N. C. State Bureau of Investigation

Quality Assurance Program

for

Documents & Digital Evidence Section

Digital Evidence Unit

July 2001

North Carolina State Bureau of Investigation
Quality Assurance Program Manual
for the Documents & Digital Evidence Section

Digital Evidence Unit

Approved By: _____   Date: _____

Reviewed By:_____   Date: _____

Reviewed By: _____   Date: _____

North Carolina State Bureau of Investigation Crime Laboratory Division

Provisions for Modification and Updating of This Manual

Any updates, modifications, additions, or deletions to this manual prepared after the issue date on the cover sheet must be approved by the SAC prior to their implementation.

Any part of the manual that is updated shall be archived in Section X. Archived document should state date of update, modification, additions, or deletions.

The Assistant Director and Laboratory Quality Manager will review any updates, modifications, additions or deletions to the Quality Assurance Manual on a yearly basis.

Table of Contents

1.   Planning and Organization

    1.1   Goals

        Provide state and local law enforcement agencies laboratory services for the examination of digital evidence associated with an official criminal investigation.

        Ensure the quality, integrity, and scientific accuracy of the digital evidence examinations through the implementation of a detailed Quality Assurance/Quality Control (QA/QC) program.

    1.2   Scope

        The QA/QC program described in this manual is intended to support scientific findings gathered from digital evidence and to ensure that the quality and integrity of the data is scientifically sound.

    1.3   Program Objectives

        <u>The objectives of this quality assurance program are:</u>

        Ensure uniformity and accountability in records and analysis techniques.

        Ensure the accuracy of the data generated.

        Document corrective actions taken.

        Monitor personnel and equipment performance.

        Terminate non-conforming work or materials.

        Ensure the use of documented and valid materials and procedures.

        Provide feedback to management on performance standards.

        Provide guidelines to employees so they will know what is expected of them.

        Ensure that personnel performing these examinations have the appropriate level of training and education.

Ensure that analysts are competent in performing the examination and interpreting exam results through a series of proficiency tests.

Provide for a safe workplace.

Provide for competent external audits to see that the operating policies and procedures are being followed and that they are adequate.

1.4   Authority and Accountability

Individual analysts in the Digital Evidence Unit with delegated responsibilities, are empowered by the Section SAC to carry out these responsibilities and to act in his place. Specific delegated responsibilities include:

The section SAC is responsible for the Quality Assurance functions pertaining to proficiency tests and audits.

A Senior Analyst has the responsibility to see that Quality Control functions are being carried out in the section on a day-to-day basis.

One (1) Computer Forensic Analyst is designated as Quality Control Officer. It is this individual s responsibility to monitor Quality Control within the unit.

Analysts are responsible for the prioritization of casework. Protocol for case prioritization and the protocol for departing from these procedures can be found in Procedure 38 of the SBI Policy and Procedure Manual.

All Bureau employees are responsible for handling any complaints against the Bureau as set forth in Procedure 24 of the SBI Policy and Procedure Manual.

1.5   Organizational Structure

The organizational structure of the Documents and Digital Evidence section and the section s place within the organization within the Bureau is documented in the following organizational charts.

N. C. State Bureau of Investigaiton
CRIME LABORATORY DIVISION
Documents & Digital Evidence

DAVID C. DUNN
FOR DOCUMENT ANLY SUPR*
(1320)

