintained in the case record. The Quality Assurance Workflow in Qualtrax may also be used to document the nonconforming work in conjunction with the above methods. If it is determined the issue did not have a detrimental effect on the laboratory activity, the Quality Assurance Workflow may be used as a sole means for the documentation.

7.10.3 **Initiation of Corrective Action**
If the evaluation of the nonconforming work indicates that the issue could recur or a violation of a policy or procedure is identified, a Corrective Action Request will be initiated (see 8.7 – **Corrective Action** for further details).
7.11 Title: CONTROL OF DATA AND INFORMATION MANAGEMENT

7.11.1 Qualtrax, LIMS and ACE Access
The Forensic Laboratory has access to the data and information in Qualtrax, LIMS, and ACE needed to perform laboratory activities.

7.11.2 Qualtrax, LIMS and ACE
The Forensic Laboratory uses three (3) information management systems; Qualtrax, LIMS, and ACE. Qualtrax is used to record and store administrative and quality documentation and records. LIMS documents and tracks the case record related to the Event # and houses quality control records. ACE provides the official chain of custody that documents and tracks the location and transfer of items of evidence received in the laboratory.

Qualtrax
The Forensic Laboratory in conjunction with the CSI Section and Information Technologies Bureau is responsible for validating the functionality of Qualtrax. Qualtrax does not interface with any other information management systems. When updates are made to Qualtrax, they are initially uploaded to a test server environment to ensure functionality prior to implementation. Once functionality is established, a member of the CSI or Forensic Laboratory Quality Unit authorizes the update via email to Information Technologies Bureau personnel.

ACE
The LVMPD Evidence Vault is responsible for the control and maintenance of ACE. The functionality, including proper interface validation for ACE are not the purview of the Forensic Laboratory. The Forensic Laboratory works in conjunction with the personnel responsible for the functionality checks to ensure the information management systems meet the needs of the Forensic Laboratory.

LIMS
The Forensic Laboratory (designated System Administrators, specifically) is responsible for validating the functionality of the Laboratory Information Management System (LIMS) and all associated peripheral applications (Property Connect, FAWeb, Batching, STAcs Import, Managerial Inquiries, BrAD). The LIMS interacts with LVMPD Department supported programs ACE (evidence management system) and OnBase (document management system). When updates are made to the LIMS, or any of the peripheral applications, changes are initially uploaded to a test environment to ensure functionality prior to implementation. LVMPD Information Technologies Bureau personnel are usually heavily involved to ensure the seamless functionality of the overall LIMS workflow. Once functionality is established (including the system interactions with ACE and OnBase), a System Administrator authorizes the update via communication with the personnel of the vendor providing the LIMS.
7.11.2.1 Software Developed by the Forensic Laboratory
A validation plan will be created for computer software developed by the Forensic Laboratory requiring validation. Records of the validation shall be maintained.

Computer Programs Developed In-House
Computer programs (e.g. extensive macros, workbooks) developed by the Forensic Laboratory will be documented and validated as being adequate for use. If the data from the macro/workbook is checked as a part of the review process, validation is not required. Commercial off-the-shelf software in general use within their designed application range is considered to be sufficiently validated.

7.11.3 Protection of Information Management Systems
The protection of data transmission, processing and storage on LVMPD network computers is accomplished by the LVMPD Information Technologies Bureau.

a) Unauthorized Access - All LVMPD network computers require a unique user name consisting of initials and a LVMPD personnel number in the format, a1234z, and a password.

Qualtrax requires a separate logon within a LVMPD computer. Access to the Forensic Laboratory records stored in Qualtrax is limited by viewing necessity determined and maintained by the Qualtrax Administrators.

ACE requires a separate logon. Access to ACE is limited to viewing necessity determined and maintained by the Evidence Vault Director/Supervisors.

Access to LIMS is controlled by individual accounts maintained by the LIMS System Administrator(s). For those with an account, their profile allows them restricted access determined by their assignment. This restriction prohibits edit access to cases from other Details/Units. Ability to change data within the worksheets is restricted by assignment of the case. Unless the case is assigned or there are delegate roles determined, LIMS will not allow edits to the worksheet data. For the Unit Record Object Repository, the ability to delete approved files is limited to certain roles (Administrator and Supervisor).

There are reports that can be produced that show the roles, the rights assigned to the roles and individual role assignments.

b) Tampering and Loss - LIMS is stored and connected to a dedicated server that is utilized by the Forensic Laboratory and maintained by ITB according to ITB policies and procedures.

The LIMS uses an interface to allow LVMPD investigative personnel to select specific items of evidence impounded in ACE in the Property Connect Portal to facilitate the submission of forensic laboratory analysis requests.
The LIMS also interfaces with ACE to facilitate the transfer of evidence impound information into the LIMS. This data is used to populate worksheets and reports related to forensic items of evidence that are being analyzed by forensic laboratory personnel.

In addition, the LIMS facilitates the release of laboratory reports, and the notification to the Forensic Laboratory’s customers of the release of these reports. The LIMS distributed Forensic Laboratory reports to two places: OnBase and FAWeb. OnBase is maintained by ITB and secured under their policies and procedures. OnBase is the LVMPD record database. FAWeb is an auxiliary program maintained by LIMS to allow outside jurisdictions the ability to obtain their laboratory reports and to allow LVMPD and outside jurisdiction requestors to see the progress of their request (e.g., in progress, in review, completed). Access to FAWeb is controlled through user accounts to individuals assigned by their agency/Bureau and must also have accounts to their specific agency/Bureau.

In the Biology/DNA Detail, electronic data from the instruments is stored on the H:drive. Only the Laboratory Director and those employees assigned to the Biology/DNA Detail have access to the DNA folder on the H:drive. Data stored on the H:drive is automatically backed up by ITB (see the Biology/DNA Procedures/Quality Manual for further details).

In the Chemistry Detail, electronic data from the instruments is backed up on an external hard drive and stored in a safe in the Chemistry vault.

The Toxicology Detail backs up the electronic data from the instruments to an external hard drive stored in the Toxicology laboratory and/or is automatically backed up from the instruments by ITB.

The protection of electronic data from macros/workbooks developed by the Forensic Laboratory is documented in the appropriate Detail/Unit Technical Manual.

c) Operating Environment – Computers with access to the various information management systems are all maintained and secured by ITB. The desktop computers are maintained in a climate-controlled environment.

   Instruments that require certain environmental conditions for proper operation will be operated in those conditions necessary to maintain the integrity of the test data. The instrumentation and the associated environmental conditions will be documented in the appropriate Technical Manual(s), if necessary.

d) Maintenance - All computers with access to the LVMPD network are properly maintained by the LVMPD Information Technologies Bureau. All other computers and instruments are maintained by the Forensic Laboratory to ensure proper functioning by authorized and qualified personnel.

e) System Failures – Qualtrax errors are documented in error handling logs in Qualtrax.
The LIMS is, by default, set up to capture any errors thrown by the operation of the system. This information can be found in an error log easily accessible to the user within the system itself. Larger scale issues (usually server or database centric) can be investigated by the vendor through additional logs not as easily accessible to the daily user.

7.11.4 The Forensic Laboratory’s LIMS is managed remotely by the LVMPD IT Bureau which complies with all applicable requirements as stated above.

7.11.5 Laboratory Information Management System Manuals
The Technical Manuals for each Detail have LIMS-specific information for each area of expertise. In addition, the following folder is available to all personnel assigned to the Forensic Laboratory, and this folder contains many step by step instruction documents on how to use the Forensic Laboratory’s LIMS:

H:\CB\Forensics\General\LIMS TRAINING:

7.11.6 Calculations and Data Transfers
It is the responsibility of each Laboratory member to monitor any data entry, transfer, or calculation performed during training, casework, proficiency tests, validations, or any other forensic laboratory activity to ensure accuracy. During the review process, the reviewer shall check any data transfers and/or calculations which are external to a validated electronic process for accuracy.

7.11.6.1 Documentation of Calculations and Data Transfer Checks
The case record shall indicate that the check of any data transfer and/or calculation was performed. In casework, the technical reviewer is responsible for verifying this information. In instances where technical review is not required, this is the responsibility of the administrative reviewer. The check shall not be performed by the person who performed the original (documented) calculation or data transfer(s).
8.0 Title: MANAGEMENT SYSTEM REQUIREMENTS

8.1 General/Options

8.1.1 General
The Forensic Laboratory has established a management system in conjunction with the LVMPD. The management system is documented in the Department Manual, this LVMPD Forensic Laboratory Quality Manual and in accompanying Detail/Unit Technical Manuals. These manuals assure that the quality of the test results will conform to requirements of the ANAB accreditation program.

8.1.2 Option A
The management system is addressed in the following policies/procedures:
- 8.2 – Management System Documentation
- 8.3 – Control of Management System Documentation
- 8.4 – Control of Records
- 8.5 – Actions to Address Risks and Opportunities
- 8.6 – Improvement
- 8.7 – Corrective Actions
- 8.8 – Internal Audits
- 8.9 – Management Reviews
LVMPD FORENSIC LABORATORY QUALITY MANUAL

8.2 Title: MANAGEMENT SYSTEM DOCUMENTATION

8.2.1 General
This LVMPD Forensic Laboratory Quality Manual and the Detail/Unit Technical Manuals are located in Qualtrax. All Laboratory members are required to read and become familiar with the Department Manual, LVMPD Forensic Laboratory Quality Manual and appropriate Detail/Unit Technical Manuals. Documentation of the review of the Department Manual and LVMPD Forensic Laboratory Quality Manual is recorded on the Administrative Task List. Documentation of the review of the Detail/Unit Technical manuals is recorded in the appropriate Training Task List.

8.2.1.1 Requirement to be Addressed in Writing
The following words in the accreditation standards require a policy/procedure in writing:

- Agreed
- Appoint
- Authorize
- Define
- Instructions
- Method
- Plan
- Procedure
- Program
- Record
- Schedule
- Specify

8.2.2 Competence/Impartiality/Consistent Operation
Policies and objectives for competence are documented in the appropriate Class Specifications, the Detail/Unit Training Manuals and in 6.2 – Personnel in this manual.

Policies and objectives for impartiality are documented in 4.1 – Impartiality in this manual.

Policies and objectives for consistent operation are documented in the Department Manual and Detail/Unit Technical Manuals.

8.2.3 Commitment to the Development of the Management System
The Management Team (Laboratory Director, Forensic Laboratory Managers, Forensic Laboratory Supervisors, the Quality Manager and the DNA Technical Leader) is committed to the development and implementation of the management
system. A management system review is utilized for documenting the continual improvement.

The Laboratory Management Team is committed to good professional practice and to the quality of testing in service its customers.

Forensic Laboratory members are committed to a quality system in order to provide law enforcement, legal communities, and citizens utilizing Laboratory services confidence that the results are accurate, relevant, and impartial. This system entails quality assurance guidelines and quality control procedures. The Laboratory analyses and related services performed by the Forensic Laboratory will meet generally recognized standards of good laboratory practice and laboratory safety measures.

The Forensic Laboratory Management Team and the entire Forensic staff is committed to compliance with the ANAB accreditation program and the continual improvement of the effectiveness of the management system.

8.2.4 Management System Documents
The quality system is comprised of the following documents which contain information related to the documentation, processes, systems, and records pertaining to the quality system. The documents are listed in hierarchal order.

- LVMPD Department Manual (not generated by or under the control of the Forensic Laboratory) – LVMPD Intranet: [http://metroweb.lvmpd.int/services/department/PaR/Policy%20and%20Research/Department%20Manual.pdf](http://metroweb.lvmpd.int/services/department/PaR/Policy%20and%20Research/Department%20Manual.pdf)
- LVMPD Forensic Laboratory Quality Manual - Qualtrax
- Forensic Laboratory Safety Manual - Qualtrax
- Detail/Unit Technical Manuals - Qualtrax
- Detail/Unit Training Manuals - Qualtrax
- Manufacturer/Instrument Manuals (not generated by the Laboratory) – Specified in Detail/Unit Technical Manuals
- Laboratory system software
  - Database, word processing, spreadsheet, browser and other proprietary viewing software will not generally be controlled.
- LVMPD Department forms (not generated by or under the control of the Forensic Laboratory) – LVMPD Intranet: [http://metroweb.lvmpd.int/Department%20Forms/Forms/AllItems.aspx](http://metroweb.lvmpd.int/Department%20Forms/Forms/AllItems.aspx) or as LVMPD Personal Word templates
- Forensic Laboratory forms - Qualtrax

8.2.5 Management System Documentation Access
All the document listed in 8.2.4 - Management System Documents are available to all Forensic Laboratory personnel with their locations listed above.
8.3 Title: CONTROL OF MANAGEMENT SYSTEM DOCUMENTS

8.3.1 Document Control General
Any documents referenced in this Forensic Laboratory Quality Manual and the Detail/Unit Technical Manuals are controlled. All printed hard copies of controlled documents are considered uncontrolled. Any individual that uses a printed or downloaded copy from a controlled document is responsible for ensuring that actions based on the policy/procedure are in compliance with the controlled document.

