



# ARKANSAS STATE CRIME LABORATORY



## QUALITY MANUAL

Executive Director:  
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# Table of Contents

<b>SECTION 1: INTRODUCTION .....</b>	<b>5</b>
1.1: MISSION OF THE ARKANSAS STATE CRIME LABORATORY SYSTEM.....	5
1.2: OBJECTIVES .....	7
1.3: QUALITY MANUAL.....	7
1.3.1: EXCEPTIONS.....	8
1.3.2: PURPOSE OF MANUAL.....	8
1.4: QUALITY ASSURANCE .....	9
1.4.1: Responsibilities.....	9
1.4.2: Procedures.....	9
1.4.3: Organization of the Quality Manual .....	9
<b>SECTION 2: PERSONNEL QUALIFICATIONS AND JOB DESCRIPTIONS.....</b>	<b>11</b>
2.1: EXECUTIVE DIRECTOR .....	11
2.1.1: Qualification .....	11
2.1.2: Job Description.....	11
2.2: SCIENTIFIC OPERATIONS DIRECTOR.....	11
2.2.1: Qualification .....	11
2.2.2: Job Description.....	11
2.3: ASSISTANT DIRECTOR.....	12
2.3.1: Qualification .....	12
2.3.2: Job Description.....	12
2.4: QUALITY ASSURANCE MANAGER.....	12
2.4.1: Qualification .....	12
2.4.2: Job Description.....	12
2.5: HEALTH AND SAFETY MANAGER .....	12
2.5.1: Qualification .....	12
2.5.2: Job Description.....	12
2.6: HUMAN RESOURCES MANAGER.....	13
2.6.1: Qualification .....	13
2.6.2: Job Description.....	13
2.7: FISCAL OFFICER .....	14
2.7.1: Qualification .....	14
2.7.2: Job Description.....	14
2.8: INFORMATION TECHNOLOGY MANAGER.....	14
2.8.1: Qualification .....	14
2.8.2: Job Description.....	14
2.9: CHIEF FORENSIC PATHOLOGIST (STATE MEDICAL EXAMINER).....	14
2.9.1: Qualification .....	14
2.9.2: Job Description.....	15
2.10: HOPE REGIONAL LABORATORY DIRECTOR .....	15
2.10.1: Qualification .....	15
2.10.2: Job Description.....	15
2.11: OTHER STAFF .....	15
<b>SECTION 3: FACILITIES .....</b>	<b>17</b>
3.1: MAIN LABORATORY SECURITY .....	17
3.1.1: Security Cameras .....	17

3.1.2:	Security Cards.....	17
3.1.3:	Protective Lighting.....	17
3.1.4:	Facilities Power .....	17
3.1.5:	Security and Response .....	18
3.1.6:	Guard's Station.....	18
3.1.7:	Elevators.....	18
3.1.8:	Stairs .....	18
3.1.9:	Doors.....	18
3.1.10:	Janitorial Service .....	20
3.1.11:	Personnel Security .....	20
3.2:	LABORATORY ANNEX SECURITY .....	20
3.2.1:	Security Cameras .....	21
3.2.2:	Security Cards.....	21
3.2.3:	Protective Lighting.....	21
3.2.4:	Security and Response .....	21
3.2.5:	Guard's Station.....	21
3.2.6:	Doors.....	21
3.3:	HOPE REGIONAL LABORATORY SECURITY .....	22
3.3.1:	Security cameras .....	22
3.3.2:	Security Cards.....	22
3.3.3:	Facility Power .....	22
3.3.4:	Doors.....	22
3.3.5:	Personnel Security .....	22
<b>SECTION 4:</b>	<b>EVIDENCE CONTROL AND CASE MANAGEMENT .....</b>	<b>23</b>
4.1:	POLICY .....	23
4.2:	ARKANSAS STATE CRIME LABORATORY'S EVIDENCE EXAMINATION POLICY .....	24
4.3:	CASE PRIORITY POLICY.....	24
4.4:	CASE TRANSFER POLICY.....	24
4.5:	RESPONSIBILITIES AND PROCEDURES.....	24
4.6:	EVIDENCE MARKING AND SEALING .....	25
4.7:	EVIDENCE STORAGE .....	25
4.8:	EVIDENCE ROUTING AND PROCESSING .....	25
4.9:	EVIDENCE RETURN .....	25
4.10:	EVIDENCE RETENTION.....	26
4.11:	INTER-LABORATORY EVIDENCE TRANSFER.....	26
<b>SECTION 5:</b>	<b>VALIDATION.....</b>	<b>27</b>
5.1:	EXTERNAL VALIDATION .....	27
5.2:	INTERNAL VALIDATION .....	27
5.3:	EVALUATION .....	27
<b>SECTION 6:</b>	<b>ANALYTICAL PROCEDURES .....</b>	<b>28</b>
6.1:	ANALYTICAL PROCEDURES MANUAL GUIDELINES.....	28
6.2:	REAGENTS/STANDARDS/CONTROLS .....	28
6.3:	POLICIES.....	28
6.4:	CONTROLS .....	29
6.5:	REAGENTS.....	29
6.5.1:	Purchased Reagents/Chemicals.....	29
6.5.2:	Prepared Reagents.....	29

6.6:	STANDARDS .....	30
6.7:	MEASUREMENT TRACEABILITY .....	30
<b>SECTION 7: INSTRUMENTATION/EQUIPMENT: CALIBRATION/MAINTENANCE .....</b>		<b>31</b>
<b>SECTION 8: COMPETENCY/PROFICIENCY TESTING .....</b>		<b>32</b>
8.1:	POLICY .....	32
8.2:	RESPONSIBILITY .....	32
8.3:	TYPES OF ERRORS AND CORRECTIVE ACTION .....	33
<b>SECTION 9: CASE RECORDS .....</b>		<b>34</b>
9.1:	DOCUMENTATION .....	34
9.2:	LABORATORY REPORT POLICY .....	35
9.2.1:	<i>Report of Laboratory Analysis</i> .....	35
9.2.2:	<i>Release of Information</i> .....	35
9.2.3:	<i>Supplemental Reports</i> .....	37
9.2.4:	<i>Amended Reports</i> .....	37
9.3:	CASE REVIEW .....	38
9.3.1:	<i>Technical Review</i> .....	38
9.3.2:	<i>Administrative Review</i> .....	39
9.3.3:	<i>Responsibilities</i> .....	39
9.3.4:	<i>Types of errors and corrective action</i> .....	39
9.4:	LABORATORY CASE RECORD STORAGE AND RETENTION .....	40
9.4.1:	<i>Storing Case Records</i> .....	40
9.4.2:	<i>Removing Case Records from Storage</i> .....	40
9.4.3:	<i>Case File Retention</i> .....	40
<b>SECTION 10: TESTIMONY REVIEW .....</b>		<b>41</b>
10.1:	RESPONSIBILITIES .....	41
10.2:	PROCEDURES .....	41
<b>SECTION 11: AUDITS .....</b>		<b>42</b>
11.1:	INTERNAL AUDIT .....	42
11.2:	EXTERNAL AUDIT .....	42
<b>SECTION 12: COMPLAINTS .....</b>		<b>43</b>
12.1:	EMPLOYEE COMPLAINTS REGARDING THE QUALITY SYSTEM .....	43
12.2:	EXTERNAL COMPLAINTS REGARDING THE QUALITY SYSTEM .....	43
12.3:	EXTERNAL COMPLAINTS REGARDING COURT TESTIMONY .....	43
<b>SECTION 13: MISCELLANEOUS .....</b>		<b>45</b>
13.1:	HEALTH AND SAFETY .....	45
13.2:	PERSONNEL HANDBOOK .....	45
13.3:	EMPLOYEE DEVELOPMENT PROGRAM .....	45
13.4:	INDIVIDUAL CHARACTERISTIC DATABASES .....	46
13.5:	RECORD RETENTION .....	46
<b>SECTION 14: GLOSSARY .....</b>		<b>48</b>

## Section 1: Introduction

Act 517 of 1977 established the Arkansas State Crime Laboratory. (Reference statute 12-12-301).

### ***1.1: MISSION OF THE ARKANSAS STATE CRIME LABORATORY SYSTEM***

The Mission of the Arkansas State Crime Laboratory is to provide the highest quality scientific services and resources to the criminal justice community and others as authorized by law. The Mission will be achieved by a team of skilled and dedicated employees, utilizing innovative programs and state of the art technology in the fields of CODIS, Digital Evidence, Firearms/Toolmarks, Forensic Chemistry, Forensic Chemistry- Illicit Labs, Forensic DNA, Forensic Toxicology, Latent Prints/AFIS, Physical Evidence, and the State Medical Examiners Office.

The missions for the respective disciplines are:

#### **CODIS**

Process all convicted offender samples and felony arrestee (Capital Murder, Murder in the 1<sup>st</sup>, Kidnapping, 1<sup>st</sup> and 2<sup>nd</sup> degree Sexual Assault) samples utilizing DNA technology to input into the National DNA Index System (NDIS). Convicted offender samples as well as casework samples are searched locally in the State DNA Index System (SDIS) and on the national level to help solve criminal cases.

#### **Digital Evidence**

The Digital Evidence section is responsible for analyzing computers, digital storage devices, video and audio evidence, and questioned counterfeit documents for the criminal justice system. This may include systematic retrieval of digital data that may be of evidentiary value, video and audio tape recovery and enhancement as well as technical support to law enforcement agencies. This analysis is performed in a chain-of-custody environment using validated and appropriate procedures in order to ensure the most accurate and relevant analytical results.

#### **Firearms/Toolmarks**

Perform examinations which include the identification of bullets, cartridge cases and shot shells with suspect weapons; the identification of tool marks with suspect tool; weapon function and mechanical condition testing; gunshot residue distance determination; restoration of obliterated serial numbers; image cartridge cases and bullets into the National Integrated Ballistics Information Network (NIBIN)

## **Forensic Chemistry**

Utilize various scientific methodologies and instrumentation to perform analyses to identify controlled substances. Included are drugs of abuse controlled under Act 590 of 1971 and addenda thereafter.