CINDY F. CLIFTON
OFFICE ASST IV
3613-0000-0002-181
SG 59

JERRY C. CARTER
CRIMINAL SPECIALIST
3613-0000-0003-055*
SG 74

R. KEN MARTIN
FOR DOCUMENT ANLY I
3613-0000-0002-133*
SG 72

TOM J. CURRIN JR.
FOR DOCUMENT ANLY II
3613-0000-0002-135*
SG 74

VACANT
FOR DOCUMENTS ASST
3613-0000-0002-145
SG 64

MARY B. DAVIS
PHOTOGRAPHER II
3613-0000-0002-209
SG 66

JIM M. TREVILLIAN
PHOTOGRAPHER II
3613-0000-0002-210
SG 66

VACANT
ARTIST ILLUSTRATOR II
3613-0000-0003-971
SG 64

JONATHAN L. DILDAY
FORENSIC COMPUTER AGENT
3613-0000-0002-117*
SG 74

DAVID C. MISHOE
FORENSIC COMPUTER AGENT
3613-0000-0002-208*
SG 74

ERIC R. HICKS
FORENSIC COMPUTER AGENT
3613-0000-0002-144*
SG 74

VACANT
COMPUTER FORENSICS TECHNICIAN
3613-0000-0008-080
SG 68

Quality Assurance Program for the Digital Evidence Unit

Quality Assurance Program for the Digital Evidence Unit

N. C. State Bureau of Investigation
ADMINISTRATION

DIRECTOR
ROBIN P. PENDERGRAFT

EXECUTIVE ASST. I
KIM D. JONES

PROFESSIONAL STANDARDS
SPECIAL UNIT SUPERVISOR ERIK A. HOOKS

LEGAL ADVISOR
JOHN H. WATTERS

ADMINISTRATIVE SERVICES DIVISION ASSISTANT DIRECTOR V. LEE ALLEN (1310)	CRIME LABORATORY DIVISION ASSISTANT DIRECTOR JERRY RICHARDSON (1320)	FIELD OPERATIONS DIVISION ASSISTANT DIRECTOR MELANIE W. THOMAS (1341)	SUPPORT SERVICES DIVISION ASSISTANT DIRECTOR LARRY W. SMITH (1370 & 1371)
FINANCIAL SERVICES VACANT	DEPUTY ASSISTANT DIRECTOR WILLIAM E. WEIS	CAPITAL DISTRICT RICHARD G. SIMS	AIR WING W. DURB TURNER
HUMAN RESOURCES JOHN M. VAUGHN	DOCUMENTS & DIGITAL EVIDENCE DAVID C. DUNN	COASTAL DISTRICT DAVID M. ALLEN	DCI DON K. ROBERTS
LOGISTICS SUPPORT SECTION WILLIAM A. VIVOLO, JR.	DRUG CHEMISTRY DEENA J. KOONTZ	NORTHEASTERN DISTRICT DENNIS G. HONEYCUTT	DECU JERRY K. RATLEY
RECORDS LINDA D. PULLIAM	EVIDENCE CONTROL & ADMINISTRATIVE SERVICES DEBORAH F. BURWELL	NORTHERN PIEDMONT DISTRICT FRANK D. BROWN, JR.	FCI J. MELINDA COLLINS
RESEARCH & PLANNING ACCREDITATION/CRIME STATS SCOTTIE D. CARPENTER	FIREARM & TOOL MARK PETER D. WARE	NORTHWESTERN DISTRICT RONALD L. PERRY	ID DEE PARKER
GRANT MANAGEMENT MARK S. NELSON	LATENT EVIDENCE JOHN A. BYRD	SOUTHEASTERN DISTRICT JERRY D. WEAVER	INTELLIGENCE & TECHNICAL SERVICES PAM TULLY
	MOLECULAR GENETICS MIKE J. BUDZYNSKI	SOUTHERN PIEDMONT DISTRICT DEIRDRE B. CALDWELL	SAFIS LARRY D. WILKIE
	TRACE EVIDENCE D. TROY HAMLIN	WESTERN DISTRICT CHARLES R. MOODY	TRAINING KEVIN R. WEST
	WESTERN REGIONAL LAB JOE D. REAVIS		

2. Qualification and Training of Personnel

All persons involved in the actual recovery, evaluation, analysis, and interpretation of digital evidence shall have a background appropriate to their duties.

2.1 Job Description

A current copy of job descriptions within the Documents & Digital Evidence Section will be maintained by the Section SAC in each employee s personnel file.

2.2 Education, Training, and Qualifications of Personnel Engaged in Digital Evidence Analysis General Requirements:

All analysts in the SBI Digital Evidence Unit must be a sworn agent and have extensive training in the field of computer science. Management prefers a baccalaureate degree in the field of Computer Science or Science.

Requirements for Computer Forensic Analysis:

All analysts will have completed the following additional training prior to performing Computer Forensics Analysis:

Successfully complete a documented in-house training program.

Completion of the SBI Special Agents Academy.

Successful completion of a series of competency tests, and a final inclusive competency test.

EnCase Training

Moot Court and/or oral discussion

Experience:

Forensic Computer Analyst Trainee (approximately six months)
Forensic Computer Analyst I
After two years as a Forensic Computer Analyst I, the analyst may be eligible for promotion to a Forensic Computer Analyst II.

Continuing Education:

Computer Forensic Analysts must stay abreast of developments within the field by reading current scientific literature and by attendance at seminars, college courses, or professional meetings. Management must make every effort to provide analysts with an opportunity to comply with the above requirements.

Training Records:

Documentation of all training will be maintained by the Section SAC. A copy of the employee s training transcript is maintained in each employee s personnel file and should be updated yearly.

3.   Documentation

3.1   Current Procedures Manual

A copy of the current analytical procedures used in the analysis of digital evidence will be maintained and available to each Computer Forensic Analyst.