8.3.2 Document Control
a) Authorization - All documents will be reviewed and approved prior to issue. The following documents will require approval in Qualtrax by the listed personnel (also considered the issuing authorities):
   • LVMPD Forensic Laboratory Quality Manual – Laboratory Director and Quality Manager
   • Forensic Laboratory Safety Manual – Laboratory Director, Quality Manager, and Health and Safety Liaison
   • Detail/Unit Technical and Training Manuals – Laboratory Director, Detail Laboratory Manager and Quality Manager
   • Biology/DNA Detail Manuals – Laboratory Director, DNA Manager, DNA Technical Leader and Quality Manager
   • Breath Alcohol Technical Manual- Laboratory Director, Toxicology Manager, Quality Manager and a Forensic Analyst of Alcohol (FAA)

All current versions of authorized manuals maintained by the Forensic Laboratory are maintained in Qualtrax. There is a controlled hard copy of the Toxicology Technical Manual in the Toxicology Detail. Making photocopies directly from the controlled hard copy Technical Manual is prohibited. All copies must be printed from Qualtrax.

Printed copies of the Training Manuals may be stored by employees when being utilized as a part of their training program.

b) Review - Detail/Unit Technical and Training Manuals and the Forensic Laboratory Quality and Safety Manuals will be reviewed and, where necessary, revised to ensure continuing suitability and compliance with applicable requirements. Each Detail/Unit will conduct an annual review of their manuals under the direction of their Laboratory Manager/Technical Leader. The Quality Manager will conduct an annual review and perform needed revisions to the Forensic Laboratory Quality and Safety Manuals.
c) **Changes and Revision Status** – Whenever a current document is revised, the track changes feature of Microsoft Word is automatically activated by Qualtrax when placed into Edit.

A tracked changes version is automatically saved in Qualtrax, embedded within the document. The tracked changes of the most recent revision are viewable any time after publishing by choosing the “View with Tracked Changes” option. The tracked changes will be archived during the subsequent revision of the document.

Each change made should have a Comment associated with it while the document being edited, using the New Comment function under Review in Microsoft Word. All changes to controlled documents are tracked in Qualtrax through version history in Document Properties under the History tab. Changes made and edit reasons are also documented in this location.

All changes to controlled documents are tracked in Qualtrax through version history in Document Properties under the History tab. Changes made and edit reasons are also documented in this location.

The tracked changes feature is not utilized on forms. Changes to forms can be viewed by utilizing the document properties history tab in Qualtrax.

d) **Availability** – All current versions of authorized manuals generated by the Forensic Laboratory are maintained in Qualtrax. Qualtrax is accessible by all Forensic Laboratory employees. Forensic Laboratory manuals are available on the internet via LVMPD website at: [http://www.lvmpd.com/en-us/Pages/ForensicLaboratoryManuals.aspx](http://www.lvmpd.com/en-us/Pages/ForensicLaboratoryManuals.aspx).

All current versions of authorized forms generated by the Forensic Laboratory are maintained in Qualtrax or in LIMS. DNA forms linked to Workbooks are located on the H: drive.

The Department Manual is available to all Forensic Laboratory personnel on the LVMPD Intranet. Department forms are available to all Forensic Laboratory personnel on the LVMPD Intranet or as personal templates in Word.

e) **Unique Identification** - All quality system documents generated by the Forensic Laboratory shall be uniquely identified by a Qualtrax Document Number (a unique number automatically generated by Qualtrax).

**Quality System Manuals generated by the Laboratory**

All quality system manuals generated by the Laboratory will also have a page header and footer. The header consists of the manual name, document number, revision number, approval date, list of approvers (issuing authorities), and date published (date of issue).

The footer consists of page numbering in the format X of Y where Y is the
total number of pages, and denotes Uncontrolled Copy if not located in Qualtrax.

*Forms generated by the Laboratory*

Forms will also contain the issuing authority, issue and/or revision date and page numbering in the format X of Y where Y is the total number of pages.

The page numbering information may be removed from the footer of a completed form if the completed form becomes a part of a case file.

Saving of Laboratory generated forms outside of Qualtrax, LIMS or the H: drive (DNA forms linked to Workbooks only) is prohibited.

*Department Manual*

The Department Manual is uniquely identified by a title and Department forms are uniquely identified by LVMPD generated case numbers.

f) **Obsolete Documents** - Obsolete versions of the Forensic Laboratory Quality and Safety Manuals and all Technical and Training Manuals will be promptly removed from use. Qualtrax automatically archives the obsolete version of controlled documents upon publication of the revised document. The obsolete versions of the controlled hard copies will be placed in a shred bin for destruction.

Obsolete documents are automatically removed from general user view by Qualtrax and watermarked with the word “ARCHIVED”.
8.4 Title: CONTROL OF RECORDS

8.4.1 General
The Forensic Laboratory creates and retains records to demonstrate fulfillment of ISO 17025:2017 as documented throughout this Manual.

8.4.2 Access, Storage and Location of Records
The Forensic Laboratory will follow the mandatory retention periods established by the LVMPD Retention Schedule located at W:\Records Retention Destruction Schedule. Records may be disposed any time after the minimum retention period has been met. The retention periods may apply to original documents, paper and electronic, that are controlled by the Laboratory. Quality and technical records that are generated by the Forensic Laboratory are identified below:

<table>
<thead>
<tr>
<th>Record</th>
<th>Access*</th>
<th>Storage Location</th>
<th>Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archived Forms</td>
<td>LD, FLM, QM, TL</td>
<td>Prior to 2015: H:\Criminalistics\Forensics\Manager</td>
<td>2015 and After: Qualtrax</td>
</tr>
<tr>
<td>Archived Laboratory Manuals</td>
<td>LD, FLM, QM, TL</td>
<td>Prior to 2015: H:\Criminalistics\Forensics\Manager</td>
<td>2015 and After: Qualtrax</td>
</tr>
<tr>
<td>Audit Records</td>
<td>All Staff</td>
<td>Prior to 2015: Hard Copy in QM Office</td>
<td>2015 and After: Qualtrax</td>
</tr>
<tr>
<td>Breath Calibration (Data and Notes)</td>
<td>FAA</td>
<td>Current Instruments: Breath Alcohol Database (BrAD) Prior Instruments: FAA Office</td>
<td></td>
</tr>
<tr>
<td>Operator Certifications (retention of copies, originals are with the DMV) &amp; Class Attendance Records/Breath Testing Certification Application</td>
<td>FAA</td>
<td>FAA Office</td>
<td></td>
</tr>
<tr>
<td>Case Files (Homicide, OIS, Sexual Assault)**</td>
<td>All Staff</td>
<td>File Room (for cases worked outside of LIMS). LIMS (for cases worked electronically)</td>
<td>Per LVMPD Retention Schedule</td>
</tr>
<tr>
<td>Case Files (other than Homicide, OIS, Sexual Assault)</td>
<td>All Staff</td>
<td>File Room** (for cases worked outside of LIMS). LIMS (for cases worked electronically)</td>
<td>Per LVMPD Retention Schedule</td>
</tr>
<tr>
<td>Case file Digital Images (not stored directly in the case file)</td>
<td>All Staff</td>
<td>H:\Criminalistics\Forensic Data Archive (for cases worked outside of LIMS). LIMS (for cases worked electronically)</td>
<td>Per LVMPD Retention Schedule</td>
</tr>
<tr>
<td>Controlled Document Changes</td>
<td>LD, FLM, QM, TL</td>
<td>Prior to 2015 H:\Criminalistics\Forensics\Manager</td>
<td>2015 and After: Qualtrax</td>
</tr>
<tr>
<td>Record</td>
<td>Access*</td>
<td>Storage Location</td>
<td>Retention</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>-----------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>Corrective Action Reports</td>
<td>All Staff****</td>
<td>Prior to 2015 H:\Criminalistics\Forensics\Manager, Hard Copy in QM Office</td>
<td>Indefinitely</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2015 and After: Qualtrax</td>
<td></td>
</tr>
<tr>
<td>Detail/Unit Manuals</td>
<td>All Staff</td>
<td>Prior to 2015 H:\Criminalistics\Forensics</td>
<td>Indefinitely</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2015 and After: Qualtrax</td>
<td></td>
</tr>
<tr>
<td>Firearms Inventories</td>
<td>LD, FLM, QM, TL</td>
<td>H:\Criminalistics\Forensics\General\Firearms</td>
<td>Until Superseded</td>
</tr>
<tr>
<td>Forensic Laboratory Quality Manual and</td>
<td>All Staff</td>
<td>Qualtrax</td>
<td>Indefinitely</td>
</tr>
<tr>
<td>Safety Manual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forms</td>
<td>All Staff</td>
<td>Qualtrax, Resource Manager, H:\Drive (DNA forms tied to Workbooks only)</td>
<td>Indefinitely</td>
</tr>
<tr>
<td>Laboratory Monthly Statistic Reports</td>
<td>LD, FLM, QM, TL</td>
<td>Laboratory Director’s Office, Storage Room</td>
<td>Indefinitely</td>
</tr>
<tr>
<td>Management Reviews</td>
<td>All Staff</td>
<td>Qualtrax</td>
<td>Accreditation Cycle or 5 Years, whichever is</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>longer</td>
</tr>
<tr>
<td>Material Safety Data Sheets/ Safety Data</td>
<td>All Staff</td>
<td>H:\Criminalistics\Forensics\General\Chemical Inventory (MSDS), Hard Copies in</td>
<td>30 Years</td>
</tr>
<tr>
<td>Sheets (MSDS/SDS)</td>
<td></td>
<td>Bullpen</td>
<td></td>
</tr>
<tr>
<td>Proficiency Test Records</td>
<td>LD, FLM, QM, TL</td>
<td>Prior to 2015: File storage room or File room</td>
<td>Accreditation Cycle or 5 Years, whichever is</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2015 and After: LIMS &amp; Qualtrax</td>
<td>longer</td>
</tr>
<tr>
<td>Preventive Action Requests</td>
<td>All Staff</td>
<td>QM Office</td>
<td>Accreditation Cycle or 5 Years, whichever is</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2014 and After: Qualtrax</td>
<td>longer</td>
</tr>
<tr>
<td>Qualifications File</td>
<td>LD, FLM, QM, TL</td>
<td>Qualtrax</td>
<td>Per LVMPD Retention Schedule</td>
</tr>
<tr>
<td>Quality Control Data**</td>
<td>All Staff</td>
<td>Detail/Unit, File Storage Room, LIMS</td>
<td>7 Years</td>
</tr>
<tr>
<td>Witness Critiques</td>
<td>LD, FLM, QM, TL</td>
<td>Prior to 2015 QM Office</td>
<td>Accreditation Cycle or 5 Years, whichever is</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2015 and After: Qualtrax</td>
<td>longer</td>
</tr>
</tbody>
</table>

*LD-Lab Director, FLM-Forensic Laboratory Managers/Supervisors, QM-Quality Manager and Quality Assistant, TL-DNA Technical Leader, FAA-Forensic Analyst of Alcohol
**Any case files other than Homicides and Officer Involved Shootings (OIS), that are over 5 years old may be stored in boxes off site under the control of the Forensic Laboratory. Any outside jurisdictions case files other than homicides that are over 3 years old may be stored in boxes off site under the control of the Forensic Laboratory.
***Homicide case files contain copies of data from batched standards, if applicable. All data included in case files are maintained utilizing the retention period of the case file.
****Corrective Action Reports that are deemed sensitive in nature are accessible by LD, FLM, QM, TL and involved parties only.

**Record Storage**
All records shall be legible and shall be stored and accessible as defined above. All records shall be maintained in a manner to prevent damage, deterioration and loss. Record retention schedules are defined above. Case files undergoing Technical and/or Administrative Review may be temporarily taken off-site (Manager/Supervisor/Technical Leader/Forensic Scientist’s home) to facilitate the review process.
Record Retention Policy
The mandatory retention periods are established by the LVMPD Retention Schedule. The LVMPD Records and Fingerprint Bureau is responsible for considering applicable legal requirements regarding retention of records.

Administrative File System
Cases worked prior to the implementation of LIMS
The Laboratory’s Administrative File System contains the case files of all reports of analyses (except confidential cases) for cases worked prior to the implementation of LIMS that have not yet been scanned into the LIMS. The case files are maintained by year in event number order. Outside jurisdiction cases are segregated from the LVMPD cases according to each individual jurisdiction and in numerical order by event number or case number. All homicide files and files related to officer involved shootings are maintained in a separate “Homicide File” area. Sexual assault files are maintained in a separate sexual assault area. Those cases designated as special confidential cases, which includes the Department’s random drug screen program, are maintained separately in the Laboratory Director’s or designated Forensic Laboratory Manager’s office.