## **Forensic Chemistry- Illicit Labs**

Utilize various scientific methodologies and instrumentation to perform analyses to identify controlled substances. Included are drugs of abuse controlled under Act 590 of 1971 and addenda thereafter. Illicit laboratory chemists also assist law enforcement agencies to dismantle suspected illicit laboratories, collect representative samples of evidence, submit the samples to evidence receiving on behalf of the law enforcement agency, and analyze evidence associated with illicit laboratories.

## **Forensic DNA**

Analyze biological evidence utilizing PCR technology in order to determine its source. This evidence is used to include or exclude individuals from having deposited the evidence in the commission of a criminal act.

## **Forensic Toxicology**

Analyze samples from the State Medical Examiner, Law Enforcement Officers, and County Coroners. Utilize various scientific methodologies and instrumentation to perform analysis on biological specimens to determine the presence and levels of drugs and/or alcohol (blood drug identification, urine drug identifications, blood alcohol analysis and urine alcohol analysis).

## **Latent Prints/AFIS**

Develop latent fingerprints using a full range of physical, chemical and alternative light source methods and compare to prints of subjects in order to identify or eliminate. Compare footwear and tire impressions to suspect footwear and tires. Utilize the computer based Automated Fingerprint Identification System (AFIS) for searching, matching and storing fingerprints and related data.

## **Physical Evidence**

**Serology-** Utilize scientific methodologies and instrumentation to examine physical evidence for the presence of any biological fluids.

**Trace-** Utilize scientific methodologies and instrumentation to examine physical evidence for the presence of fibers, hairs, paint, glass, tape, fire debris, lamp filaments, primer gunshot residue from suspects and physical comparisons. Perform other miscellaneous analysis when appropriate. Compare questioned samples to known samples to determine if a common origin exists.

## **State Medical Examiner**

Perform post mortem examination and make a determination of the cause and manner of deaths, which become subject to the jurisdiction of the State Medical Examiner as set out in Statute 12-12-315 and shall include the general application of the medical sciences to assist the criminal justice system in the State of Arkansas.

### **1.2: OBJECTIVES**

- To maintain excellence in the quality of forensic science services provided to the criminal justice system
- To provide early identification and correction of problems and potential problems so that reoccurrence and/or more serious situations can be avoided
- To ensure the use of validated procedures that are reliable, reproducible and which serve their intended purpose with respect to precision, accuracy, sensitivity, and specificity
- To provide scientific analysis reports that are clear and accurate
- To provide relevant, professional and impartial testimony in judicial proceedings
- To participate in a proficiency-testing program that monitors the capabilities of the analysts/examiners and the reliability of our analytical results
- To provide a system to ensure the integrity and security of evidence from its receipt to its return or disposal
- Ensure quality in every aspect of our work
- Ensure that the public has a quality laboratory in the State of Arkansas

### **1.3: QUALITY MANUAL**

The administration of the crime laboratory is committed to ensuring the success of the quality system by participation of each member of the laboratory staff.

The quality manual is a compilation of policies and procedures for use in the crime laboratory operations in compliance with Arkansas State Statutes.

The quality manual is used by the employees of the Crime Laboratory System. The quality manual is reviewed annually by the Quality Assurance Manager, Scientific Operations Director and Executive Director and updated as needed to reflect changing organizational, technical and procedural information. Changes to the quality manual may be initiated by any employee of the State Crime Laboratory upon preparing the information for presentation to the Quality Assurance Manager. The Quality Assurance Manager will review the requested changes and forward them to the Scientific Operations Director and Executive Director. Approval by the Scientific Operations Director and Executive Director is necessary for revisions of the manual. The Quality Assurance Manager will be responsible for controlling this document. The controlled version of this manual shall be a PDF document stored on the Q drive. Copies (printed or

electronic) are uncontrolled versions. The Quality Assurance Manager will also be responsible for informing employees of new versions of the quality manuals.

The ASCL Organizational Charts (ASCL-DOC-03, 04, 05) are located on the Q drive. In addition, each section's organizational chart is also located on the Q drive.

### **1.3.1: EXCEPTIONS**

It is recognized that unforeseen circumstances may arise which require immediate deviations from the policies and procedures of this manual. In such situations, the request for exceptions to policy will be submitted in writing to the Scientific Operations Director, or designee, of the laboratory and the request must include an adequate description of the circumstances requiring the action, a statement of the proposed alternative policy and procedure, and the intended duration of the exception.

The Scientific Operations Director will maintain documentation of the approved policy exception.

### **1.3.2: PURPOSE OF MANUAL**

The Quality Manual provides guidelines for the maintenance of the Quality System at the Arkansas State Crime Laboratory. Detailed elements of specific laboratory policies and procedures to ensure a quality work product are defined in this manual. In addition, each Section of the laboratory will have a Section Quality Manual and Training Manual. The Section Quality Manuals will be reviewed annually by respective Section Chief and/or designee(s). Proposed changes to the Section Quality Manual must be submitted to the Quality Assurance Manager. The Quality Assurance Manager will review the requested changes to ensure conformity with lab wide policies and procedures. The Quality Assurance Manager will forward the proposed revisions to the Scientific Operations Director and Executive Director. Approval by the Scientific Operations Director and Executive Director is necessary for revisions of the manuals. The Quality Assurance Manager will be responsible for controlling this document. The controlled version of this manual shall be a PDF document stored on the Q drive. Copies (printed or electronic) are uncontrolled versions. The Quality Assurance Manager will also be responsible for informing employees of new versions of the quality manuals. The intent of these manuals is:

- To promote the efficient and effective operation of the Crime Laboratory
- To assist the laboratory staff in performing their assigned duties and tasks
- To state the policies and procedures established by the sections contained within the Arkansas State Crime Laboratory to ensure quality

## **1.4: QUALITY ASSURANCE**

The Arkansas State Crime Laboratory will develop and maintain a Crime Laboratory Quality Assurance Program. This program will include technical and operational guidelines for each analytical service area as well as guidelines for evidence management, record retention, analytical data retention, laboratory reports, case review, testimony review, proficiency testing, and training.

### **1.4.1: Responsibilities**

The Executive Director has the overall authority and responsibility for laboratory administration.

The Scientific Operations Director has the authority and responsibility for forensic science services.

The Quality Assurance Manager has the authority and responsibility for maintaining the Quality System.

Each Section Chief, or designee, has the responsibility for quality assurance within their discipline and for ensuring the integrity of the work product provided is within the guidelines of the section's quality manual. Each section will have a quality manager who will work directly with the Section Chief for annual review and revision of their quality manual and for quality assurance matters within their section. Each section's quality manual will establish guidelines and uniform analytical procedures for each analytical service for which the Section Chief is responsible.

### **1.4.2: Procedures**

The outline detailed in Section 1.4.3 will be used as a guide in the development of each section's quality manual. Each section's quality manual and the Arkansas State Crime Laboratory Quality Manual will be in compliance with all relevant laws, codes and administrative rules of the State of Arkansas.

### **1.4.3: Organization of the Quality Manual**

- Section 1. Introduction (Goals and Objectives)
- Section 2. Personnel Qualifications and Job Descriptions
  - 2.1 Job Descriptions
  - 2.2 Educational Requirements
  - 2.3 Special Training Requirements
- Section 3. Facilities
  - 3.1 Security

- Section 4. Evidence Control and Case Management
- Section 5. Validation (if applicable)
- Section 6. Analytical procedures (SOP)
- Section 7. Calibration and maintenance
- Section 8. Proficiency testing program
  - 8.1 Sources of testing
  - 8.2 Evaluation of results obtained
  - 8.3 Corrective action
- Section 9. Case Records
  - 9.1 Technical & administrative review
  - 9.2 Types of errors and corrective action
- Section 10. Testimony Review
- Section 11. Audits
- Section 12. Complaints
- Section 13. Miscellaneous
  - 13.1 Health and Safety
- Section 14. Appendix

## **Section 2: Personnel Qualifications and Job Descriptions**

### ***2.1: Executive Director***

#### **2.1.1: Qualification**

The Governor of the State appoints the State Crime Laboratory Executive Director. The State Crime Laboratory Board shall prescribe the duties, responsibilities, compensation, and qualifications for the Executive Director.

#### **2.1.2: Job Description**

Provides administrative oversight for the operation of the laboratory through executive and legislative direction. Provides daily oversight of operations and financial status of biennial budget. Acts as liaison between Criminal Justice System and laboratory. Maintains relationship with statewide media. Serves on Alcohol and Drug Abuse Coordinating Council and the Integrated Justice Information System Program by statute.

### ***2.2: Scientific Operations Director***

#### **2.2.1: Qualification**

The position requires a minimum of a Baccalaureate degree in one (1) of the physical sciences with a minimum of five years experience in a forensic laboratory. A master degree can substitute for two (2) years of experience in a forensic laboratory.

#### **2.2.2: Job Description**

Oversee all analytical sections of laboratory. Assist with purchasing equipment and supplies for laboratory. Assist with inventory of supplies and equipment, and asset management portion of statewide system. Write or assist with grant proposals; maintain budget, payouts, and equipment purchases for such grants. Oversee new hires for all analytical sections of the laboratory. Provide administrative assistance to Executive Director with budgeting for laboratory personnel, equipment and supplies. Section Chiefs for Forensic DNA, CODIS, Forensic Chemistry, Forensic Chemistry- Illicit Labs, Forensic Toxicology, Physical Evidence, Latent Prints, Firearms/Toolmarks, and Digital Evidence report directly to the Scientific Operations Director.

## ***2.3: Assistant Director***

### **2.3.1: Qualification**

The Executive Director of the State Crime Laboratory appoints the Assistant Director.

### **2.3.2: Job Description**

Oversee all construction, renovation, remodeling of laboratory. Assist with payroll, timekeeping and personnel administration. Assist with purchasing, invoice payment, and in the preparation of professional service contracts. Manage all paper records maintained by laboratory. Liaison between laboratory and other state agencies for contract services (janitorial, security, security guards, and waste hauling). Liaison with public utilities. Assist with state budget preparation. Assist with IT plan. Maintain all vehicle records and reports.