3.2   Operational Guidelines

Guidelines for the receipt, identification, storage and handling of evidence submitted to the Crime Lab are documented in the SBI Evidence Accountability policy. A copy of this policy is found in the SBI Policy and Procedure Manual.

Guidelines for The Proper Recording of all Analytical Data

<u>The following information will be recorded in the permanent file of every case submitted for computer forensic analysis:</u>

A SBI Physical Evidence Examination Request Form (SBI-5)

Notes which describe analysis used in case shall be entered into LIMS and/or the laboratory case file.

Prints of images or a representative sample of the images found on the computer which may be pertinent to the case. Any CD that has pornographic images copied on it as part of the examination will be labeled to reflect the following:

> *This media may contain contraband and is intended for use by law enforcement in an official criminal investigation. Dissemination of this material may result in a criminal violation.*

Evidence determined to have pornographic images on it will be labeled   This media may contain contraband and is intended for use by law enforcement in an official criminal investigation. Dissemenation of this material may result in a criminal violation.   This label will be placed on the evidence package prior to being returned to the submitting agency.

Final Lab Report (All analysis results will be reviewed by at least one Computer Forensic Analyst or the Section SAC.) The review will be approved through LIMS.

The analyst will record incoming and outgoing phone calls regarding the case into LIMS for each case file. A copy of the phone log shall be stapled to the front inside cover of the case file.

Data Handling, Storage and Retrieval

Evidence will be stored according to the SBI Crime Laboratory Procedure Manual.

Historical and Archival Records

Analytical procedures that are outdated or revised will be maintained in the Computer Forensics Procedures Manual under Section X titled Historical and Archival Records. Each procedure will indicate the effective date and the termination date.

Material Safety Data Sheets

MSDS sheets will be maintained on all chemicals and reagents used in the Digital Evidence Unit. The Section Safety Officer will file these sheets in the MSDS manual.

Personnel Records

The Section SAC maintains a personnel file on each analyst which is subdivided into the following categories:

Personnel history, assignments, promotions, etc.
Commendations
Complaints and disciplinary action
Training
Evaluations

The Section SAC and the Deputy Assistant Director of the lab also maintain a separate file of proficiency test results from each trainee, and proficiency test results from trained analysts.

Quality Assurance and Audit Reports

Copies of audit reports will be maintained in section files. Those reports

generated by the SBI Inspection Program will be stored according to Bureau procedure. Results from the annual internal audit program described in Section 10 of this manual, will be maintained by the SAC.

Safety Manuals

Copies of the safety manuals described in Section 11 of this document will be available to every employee of the section.

4. Control of Equipment, Instruments, Materials & Supplies

   4.1   Equipment and Instruments

   Procurement

   All equipment and instruments will be ordered by the Section SAC.

   Equipment Inventory Log

   An inventory log will be maintained on each piece of equipment in the Digital Evidence Unit. This log will include the asset number, location, sticker number, who equipment is issued to, and serial number whenever the information is available. (See Appendix A)

   Operating Manuals

   Operating manuals will be maintained in the laboratory and warranty information provided by the manufacturer will be maintained in a file in the Digital Evidence Unit.

   Training

   Operators of scientific instruments will be knowledgeable in their use. Operator training will occur during the in-house Computer Forensics training program and will cover the manufacturer's instructions, theory of application, procedures to be used, and any calibration requirements.

   Equipment Maintenance Forms and Annual Inspection Reports

   When a piece of equipment requires service or maintenance outside routine maintenance, that fact will be documented on a "Laboratory Instrument and Equipment Repair Record   form. (See Appendix B) This information is maintained in the section Laboratory Equipment Manual.

   Every year, lab equipment will be inspected and this inspection will be documented using the "Annual Equipment Inspection Form". (See Appendix C) The Supervisor will assign an individual to be responsible for the documentation and inspection of the equipment in this unit.

4.2   Materials and Supplies

Sources of Materials and Supplies

A listing of all hard drives, software, materials and supplies used in the Digital Evidence Unit will be maintained.

Procurement

All orders for hard drives, software, materials, chemicals and supplies will be placed by an assigned Documents & Digital Evidence employee and approved by the Section SAC.

Receipt of Hard Drives, Software, Materials and Supplies by the Digital Evidence Unit.

All hard drives, software, supplies and materials will be received into the Digital Evidence Unit by an employee in the section. The employee shall verify the items received against the orders placed.

All inventory will be stored under the conditions specified by the manufacturer. Any materials which require special handling will be handled appropriately and under conditions specified in the section's Safety Manuals.