Clerical support staff members are responsible for the maintenance of the administrative file system. The clerical support staff has the authority to control the filing and removal of Laboratory report files.

Cases worked in LIMS
All cases worked in LIMS (implemented October 07, 2013) are maintained in LIMS. LIMS generates a unique number (Lab Number) for each case processed by the Forensic Laboratory. The cases in LIMS are identified and indexed by Lab Number and can be searched using a range of available information (e.g., the Lab Number, event number, case number, subject name). Access to the case files in LIMS is based on assignment and controlled by the LIMS Administrators. Case records stored in LIMS will follow the mandatory retention periods established by the LVMPD Retention Schedule located at W:\Records Retention Destruction Schedule. Records may be disposed at any time following the minimum retention period.

Positive Department, Pre-Employment, and all Commissioned Supervisor samples are stored in LIMS and marked confidential.

Records in Qualtrax
The records stored in Qualtrax are identified by title and indexed using a detailed tree structure and can be searched using a range of available information (title, document number, key words). Access to the records in Qualtrax is based on assignment and controlled by the Qualtrax Administrators. Those records located in Qualtrax described in the table above will be maintained as detailed above. The records may be disposed at any time following the minimum retention period.
Electronic Records

Forensic Laboratory Shared Drives
All electronic records on the Forensic Laboratory shared drive (H:drive) are backed up by the LVMPD Information Technologies Bureau (ITB) according to their policies and procedures. The Quality Manager in coordination with the Laboratory Director is responsible for determining access to the folders in the shared drive. The actual access to the folders is granted by ITB. In the Biology/DNA Detail, electronic data from the instruments is stored on the H:drive. Only the Quality Manager and those employees assigned to the Biology/DNA Detail have access to the DNA designated folders on the H:drive. Data stored on the H: drive is automatically backed up by ITB. (see the Biology/DNA Technical Manual for further details).

LIMS
Records stored in LIMS are maintained on a dedicated server utilized only by the Forensic Laboratory and maintained and backed up by ITB according to their policies and procedures. Access to the records via LIMS is limited by the necessity of having an account within LIMS which is maintained by the LIMS System Administrator(s).

Any amendments to examination records maintained in LIMS are tracked through a version history in LIMS. Amendments to worksheets in LIMS can only be performed by the person who has custody of the Unit Record in LIMS. The transferring of a Unit Record in LIMS is tracked by LIMS. The rights to transfer Unit Record are limited to transfers within the same Detail/Unit only. Changes to items in the Object Repository are tracked through version history. As required by their duties as LIMS Administrators, LIMS Administrators have the ability to amend records. These amendments are also tracked through version history.

Qualtrax
Records stored in Qualtrax are maintained on a dedicated server utilized for Qualtrax only and maintained and backed up by ITB according to their policies and procedures. Access to the Forensic Laboratory records stored in Qualtrax is limited by viewing necessity determined and maintained by the Qualtrax Administrators.

Amendments to both controlled and uncontrolled records in Qualtrax are tracked through a version history. Changes to records stored in Qualtrax are limited by setting strict editing rights through the security tab in Qualtrax. These rights are maintained by the Qualtrax Administrators. Changes to records are documented through a version history in Qualtrax and deletion rights are only granted to the Qualtrax Administrators.

Equipment/Instruments
Back-up of the electronic data from equipment/instruments is detailed in the appropriate Detail/Unit Technical Manuals.
Case File Removal (cases worked prior to the implementation of LIMS)
Case files may be removed from the administrative file system for review, supplemental analysis, and testimony. Any Forensic Laboratory member requiring a file should make a request for file removal to the LEST/designee.

Clerical support staff has the authority to request that analysts adhere to established file removal policies and respond to file audits and follow-up questions.

A File Check-Out Sheet for the removal of case files is located in the file room. When a case file is removed from the administrative file system, the LEST/designee will annotate the log and the Laboratory member will be required to initial that the file was received. In addition, an out card will be completed and placed in the file in the appropriate event number order. The out card will contain the event number of the file removed, the date it was removed, and who received the file.

If a Forensic Laboratory member requires a case file and clerical staff is not present to annotate the log or out card, the member removing the file from the administrative file system will complete the appropriate steps. However, this should only take place in emergency situations, the procedure of choice is to receive the file through the clerical staff.

All case files will be returned promptly when the review, testimony, or supplemental analysis is completed. Analysts are not to retain case files on their desks or in their own personal files - these are the property of the LVMPD. The case file will be returned to the LEST/designee. The LEST/designee will sign the log sheet indicating that the file was returned. Under no circumstances is the analyst to replace the file in the administrative files.

Since the case files are the property of the LVMPD and are maintained by the Forensic Laboratory, it is contrary to policy to leave original case file records with any court. If ordered by the court to leave the originals, the analyst will advise the court of this policy and the importance of the work notes and other case records in rendering accurate testimony. If the court is unyielding, the analyst will request, in open court, that a copy of all documentation be made for the lab’s file system. The analyst will request that an officer of the court (bailiff, DA, etc.) annotate the copy with initials and a date. The analyst will inform their respective Laboratory Manager that the originals were retained by the court upon return to the Laboratory.

Case File Audit
Clerical support staff members are responsible for the maintenance of the administrative file system. As such, periodic audit or review of all out files should be conducted. Analysts will cooperate with this review, recognizing that it is part of the Laboratory’s quality control process and will make every effort possible to locate any outstanding files.
8.5 Title: ACTIONS TO ADDRESS RISKS AND OPPORTUNITIES

8.5.1 Risks and Opportunities
The Forensic Laboratory will consider risks and opportunities associated with laboratory activities in order to:

a) Give assurance that the management system achieves its intended results. This is accomplished through the use of proficiency tests, technical review, corrections, corrective actions, audits and management reviews.
b) Enhance opportunities to achieve the purpose and objectives of the laboratory. This is accomplished through supervisor meetings, preventative actions, audits, policy/procedure review and management reviews.
c) Prevent, or reduce, undesired impacts and potential failures in the laboratory activities. This is accomplished through the use of technical review, preventative action, corrections, corrective actions, audits and management reviews.
d) Achieve improvement. This is accomplished through the use of the technical review, preventative action, corrections, corrective actions, audits, testimony review and management reviews.

See for further details:
- Proficiency Tests – 7.7.2
- Technical Review – 7.7.1 l)
- Corrections – 8.7
- Corrective Actions – 8.7
- Improvement – 8.6
- Audits – 8.8
- Management Reviews – 8.9

8.5.1.1 Health and Safety
Risks to health and safety will also be considered. This is accomplished through review of the Forensic Laboratory Safety Manual and annual bloodborne pathogen and chemical hygiene training.

8.5.2 Planned Actions to Address Risks and Opportunities
The Forensic Laboratory will plan:

a) Actions to address identified risks and opportunities. This action will be documented on proficiency test review forms, technical review forms, in the Quality Assurance Workflow, on Corrective Action Reports, on Preventative Action Reports, in the Audit Findings Workflow, or in Management Reviews.
b) How to:
   1) Integrate and implement these actions into its management system.
2) Evaluate the effectiveness of these actions. The effectiveness will be evaluated during Management Reviews, Quality Assurance Workflow and Audit Workflows.

8.5.3 Actions
The actions chosen to address the identified risks and opportunities will be proportional to the potential impact on the validity of the laboratory activities.
8.6 Title: IMPROVEMENT

8.6.1 Opportunities for Improvement
The Forensic Laboratory will identify and select opportunities for improvement through the use of the following:
- Review of policies and procedures
- Audit results
- Corrective Actions
- Management Review
- Suggestions from Personnel
- Proficiency Test Results
- Testimony Review
- Technical Review
- Risk Assessment

8.6.2 Customer Feedback
In a continuing effort to improve the quality of the services provided, the Forensic Laboratory will solicit feedback from the law enforcement and legal agencies utilizing the services of the Laboratory. This process will be initiated automatically upon the release of all Forensic Laboratory Reports of Examination by LIMS. The Quality Manager will track the feedback, both positive and negative. All feedback will be evaluated and utilized to improve the quality system. Records of actions taken by the Laboratory in response to feedback received will be retained in Qualtrax. The feedback received will be disseminated by the Quality Manager accordingly.

All feedback is reviewed during the management review.

The policies set forth in 7.9 – Complaints will be followed for any complaints received as a result of the feedback process.
8.7 Title: CORRECTIVE ACTIONS

8.7.1 Corrective Action

a) Notification

Every questionable situation/incident involving a quality issue must be brought to the immediate attention of the Quality Manager by the person discovering the issue or by their Manager/Supervisor/Technical Leader. This will allow the Quality Manager to determine the needed course of action (No action needed (documentation only), Preventive Action Report, Corrective Action Report, ANAB notification).

ANAB requires disclosure of all substantive occurrences of non-compliance within 30 calendar days of determining the non-compliance has occurred. Any event that may require the notification of ANAB shall be brought to the immediate attention of the Laboratory Director by the Quality Manager. Final determination of notification will be made by the Laboratory Director in conjunction with the Quality Manager.

b) Corrective Action Process

Through the course of Laboratory operations, situations will arise that necessitate steps be taken to evaluate, document, adjust and/or review current practices or events within the Laboratory. Examples might include casework problems, proficiency testing irregularities, failure to follow established procedures/policies, etc. This does not include an approved temporary modification to an existing method. Occurrences documented may vary in severity from negligible to significant.

The corrective action process consists of two steps:

- Corrective Action Request via the Quality Assurance Workflow
- Corrective Action Report (CAR)

A Corrective Action Request is a tool used to identify issues and initiate corrective action. A Corrective Action Request will be initiated as soon as the nonconformance is noted.

A member of the appropriate Management Team or a member of their Detail/Unit will initiate a Quality Assurance Workflow as soon as practical after notification of the potential issue.

A guide titled- Quality Assurance Workflow- Corrective Action, containing step by step instructions for initiating and completing the Quality Assurance Workflow, is located in the Qualtrax Instructions folder in Qualtrax.
The Quality Manager will review the information provided in the Quality Assurance Workflow and determine if a Corrective Action Report, Preventive Action Report or no further action is needed and inform the appropriate Forensic Laboratory Manager/Supervisor/DNA Technical Leader.

If a Corrective Action Report or Preventive Action Report is needed, the Forensic Laboratory Manager/Supervisor/DNA Technical Leader will notify the person identified as responsible for completion of the Corrective Action Report.

**Root Cause Analysis**

The Quality Manager, appropriate Forensic Laboratory Manager/DNA Technical Leader/Supervisor and all involved persons will meet to discuss the corrective action and begin the process of determining the root cause(s), corrective action(s) and preventive measure(s).

The meeting will begin the corrective action process by investigating the situation in order to determine the root cause(s). The person responsible for completing the Corrective Action Report will document the following items on the Corrective Action Report:

- Applicable event number(s) and crime type
- Relevant instrument information, if needed
- A description of the incident
- The effect of the discrepancy (impact of the deficiency)
- Date of the incident
- The determined root cause(s)
- The corrective action(s) taken
- The preventive measure(s) taken

If the corrective action involves casework and the evidence or results are impacted, the requestor of the affected case shall be notified. The notification shall be documented in the appropriate area on the Corrective Action Report. The date the notification is made will also be documented.

After initial completion of the CAR the person responsible will:

- Forward the CAR to their Detail/Unit Forensic Laboratory Manager/Supervisor/DNA Technical Leader and the Quality Manager for review prior to distribution
- Once accepted, the CAR will be forwarded to the Laboratory Director for approval
- Any changes made to the CAR by the Detail/Unit Forensic Laboratory Manager, Supervisor, DNA Technical Leader, Quality Manager and/or Laboratory Director will be discussed with all involved personnel to ensure accuracy of the final draft before routing
- Once approved, the CAR will be uploaded into Qualtrax and the Corrective Action step of the workflow will be completed by the Quality Manager.
c) Implementation of Corrective Actions
Any required changes resulting from a corrective action shall be documented on the CAR and implemented. The implementation will be documented in the Quality Assurance Workflow.

In the Biology/DNA Detail, corrective actions must be approved by the DNA Technical Leader prior to implementation.

The Detail/Unit Forensic Laboratory Managers/Supervisors/DNA Technical Leader and/or the Quality Manager have the responsibility to ensure the corrective action is implemented. Acknowledgement of the implementation will be documented in the Quality Assurance Workflow.

d) Monitoring of Corrective Actions (Effectiveness Determination)
The Quality Manager in conjunction with the Detail/Unit Forensic Laboratory Managers/Supervisors/DNA Technical Leader will be responsible for ensuring that the corrective actions have been effective.