## ***2.4: Quality Assurance Manager***

### **2.4.1: Qualification**

The position requires a minimum of a Baccalaureate degree in one (1) of the physical sciences with a minimum of five years experience in a forensic laboratory. A master degree can substitute for two (2) years of experience in a forensic laboratory.

### **2.4.2: Job Description**

Maintains and updates the lab-wide quality manual. Monitors laboratory practices to verify continuing compliance with policies and procedures. Evaluates instrument calibration and maintenance records. Periodically assesses the adequacy of report review activities. Ensures the validation of new technical procedures. Investigates technical problems, proposes remedial action, and verifies implementation. Administers proficiency tests and evaluates results. Selects, trains, and evaluates internal auditors. Schedules and coordinates quality system audits. Maintains training records of laboratory personnel. Recommends training to improve the quality of laboratory staff. Proposes corrections and improvements in the quality system.

## ***2.5: Health and Safety Manager***

### **2.5.1: Qualification**

The State Crime Laboratory Executive Director appoints the Health and Safety Manager.

### **2.5.2: Job Description**

Affects a standardized safety program within the laboratory by coordinating the educational and supervisory activities related to it by providing educational materials; assisting the supervisors in teaching safety rules regulations and procedures to their employees; conducting safety surveys and ensuring that proper practices and procedures are being followed; review and evaluate the

effectiveness of the safety manual in conjunction with the safety committee; recommend and implement changes in safety rules, regulations and procedures to the Executive Director; assist supervisors in resolving safety incidents and maintain records of such incidents; communicate with R.N. for administration of immunizations for employees and maintenance of inoculation record of employees; monitor the procurement, use, and disposal of chemicals used in the lab; maintain auditing procedures; help project directors develop precautions and adequate facilities; maintain a current copy of all MSDSs; provide regular, documented formal chemical hygiene and housekeeping inspections including routine inspections of emergency equipment; know the current legal requirements concerning regulated substances; and seek ways to improve the safety program.

## ***2.6: Human Resources Manager***

### **2.6.1: Qualification**

The position requires the formal education equivalent of a Baccalaureate degree in public administration, general business, or a related field; plus three years' experience in planning, research, or a related field. Other job related education and/or experience may be substituted for all or part of these basic requirements.

### **2.6.2: Job Description**

Assist Director, Assistant Director, and Scientific Operations Director in advertising vacancies and recruiting applicants. Assist Director with preparation of biennial personnel budget including advising on proper classification of positions. Provides consultation and information to agency management and employees regarding personnel matters such as grievances, discipline, classification and compensation issues, staffing, legal requirements, career counseling, and salary administration. Conduct personnel and salary surveys or special studies, prepare reports, proposals and correspondence pertaining to personnel matters. Evaluates the need for personnel policy or program changes by monitoring changing legal requirements and reviewing data and management reports to detect problem areas. Maintain all records concerning State Crime Laboratory Board. Maintain all personnel records for the agency. Maintain all leave records for the agency. Perform payroll functions to ensure accuracy of records and disbursements. Ensure supervisory training. Review performance evaluations for accuracy and completeness. Other duties as assigned.

## ***2.7: Fiscal Officer***

### **2.7.1: Qualification**

The position requires a minimum of a Baccalaureate degree in accounting with a minimum of five years experience as an accountant. A master degree can substitute for two (2) years experience.

### **2.7.2: Job Description**

Establish procedures for receipt, processing, and deposit of funds for autopsy reports, depositions, witness fees, FAA autopsies, copies of photographs, and laboratory reports, or slides, and all other funds received by the Crime Laboratory. Reconcile all bank accounts. Establish and implement agency procedures for compliance with all accounting laws and regulations. Prepare annual financial reports. Provide accounting for all Federal Grants. Access Arkansas Administrative Statewide Information System to reconcile agency funds and funding. Participates with other agency management in the development and implementation of departmental policies and programs. Advises director regarding agency's financial status, program priorities, changes in laws or regulations, and other factors affecting the department's overall operation.

## ***2.8: Information Technology Manager***

### **2.8.1: Qualification**

The position requires a minimum of a Baccalaureate degree in Information Technology with a minimum of five years experience in programming. A master degree can substitute for three years of experience.

### **2.8.2: Job Description**

Monitor and evaluate the status of the data network. Resolve hardware and server software problems in response to user questions and requests. Direct and assist computer maintenance vendors. Maintain cable systems including fiber optic system. Maintain operating systems and server software. Maintain modems, switches, and routers. Maintain security system for laboratory.

## ***2.9: Chief Forensic Pathologist (State Medical Examiner)***

### **2.9.1: Qualification**

The State Crime Laboratory Board shall appoint and employ the Chief Forensic Pathologist. State Statute 12-12-308 lists the Qualifications for the position. The State Crime Laboratory Board has further required the following qualifications: must obtain a license to practice medicine in the

State of Arkansas, have a minimum of five years experience in the field of forensic pathology, and be Board Certified in Forensic Pathology by the American Board of Pathology.

### **2.9.2: Job Description**

Responsible for the overall planning and day to day operations of forensic pathology, involving medico-legal investigations using laboratory and medical procedures to determine the cause, manner and mechanism of death as prescribed by Arkansas Code. Work involves thorough postmortem examinations, certifications of the cause, manner, and mechanism of death; consultations with toxicologists, criminalists, physicians and law enforcement officers to establish medical evidence and to obtain expert opinions regarding unexplained deaths. The Medical Examiner testifies as an expert witness to provide information concerning findings, evaluations, and autopsy results in accordance with State and Federal law; develops and supervises in-service training for Medical Examiner staff and other laboratory personnel to insure quality performance within the Medical Examiner section and the Laboratory; provides consultation and recommendation to the Executive Director of the Laboratory for administrative or legislative changes needed to improve the delivery of services provided to the public. Responsible for maintaining the necessary records required for the Medical Examiner Section.

## ***2.10: Hope Regional Laboratory Director***

### **2.10.1: Qualification**

The position requires a minimum of a Baccalaureate degree in one (1) of the physical sciences with a minimum of three years experience in a forensic laboratory. A master degree can substitute for two (2) years of experience in a forensic laboratory.

### **2.10.2: Job Description**

Manages the work and personnel of the Hope Regional Laboratory by ensuring that work is completed timely and accurately, personnel are trained and developed, employees are informed and productive, needs of customers and employees are met, supplies are adequate, equipment is operational. Coordinates with the Scientific Operations Director, Purchasing, Quality Assurance and Health & Safety Managers to ensure that the laboratory adheres to all prescribed quality assurance, safety, and security standards as well as technical protocols and agency policy.

## ***2.11: Other Staff***

Qualifications and job descriptions for Section Chiefs and analysts are included in individual sections' quality manuals.

Technical Support may be utilized to perform duties in a section even though they may not have the educational qualifications. Technical support job descriptions and duties performed will be

in agreement with one another. Job descriptions will be kept in their Employee History Binder. Technical Support must have knowledge of techniques and methods used in their assigned tasks. All data generated by technical support must be interpreted by an experienced and degreed analyst.

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## Section 3: Facilities

The Arkansas State Crime Laboratory complex consists of approximately 79,000 square feet of laboratory and administrative areas in the main building and an annex consisting of approximately 3,000 square feet of storage and automotive processing space located across the street. The facility is located at #3 Natural Resources Drive, Little Rock, Arkansas.

The Hope Regional Laboratory is located at 2500 South Main St., Hope, Arkansas, on the campus of the University of Arkansas Community College at Hope. The building consists of approximately 2,200 square feet of laboratory and administrative areas.

### ***3.1: Main Laboratory Security***

Laboratory security encompasses the physical plant and personnel security.

#### **3.1.1: Security Cameras**

Security Cameras are located in and around the laboratory complex.

#### **3.1.2: Security Cards**

Security Cards are issued to authorized personnel in order to access certain areas of the laboratory complex according to authorization as determined by the Executive Director or designee.

#### **3.1.3: Protective Lighting**

The following time-controlled exterior security lighting protects the Crime Laboratory:

<b>Pole Lights</b>	<b>Photo Cell</b>	<b>Dusk to Dawn</b>
<b>Wall Lights</b>	<b>Photo Cell</b>	<b>Dusk to Dawn</b>

The building housing the State Crime Laboratory is owned by Arkansas Building Authority and rent is paid on the facilities every quarter. Arkansas Building Authority is responsible for the physical plant and grounds. The lighting of the building is the responsibility of Arkansas Building Authority.

#### **3.1.4: Facilities Power**

In the event of commercial power failure, the laboratory complex has an emergency generator that is activated within 10 seconds. The generator furnishes emergency lighting within the laboratory. It is also used to power emergency circuits for critical refrigeration and some instrumentation needs. The generators are the responsibility of Arkansas Building Authority.

Commercial power failures should be reported to Entergy Utilities (1-800-968-8243).

### 3.1.5: Security and Response

An outside security company furnishes security to the building during the off-hours as follows:

<b>Monday through Thursday</b>	<b>1700-0700 each day</b>
<b>Friday/Weekends</b>	<b>1700 Friday through 0700 Monday</b>
<b>Holidays</b>	<b>24 hours a day</b>

### 3.1.6: Guard's Station

A station is located in the lobby of the State Crime Laboratory and the guard's duties are as follows:

- Watch the monitors that are connected to cameras located around the perimeter of the building.
- Report any unusual activity outside the building to the Little Rock Police Department.
- Call someone on the emergency list if alarms activate or other emergencies exist at the laboratory.
- A security company provides 24 hours a day monitoring of the fire alarm system and notifies the fire department and Arkansas Building Authority.
- The guard will not provide access to anyone without a security card during off hours except emergency personnel.

### 3.1.7: Elevators

- A security card is required to activate the elevators on the first floor.
- Only Central and West elevators will go to all floors.
- South elevator will not go to the basement, only first through third floors.

### 3.1.8: Stairs

- All stairwell entries from first floor require security card activation.
- Only Central and West stairwells go to all floors.
- South stairwell will only allow access to first through third floors.