Material Safety Data Sheets

Material Safety Data Sheets will be maintained in the Documents & Digital Evidence Section library on all chemicals and reagents used in the Documents & Digital Evidence Section, Photo Lab, Graphics Unit and Digital Evidence Unit.

Equipment Inventory Log

Appendix A

Room 1450C
Digital Evidence Unit

Description	Asset Number	Serial Number	Location	Comments
Solid Steel Tower	211340	SST-0201-0005	Mishoe	Forensic Computers.Com
Solid Steel Tower	211341	SST-0201-0009	Dilday	Forensic Computers.Com
Solid Steel Tower	211343	SST-0201-0007	DEU	Forensic Computers.Com
Solid Steel Tower	211345	SST-0201-0004	Smith	Forensic Computers.Com
Solid Steel Tower	211347	SST-0201-0008	Cullop	Forensic Computers.Com
Solid Steel Tower	211349	SST-0201-0003	Garrett	Forensic Computers.Com
Solid Steel Tower	211353	SST-0201-0006	Miller	Forensic Computers.Com
Monitor	211339	1983BAA21031151	Mishoe	KDS Model V5-195E
Monitor	211342	1983BAA21031216	Dilday	KDS Model V5-195E
Monitor	211344	1983BAA21031146	DEU	KDS Model V5-195E
Monitor	211346	1983BAA21031233	Smith	KDS Model V5-195E
Monitor	211348	1983BAA21031147	Cullop	KDS Model V5-195E
Monitor	211350	1983BAA21031228	Garrett	KDS Model V5-195E
Monitor	211354	0302040993	Miller	KDS Model V5-195E
Portable	211351	HANZ5ABT026	DEU	Forensic Workhorse II

Laboratory Instrument & Equipment Repair Record

Appendix B

Laboratory Instrumentation & Equipment Repair Record

Digital Evidence Unit
Month _____   Year _____

Equipment	Manufacturer	Model Number	Room	Date of Service	Cost	Comments

Annual Equipment Inspection Form

Appendix C

Annual Equipment Inspection Form

Digital Evidence Unit

Month _____   Year _____

Equipment	Manufacturer	Model Number	Room	Date of Service	Cost	Comments

5.   Analytical Procedures

Any analytical procedure used in the course of a computer forensics examination will follow the procedures set forth in the Computer Forensics Unit Technical Procedure Manuals.

6.   Evidence Handling Procedures

6.1   Evidence Labeling and Documentation

        Each item of evidence will be labeled with a unique identifier according to the
        Bureau's Evidence Accountability Policy.

6.2   Evidence Handling

        Evidence will be handled in a manner to prevent loss, alteration,
        contamination, or mixing. Analysts will wear gloves while handling evidence
        that is to be processed for latent prints. Safety gloves will be used for personal
        protection, when handling contaminated evidence. If evidence is lost or
        accidentally destroyed, the Computer Forensics Analyst will immediately cease
        work, document the incident in the case file and notify the SAC. The final lab
        report will indicate the reason why no results were reported.

6.3   Operational Guidelines for the Receipt, Identification, Chain of Custody of
        Evidence

        The operational guidelines set out in Section 3.2 of this document will be
        followed to insure that evidence is accounted for and that a proper chain of
        custody is maintained on the evidence through LIMS or the SBI-5 if LIMS is not
        available. (See Appendix A)

LIMS Chain of Custody

SBI-5 Chain of Custody

Appendix A

North Carolina
State Bureau of Investigation
Department of Justice

SBI Laboratory Chain of Custody for Case R20010000XX

The signatures of North Carolina State Bureau of Investigation Employees appearing below indicate that the material described on the SBI Submission Form, under   TYPE CONTAINER/DESCRIPTION OF EVIDENCE   was delivered to the person (or approved carrier) indicated, on or about the date stated, and was delivered in essentially the same .

LAB Item Number	Agency Item Number	Received From	Transferred To	Date of Transfer	Signature	
1	1	Certified Mail	John Doe	06/11/2001	John Doe	
1	1	John Doe	Jane Doe	06/12/2001	Jane Doe	

North Carolina State Bureau of Investigation

PART A   **REQUEST FOR EXAMINATION OF PHYSICAL EVIDENCE**

g Officer: County of Offense: SBI Lab #

g Agency: ORI # :   SBI File #

PLACE A CHECK MARK (Y) BESIDE THE PREFERRED ADDRESS

P. O. Box, City and Zip :   Agency File #

Street Address, City and Zip :   Type of Case:

e Agent Assigned) :   DIC (SBI District in Charge) :   Date of Offense:

g Officer Name and Best Contact Number - Name: _____   Contact Number:

	Race/Sex	DOB	**SUSPECT(S)**	Race/Sex	DOB	SID #

vidence in this case been submitted to the laboratory previously? _____ If yes, to which section(s)?