This determination may take place during the review of Corrective Action Reports as a part of the Management Review. This determination will be documented in the Quality Assurance Workflow.

e) Update Risks and Opportunities
If necessary, any risks or opportunities determined during 8.5.2 – Planned Actions to Address Risks and Opportunities will be updated.

f) Changes to Management System
Changes to policy or procedure will be made if, during the corrective action process, it is determined a change to the management system is necessary.

g) Corrective Action Completion Timeframe
A timeframe for completion of the Corrective Action Report and the determined corrections and corrective actions will be documented in the Quality Assurance Workflow. The timeframe will be determined based on the totality of the information and will be based on an appropriate estimation of the length of time needed for completion. The completion for the CAR will normally be within 30 days of the determination of a Corrective Action Report is needed. The completion of the corrections and corrective actions will normally be within 60 days from the completion of the Corrective Action Report.

8.7.2 Selection of Corrections and Corrective Actions
During the CAR meeting potential corrective actions shall be identified. The corrective action(s) selected will be:
- To a degree appropriate to the magnitude of the problem
- The most likely to eliminate the problem and preclude recurrence
8.7.3 Corrective Action Records
Corrective Action Reports will be located in Qualtrax.

a) The nature of the nonconformities, cause(s) and actions taken are all documented on the Corrective Action Report. The CAR and supporting material will be maintained in Qualtrax. All working documents (notes, checklists, drafts of the CAR, etc.) produced during the course of corrective action may be discarded.

b) The results of the corrective actions are documented in the Quality Assurance Workflow in Qualtrax.
8.8 Title: INTERNAL AUDITS

8.8.1 General
Audits are an important aspect of the quality assurance process. Audits are an independent review conducted to check compliance with quality standards. Audits provide information on whether the management system:

a) Conforms to:
   - The Forensic Laboratory management system
b) Is effectively implemented and maintained.

Audits are not punitive in nature and are the primary tool to provide management with an evaluation of the Laboratory’s performance in meeting its quality policies and objectives and its compliance with policies and procedures.

8.8.1.1 Audit Frequency
With the exception of the Breath Alcohol Unit, each Detail/Unit shall be audited at least annually. The time frame between audits shall be no greater than 18 months.

External Audits
Every other year an external audit of the Biology/DNA Detail is required to effect compliance with the FBI Quality Assurance Standards for Forensic DNA Testing Laboratories, and the FBI Quality Assurance Standards for DNA Databasing Laboratories. The audits will be conducted against the FBI Quality Assurance Standards for Forensic Casework and the FBI Quality Assurance Standards for Databasing.

In addition, the Bureau of Alcohol, Tobacco, Firearms and Explosives (BATFE) issued the Minimum Required Operating Standards for National Integrated Ballistic Information Network (NIBIN) Sites. These standards took effect July 1, 2018, and the BATFE may conduct audits of NIBIN sites to ensure the standards are sufficiently being met.

8.8.2 Audit Plan and Implementation
a) Audit Procedure
   The Quality Manager and/or DNA Technical Leader will plan and organize audits, to include choosing an audit team as well as providing any internal
auditor training needed and starting an Audit Workflow in Qualtrax. The Quality Manager and/or DNA Technical Leader will notify Laboratory staff, as appropriate, with audit dates and basic information concerning the audit.

An Audit plan will be developed by the Quality Manager/Quality Assistant. It will include the following information:

- Audit Dates
- Audit Objectives
- Audit Criteria
- Audit Scope
- Auditor Names and Assignments
- Auditor Training Dates (if needed)
- Items Provided to Auditors
- Required Items from Detail/Units

The Audit Plan will be provided to all members of the audit team in advance of the audit. The auditors will prepare for the audit by attending the Internal Auditor training, if needed, and by reading the appropriate Manuals. The auditors will perform the audit and complete the appropriate Internal Audit Checklist. At the conclusion of the audit, a closing meeting will be held by the Quality Manager and all potential findings will be discussed amongst the audit team. The final version of the Internal Audit Checklist(s) will be provided to the Quality Manager. The Quality Manager will use the Internal Audit Checklist(s) to create the Audit Report and initiate the Audit Findings Workflow.

b) Audit Criteria and Scope

The audit criteria and scope for each audit is included on the Audit Plan.

1) Direct Observation - Internal audits shall include direct observation of a sample of accredited services within each discipline.

c) Audit Results

The results of the audit are documented on the Audit Report. The Audit Report is provided to the Forensic Laboratory Director via the Quality Manager and is uploaded into Qualtrax.

d) Audit Findings and Corrective Action

If any audit findings cast doubt on the effectiveness of Laboratory operations or on the correctness or validity of Laboratory results the corrective action process shall be initiated in a timely fashion. A course of corrective action will be established within 30 days from the completion of the Audit Report. All determined corrections will be implemented within 90 days from the completion of the Audit Report. Any extenuating circumstances delaying the completion of the determined corrective actions will be documented. The documentation will include an anticipated date of completion.
If it was determined that a deficiency may have affected previous casework, the appropriate notifications (requestor, District Attorney, etc.) will be made in writing.

Findings reported through audits will be remediated to the satisfaction of the Laboratory Director, Quality Manager and appropriate Forensic Laboratory Manager/Forensic Laboratory Supervisor/DNA Technical Leader.

e) **Audit Documentation**

Following completion of an audit, an Audit Report will be written by the Quality Manager/designee. The report will be distributed to and signed by the Forensic Laboratory Managers/Supervisors/DNA Technical Leader, the Laboratory Director and the auditors as appropriate. This report will detail the area of activity audited, findings of the audit and report on areas that are exceptional (if noted) as well as areas that require corrective action.

An Audit Findings Workflow will be initiated in Qualtrax for each finding. This Workflow will list the finding, the standard the finding was against, and the date the Audit Report was completed.

Once an Audit Findings Workflow is launched, the Detail/Unit Forensic Laboratory Manager/Supervisor and/or DNA Technical Leader will determine the root cause(s) and appropriate corrective actions needed to remedy the finding. Once the corrective actions associated with each finding have been completed and implemented, the Workflow will be returned to the Quality Manager for further action as needed.

A follow-up audit will be conducted by the Quality Manager in conjunction with the appropriate Forensic Laboratory Manager/Forensic Laboratory Supervisor/DNA Technical Leader to ensure that the listed actions were implemented and effective. This follow-up audit is documented in the Audits Workflow.

### 8.8.3 Surveillance Conformance Review

The Laboratory will submit documents and/or records to support conformance with all requirements listed in the conformance checklist provided by ANAB. The documents/records will be uploaded into the assigned ShareFile “Customer Docs & Records” folder.

The completed conformance checklist shall be provided to ANAB no later than 30 days prior to the scheduled surveillance activity.

8.8.4 Other Audits
Audits can be initiated for many different reasons and can encompass many different areas. Below is a sampling of audit types.

- Security Audit – An audit of the secured keys and Laboratory access is conducted on an annual basis
- Evidence Audit – Evidence audits are conducted twice a year on all evidence located in the Forensic Lab Node.
- Logbook Audits, as needed
- Case Record Audits, as needed
8.9 Title: MANAGEMENT REVIEWS

8.9.1 General
The Laboratory Director, Forensic Laboratory Managers, Forensic Laboratory Supervisors, Quality Manager and DNA Technical Leader will conduct an annual review of the Laboratory’s Management System and testing activities to ensure continuing suitability and effectiveness. This review will include the policies and objectives related to the fulfillment of ISO/IEC 17025:2017.

8.9.1.1 Frequency of Management Reviews
The comprehensive review of the Forensic Lab Management System will be conducted at least annually.

8.9.2 Management Review Requirements
The review shall take account of the following for the year under review:

a) Changes in internal and external issues that are relevant to the laboratory;
b) Fulfillment of objectives;
c) Suitability of policies and procedures;
d) Status of actions from previous management reviews;
e) Outcome of recent internal audits;
f) Corrective actions;
g) Assessments by external bodies;
h) Changes in the volume and type of the work or in the range of laboratory activities;
i) Customer and personnel feedback;
j) Complaints;
k) Effectiveness of any implemented improvements;
l) Adequacy of resources;
m) Results of risk identification;
n) Outcomes of the assurance of the validity of results; and
o) Other relevant factors, such as monitoring activities and training.

8.9.3 Management Review Documentation
The outputs from the management review shall record all decisions and actions related to at least:

a) The effectiveness of the management system and its processes;
b) Improvement of the laboratory activities related to the fulfillment of the requirements of ISO/IEC 17025:2017;
c) Provisions of required resources; and
d) Any need for change.

The outputs may be documented on a Management Review Form. Management Review records are maintained in Qualtrax.
A.1 Organization in the LVMPD
The Forensic Laboratory is a section of the Criminalistics Bureau, Investigative Services Division. Its position is illustrated by the following organizational charts:
- LVMPD organizational chart
  - [http://metroweb.lvmpd.int/services/department/PaR/Policy%20and%20Research/Forms/Organization%20Chart.aspx](http://metroweb.lvmpd.int/services/department/PaR/Policy%20and%20Research/Forms/Organization%20Chart.aspx)
- Forensic Laboratory Section organizational chart
  - In Qualtrax

A.2 Organization of the Forensic Laboratory
The Forensic Laboratory is located in two buildings and divided into six Details.
- Administrative/Quality Detail
- Biology/DNA Detail
- Chemistry Detail
- Firearms Detail
- Latent Print Detail
- Toxicology Detail

The Administrative/Quality Detail, Biology/DNA Detail, Chemistry Detail, and Toxicology Detail are divided into Units.
- Administrative/Quality Detail
  - Administrative Unit
  - Quality Unit
- Biology/DNA Detail
  - Casework Unit
  - Database/CODIS Unit
- Chemistry Detail
  - Seized Drugs Unit
  - Trace Materials Unit
- Toxicology Detail
  - Blood Alcohol and Drug Screen/Confirmation Unit
  - Breath Alcohol Unit

The Biology/DNA Detail and the Administrative personnel assigned to the Biology/DNA Detail are located in the DNA Annex. The remainder of the Details, Administrative personnel and the Quality Unit are located in the Forensic Laboratory building.
Appendix B  Title: PERFORMANCE STANDARDS

B.1 Forensic Laboratory Performance Standards
Performance standards and goals will be established in writing by each of the Detail/Units of the Laboratory and reviewed annually, taking into account work load balance, backlog, and special projects of the Detail/Unit and the Laboratory. The establishment of performance standards, in concert with the goals of the various Details/Units, is an effective way to coordinate the efforts of Laboratory members so they contribute to the achievement of Laboratory functions and to the goals and strategies of the entire organization. Therefore, these goals should be revisited annually to ensure they are relevant and realistic. A copy of the Laboratory’s performance standards is located in the Forensic Laboratory Quality Manual folder in Qualtrax.

B.2 Performance Appraisals
Performance appraisals are conducted annually on tenured non-appointed employees in accordance with guidelines established for civilian employees and applicable contractual requirements. Performance appraisals on probationary employees are conducted on a quarterly schedule, as approved by established guidelines in accordance with LVMPD procedures. Performance appraisals can be conducted more frequently, if warranted.

LVMPD documents describing the performance appraisal system are available to Laboratory members for review. Standardized forms associated with the performance appraisal system can be found on the wide area network at W:\Performance Appraisal System.

B.3 Rewards and Recognition Program
Laboratory management maintains an informal employee rewards and recognition program. Letters of commendation and appreciation forwarded to the Laboratory Director are read during the bimonthly staff meeting to bring attention to the achievements of members of the Laboratory. Employees wishing to bring the achievements of a Laboratory member to the attention of management staff can prepare a brief memo outlining the contributions of their fellow employee.
Appendix C  Title: DUTY HOURS

C.1 Duty Hours
The Forensic Laboratory will be open for business Monday through Friday 0700 to 1600 hours. The Laboratory will be closed for those holidays established by collective bargaining agreement.

Work schedules with start times varying between 0630 and 0900 are available to Laboratory members with the approval of the Laboratory Director. If established work schedules are not meeting the family responsibilities and needs of Laboratory members, revisions to shift and days off can be requested twice annually, in the first week of January and July. These requests should be submitted to the Laboratory Managers/Supervisors first, who will determine the impact the change will have on Laboratory functions. Final approval for the changes rests with the Laboratory Director.

C.2 Deviations from Established Work Schedules
Any deviations from established work schedules or the daily work routine (such as lunch hours, medical appointments, etc.) must be approved by the member’s supervisor before they occur, as this can negatively impact the Laboratory’s ability to properly carry out case work and court appearance responsibilities. Shift adjustments will not be a routine practice and may only be approved in limited circumstances by the member’s Laboratory Manager/Supervisor or the Laboratory Director.