### 3.1.9: Doors

Distribution of all keys (including card keys) must have the approval of the Executive Director. Approval documentation will be kept with the Quality Assurance Manager.

The laboratory has a card access system controlled by a computer placed in the Administrative Section (access reports can be generated from the card access system software). An *Access Area Approval Form* (ASCL-FORM-10) must be completed prior to giving card key access to an individual. This form must be completed for new hires, damaged/lost cards, etc.).

- Front doors to receptionist area of the building are unlocked 0730 through 1700 except holidays and weekends. The door leading into the lobby will remain locked at all times and all visitors will be required to sign in. Law enforcement officers must show their badges before being admitted into the laboratory. All other visitors must have an escort.
- All other exterior doors are to remain locked at all-times and require a security card to open. This includes the South and North doors on first floor and doors to the basement.
- Access to all laboratory areas on second floor is restricted. Unescorted access requires security card and/or key.
- Doors to the Administrative section of the laboratory are open during business hours on weekdays, and closed on weekends and holidays. Entry during non-business hours requires a security card for access.
- Doors on the third floor to the Forensic DNA, CODIS and Physical Evidence laboratory areas are locked at all times and require a security card or escort to enter the section. All others, with the exception of the following people, are not allowed access to the section:
  - Executive Director
  - Scientific Operations Director
  - Quality Assurance Manager
  - Health and Safety Manager
  - CODIS Personnel
  - Forensic DNA Personnel
  - Physical Evidence Personnel
  - Other personnel deemed necessary by the Executive Director
- Doors to the other laboratory sections are locked and require card and/or key access.
- Employees are given keys to access doors on an as needed basis. Firearms, Forensic Biology, Forensic Chemistry, Latent Prints and Physical Evidence sections have a key box containing cabinet keys and door keys. The key to the section key box is kept by the appropriate section chief. A log must be kept when keys are added or removed from the section key box.

The ASCL has a Master Key Box containing master door keys, extra door keys, section key box keys and/or section master cabinet keys. A Master Key Log will be kept and an inventory will be conducted as needed. Keys removed or added to the Master Key Box will be recorded on the key logsheet attached to the Master Key Box. An *Access Area Approval Form* (ASCL-FORM-10) must be completed prior to giving a key from the Master Key Box to an employee.

Note: The toxicologists, forensic chemists, and physical evidence analysts have access to the toxicology and forensic chemistry sections at all times. The shared access is due to the physical layout of the laboratory.

- Evidence receiving section has limited access. Access requires a security card and/or key. The following people have access to the evidence storage area:
  - Evidence Receiving Section Chief
  - Evidence Technicians
- The following people have access to but only during regular work-hours and must sign the log when entering and leaving the evidence storage area. They do not need to be escorted.
  - Executive Director
  - Assistant Director
  - Scientific Operations Director
  - Quality Assurance Manager
  - Health and Safety Manager
  - Information Technology Manager
  - Other Personnel as Deemed Necessary by the Executive Director

Note: The assigned Arkansas Building Authority Employees have access to the exterior door of the building and mechanical rooms inside the building.

### **3.1.10: Janitorial Service**

Janitorial service to the building is the responsibility of Arkansas Building Authority who have contracted with an outside business. Janitorial employees are located in the building each workday during regular business hours. They have access to all sections when laboratory employees are present.

Additional janitorial service is furnished on an as needed basis.

### **3.1.11: Personnel Security**

All laboratory personnel must pass a criminal background check.

## **3.2: Laboratory Annex Security**

The annex is part of the main laboratory's security system consisting of motion sensors, door sensors, and key locks. If access is gained without disarming the system, an audible alarm will sound, and the security guard's station will also be alerted. The annex consists of a solvent storage area, file storage area, supply storage area, and automotive processing area

- Solvent storage: consists of a four wall concrete block area that is temperature controlled for storage of solvents in flammable cabinets and is secured by key lock
- Miscellaneous supply storage: areas secured by key lock and motion detectors
- File storage: temperature controlled and secured by key lock
- Automotive processing area: secured by motion detectors and key lock

### 3.2.1: Security Cameras

Security Cameras are located in and around the laboratory annex.

### 3.2.2: Security Cards

Security Cards are issued to authorized personnel in order to access certain areas of the laboratory annex according to authorization as determined by the Executive Director or designee.

### 3.2.3: Protective Lighting

The following time-controlled exterior security lighting protects the Crime Laboratory Annex:

<b>Pole Lights</b>	<b>Photo Cell</b>	<b>Dusk to Dawn</b>
<b>Wall Lights</b>	<b>Photo Cell</b>	<b>Dusk to Dawn</b>

The building housing the State Crime Laboratory is owned by Arkansas Building Authority and rent is paid on the facilities every quarter. Arkansas Building Authority is responsible for the physical plant and grounds. The lighting of the building is the responsibility of Arkansas Building Authority.

### 3.2.4: Security and Response

An outside security company furnishes security to the building during the off-hours as follows:

<b>Monday through Thursday</b>	<b>1700-0700 each day</b>
<b>Friday/Weekends</b>	<b>1700 Friday through 0700 Monday</b>
<b>Holidays</b>	<b>24 hours a day</b>

### 3.2.5: Guard's Station

A station is located in the lobby of the State Crime Laboratory and the guard's duties are as follows:

- Watch the monitors that are connected to cameras located around the perimeter of the annex building.
- Report any unusual activity outside the building to the Little Rock Police Department.
- Call someone on the emergency list if alarms activate or other emergencies exist at the laboratory.
- A security company provides 24 hours a day monitoring of the fire alarm system and notifies the fire department and State Building Services.
- The guard will not provide access to anyone without a security card during off hours except emergency personnel.

### 3.2.6: Doors

The annex's gates have a card access system controlled by a computer placed in the Administrative Section. Employees are given access to doors on an as needed basis. (See security systems access manual and log). All doors require key access. Keys are issued to authorized

personnel in order to access certain areas of the laboratory annex according to authorization as determined by the Executive Director or designee.

### ***3.3: Hope Regional Laboratory Security***

#### **3.3.1: Security cameras**

Security cameras are located around the laboratory building. These cameras are maintained by the Telecommunications Division of the Hope Community College.

#### **3.3.2: Security Cards**

Security Cards are issued to authorized personnel, as determined by the Executive Director, to provide access to the areas of the laboratory protected by the magnetic lock system.

#### **3.3.3: Facility Power**

In the event of a commercial power failure the security system is equipped with a battery backup which is rated to provide twenty-four hours of continued functionality.

#### **3.3.4: Doors**

The Hope Regional Laboratory has an intrusion alarm system equipped with door contact sensors, motion detectors, and glass breakage detectors.

The front entrance has a key lock and has a contact sensor for the security system.

The compressed gas storage room entrance has a key lock and has a contact sensor for the security system.

The exterior entrance to the laboratory examination area has a key lock, a magnetic lock, and has a contact sensor for the security system.

The interior entrance to the laboratory examination area has a key lock, a magnetic lock, and has a contact sensor for the security system.

The entrance to the evidence storage area has a key lock, a magnetic lock, and has a contact sensor for the security system.

Each chemist has a personal evidence storage area with a key lock to secure the evidence during processing.

#### **3.3.5: Personnel Security**

All laboratory personnel must pass a criminal background check.

## Section 4: Evidence Control and Case Management

### *4.1: Policy*

The Evidence Receiving Section's Quality Manual contains policies for receiving, packaging, refusing, maintenance, control, and disposition of evidentiary items. Additional policies may be implemented by individual sections in their quality manual.

An evidence inventory will be conducted approximately every six months. The Quality Assurance Manager will schedule and coordinate the inventory with each Section Chief. This inventory shall apply to and include all evidence held by the Arkansas State Crime Laboratory, whether waiting to be analyzed or awaiting release. This shall not include those samples retained for future analysis or destruction (i.e. toxicology samples, DNA long term storage, etc.). Each section chief will provide a written report to the Quality Assurance Manager. These reports will be forwarded to the Executive Director.

The Arkansas State Crime Laboratory will receive, secure, analyze and document evidence submitted by duly authorized agencies. The Laboratory will process evidence in a timely manner consistent with the need for quality services, preservation of the chain-of-custody and protection of the integrity of the evidence. An electronic or written chain-of-custody for all transfers of all evidence shall be utilized.

The database contains electronic signatures and initials for all analysts.

When evidence can only be recorded or collected by photography and the image itself is not recoverable, the photograph or negative of the image must be treated as evidence. All sections must have guidelines determining which materials must be treated as evidence in their section manual.

It is a system-wide priority to ensure that the necessary precautions are taken to maintain the integrity of the evidence, including proper collection and preservation techniques.

In order to determine the items most likely to assist in the investigation and prioritize those items for examination, the examiner or analyst may conduct a review of large, bulky submissions. Whenever possible, this review will occur with the agency representative in person or by phone to assist with the investigation and to eliminate unnecessary examinations or analyses.

If there is evidence in a case involving a laboratory employee or their immediate family, the employee should notify the Executive Director as soon as possible. The Executive Director will determine the specific case management needs. This includes postmortem examinations.

## ***4.2: Arkansas State Crime Laboratory's Evidence Examination Policy***

The laboratory may discontinue further forensic examinations when a conclusion identifies, includes or eliminates the subject(s) or substantiates the maximum charge to be filed.

## ***4.3: Case Priority Policy***

All cases may be prioritized based upon a system that allows for a timely response. Unless priority requests are made, cases should be analyzed in chronological order. Priority may be made for the following reasons:

- Investigating Officer request
- Court Official request (including court dates and court orders)
- Threat to public safety (homicides, rapes, violent crimes, etc.)

Other cases or types of cases may be prioritized at the request of the Section Chief, Scientific Operations Director, Medical Examiner or the Executive Director.

All priority requests will be documented in the LIM system under the 'Request Tab' with a brief description of the prioritization request.

## ***4.4: Case Transfer Policy***

Cases may be transferred within the State Crime Laboratory System as necessary in order to minimize the turn around time and to provide the best overall service to our customers.