Work schedules are maintained by the Sr. LEST of the Administrative/Quality Detail. Alterations to the work schedule must be brought to the attention of the Sr. LEST by Laboratory members.

C.3 In/Out Board
Members will assume responsibility for keeping their supervisors and peers abreast of their whereabouts during duty hours as a professional courtesy. Court appearances, attendance at meetings, errands, etc., as well as the applicable contact numbers, will be communicated to the appropriate supervisor and the support staff.

An In/Out board will be utilized by members to aid the staff in their duties. The board will help keep the staff abreast of the members’ whereabouts during duty hours.

C.4 Training on RDO’s
If a member is required to attend department authorized training on regular days off, the RDO’s may be adjusted within that specific pay period with appropriate approval. RDO adjustments are also allowed for department authorized travel time.
If funds are unavailable for training and a member wishes to attend relevant training at their own expense, time for offsite training may be approved at the discretion of the Laboratory Director, dependent upon work load considerations and Laboratory needs.

**C.5 Overtime**

On occasion, staff members may have to work beyond their normal duty hours. Overtime compensation is determined by collective bargaining agreement and the policies set forth in the Department Manual.

Planned overtime, such as that required for casework directed by court order or for investigative purposes within a limited time frame, must be approved in advance by the appropriate Laboratory Manager/Supervisor or the Laboratory Director.
D.1 Leave

Vacation and sick time accrual and usage are governed by the policies set forth in the Department Manual and collective bargaining agreements.

Forensic Laboratory members unable to report to work shall notify their supervisor at least two (2) hours prior to their assigned shift as outlined in the Department Manual 620.1 – Attendance.

As a courtesy, the member’s supervisor should be advised before completion and submission of a leave request in Employee Self Service (ESS).
E.1 Dress Code

Laboratory employees will adhere to the rules governing civilian attire as outlined in the Department Manual, section 4/107.00 – Personal Appearance. Jeans and sport shoes are appropriate attire for the Laboratory environment, especially when public access is so restricted. As outlined in 4/107.00, jeans must be in good repair and must not be faded (either by design or wear). Appropriate safety clothing will be utilized in the Laboratory proper according to 3.4 - Chemical Hygiene Plan, 3.4.6 – Personal Protective Equipment (PPE).

Members are required to have appropriate court attire on hand as they are “on call” for court appearances (see Appendix O – Subpoenas for further details).

Members will follow business dress guidelines for all court appearances and other appearances (presentations, training) where professional testimony or discussion is given by the member:

- Male members - suit and tie, or sports jacket with shirt and tie and casual slacks (no denim allowed).
- Female members - dresses or suits (suits can be either a skirt or pants suit).
F.1 Criminalistics Bureau Members
Access to Laboratory areas is carefully controlled for security purposes. In the Forensic Laboratory building, members of the Criminalistics Bureau are permitted access to the Laboratory proper without signing the LVMPD Visitor Log (LVMPD 518), as their duties require contact with Laboratory personnel or use of facilities or equipment. However, this may not occur unless they are escorted or the section is occupied by Laboratory members at the time.

Daily custodial tasks are performed by a company contracted by the LVMPD. Custodians will be escorted when performing custodial duties in the Detail laboratory areas in the Forensic Laboratory and in the DNA Annex.

In the DNA Annex, the only personnel allowed unescorted access to the Laboratory proper are the Bureau Commander/Executive Director, Forensic Laboratory Director, Quality Management, Sr. LEST, members of the Biology/DNA Detail to include assigned volunteers/interns, and Lab Aides. Employees of the Forensic Laboratory and Evidence run teams are not required to be signed-in, however will be escorted while in the Laboratory proper area of the DNA Annex. All other members of the Criminalistics Bureau (CSI and Main Evidence Vault) and police department must be signed-in and escorted at all times while in the Laboratory proper area of the DNA Annex.

F.2 Visitors
Visitors, including those individuals performing routine deliveries of Laboratory supplies and routine building maintenance, entering the Laboratory must complete and sign the LVMPD Visitor Log before being granted entry.

Members of the LVMPD (including officers and detectives) must sign the Visitor Log upon entry into the Laboratory proper.

Entry into the Laboratory proper requires signing the Visitor Log and accompaniment by a Laboratory member. The Visitor Log is found at the reception area of the Forensic Laboratory and near the back door.

A Laboratory member will sign visitors in with name, visitor badge # (if applicable), organization (agency/company information, if they are not affiliated with an agency or company, enter ‘Citizen’), I.D. type (badge, Driver’s License, company I.D.), time of admittance (in 24 hour format), and purpose of visit. The visitor will be provided a Visitor badge to be worn for the duration of their stay in the Laboratory. LVMPD employees who are clearly identified (badge or LVMPD ID displayed) are not required to wear a visitor’s badge. Visitor’s badges will be returned upon departure.
and the time out (in 24 hour format) will be recorded. Visitors will be monitored by Laboratory members during their stay.

The Laboratory Director may grant routine delivery personnel and consultants/contractors employed by the LVMPD specific access depending upon duties or scope of work. The Visitor Log need not be signed if their duties or scope of work are directly related to Forensic Laboratory business.

The Information Technologies (IT) Bureau Architect Network Section has been granted unescorted access in the Forensics IT Room located in the Forensic Laboratory Building by the Laboratory Director. Members of the Architect Network Section must still log in as Visitors and be escorted to the Forensics IT Room. Access to the Laboratory Proper from the Forensics IT Room cannot be gained without proximity card access.

Outside Experts
The policies and procedures governing outside experts are located in Appendix P – Requests for Documentation Production/Outside Experts, subsection P.10 – Outside Experts.

F.3 Tours
Tours for LVMPD Employees
Laboratory members who wish to provide tours for Department members are encouraged to do so if they feel it will benefit the members in carrying out their official duties (ex: new sexual assault detectives). The requirements for visitors described above must be met.

Tours for Legal Groups
Tours of the Laboratory for groups such as Grand Jurors, prosecutors or public defenders are mutually beneficial and are typically granted upon request.

Tours for Visiting Law Enforcement Officials
Tours involving visiting law enforcement officials (commissioned officers, forensic scientists, etc.) are generally permitted (a copy of their law enforcement identification is required).

Tours for Laboratory Personnel's Immediate Family
Laboratory personnel may provide tours to their immediate family members without performing the background check with the understanding that their family members will be disqualified from touring the Laboratory if they fall into any of the eight categories listed below in 2.4.3.4 – Tours for the General Public.

Tours for the General Public
Due to space limitations, safety considerations, and security issues, tours for the general public are discouraged, particularly when they involve large groups or children. Requests for non-law enforcement community groups and school groups will only be permitted on scheduled tour days. Any non-law enforcement personnel
wishing to tour the Forensic Laboratory will be required to undergo a limited background check. Information for the background check will be collected on the LVMPD Forensic Laboratory Background form. Tour requests will follow the same disqualification guidelines set by the LVMPD for citizen observers in the Department Manual 5/207.10- Citizen Observers, Ride-Alongs/Sit-Alongs. Requestors who fall into any of the following categories are disqualified:

1. Is in the United States illegally;
2. Has a felony conviction (including any crime that would be a felony if committed in Nevada);
3. Has a misdemeanor conviction in the past two years;
4. Has a conviction for Battery/Domestic Violence;
5. Is involved in a pending criminal case;
6. Is determined to have gang, subversive, or terrorist group affiliation;
7. Is under 18 years of age at the time of the request, unless participating in the LVMPD Explorer program;
8. Is untruthful on the application;

Tours may also be denied if it is deemed in the best interest of the Department, and with Bureau Commander concurrence.

In the event that a requestor is denied due to criminal background, gang or terrorist affiliation, members are not to disseminate the information to the requestor.

For groups containing individuals under the age of 18, the Laboratory may offer the group requesting the tour an offsite presentation by one of the Laboratory members.

Scheduled Tours
Scheduled tour days - To help control the down time experienced by the analysts associated with tours, tours will be scheduled on an as needed basis. On tour days there may be two separate tours scheduled consisting of not more than 20-25 people per tour. Signing up for the tours will be mandatory as the tours will be provided on a first come, first served basis. Groups approved to tour the Laboratory during this time routinely consist of, but are not limited to, community groups and college students interested in forensic/law enforcement careers. Due to the nature of evidence, and the potential for contamination, no tour groups will be allowed to enter the Detail/Unit specific areas of the Laboratory.

The coordination of tours of the Laboratory will be handled by the Public Relations Committee. Tour groups must be escorted and continually monitored. The LVMPD Visitor Log will be used for all tours. Visitors in tours may wear temporary Visitor stickers in lieu of badges. Large groups should be divided so that they are more manageable. In all instances, visitors shall be advised of evidence integrity issues and that nothing in the Laboratory shall be touched unless they are specifically instructed or invited to do so. Members of the visiting group will not be permitted to wander off individually. Local High Schools and other organized groups may request an offsite presentation by members of the Laboratory, which can be performed
schedules permitting. The vetting of requests for offsite presentations will be handled by the Public Relations Committee.

Note: No tours will enter Laboratory proper areas without prior permission from the appropriate Manager/Supervisor or Laboratory Director.
LVMPD FORENSIC LABORATORY QUALITY MANUAL

Appendix G  Title: VEHICLES

G.1 Vehicles
The Department provides the Laboratory with a number of “pool vehicles” to be used by Laboratory members. Keys for the cars are maintained near the Sr. LEST’s desk.

If no Forensic Laboratory vehicles are available, Laboratory members may use vehicles assigned to the CSI Section. When using a CSI vehicle, the on-duty Crime Scene Analyst Supervisor or the CSI Sr. LEST shall be notified and the vehicle must be signed out utilizing the CSI Vehicle Log (located near the key box).

The Clandestine Laboratory member on call will utilize the clan lab vehicle during calls.

The breath car will be assigned to the Breath Alcohol Unit for use during official duties.

The NIBIN truck will be assigned to the NIBIN squad for use during official duties.

The DNA vehicle will be assigned to the Database Unit for use during official duties.

Laboratory members are assigned individual gas cards to be used when fueling Department vehicles. Department members are limited to specific car wash and fueling locations arranged for the Department by the Logistics Bureau. A list of these locations may be kept in the vehicle for the convenience of Laboratory members. See Department Manual 5/104.06 – Maintenance and Fueling of Department Vehicles for further details.

All members are encouraged to advise their Manager/Supervisor when they detect problems with any vehicle. Vehicle maintenance is usually handled by support service personnel.
H.1 Budget

The LVMPD’s fiscal year runs July 1 – June 30. The budget for the Forensic Laboratory is prepared annually in accordance with guidelines established by the Office of Finance. A copy of the current budget is maintained in the office of the Laboratory Director. In addition, budget information is available to all LVMPD Department Personnel on the following website:

W:\Budget

Preparation for the next fiscal year usually begins in September and is usually due in November of the preceding year. Although the Laboratory Director is ultimately responsible for the preparations and management of the budget, Laboratory members actively participate in the process.

Other funding sources available to the Laboratory are grants and the Forensic Analysis and Genetic Testing Funds, commonly referred to as Fund 207. Expenditures of money available through Fund 207 are regulated by Nevada Revised Statutes. If purchases are made through Fund 207, the Budget Office must be informed by annotation on the Request for Purchase Requisition via SAP.
LVMPD FORENSIC LABORATORY QUALITY MANUAL

Appendix I

Title: PURCHASING REQUESTS

I.1 Blanket Purchase Orders
Since Laboratory functions depend on a variety of equipment, disposable supplies, chemicals, etc., the need for a quick and easy method to receive supplies is established through the use of blanket purchase orders (PO’s). The purpose of blanket PO’s is outlined in the Department Manual, 5/103.08 – Purchasing – Requests, Processing and Payments and is used for multiple purchases from the same vendor over the course of a fiscal year. Laboratory members should recommend blanket purchase orders for those scientific supply companies which will be used on a routine basis. Some vendors, which supply items department wide, may have a blanket PO established by the Logistics Bureau. A list of those companies is available through the Sr. LEST.

I.2 SAP
The Department utilizes SAP as its financial and inventory management system. Purchase order requisitions and goods receipts are entered into the system with specific persons given authority for budget approvals.

I.3 Non-Blanket Purchase Orders
Purchase of other capital equipment, goods, or services from a vendor which does not have a blanket PO can be accomplished by submitting supply and equipment requests to the member’s Laboratory Manager/Supervisor and if approved, it will be forwarded to the Laboratory Director. Availability of funds, appropriateness of the purchase and funding priorities will be considered by the Director and the chain of command. When approved, the Sr. LEST will place the request in the SAP system. The exception to the use of SAP occurs with grant purchases, which must be submitted on a paper purchase order requisition.