## ***4.5: Responsibilities and Procedures***

Those employees assigned to the Evidence Section will have primary responsibility for the receipt, storage, transfer, and return of all evidence.

All employees will be trained to recognize the need for taking precautions necessary to ensure the integrity of evidence.

All firearms will be handled as though they are loaded. A Firearms Examiner will perform firearms inspections for loaded/unloaded condition when a signature is absent on the submission sheet indicating that the firearm is unloaded, or the submitter of the evidence is unsure of whether the firearm is loaded/unloaded and requests a firearms examiner to inspect it.

All externally submitted illicit lab evidence is to be inspected by a forensic chemist or other employees with the appropriate chemistry background and training. A checklist is to be signed by a chemist certifying that the evidence has been checked. The *Forensic Chemistry Quality Manual* contains policies for inspecting this evidence.

#### ***4.6: Evidence Marking and Sealing***

All evidence will be marked or identified with the laboratory case number, if practical. (e.g. YYYY-00000) Otherwise the proximal container must be marked or identified with the laboratory case number. Each exterior container must have its appropriate barcode label affixed to it.

When the container is opened, the original seal shall be left intact, whenever practical, and a new opening made. When the analysis or examination is completed, the new opening shall be sealed, as outlined in these procedures; thus the original container seals will be intact and all seals will be clearly marked.

Evidence will be sealed in a manner in which the contents cannot readily escape and in such a manner that opening the container would result in obvious damage or alteration to the container or its tape seal. All evidence must bear a proper seal which shall include the initials or other identification of the person sealing the evidence across the seal.

If reusing the original container is impractical, a new evidence container may be used. It shall also be marked and sealed according to the above procedures and the original evidence packaging shall be maintained, either inside the second evidence container or complete documentation along with a picture of original packaging. Documentation of the change in packaging along with description must be input into the computer for future reference.

Agency evidence numbers will be used to identify the evidence whenever practical.

#### ***4.7: Evidence Storage***

Evidence will be stored in the evidence storage area until transferred to a laboratory analyst or examiner, another laboratory or the submitting agency according to Evidence Section's Quality Manual. Storage of evidence in individual sections is addressed in each section's quality manual.

#### ***4.8: Evidence Routing and Processing***

Evidence tracking within the laboratory is done using the laboratory information management system (LIMS) and is described in the Evidence Section's Quality Manual. The evidence is tracked electronically providing a chain of custody which can be printed. In some cases, a combination of written and electronic chain of custody is utilized.

#### ***4.9: Evidence Return***

When all necessary analyses are completed on an item, and it is returned to evidence receiving, the item is retained until it is released to an authorized representative of the submitting agency. Authorized representatives are employees of the submitting agency or have written authorization from the submitting agency on file in evidence receiving. If the evidence technician does not recognize the submitting authorized representative, proper identification must be

provided. The signature and printed name of the receiving agency official is required to document this return.

Evidence will only be shipped with receipt of written request from the submitting agency upon approval by the Executive Director or the Scientific Operations Director. When mailing or shipping evidence, the following will apply:

- Controlled substances, currency or firearms cannot be mailed.
- All other evidence may be mailed via U.S. Certified Mail, return receipt requested.
- When shipping any evidence by other than the U.S. Postal Service, the vendors must provide return receipt and be able to track shipment.

When the Evidence Receiving Section supervisor deems necessary he/she will ensure that submitting agency personnel are notified, in writing, to pick up completed evidence. If the agency does not respond within 30 days, evidence may be refused from that agency until the situation is resolved.

#### ***4.10: Evidence Retention***

The Arkansas State Crime Laboratory will retain evidence for long-term storage for the Arkansas State Police. The Evidence Section Supervisor will work with the Arkansas State Police to ensure that they remove the evidence after it has been adjudicated.

Individual section retention policies are found in the appropriate section quality manuals.

If a private individual requests a sample be retained, a fee may be imposed by the Arkansas State Crime Laboratory to cover cost of storage, as determined by the Executive Director or designee.

#### ***4.11: Inter-Laboratory Evidence Transfer***

If the Arkansas State Crime Laboratory finds it necessary to transfer evidence to an outside laboratory (e.g. FBI, NMS), an *Inter-Laboratory Evidence Transfer Form* (see ASCL-FORM-07) must be completed and entered into the case file. The *Inter-Laboratory Evidence Form* may be waived for items funded out of a grant and/or items under a contract. Any cost incurred by the laboratory must be approved by the Fiscal Officer.

Any external laboratory that is to perform casework for the Arkansas State Crime Laboratory (whether contracted or not) must be an accredited laboratory. This accreditation must be from an accrediting body that is recognized by the Arkansas State Crime Laboratory. These laboratories must provide the Arkansas State Crime Laboratory with a Certification of Accreditation.

A site visit must be performed on any external laboratory entering into a contract with the Arkansas State Crime Laboratory before casework begins. In addition to the first site visit, a minimum of one site visit per calendar year must be conducted.

## Section 5: Validation

Validation is the process used by the scientific community to assess the ability of a procedure to reliably obtain a desired result, to determine the conditions under which such results can be obtained and to determine the limitations of the procedure. The validation process identifies the critical aspects of the procedure that must be carefully controlled and monitored. All validations must include successful testing of samples that are representative of what would typically be encountered in casework.

### ***5.1: External Validation***

Developmental validation work may be done by an outside laboratory developing the procedure, but must undergo an internal validation before the method or procedure can be used.

### ***5.2: Internal Validation***

Prior to implementing a new analytical procedure or significant modifications to old procedures, a proposal will be submitted to the appropriate Section Chief(s), Quality Assurance Manager and the DNA Technical Leader (if applicable) outlining a validation plan. The validation plan must be approved by the appropriate Section Chief(s), Quality Assurance Manager and the DNA Technical Leader prior to conducting the validation.

### ***5.3: Evaluation***

Validation procedures must be evaluated on the basis of accuracy, precision, sensitivity and specificity. These four components are essential to establishing and maintaining the reliability of the analytical methods used in the laboratory.

Validation should involve the use of at least one of the following procedures; Split Samples, Blind Trials or Concordance Testing.

After the validation has been completed, the appropriate Section chief(s), Quality Assurance Manager, and the DNA Technical Leader (if applicable) will meet with the submitter of the validation to discuss validation results. The appropriate Section Chief(s), Quality Assurance Manager, and the DNA Technical Leader (if applicable) will then recommend approval/disapproval of the validation to the Scientific Operations Director and Executive Director.

All validations must be approved by the Scientific Operations Director and Executive Director. All documentation supporting validation must be kept on record in an area located close to where the analysis occurs and readily available to each analyst/examiner who utilizes it. Training employees on the new procedure/modification should be taken into consideration.

## Section 6: Analytical Procedures

Each section within the Arkansas State Crime Laboratory will maintain a quality manual, which shall contain a Standard Operations Procedure section. There is to be a detailed procedure for each method of analysis within that section. These procedures are available to all analysts/examiners who work in that section. In many cases, there are many acceptable procedures to accomplish a particular examination. The considerable variations that exist in actual casework demand that a forensic scientist be free to exercise sound judgment in choosing the method most appropriate to the problem at hand. It is important to give the analyst/examiner reasonable flexibility in selection and application of analytical methods to suit the needs of a particular case situation. The Section Chief ensures that those procedures which are contained in their section's quality manual meet acceptable scientific standards, and that they are applied appropriately.

### ***6.1: Analytical Procedures Manual Guidelines***

The written technical procedures must include descriptions of sample preparation methods, controls, standards, and calibration procedures. They must also include interpretational guidelines. Components of interpretational guidelines should include: a discussion of precautions; possible sources of error; applicable literature references; criteria for positive, negative, and inconclusive results; applicable disclaimers...etc. It is acceptable for laboratory procedures to specify where specific case record components (e.g. spectra of standards or calibration documentation) are maintained without a reference to the location of these records in the case file.

### ***6.2: Reagents/Standards/Controls***

Reagents, standards and controls utilized by the sections of the Arkansas State Crime Laboratory are maintained and quality controlled by the specific section.

### ***6.3: Policies***

- Items with a manufacturer-specified expiration date may not be used after that date without documentation to support continued reliability
- For items without a manufacturer-specified expiration date, dates will be based on experience, industry standard, or scientific consensus.
- Appropriate logs must be maintained within sections for reagents and standards used.
- Each analyst must ensure that the controls, reagents and/or standards used in their analysis are of satisfactory quality.
- Controls, reagents, or standards which are determined not to be reliable must be removed from use immediately.

## **6.4: Controls**

Specification of appropriate controls is a part of each section's Quality Manual. The following characteristics should be considered when designing controls:

- Similarity to the samples being tested
- Homogeneity and stability
- Significant variables in the analysis
- Quantitative controls should be in the expected range of the assay

An appropriate logbook must be kept for controls, including the following:

- Source
- Lot number, when available
- Date received and/or prepared
- Expiration date, if appropriate
- Initial quality control results

## **6.5: Reagents**

Reagents may be purchased or prepared and this includes single component chemicals. Minimum requirements for quality control of reagents are outlined below.

### **6.5.1: Purchased Reagents/Chemicals**

Containers must be labeled with the following:

- Lot number
- Date opened
- Expiration date (if applicable)
- Initials upon opening
- Date received and initials

### **6.5.2: Prepared Reagents**

Containers must be labeled with the following:

- Identity
- Date of preparation
- Date of expiration

Logbook must include the following:

- Identity
- Date of preparation
- Date of expiration
- Instructions on preparation of reagent
- Lot numbers of solvents and/or chemicals used in preparation of reagent
- A method to verify the reagent's reliability (if applicable)
- Initials of the person preparing reagent

- Initials of the person verifying reagent (if applicable)

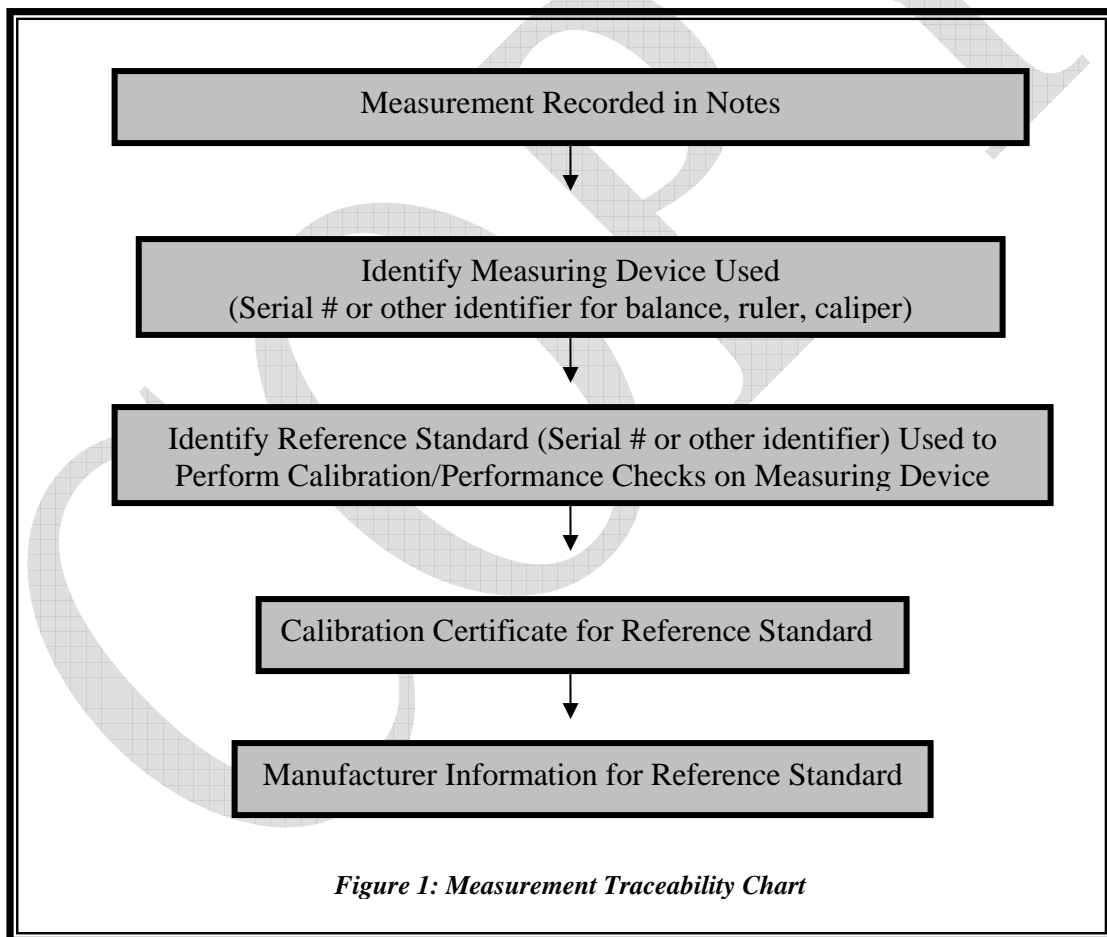
### **6.6: Standards**

All standards, whether prepared in-house or purchased from commercial sources, must be verified prior to use. A Certificate of Analysis will suffice for verification.

Standards on which an identification or quantitation are based must have documented reliability.

### **6.7: Measurement Traceability**

Measurements should be traceable back to the appropriate reference standard used for calibration or performance checks. Section Chiefs will be responsible for ensuring that reference standards and measuring devices meet appropriate specifications. See Figure 1 below for general guidance.



## Section 7: Instrumentation/Equipment: Calibration/Maintenance

The Arkansas State Crime Laboratory equipment/instrumentation is maintained by employees of the section who utilize that instrument/equipment. Details of specific quality control of instruments/equipment are outlined in each Section's Quality Manual. All instrument/equipment quality control is subject to the following parameters:

- All equipment and instrumentation will be maintained in a clean, orderly, and safe condition
- If an instrument is not working properly or potential problems are observed, it is the duty of the analyst to immediately take the appropriate steps to repair/correct the problem or inform the appropriate person of the problem. Any problem and the action to correct the problem must be logged in that instrument or equipment's log
- Instruments that are not working properly must be clearly identified for all employees who may use that instrument
- Instruments that are not in service must be clearly marked
- Designated instruments will be subject to a schedule of calibration or quality control checks with traceable or certified standards. Written procedures for these checks will be maintained in the appropriate Section's Quality Manual
- All maintenance (routine or periodic) and repairs on designated instruments will be recorded in the logbook
- Designated instruments require the maintenance of a QC logbook(s) which includes the following:
  - Outline of normally expected instrument operating parameters (e.g. oven program, carrier gas flow rate)
  - Record of all calibration and quality control checks
  - Record of all maintenance performed on the instrument
- All logbooks will be kept in an area located close to the instrument or equipment and readily available to each analyst/examiner who utilizes it

## Section 8: Competency/Proficiency Testing

### *8.1: Policy*

The Arkansas State Crime Laboratory maintains a Competency/Proficiency Testing program designed to provide independent evaluation of individual technical expertise, as well as a mechanism to monitor training needs and procedural weaknesses for both individual analysts/examiners and each discipline within the laboratory.

### *8.2: Responsibility*

Each Section Chief will ensure that analyst/examiner trainees have successfully completed a competency test prior to performing independent casework. A competency test should include a written/oral test, internal/external proficiency tests, and moot court. Moot Court may be waived for employees receiving training in additional sub-disciplines within the same discipline. Technical Support must successfully complete an appropriate competency test prior to assuming casework responsibility.

Each Section Chief will maintain a proficiency-testing program to evaluate the work product of each analyst/examiner (including technical support).

All internal and external proficiency tests will have a case file generated in JusticeTrax. All administration and examination documentation will be in the assigned electronic case file. This electronic version is considered the official proficiency case record.

It is the responsibility of the Section Chief to ensure that all required external proficiency tests are returned to the provider before the deadline.

Each Section Chief must ensure that a minimum of one (1) external proficiency test be completed annually in each discipline from an ASCLD/LAB approved provider if available. If an approved provider is unavailable, an external proficiency test must be obtained from another source. Each discipline in the laboratory is encouraged to participate annually in a blind or re-examination proficiency test.

The Section Chiefs shall maintain a log of proficiency testing in the appropriate Employee History Binder. This log shall contain the following:

- Analyst's/examiner's name
- Date proficiency case file assigned
- Date test completed
- Internal or external provider
- Test results
- Date reviewed

A copy of the provided results will also be maintained in the Employee History Binder.

All analysts/examiners performing and reporting independent casework will participate in the proficiency-testing program. Each analyst/examiner must perform one (1) proficiency test per calendar year in each discipline in which they perform case work using the same analytical methods and techniques as are used for comparable casework. Technical support personnel must also successfully complete an appropriate proficiency test annually. In addition, each examiner must be proficiency tested (internal or external) at least once, during each five-year accreditation cycle, in each subdiscipline in which the examiner performs casework.

Additional requirements pertaining to Forensic Biology and CODIS are detailed in the appropriate section manuals.

Each Section Chief is responsible for comparing the analytical results to the expected results, determining if the analytical results are acceptable, and for reviewing these results with the analyst. The Section Chief will complete a *Proficiency Test Summary Form* (see ASCL-FORM-11) for each completed proficiency test and give to the Quality Assurance Manager.

### ***8.3: Types of errors and corrective action***

#### **Administrative Errors:**

Minor errors detected under administrative review of the case file.

- Correct error and take appropriate action to help prevent reoccurrence

#### **Systemic Errors:**

Errors such as problems with procedures, equipment, and/or materials

- Review of procedures and instrumentation and take appropriate action to help prevent reoccurrence

#### **Analytical/Interpretative Errors:**

1. **Minor Errors-** are those due to a problem, which may affect the quality of work, but is not persistent or serious enough to cause immediate concern for the overall quality of the analyst/examiner's work.
2. **Major Errors-** are those that raise immediate concerns regarding the quality of the analyst/examiner's work.

#### **Corrective Actions:**

- Halt the casework of the individual until the appropriate corrective action is taken to minimize the chance of a recurrence of the error (depending on the circumstance, the analyst may perform casework in other non-related analyses).
- Review all relevant casework.

- The examiner must successfully complete a proficiency test before resumption of casework. Remedial training or a period of supervised casework may be required as well.

If there is a discrepancy between the expected results and the experimental results the Section Chief must notify the Quality Assurance Manager. The Section Chief must begin an investigation and complete a 'Corrective Action Request Form' (See ASCL-FORM-08). This form will be maintained in the proficiency case file.

## **Section 9: Case Records**

### ***9.1: Documentation***

The Arkansas State Crime Laboratory is currently using the JusticeTrax LIMS-plus software program. All case documentation will be stored electronically. Once reviewed, this electronic version is considered the official case record.

As a case is created in JusticeTrax, 'request(s)' will be added for the disciplines that have evidence to be processed. Each request has a set of milestones- 'request entered,' 'findings entered,' 'draft complete,' 'technical review assigned,' 'technical review completed,' administrative review assigned,' 'administrative review completed' and 'report released.' In addition, each request has a storage location for images.

Examination Documentation is any documentation generated by the analyst/examiner (e.g. notes, worksheets, photographs, spectra, printouts, charts and other data). Examination documentation that is essential for the evaluation and interpretation of the data must be stored in the appropriate folder within the 'Request' folder in the LIMS case file. When it is not feasible to incorporate the examination documentation in the LIMS case file, this documentation may be stored external to the LIMS case file. The location of this documentation must be specified in the section's quality manual or in the case file.

All other documentation contained in the case file will be considered administrative documentation and will be stored in the 'Case Images' folder. The unique Arkansas State Crime Laboratory (ASCL) case number (YYYY-00000) must be on each page of the examination and administrative documentation in the case record. Dates should be recorded throughout the documentation to indicate when the work was performed, but at a minimum, the starting and ending dates must be recorded. Each section's quality manual must describe their dating procedure.