I.4 Purchases Exceeding $25,000
If the purchase from one vendor exceeds $25,000 but is less than $50,000 during a fiscal year, a price quote for the same supplies/services from at least two vendors will be required. The written quotes from the vendors must be obtained using the Request for Quote, LVMPD 432. If any one item or like items (disposable Laboratory supplies or Laboratory sample kits, for instance) exceed $50,000, a competitive bid for purchase is required. The department is governed by purchasing regulations established in the NRS applicable to governmental entities. See Department Manual, 5/103.08 – Purchasing – Requests, Processing and Payments for further details.

Grant purchases follow federal procurement rules.

Sole Source
Some purchases and/or professional or proprietary services that do not warrant competition may be sole sourced (competitive bid exceptions) based on factors such as: the compatibility of instrumentation, a highly specialized service, an uniqueness/specialization of the product. Justification for a competitive bid exception must be submitted to LVMPD Purchasing Unit for approval.

Grant purchases follow federal procurement rules.

### 1.5 Credit Card

The Forensic Laboratory has a credit card which can be used for one time purchases of items costing less than $200. This card is available to employees upon approval by the Laboratory Director for the purchase of items which are needed on an emergency basis or if an alternate form of payment is not accepted by the vendor. It must be stressed that the LVMPD is a tax exempt institution and some local vendors have refused to honor the card based on this fact (see Department Manual 5/103.45 – *Department Credit Cards* for further details).
**Appendix J**

**Title: INVENTORIES**

**J.1 General Property**
The policies located in Department Manual 5/103.22 – Property Management System must be followed for all property with an initial value of more than $5,000 (fixed assets).

A comprehensive property inventory, provided by the Accounting Section, of all fixed assets is required to be completed annually. Therefore, when equipment is purchased, moved to a different location or destroyed, proper notations must be made to the Laboratory’s inventory located in the following location- H:\CB\Forensics\General\Inventory. When a fixed asset is being removed from service (scrap, auction or disposal) the change section of the Property Control form must be completed. A copy of the form should be saved for inventory purposes. The form must be forwarded to the Accounting Section.

The Laboratory’s inventory must be properly documented when any non-fixed asset item (valued under $5000) is purchased, moved to a different location or destroyed.

If an “older” item (purchased prior to the initiation of the Laboratory property inventory) is being destroyed, a LVMPD memorandum should be completed and forwarded to the Sr. LEST assigned to the Forensic Laboratory.

**J.2 Equipment and Instrumentation**
Any and all technical equipment and instrumentation acquired by the Laboratory will be recorded on the Forensic Laboratory Equipment/Instrumentation Receipt form (Qualtrax 5431). The Detail/Unit receiving the equipment/instrumentation is responsible for filling out the form. The form should be completed in its entirety. Originals are maintained in the Resource Manager Object Repository or in Qualtrax.

**J.3 Firearms Inventory**
An inventory of the firearms reference collection will be maintained. If available, the information collected will include the make, model, caliber, serial number and location. The master inventory, located in the following location-H:\CB\Forensics\Manager\Firearm Reference Collection, is maintained by the Firearms Detail. Any deletions or additions to the inventory will be noted by memorandum to the Laboratory Director and will be incorporated into the master inventory during the next routine accounting. The Forensic Laboratory firearms inventory will be kept in coordination with the Department’s equipment tracking system to ensure that the inventory is accurate.

An annual inventory will be conducted and any discrepancies not accounted for by memorandum will be brought to the immediate attention of the Forensic Laboratory.
Manager of the Firearms Detail and the Laboratory Director. Any unaccounted discrepancies will also be reported to the Supply Section of the Logistics Bureau (see Department Manual 5/208.06 – Firearms Issue and Tracking for further details). A LVMPD memorandum detailing the results of the inventory will be forwarded to the Quality Manager/designee and will be uploaded into Qualtrax.

Firearms from the collection may be used by the personnel assigned to the Firearms Detail in conjunction with their official duties. Firearms from the reference collection may also be removed from the Laboratory and transported to an off-site facility for testing or training purposes. This practice is permissible as long as the firearm(s) remain in the custody and control of the Firearms Detail personnel while outside the Laboratory.

Firearms from the reference collection may be released to other Department Members upon approval of the Firearms Detail Manager. These releases will be for short term use only and must coincide with the official duties of the Department Member. These releases will be documented on the Firearms Detail “Temporary Firearm Release” form (Qualtrax 6982). These forms will be maintained in the Firearms Detail Armory until the released firearm(s) is/are returned. Once returned, these forms will be maintained in Qualtrax.

Removal of firearms from the Laboratory for personal use is forbidden.

J.4 Chemical and Drug Inventory

An inventory of chemicals and controlled substances will be maintained. Those records, kept electronically, can be found in two locations - H:\CB\Forensics\General\Chemical inventory (MSDS)\Chemical Inventory and in the Resource Manager.

The inventory on the H: drive contains all the information required by the LVMPD Safety Detail and is maintained for first responder safety. This inventory is provided to the LVMPD Safety Detail upon request.

The inventory in Resource Manager is maintained for casework purposes.

The Drug Weight History inventory used for tracking the weights of the controlled substances used by the Seized Drugs Unit is located in Qualtrax.

An annual inventory will be conducted on controlled substances and any discrepancies in the quantity exceeding +/- 5% of the amount recorded in the Drug Weight History tab in Qualtrax will be brought to the immediate attention of the Forensic Laboratory Manager of the Chemistry Detail and the Laboratory Director.
Appendix K  
Title: RECORD SEALING

K.1  General
The Forensic Laboratory is required to comply with the sealing process by removing information in files and databases that can link the petitioner to the event. Information of this nature consists of the petitioner’s name, ID number(s), Social Security number, or any description from which identity could be deduced (for example, a reference to the petitioner’s brother), etc.

Note: A sealing order would not apply to a DNA sample or DNA profile. The sealing statutes in NRS 179.235, 255 apply to criminal history records. Since DNA samples and profiles are not criminal history records, they are not sealed pursuant to an order. There are specific statutes and processes (NRS 176.09125 and NRS 176.09165) to follow to have a DNA sample or profile purged that would override the general sealing statute.

K.2  Sealing Procedures
Upon receipt of an order to seal records from the Records Bureau, the following sealing procedures will be performed by Laboratory personnel:

Sealing procedure for cases worked prior to the implementation of LIMS (October 07, 2013):
- A checklist will be created on colored paper (lime green).
- The event number will be queried in NFLIS (National Forensic Laboratory Information System). Entries in any fields that contain the name or identifying information about the petitioner must be removed by replacing it with five capital X’s (“XXXXX”). Therefore, if the name, ID number, social security number (although it is unlikely that this number is in NFLIS), is present in the NFLIS record, it will be deleted and XXXXX will appear in its place. All other information maintained in NFLIS will remain unaffected – this includes names of other suspects and victims and the names of requestors, officers, detectives, etc.
- Case files (including case notes) will be pulled. The case file and notes will be visually searched and the petitioner’s name and any other identifying information will be redacted.

Sealing procedures for cases worked after the implementation of LIMS (October 07, 2013):
- A checklist will be created on colored paper (lime green).
- The event number will be queried in LIMS. A blue flag located under Actions in Lab Case Detail will be selected. When the blue flag is selected, Sealed Record will appear in the lower left hand corner of the Lab Case Details page.
The petitioner’s name, a reference to the seal order and date, along with any other pertinent information will be placed in the Lab Case Comments.

- Entries in the Parties of Interest tab on the Lab Request Details page that contain the name or identifying information about the petitioner must be removed by replacing it with five capital X’s (“XXXXX”).

*Note: The sealing of records for Biology/DNA outsourced cases containing batched information may require all Lab Numbers in the associated batch to be sealed.*

**Sealing procedures for all cases:**

- For cases with event numbers prior to 2011, associated latent lift packets will be pulled. The petitioner’s name and other identifying information will be redacted from the latent print envelope. It is not necessary to redact information from the actual lift cards contained in the envelope, unless the cards are to be reproduced per the demands of a discovery subpoena or a court order. If the prints are going to be released, then the information must be redacted. The redacted latent lift packet will be refilled and retained in the Remstar or in secured storage according to normal procedures.

- If the Laboratory receives a discovery subpoena requesting documentation under a specific event number, LIMS, NFLIS and/or the administrative file system (for non-LIMS cases) will be checked. If it is obvious from these sources that a record sealing took place, additional redacting may be necessary before any records can be released. All releases of discovery materials must flow through the Quality Manager/designee (see 2.14 – Requests for Document Production/Outside Experts for further information on discovery procedures).

**K.3 Sealing Orders Not Received from the Records Bureau**

The Quality Manager should be notified if an order to seal a record comes to the Laboratory from a source other than the Records Bureau.

**K.4 Release of Case Information**

Laboratory members must query LIMS, NFLIS and/or the administrative case files to ensure that sealing procedures have not been applied to a case before releasing information. Any Laboratory member who violates the sealing order by releasing information (even to other department members) should be aware that serious consequences may be a result of this breach of Nevada Revised Statute.
Appendix L

Title: COMMUNICATIONS

L.1 General
Effective communication is essential to provide professional quality service to the LVMPD and other user agencies and to render support services which enable the Laboratory to maintain a smooth flowing operation.

L.2 Written Communication
Several forms of written communication exist for use by Department members, the most common of which are the memorandum and e-mail.

Written correspondence from members of the Laboratory which pertains to official business can be prepared on memorandum form or Department letterhead.

**Memorandums and Letterhead**
Correspondence within the Department and to some county agencies should be in the form of an inter-office memo. A number of memo templates exist on the wide area network and are to be used by Laboratory members.

The use of letterhead is reserved for more formal correspondence, usually outside the Department, and is prepared under the Sheriff’s or Laboratory Director’s name. With the exception of letters prepared on a consistent basis (discovery), written correspondence regarding official Laboratory business will be submitted to the respective Laboratory Manager/Supervisor or Laboratory Director for review prior to distribution. A copy of all official correspondence will be maintained in the Laboratory. Correspondence associated with a specific case will be stored by the Lab number in the appropriate Object Repository.

All formal Laboratory correspondence must bear preparer’s signatures or initials. Initials and/or initials and P#’s are acceptable on memorandums; preparer’s signatures must be on letterhead.

**E-mail**
All Laboratory members will have an official Department e-mail address and will check their e-mail at least once daily while on duty. The use of e-mail is encouraged for routine official business to cut down on unnecessary paper usage. E-mail can be utilized in the communication between Department members, county employees (including deputy DA’s), individuals outside the Department, and Internet sites of forensic interest. E-mail communications must remain professional at all times.

**E-mails Containing Important Case Information**
E-mails of particular importance to cases worked by the Laboratory should be stored by the Lab number in the appropriate Object Repository. If an e-mail contains both
communications of particular importance to the case as well as non-relevant communications, the case pertinent portion of the e-mail should be memorialized in the appropriate Communication Log in LIMS.

**Routed Materials**
Written materials may be routed through the Laboratory for purposes of keeping Laboratory members informed and providing information on Forensic Science topics. Other materials passed on as an “FYI” only can be read at the member’s choice. In either case, routed materials should be moved along quickly and should not languish on any one individual’s desk.

**Research Projects/Articles**
The Laboratory Director and respective Laboratory Manager/Supervisor will be informed of any research projects, articles, etc., being performed or published by Laboratory members.

**L.3 Mail**
Each Laboratory member will have a designated mail slot where they are to pick up incoming mail and messages. Laboratory members will check their mail slots at least once daily while on duty. US mail and outgoing mail, both intra-lab and departmental, should be placed at the designated locations in the reception area.

Mail traveling within the Department or county can be sent via “thousand miler” (interdepartmental mail) and is routed to the other bureaus/sections by the Supply Section of the Logistics Bureau. Supply couriers pick up and deliver mail at least once a day.

Official correspondence outside of the Department, including bulk items, is mailed through the US Mail or private carrier (UPS, Federal Express) at the expense of the Department. Pickup can be arranged through the LEST/designee assigned to the front desk. Special arrangements for pick up can be made with the Supply courier. This can be coordinated with the assistance of the support staff.

**L.4 Land Line Phones**
Phones are an essential tool for communications regarding Laboratory services. Laboratory phone numbers are provided to Department employees and to others for official business. Therefore, Laboratory members should utilize the extension most convenient for them and ensure that the Bureau phone list contains correct information.

A number of Laboratory members share the same extension. For this reason, any one member is not to monopolize the extension. Department email is a good alternative to the phone and most detectives and DA’s are available via e-mail. It is understood that Laboratory members must occasionally speak with family members and others, however personal calls shall be kept to a minimum and lengthy calls should be conducted during breaks or lunch. Long distance service is available for
official business but long distance personal calls are not permitted at Department expense.