Handwritten notes and observations must be in ink. However, pencil may be appropriate for diagrams or making tracings. Nothing in the handwritten information will be obliterated or

erased. Any corrections will be made by an initialed, single strikeout (so that what is stricken can still be read). Correction fluid or correction tape may not be used.

When the analyst/examiner has completed the request, they will set the milestone(s) in JusticeTrax to 'draft complete.' Examination documentation for a request will be considered "stored" once the request has been draft completed in Justice Trax. If a change to the examination documentation is made after this milestone, the original documentation will remain in the electronic case file and the changed documentation stored with a different name (i.e. amended notes, etc.).

Technical and/or administrative reviews must ensure that electronic versions of all necessary documentation are present in LIMS-plus. The case review form will be filled out and scanned into the database. Once the technical/administrative review is complete, the reviewer will set the milestone to 'technical review' and/or 'administrative review'. Once the administrative review has been performed, the laboratory report for that request will be stored as a PDF document.

If a correction needs to be made in the case file that only a LIMS-Plus Administrator can perform (i.e. clearing extraneous items, rolling milestones back, etc.), a *LIMS-Plus Data Change Request Form* (ASCL-FORM-09) must be completed.

## ***9.2: Laboratory Report Policy***

### **9.2.1: Report of Laboratory Analysis**

When analytical conclusions and/or opinions are made on evidence submitted for analysis, a report will be issued to the investigating agency.

Each analyst/examiner will proofread and sign their reports ensuring the report is accurate and error-free. LIMS-plus allows the analyst to sign their reports electronically.

Laboratory reports will include the name of the submitting officer and the name and address of the submitting agency, the laboratory case number, agency case number (if available), a listing of exhibits and results of examination(s) conducted. Where associations are made, the significance of the association must be communicated clearly and qualified properly in the report.

### **9.2.2: Release of Information**

Investigative information regarding items requiring independent verification may not be released without prior technical review or independent verification by another analyst/examiner (note: if an independent verification of the item is performed, the verifier must appropriately document this) Final results, conclusions, or reports will be released only after a technical review of the case file has been completed and documented. Pursuant to Arkansas State Statute 12-12-

312, the records, files, and information kept, obtained, or retained by the State Crime Laboratory shall be privileged and confidential and released only under and by the direction of a court of competent jurisdiction, the prosecuting attorney having criminal jurisdiction over the case, or the public defender appointed or assigned to the case. No information is to be released to the media except by the Executive Director or the designee of the Executive Director.

Submission sheets and laboratory reports may be released to the prosecuting attorney's office by the Executive Director, the subpoena coordinator, or any employee of the appropriate section. Submission sheets and laboratory reports may be released to the investigating agency by the Executive Director, subpoena coordinator, or any employee of the appropriate section. The Evidence Receiving Section may release submission sheets and evidence release forms to the investigating agency upon request.

Upon receipt of a court order from a court of competent jurisdiction, all authorized information shall be released to the designated party. All other written requests must be on letterhead and signed by the requesting party. Written requests by facsimile are acceptable. Prior to the release of the contents of a case file, the appropriate analyst or Section Chief will be notified.

Upon written request on official letterhead, any information authorized by the prosecuting attorney having criminal jurisdiction shall be released to the designated party.

Upon written request on official letterhead, any information authorized by the public defender appointed or assigned to the case shall be released to the designated party. Requests made by a public defender must be in writing on letterhead and must include the statement that they are the public defender of record in that case.

Requests made by the submitting agency must be in writing or facsimile on letterhead unless the analyst is confident of their identity, in which case an *Agency Contact Form* (see ASCL-FORM-06) must be completed.

Requests by a law enforcement agency other than the submitting agency must be made in writing on letterhead. Written approval from the submitting agency must be obtained before any information is released.

Requests by a private defense attorney in a criminal case must be approved in writing on letterhead by the prosecuting attorney having criminal jurisdiction over the case or by court order.

When there is a discovery request for case information, a duplicate copy of the information will be sent to the prosecuting attorney having criminal jurisdiction over the case.

All documentation of the above requests will be scanned into the case file as case images and become a part of the permanent case file.

### **9.2.3: Supplemental Reports**

The original report, submission sheet, administrative and examination documentation must remain in the case record. Administrative and technical reviews are required before a supplemental report is issued.

When additional evidence is received on a case that has not been completed, the additional evidence may be analyzed and included in the original report.

If additional evidence is received after the original report has been issued, additional requests for analysis are made, or other additional testing is required in a case, a supplemental request must be made. The submission sheet(s), notes, examination documentation, and administrative documentation for the additional evidence must be incorporated electronically into the imaging module of LIMS-plus.

When a supplemental report is issued for additional evidence, the words “Supplemental Report” must appear below the header information and above the listing of the evidence and the results.

### **9.2.4: Amended Reports**

The original report, submission sheet, administrative and examination documentation must remain in the case record. Administrative and technical reviews are required before an amended report is issued.

An amended report is necessary if an error is found on the original report (this also includes reports uploaded to iResults).

When an amended report is necessary to change the analytical results, the analyst will notify their immediate supervisor in writing to document the reason(s) for the amended report. This documentation will be incorporated into the original case file.

If additional analysis is required after the original report has been issued, an amended request must be made. The evidence must be analyzed and an amended report issued. The amended report, submission sheet(s), notes, examination documentation, and administrative documentation for the additional evidence must be incorporated into the original case record.

When an amended report is issued, the words “Amended Report” must appear below the header information and above the listing of the evidence and the results. The amended report should contain all of the items on the original report, any amendments, and the words “Amended Report”.

### **9.3: Case Review**

#### **Policy**

All cases will be technically and administratively reviewed. The review process must confirm that electronic versions of all necessary documentation are in the imaging module of the LIMS-plus program.

If a reviewer discovers an error in the case record, the reviewer must document the error on the *ASCL Case Review Form* (see ASCL-FORM-05) and inform the analyst. If the analyst and the reviewer can not reach consensus, then both the analyst and reviewer must meet with the Section Chief (or designee) for resolution.

All information on the laboratory case review form must be included on the individual sections' case review form. The Section Chief may add more fields if appropriate. Individual requirements in the laboratory case review form may be removed, if appropriate, with the approval of the Quality Assurance Manager.

#### **9.3.1: Technical Review**

The technical review will include a thorough review of analyst bench notes to ensure that the documentation supports the results on the report.

Technical reviews must be conducted by individuals having expertise gained through training and experience in the discipline being reviewed. The technical review may not be conducted by the author of the report. An individual conducting the technical review does not have to be an active examiner or currently being proficiency tested. The reviewer must have sufficient knowledge of the discipline to verify compliance with the laboratory's technical procedures and that the conclusions reach are supported with the examination documentation. Additional requirements pertaining to Forensic Biology and CODIS are detailed in the appropriate section manuals.

The technical review does not shift the responsibility for the forensic findings to the reviewer, but the reviewer is responsible to ensure that the documentation does reflect adequate basis for the conclusion.

The technical review is to include but not necessarily limited to: bench notes, spectra, graphs, external telephone conversation records, investigative reports, sketches, diagrams and laboratory reports. The documentation must reflect adequate basis for the conclusion.

Routine (no identification or correlation) AFIS and NIBIN searches are not required to be contained in the case file.

### **9.3.2: Administrative Review**

The administrative review of the case file will include review of spelling, grammar, case number, date, and initials on appropriate pages, description of evidence and seals and other appropriate documentation.

Administrative reviews may be conducted by any laboratory analyst, except the author of the report, or other individuals qualified to perform technical review.

### **9.3.3: Responsibilities**

It is the responsibility of the technical reviewer to report serious or repetitive deficiencies and corrective actions to the Section Chief. If the technical reviewer discovers a problem that raises an immediate concern regarding the overall quality of the analyst/examiner's work, the technical reviewer must promptly notify the Section Chief. The Section Chief, Scientific Operations Director, and the Quality Assurance Manager must determine whether an investigation is warranted. If an investigation is undertaken, the Section Chief must complete a *Corrective Action Request Form* (see ASCL-FORM-08). This form will be maintained in the employee's personnel file.

### **9.3.4: Types of errors and corrective action**

There are several types of errors, some of which are very minor and do not raise immediate concerns regarding the quality of the analyst/examiner's work product. Others do reflect the quality of the analyst/examiner's work.

#### **Administrative Errors:**

Minor errors detected under administrative review of the case file.

#### **Systemic Errors:**

Errors such as problems with procedures, equipment, and/or materials

#### **Analytical/Interpretative Errors:**

1. **Minor Errors**- are those due to a problem, which may affect the quality of work, but is not persistent or serious enough to cause immediate concern for the overall quality of the analyst/examiner's work.
2. **Major Errors**- are those that raise immediate concerns regarding the quality of the analyst/examiner's work.

#### **Corrective Actions:**

- Halt the casework of the individual until the appropriate corrective action is taken to minimize the chance of a recurrence of the error (depending on the circumstance, the analyst may perform casework in other non-related analyses).
- Notify the customer agency if necessary.
- Review all relevant casework.
- The analyst must successfully complete a proficiency test before resumption of casework. Remedial training or a period of supervised casework may be required as well.

## ***9.4: Laboratory Case Record Storage and Retention***

### **9.4.1: Storing Case Records**

Non-electronic case files for the Little Rock laboratory are stored in the appropriate section, the file room in the main building, the evidence storage area in Evidence Receiving, the file rooms located in the annex, or off-site storage. Case files for the Hope Regional Laboratory are stored onsite.

### **9.4.2: Removing Case Records from Storage**

Whenever a case file is removed from an on-site file storage area by an authorized person, an In-and-Out card shall be inserted in its space citing the case number, date of removal, and initials of person removing the file, and initials of the person for whom the file is being retrieved.

### **9.4.3: Case File Retention**

Case files will be retained by the Arkansas State Crime Laboratory in either physical or electronic form.

## Section 10: Testimony Review

### Policy

The Arkansas State Crime Laboratory maintains a program to monitor and evaluate personnel testifying as expert witnesses. This annual review of courtroom testimony is intended to provide a mechanism for evaluating an analyst's ability to present scientific information in an effective and understandable manner, and to ensure that the testimony is scientifically consistent with the findings documented in the case file.

### ***10.1: Responsibilities***

The laboratory must monitor the testimony of each analyst. This monitoring may be carried out by one or more of the following methods:

- observation of the testimony by a supervisor or a peer
- review of transcripts of testimony given by an examiner
- having one or more officers of the court fill out and return a testimony evaluation form (checklist and/or comment sheet) provided by the laboratory
- telephonic solicitation by a laboratory director or supervisor to one or more officers of the court for responses to the evaluation form

Analyst/examiners are encouraged to provide a Testimony Review Form to officers of the court and ask them to fill out and return the form to the laboratory. This may substitute for testimony review by supervisory personnel. However, testimony review by supervisory personnel is the preferred method. In any case, a *Testimony Evaluation Form* (see ASCL-FORM-04) will be completed by the reviewer and signed by the supervisor.

Results of the evaluations will be maintained in the Employee History Binder of the individual.

### ***10.2: Procedures***

- An *Testimony Evaluation Form* (ASCL-FORM-04) will be used to document the findings of the review.
- The supervisor and the evaluator (peer), will discuss the evaluation with the analyst/examiner. Positive and negative aspects of the testimony as well as any constructive criticism concerning areas that need improvement should be discussed. The evaluator, supervisor and the analyst will sign and date the evaluation form.
- Unsatisfactory evaluation – The analyst/examiner will develop a written Corrective Action Plan. After completion of Corrective Action Plan, the analyst/examiner's courtroom testimony should be re-monitored at the next available date.
- If after one (1) calendar year an analyst/examiner has not testified or been evaluated due to unforeseen circumstances, the reason will be documented by the supervisor and placed in the analyst/examiner's employee history binder.

## **Section 11: Audits**

### **Policy**

It is the policy of the laboratory to conduct internal and external audits of the laboratory in order to ensure that the Quality Manuals are being followed.

#### ***11.1: Internal Audit***

An internal audit of the laboratory will be performed each year (except when an external audit is performed). The Quality Assurance Manager will schedule and coordinate the audit in each section of the laboratory. The audit is then reviewed by the Quality Assurance Manager, Scientific Operations Director and the Executive Director.

Findings will be issued to the appropriate Section Chief. Each Section Chief receiving a finding must either appeal the finding or complete a Corrective Action Report for each finding. These appeals or Corrective Action Reports, along with supporting documentation, must be returned to the Quality Assurance Manager by the assigned deadline. If necessary, the Scientific Operations Director and/or the Quality Assurance Manager will meet with the Section Chief to discuss the findings and their corrective actions.

Annual Accreditation Review Reports will be sent to ASCLD by each laboratory's accreditation anniversary each year by the Executive Director.

In concordance with the internal audit, an annual review of the quality system will be performed and documented. This may be accomplished by different techniques. Audit results will be discussed with staff to encourage the formulation of ideas to improve the current quality system. The Quality Assurance Manager, Scientific Operations Director and Laboratory Director will meet to discuss the overall quality system of the laboratory.

#### ***11.2: External audit***

The laboratory will have external audits scheduled in accordance with ASCLD/LAB requirements.

The Forensic DNA and CODIS sections of the laboratory will have additional external audits in order to comply with the DNA Advisory Boards and CODIS guidelines.

## **Section 12: Complaints**

### ***12.1:Employee Complaints Regarding the Quality System***

Employees are encouraged to notify the Section Chief or Scientific Operations Director if they have complaints or concerns regarding the quality system. Complaints/concerns may be submitted anonymously (i.e. through the Employee Suggestion box located outside of Evidence Receiving). If a serious problem is revealed, the Quality Assurance Manager must be notified and a corrective action request completed.

Policies and procedures for internal complaints regarding grievance and sexual harassment are found in the Personnel Handbook (ASCL-DOC-02).

### ***12.2:External Complaints Regarding the Quality System***

External complaints that question the analytical results of an analyst will be investigated by the Section Chief and the Quality Assurance Manager. If the investigation finds the complaint to be groundless, the Section Chief and the Quality Assurance Manager will document their findings and present them to the Executive Director. If the investigation finds the complaint is valid, the Section Chief and the Quality Assurance Manager must determine if the error was administrative, systemic, or analytical. The corrective actions listed in section 8.4 should be used as a guideline by the Section Chief and the Quality Assurance Manager.

The Section Chief and the Quality Assurance Manager should also review other cases by the same analyst to determine if this error is an isolated event or an on-going problem. This review may include re-examination of some or all of the analyst's cases if it is deemed necessary by the Section Chief and/or Quality Assurance Manager.

The findings of the investigation should be documented and presented to the Executive Director.

### ***12.3:External Complaints Regarding Court Testimony***

External Complaints that involve Courtroom testimony, demeanor or dress of an analyst should be investigated by the analyst's immediate supervisor. This investigation should include telephonic solicitation of court officers and/or police officers that were present. These conversations should be documented on an *Agency Contact Form* (see ASCL-FORM-06). The analyst should document their response to the complaint. If the investigation finds the complaint to be groundless, the Section Chief should document the findings and present them to the Scientific Operations Director and the Executive Director. If the investigation finds the complaint to be valid, the Section Chief should discuss his findings with the analyst. The Section Chief should develop a written corrective action plan for the analyst. The Section Chief should submit the results of the investigation along with the corrective action plan to the Scientific Operations

Director and the Executive Director for approval. The Section Chief should monitor the analyst's courtroom appearances until the analyst demonstrates the problem has been resolved. Other external complaints will be addressed on a case by case basis by the employee's immediate supervisor.

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## **Section 13: Miscellaneous**

### ***13.1: Health and Safety***

The laboratory is committed to providing a safe working environment for its employees. The laboratory has a safety manual that must be followed by all employees and guests. Employees not following the safety guidelines as spelled out in the safety manual will be subject to disciplinary action. Guests will be asked to leave or conform to the safety regulations.

### ***13.2: Personnel Handbook***

The following policies may be found in the Personnel Handbook:

- General State Policies
- Crime Laboratory General Policies
- Disciplinary Policy
- Drug Free Workplace Policy
- Immunization and Accident Policy
- Travel Regulations
- Employee Leave Policy
- Family and Medical Leave Act of 1993
- Fair Labor Standards Act
- Authorization to Earn Compensatory Time Form
- Catastrophic Leave Bank Program
- Sexual Harassment Policy
- Grievance Procedure
- Employee Suggestion System
- Paper Recycling Policy
- State of Arkansas Employee Assistance Program
- Use of Crime Laboratory Facilities for Private Cases
- Executive Order 98-04
- Whistle Blower Law for Public Employees

### ***13.3: Employee Development Program***

Each section will maintain a Training Manual that is sufficiently comprehensive to cover all aspects of the work performed. In addition, training will include a segment on ethical practices in relation to forensic science.

The ASCL encourages and supports employees to improve their knowledge and skills to grow as individuals and to fully develop their potential. The ASCL affords employees the opportunity to attend training annually. This training may include professional meetings, staff development seminars, technical training courses, in-house technical meetings, courses

and seminars and ASCL sponsored seminars and conferences. A Travel Authorization Form (ASCL-FORM-21) must be completed and approved prior to attendance.

### ***13.4: Individual Characteristic Databases***

#### ***Individual Characteristic Databases***

The ASCL utilizes three different individual characteristic databases: Automated Fingerprint Identification System (AFIS) in the Latent Prints section, Combined DNA Index System (CODIS) in the CODIS section and National Integrated Ballistics Information Network (NIBIN) in the Firearms/Toolmark section. Employees utilizing these databases must receive proper training and/or clearance through the appropriate organizations (AFIS-Arkansas State Police (ASP); CODIS-National DNA Index System (NDIS) guidelines; NIBIN-Forensic Technologies, Inc. and Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF).

Access to individual characteristic databases is restricted to those employees authorized by the Executive Director. The Section Chief of the respective section will keep an updated list of employees that have access to the database. Specific procedures concerning individual characteristic databases are addressed in the appropriate section's quality manual.

#### ***Individual Characteristic Database Samples***

Individual characteristic database samples include ten print cards of known individuals (Latent Prints-AFIS), convicted offender/arrestee known biological samples (CODIS) and test fired ammunition produced at the ASCL (Firearms/Toolmark-NIBIN). Ten print cards are treated as examination documentation. Convicted Offender/Arrestee known biological samples and test fired ammunition produced by the ASCL are treated as reference materials.

Individual characteristic database samples controlled by the ASCL must be protected from loss, cross-transfer, contamination and/or deleterious change. Access to individual characteristic database samples is restricted to those employees authorized by the Executive Director. The Section Chief of the respective section will keep an updated list of employees that have access to the database samples. Specific procedures concerning individual characteristic database samples are addressed in the appropriate section's quality manual.

### ***13.5: Record Retention***

The following items are required to be retained either electronically or in paper form for a period of 15 years unless otherwise specified below:

- Proficiency Tests
- Corrective Action Documentation
- Audit Records

- Training Records
- Continuing Education Documentation
- Case Files (indefinitely)
- Court Testimony Monitoring

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## Section 14: Glossary

**Blind Test:** A test in which the analyst is unaware of the test nature of the sample at the time of analysis.

**Blind Trials** - internally generated sample whose composition is unknown to the analyst

**Concordance Testing** – testing which is an external procurement or exchange of blind and reference samples with another competent laboratory

**Control:** Sample which verifies procedure is working as expected.

**External Proficiency Test:** A test to evaluate the competence of analysts, technical support personnel, and the quality performance of the laboratory conducted by an independent agency.

**Internal Proficiency Test:** A test to evaluate the competence of analysts, technical support personnel, and the quality performance of the laboratory conducted by the laboratory itself.

**LIMS:** Laboratory Information and Management System

**Reagent:** Any substance used for its chemical or biological activity.

**Re-examination Test:** A test in which a previously examined sample is re-analyzed by a different analyst/examiner.

**Split Samples** – homogeneous sample portioned out for separate analysis

**Standard:** Substance of known quantity and/or quality.