Department phones will be answered in a courteous business-like manner. Voice mail or answering machines are available for all Department phones through the Facilities Section of the Logistics Bureau (coordinate request through clerical support staff). During the work day, attempts should be made to answer Laboratory phones. Calls should be screened as practical and, when necessary, transferred to the most appropriate member.

When Laboratory members engage in a conversation with prosecutors, defense attorneys, detectives or others that is of particular importance to cases worked by the Laboratory, the conversation should be memorialized in the appropriate Communication log in LIMS.

Providing callers with personal information about other Department/Laboratory members, including personal contact numbers, is not permitted. When personal contact numbers are requested, the member answering the call can take a message or if the call seems urgent, call the member and relay the information.

L.5 Facsimile/Electronic Scanning

Items, including formal reports, can be sent to appropriate parties via facsimile or e-mail (see 4.2.1 – Dissemination of Laboratory Results for further details). Clerical staff can send faxes and electronic transmissions for analysts provided notations, fax numbers, e-mail addresses and other pertinent data are clearly annotated by the analyst. The printed FAX “sent” receipts may be maintained as a record if the items sent are deemed important. The preferred method of distributing reports is through the use of OnBase and/or FA (Forensic Advantage) Web.

L.6 Cellular Phones

Certain Forensic Laboratory members are required to carry a Department issued cellular phone. A cellular phone is issued to the Breath Alcohol Unit for use in their official duties and Clan Laboratory members who are on call are required to carry the clan lab cellular phone during their response week. These numbers are available on the Bureau phone list or through the Communications Bureau.

When performing official duties or errands, the Laboratory cell phone can be utilized and the number can be posted on the in/out board located near the front desk or relayed to the appropriate Manager/Supervisor and support staff. If a member is expecting a call regarding a court appearance, but is on a Friday or Monday RDO as part of the alternate nine hour schedule, as a courtesy, the Laboratory member’s respective Manager/Supervisor and fellow employees will be advised so that they are aware of the situation and can obtain the pertinent information if a prosecutor should call the Laboratory.

Personal cell phone numbers may be provided to Deputy District Attorneys’ or court personnel if the employee so chooses for these RDO court appearances.
If a member is responding to an outside jurisdiction court appearance, use of the Laboratory cell phone is advised in the event that the case is called off and the member can be saved from making an unnecessary trip.

**On Duty Personal Cell Phone Use**
Personal cell phone usage should be kept to a minimum. If lengthy personal phone calls are required, they should be relegated to lunch and authorized break periods.

While members are engaged in work related activities in the bullpen or in the Laboratories, cell phones must be in the silent/off mode.

Exceptions to cell phone use during work hours apply only when members have been provided Department issued cell phones for specific work related functions.

The main Laboratory phone line (702-828-3292) is manned during the hours of 0700-1600 and family members can call this main line when an emergency arises. The Laboratory Director/designee will ensure that the member is contacted immediately.

**L.7 Radio Communications**
The clan lab vehicle is equipped with a Department radio to enhance communications when members are on the road responding to clan lab sites. The Communications Bureau has assigned the call sign of “CL” to the Forensic Laboratory and this sign should be utilized when conversing over Department channels.
M.1 Outside Employment
Department approval must be granted before a Forensic Laboratory member can engage in outside employment.

Permission for and the rules governing outside employment are located in the Department Manual 5/101.35 – Outside Employment.
Appendix N
Title: INTERNS AND VOLUNTEERS

N.1 Interns and Volunteers
The LVMPD Office of Human Resources has established a formal program for interns and volunteers. Any individual desiring a position must submit a request through the Office of Human Resources.

Any individual chosen to participate in an internship must have the necessary science courses and must be able to operate safely and rationally in a Forensic Laboratory environment.

Any individuals requesting an internship at the Forensic Laboratory should be directed to the following LVMPD website (Internship Program):
http://www.lvmpd.com/enus/ProtectTheCity/Pages/InternshipOpportunities.aspx
This website details the requirements for the internship program.

Volunteers can perform a myriad of duties including those of a clerical and nontechnical nature. If operating in a technical capacity, it is preferable that Laboratory volunteers have a science background.

Any individuals requesting to volunteer at the Forensic Laboratory should be directed to the following LVMPD website (Metro Volunteer Program):
http://www.lvmpd.com/en-us/ProtectTheCity/Pages/VolunteerProgram.aspx
This website details the requirements for the LVMPD volunteer program.

Any current LVMPD volunteers requesting to volunteer at the Forensic Laboratory should be directed to the Laboratory Director/designee.

Any volunteer or intern must submit to a thorough background investigation conducted by the Internal Affairs Bureau, required by LVMPD policy.
Appendix O  Title: SUBPOENAS

O.1 Subpoena Delivery and Receipt
Subpoenas are delivered to the Forensic Laboratory by various means including fax, hand delivery and a specific web site developed for this purpose by the Clark County DA’s Office. Routine receipt of subpoenas for Laboratory personnel will be through the Administrative/Quality Detail of the Laboratory. The Director will designate members of the clerical support staff (LEST) to be responsible for subpoena receipt. The LEST/designee will log all subpoenas received into the Testimony module located in LIMS. The LEST/designee will issue Uniform Nonappearance Notifications as needed, based upon the most current schedule. Subpoenas will then be forwarded to the appropriate member.

If subpoena servers or investigators appear at the Laboratory to serve an individual analyst, the analyst will inform the server or investigator that service is to take place at the front desk of the Laboratory, with the LEST/designee.

O.2 Subpoenas for Former Employees
If a subpoena is received for a former Forensic Laboratory member, a Forensic Laboratory Uniform Nonappearance Notification will be completed and forwarded along with a copy of the subpoena to the appropriate attorney’s office. The following wording will be placed on the bottom of the Uniform Nonappearance: “FORMER EMPLOYEE’s NAME REASON (retired, is no longer an employee of LVMPD, passed away, etc.) on/as of DATE. This subpoena was received and will be forwarded to the appropriate Manager, MANAGER’S NAME. You can reach her/him at PHONE NUMBER.

Example: Fred Boyd retired on July 29, 2011. This subpoena was received and will be forwarded to the appropriate Manager, David Johnson. You can reach him at (702) 828-3938.

The following wording will be placed on the bottom of the subpoena: “This subpoena was received. However, FORMER EMPLOYEES NAME is no longer an employee as of DATE EMPLOYEE LEFT FORENSIC LABORATORY EMPLOYMENT. If you have any questions you may contact Forensic Laboratory Manager FORENSIC LABORATORY MANAGER NAME at FORENSIC LABORATORY MANAGER PHONE NUMBER. LEST/DESIGNEE NAME, TITLE and PHONE NUMBER on DATE.

Example: This subpoena was received. However, Fred Boyd is no longer an employee as of 7/29/2011. If you have any questions you may contact Forensic Laboratory Manager David Johnson at 828-3938. Jennifer Seto, LEST (828-3292) on September 13, 2011.
O.3 Subpoena Availability
It is the responsibility of the Laboratory member to notify the administrative staff of impending absences. The Sr. LEST/designee will send out an email quarterly inquiring about availability for court for the upcoming three month period. Every testifying Laboratory member must respond to this email by the deadline stated in the email. The response must include the dates and the type (vacation, training, FMLA, etc.) of all anticipated absences for the requested time period. These responses will be used as the basis of acceptance or refusal for the subpoenas received by the Laboratory.

If, after sending the dates of anticipated absences, a Laboratory member requires additional time off, an email must be sent to the Temporary Support Assistant and the LEST responsible for subpoena service.

If any subpoenas have already been served for the additional time off requested and the member is unable to appear as scheduled due to an emergent situation, the member must notify the attorney, the court or its administrative body, or their supervisor as soon as possible.

Due to calibrations, training classes, etc., subpoena availability for the Forensic Analysts of Alcohol will be determined as the subpoenas are received. A Forensic Analyst of Alcohol will provide the availability to the LEST responsible for subpoena service/designee.

O.4 Subpoena Service
The Subpoena Record is a form that is utilized to satisfy Department policy 5/201.01 - Subpoena Service for Department Members. The Subpoena Record will be printed out from LIMS and placed on a clip board located in the mail room. Upon receipt of their subpoenas, Laboratory members will acknowledge the receipt of the subpoenas by entering their initials and P # or signature in the Confirmation of Receipt column and the date in the Acknowledged Date column in each row corresponding to a subpoena received in the Subpoena Record. If multiple subpoenas are received by a member in a given day, the member must place their initials and P #/signature in the first entry and an arrow may be used for all the following entries.

O.5 Appearance for Subpoenas
It is the responsibility of the Laboratory member to be aware of the status of the subpoenas which have been served. Appearances can be verified through the use of the prerecorded phone messages noted on the subpoena. Agreements with local district and city attorney’s offices have established that Laboratory members are “on call” for court appearances. Therefore, members will not respond to subpoenas.
automatically, but will await a phone call from the appropriate party advising them that testimony is required.

If an appearance subpoena is received from a defense attorney, the attorney should be made aware of the above policy (members will not automatically respond to subpoenas, but require a phone call advising them that testimony is required).

Per Department policy, in the event the member is unable to appear as scheduled due to an emergent situation, the member must notify the attorney, the court or its administrative body, or their supervisor as soon as possible to avoid adverse circumstances. The member has an obligation to ensure that subpoena response is not necessary and alternate arrangements can be made with the person issuing the subpoena.

O.6 **Multiple Appearances for the Same Date**
Laboratory members often receive multiple subpoenas requiring appearance at the same date and time. This conflict is resolved by advising the appropriate courts or attorneys that responding is based on the level of court and date of subpoena receipt. Federal court jury trials would represent the highest level of court and take precedence over lower courts requiring response. Followed by district court, justice court, municipal court, and finally, administrative court, represent the court hierarchy. If appearances are required at the same time by the same level of court, the subpoena received first shall be responded to first. Conflicts should always be brought to the attention of the Laboratory Manager/Supervisor or Laboratory Director.

O.7 **Civil Subpoenas**
Any civil subpoena received by a Laboratory member should be forwarded to the Quality Manager/designee. The Quality Manager/designee will forward the subpoena to the Office of General Counsel who will perform research regarding the case to determine whether the criminal portion of the case has been adjudicated and to provide direction on how the Forensic Laboratory should respond.

O.8 **Depositions**
Laboratory members are frequently subpoenaed to provide depositions. Depositions may be introduced at trial and therefore testimony must be rendered with equal care and consideration for fairness and impartiality.

O.9 **Payment for Off Duty Appearances**
Payment for off duty appearances is governed by department regulations and collective bargaining agreement.
LVMPD FORENSIC LABORATORY QUALITY MANUAL

Appendix P Title: REQUESTS FOR DOCUMENTATION PRODUCTION/OUTSIDE EXPERTS

P.1 Discovery Requests for Documentation Production

Formal Laboratory Reports may be produced to appropriate parties (Detectives, DA’s, Defense Attorneys) upon request. All other documentation including, but not limited to Corrective Action Reports, quality control logbooks, work notes, and other case related documentation will only be produced upon presentation of a legal court order, subpoena duces tecum, or the Discovery of Forensic Lab Records form, and only those records specified will be produced.

Per NRS 171.1965 and NRS 174.335 (3), discovery is properly obtained through the prosecuting attorney and only the court can direct documents prior to trial. Per Nevada v. Tsolis, the defense cannot command the delivery of documents outside of court proceedings. The prosecuting attorney may request records using the Discovery of Forensic Lab Records form, however the defense must obtain a Court Order in order to subpoena records in lieu of appearance.

Discovery Request Receipt

Discovery requests must be directed to the Quality Manager/designee or pass the front desk of the Laboratory. Often these are issued to the Laboratory Director, Quality Manager, or the “Custodian of Records” (COR) for the Forensic Laboratory. The LEST/designee will log all discovery requests received into the Testimony module located in LIMS. Once logged, the request is then forwarded to the Quality Manager/designee.

Discovery Documents

Case record discovery documents are located in the Published Documents tab in LIMS. The Published Documents tab can be found by performing the following steps:

- Open the appropriate Lab Number
- Click on the Unit Records tab
- Double click on the appropriate Unit Record
- Click on the Actions button
- Chose Open Publish & Packet Manager
- Click on the Published Documents tab

Notes: Discovery documents pertaining to a particular Unit are also available in the Object Repository, etc. at the Unit Record level. Cases worked prior to the implementation of LIMS will require scanning of all items in the paper case file.

The following documents will be sent for a discovery requesting a copy of the case file and/or case record (if created):
- Case Record Files (final version only unless drafts are specifically requested). These are the records located in the Unit Record Object Repository.
- Case Report Lab Packet
- Communication Log
- Lab Report Released
- Messages (if populated)
- Submission Images (this is the RFLE scan)
- Worksheet(s) (all views of the worksheet that contain information must be provided, including review results)
- Corrective Action Reports, if applicable
- Chain of Custody Report and Notes from ACE

The appropriate documents will be electronically saved in the following location: 
H:\CB\Forensics\General\Discovery under the appropriate event number and Detail\Unit (e.g. H:\CB\Forensics\General\Discovery\130106-0754\LP).

Documents will be redacted as needed (e.g. Social Security Number, names from unrelated cases (batching)) prior to being disseminated. It is recommended using Adobe Pro for redaction, however, if it must be by hand, the following can be done:
- Use white correction tape with a note and initial next to it.
- Use white correction tape and then cover it with black sharpie and then scan/copy to ensure coverage.
- Black it out with a sharpie, photocopy and then black out the copy to ensure coverage.

The above records will be prepared by the Quality Assistant/designee if the position is filled; otherwise it is the responsibility of the appropriate case analyst.

It is the responsibility of the appropriate case analyst to prepare any records directed by the request beyond those listed above (maintenance records, raw data, reagent records, etc.). It is also the responsibility of the appropriate case analyst to assist the Quality Assistant/designee and/or prepare case records for cases worked prior to the implementation of LIMS (NFLIS cases).

**Discovery Documents - Breath**

Discovery documents for Breath Alcohol will be prepared by a Forensic Analyst of Alcohol. A discovery packet for a Breath Alcohol discovery will typically consist of the following:
- Maintenance Records of the instrument in question
- Calibration Declaration
- Reference Standard Declaration
- QC Packet/Data for the Reference Standard
- QC Packet/Data for the calibration solutions
- Breath Alcohol Test Results
• Log Book (if the log book is maintained by the Forensic Lab (i.e. CCDC, Traffic Mobile Units).

Any records requested beyond those listed above will be handled on a case by case basis.

Records for release will be stamped with the “certified copy” stamp, or accompanied by a notarized affidavit, when specifically requested to do. If the analyst is no longer an employee of the Forensic Laboratory, the appropriate Laboratory Manager/Supervisor will serve as the contact for record preparation.

**Documentation of Items Released**
Specific items released under discovery requests will be documented through a completed LVMPPD Forensic Lab Document Release Receipt. The documentation of items released will be the responsibility of the Quality Manager/designee. It is considered case administrative documentation and thus maintained along with a copy of the request and any correspondence, in the appropriate Object Repository (Lab Case/Unit Record) under the appropriate Lab Number. For Breath Alcohol cases not located in LIMS, this documentation will be retained in Qualtrax. Copies of this documentation for other cases worked outside of LIMS will be stored in the paper case file as well as Qualtrax. The LVMPPD Forensic Lab Document Release Receipt must be signed by the individual receiving the case documentation. If the documentation is sent through interdepartmental mail to the requestor, the form must be added to the packet with a note instructing the individual in receipt to sign it and return it to the Forensic Laboratory.

**Distribution of Discovery Documents**
If an invalid subpoena originates from a defense attorney, a form letter provided by LVMPD Office of General Counsel informing the defense attorney that discovery is properly obtained from the District Attorney, will be sent to the defense attorney utilizing Department letterhead. Non-objectionable items requested by the defense attorney will be forwarded to the District Attorney’s Office for dissemination to the defense.

If the request originates from the District Attorney’s Office, two copies of the non-objectionable items requested will be sent to the District Attorney’s Office with the understanding that the extra copy will be forwarded to the defense attorney.

**Overly Burdensome Discovery Subpoenas/Court Orders**
Any request for records which seems unreasonable will be brought to the attention of the Laboratory Director or Quality Manager/Quality Assistant. In this case, a review of the request may be requested by LVMPD General Counsel, or the Clark County District Attorney’s Office, before any records are released.

**P.2 Discovery Requests for Civil Cases**
If a discovery request is received on a civil case, the Quality Manager/designee will forward the subpoena to the Office of General Counsel who will perform research
regarding the case to determine whether the criminal portion of the case has been adjudicated and to provide direction on how the Forensic Laboratory should respond.

P.3 Court Orders/Discovery Requests for Evidence Production/Reanalysis
When a court order compels the release of evidence for analysis by an external laboratory, the case must first be researched before the evidence can be released. The Forensic Laboratory must perform all relevant analyses as requested on LVMPD evidence before it can be released to an external laboratory. This is to ensure that the Forensic Laboratory can vouch for the integrity of the evidence, before it may be affected by the shipping, handling, and preservation of evidence, or analytical procedures utilized by the external laboratory. If the order is presented at the Evidence Vault, vault personnel will contact the Laboratory according to Department Manual 5/210.20 - Release of Evidence. When the Laboratory receives such a court order, the following must be performed:

- Check case records. If all appropriate analyses are completed, the evidence may be released.
- Query LIMS. If a request for analysis has not been met, the evidence cannot be released.

Evidence sent out or released to outside experts via Laboratory members must be thoroughly documented. Procedures for sending evidence to outside agencies and/or laboratories are outlined in 7.4.1 - Evidence Ordering, Receipt, Processing, Return and Release - Temporary Release of Evidence/Shipping Evidence.

Requirement of a Court Order for the Release of Evidence
Subpoenas are often utilized to request that the Forensic Laboratory perform evidence mailing and release services. However, since a subpoena does not carry adequate authority, a court order will be required for the release of evidence, including copies of latent prints of comparison quality.

P.4 Outside Experts
Review of Evidence in the Laboratory by Outside Experts
Court orders may dictate that an outside expert be given the opportunity to conduct a review of evidence or documentation in the Laboratory. This may be appropriate if the evidence consists of latent print cards, but may not be appropriate for other types of evidence (for example, the analysis of bloody items). Outside experts shall not be permitted to use the Laboratory’s analytical equipment.

Observation of Laboratory Analysis by Outside Experts- General
Unless directed by a court order, the Forensic Laboratory does not allow non-LVMPD personnel to observe analysis in the facility for the following reasons:

The Forensic Laboratory will not permit any actions that may lead to the loss, deterioration, or contamination of evidence. Maintaining the integrity and identity of the evidence is of the utmost importance. Actions that lead to a breach in confidentiality, safety or the disruption of the efficiency of Laboratory operations are not allowed.
The presence of non-LVMPD trained individuals causes a disruption in Laboratory operations, hindering the ability of the Laboratory to operate efficiently. Non-LVMPD individuals have not been subjected to the thorough LVMPD background check. A visitor will be unfamiliar with LVMPD Forensic Laboratory analytical procedures, safety rules and security policies.

The Forensic Laboratory is not designed to accommodate the witnessing of casework analysis while simultaneously ensuring the integrity, confidentiality and security of other cases in progress.

An outside observer would have access to information relating to ongoing investigations (suspect names, victim names, criminal charges, evidence undergoing analysis and results of evidence analysis).

Due to the limited size of some evidence, an outside observer would pose a significant risk to the established policies and procedures used to ensure sample integrity and minimize the chance of loss, contamination and/or deleterious change.

An outside observer would be a serious distraction to the full, undivided attention that Laboratory members must give their work.

**Guidelines for Observation of Laboratory Analysis by Outside Experts**

If a court order directs the Forensic Laboratory to allow an outside expert to observe forensic analysis, the court must be asked to order that the following guidelines are followed:

1. Prior to being allowed in the LVMPD Forensic Laboratory the expert must:
   
   a. Complete and sign the LVMPD Forensic Laboratory Confidentiality Agreement.

   b. Submit to and pass a limited (~4 to 6 weeks) LVMPD background investigation. Documentation will be submitted to Records Bureau.

      i. Complete the CJIS Security Addendum

      ii. Fingerprint cards

      iii. Copy of Driver's License

      iv. Contract Worker Application (LVMPD TSD 18-G)

      v. Cashier’s Check for processing of background

   c. Provide a buccal swab for entry into the elimination/staff index.

      i. A DNA profile may be submitted in lieu of a buccal swab as long as the following criteria are met:

         1. The expert must sign the LVMPD Forensic Laboratory Affidavit attesting to the fact the DNA profile provided is their true profile; and

         2. The profile provided must have been obtained from the same amplification kit in use by the LVMPD Forensic Laboratory.

   d. Review the current appropriate Technical Manual, Forensic Laboratory Safety Manual and the Accommodation and

   e.
Environmental Conditions Chapter in the Forensic Laboratory Quality Manual.

2. While in the Forensic Laboratory the expert must:
   a. Wear appropriate personal protective equipment (PPE) as directed by policy and determined by the Forensic Laboratory staff.
   b. NOT perform any recording (photography, video or audio).
   c. Refrain from unnecessary talking during the analytical process.
   d. Be escorted at all times by a Forensic Laboratory staff member.
      i. The expert will only be allowed in the Laboratory areas during the time that the pertinent case is being processed.
   e. Follow the instructions of the Forensic Scientist analyzing the pertinent case by remaining in a location that will allow for unobstructed viewing of the analysis without compromising the testing capabilities of the Forensic Scientist.
Appendix Q

Title: RE-EXAMINATION OF EVIDENCE

Q.1 General
It is recognized that circumstances may exist and be the impetus for a request for reexamination. Any and all requests for this service shall be made to the Laboratory Director or a Laboratory Manager who will make the final decision.

Q.2 Reexamination of Evidence Examined by an Outside Laboratory
Unless it is pursuant to a corrective action, physical evidence belonging to outside jurisdictions that has been examined by another agency will not be re-examined by the Forensic Laboratory. Frequently, evidence that has been subjected to some prior examination is unsuitable for additional analysis. This policy also prevents agencies or investigators from “shopping” for desired results.

An exception to this situation will exist when the analysis requested is of a different nature than that performed by the original agency (for example, a laboratory with the capability of performing latent exams now requires a DNA analysis on the same piece of evidence but does not have DNA capabilities). If this is the case, a request must be provided by the original agency.

Q.3 Preliminary Field Tests
Preliminary field drug tests performed by officers and presumptive field tests for biological fluids are not considered “previous examinations”.

Q.4 Reexamination of Evidence Examined by the Forensic Laboratory
Reexamination of evidence previously analyzed by the Forensic Laboratory will not be performed unless extenuating circumstances exist and the reexamination is approved by the Laboratory Director or Laboratory Manager. Requests for reexamination originating with the District Attorney’s Office because of the examining employee’s anticipated absence during a trial will be evaluated on a case by case basis. Attorneys may assume that results will be identical in all respects; however this may not be the case. This may be relevant in cases involving DNA analysis where adequate biological samples may not be available for re-analysis and arson cases where the volatile substances being examined may have dissipated. Toxicology results may change over time due to the chemical properties and stability of analytes in biological matrices. Also weights of seized drugs may change due to drying during storage or consumption of the sample during the first analysis.

Q.5 Reexamination Due to Technological Advances
Reexamination of evidence may be appropriate to obtain more discriminating information from the evidence due to technological advances in forensic science. For example, evidence originally subjected to enzyme/protein typing or DQA1/Polymarker may benefit from STR “reanalysis” to provide more probative
information. Reanalysis requests on these cases will also be evaluated and approved based on the circumstances of the case.
Appendix R  Title:  TESTIMONY TO REPORTS BY OUTSIDE LABORATORIES

R.1  Testimony to Reports by Outside Laboratories
Members of the LVMPD Forensic Laboratory should not, as general practice, testify in the courts of law to the work product, interpretations, conclusions, and reports generated by another laboratory. This also applies to any reports generated as a direct result of a request by the Forensic Laboratory itself, such as a mitochondrial DNA analysis performed by a private laboratory or an analysis conducted by the FBI laboratory. There are certain circumstances where this will be warranted and the decision to do this will be made on a case by case basis.

This does not preclude an analyst from informally consulting with a detective or deputy district attorney as to the value of the results. Nor, in rare occasions, does it preclude Forensic Laboratory members from assisting the trier of fact by relaying results to a jury or interpreting information in the reports. The decision to do this will be made on a case by case basis and in no circumstances will an analyst be forced to interpret another’s report by subpoena or request.
LVMPD FORENSIC LABORATORY 
QUALITY MANUAL

Appendix S  Title: STATISTICAL REPORTS

S.1 Laboratory Statistics
Laboratory statistics are reported by means of the Quarterly Performance Reports as established in Department Manual 5/102.04 – Statistical and Administrative Reporting.

S.2 Individual Statistics
Recording statistics is a requirement of most Laboratory members. Whether information is to be recorded regarding time spent on case related activities or the number of cases that are analyzed is an issue decided by the individual Laboratory Managers and the Laboratory Director.

Individual statistics are to be recorded in the Activity Module in LIMS. Statistics for the Breath Alcohol Unit are recorded in LIMS and/or on an Excel form.

The Sr. LEST/designee of the Administrative/Quality Detail, is responsible for the preparation of the Laboratory’s statistical reports.