Agency Item #	Type Container/Description of Evidence	Examine For	Exact Location Found (Use names for body fluid/DNA Evidence)

Analysis Requested / Instructions:

E WILL BE RETURNED TO THE REQUESTING OFFICER

ABORATORY CHAIN OF CUSTODY USE ONLY

ures of North Carolina State Bureau of Investigation employees appearing below indicate that the material described above under *TYPE
ER / DESCRIPTION OF EVIDENCE* was delivered to the person (or approved carrier) indicated, on or about the date stated, and was delivered in
the same condition as received.

	Received By: (Print) (Initial)	**Received From: (Print) (Initial)**	**DATE**

7. Internal Quality Control and Standards

Instruments used by the Digital Evidence Unit will be calibrated with standard media and maintenance to these instruments will be documented. Procedures for the calibration of these instruments as well as validation of tools an testing procedures can be found in the Digital Evidence Unit Validation and Calibration Manual.

All computer forensics evidence examinations will be performed in accordance with the Digital Evidence Unit Procedures Manuals and will follow the guidelines in this document.

7.1 All examinations will be subjected to peer review. Each case will receive a technical review and an administrative review The reviews will be approved or rejected through LIMS. Each reviewer will initial their electronic signature on the cover sheet of the case notes generated through LIMS. (See Appendix A)

All reports generated will also receive a final clerical review by a member of the section. The section employee conducting the review will initial the coversheet to indicate that the review has been completed.

7.2 Errors noted during case review

If analytical errors are noted during the case review, the analyst may be removed from casework and corrective action taken. The corrective actions may include remedial training, the analyst be placed back into a trainee status, or termination of employment.

7.3 Testimony Review

Analyst court testimony will be reviewed as set forth in Procedure 34 of the SBI Policy and Procedure Manual in order to ensure that the testimony is consistent with the documented findings.

7.4 If the Digital Evidence Unit has an analyst in training, that trainee will be required to review every case possible. On the cover sheet the trainee will sign his/her name and print in block letters the word TRAINEE after it. This should assist the analyst in their training.

Case Notes Cover Sheet

APPENDIX A

North Carolina

State Bureau of Investigation
Department of Justice

Documents & Digital Evidence Section

CASE NOTES COVER SHEET

CASE INFORMATION

SBI LAB FILE NUMBER   R20000000

ANALYST   John Doe

DATE ANALYSIS STARTED   _____

DATE ANALYSIS COMPLETED   _____

TECHNICAL REVIEWER   _____

ADMINISTRATIVE REVIEWER   _____

TOTAL NUMBER OF PAGES   _____

8. Case Reporting

8.1 Report Writing

Lab reports will be issued on all cases received by the Digital Evidence Unit and these reports will be prepared in accordance with existing Bureau policy through LIMS. Prior to issuance of the report, the analyst assigned to the case will have all data and conclusions technically reviewed by a second analyst.

8.2 Review of Reports

All lab reports will be reviewed by appropriately designated personnel through LIMS.

8.3 All rough draft reports will be destroyed at the completion of the Technical and Administrative Review.

8.4 Case Conclusions

1. Document the type of file found (e-mail, spreadsheet, image file, etc.).

2. Document where the file was found (logical file, deleted file, slack space, unallocated space).

3. Document that it is consistent with the information supplied by submitting officer (why those files are important).

Examples:

1. Examination of Item 1 (HP Vectra Computer from suspect s residence) revealed the presence of image files which depict pornographic images of children. These images were found in a folder named CP , in deleted files, and in unallocated disk space. See the enclosed CD for a sample of the images recovered from Item 1.

2. Examination of Item 1 (Compaq Presario Computer from victim s residence) revealed the presence of numerous deleted e-mail files. These files were found to be correspondence between the e-mail addresses bigloser@hotmail.com and msinnocent@yahoo.com . Copies of these e-mails can be found on the enclosed CD.

3. Examination of Item 1 (Gateway 2000 computer from suspect s residence) did not reveal the presence of any pornographic images of children.

4. The examination of Item 1 (Gateway 2000 computer from suspect s residence) did not reveal the presence of e-mail files pertinent to the information supplied by the submitting officer. Copies of the e-mail files recovered from Item 1 are being returned on the enclosed CD for further investigation by your agency.

8.5 Case Information

All case related information will be distributed only as dictated in Procedure 35 of the SBI Policy and Procedure Manual.

9.   Proficiency Testing

   9.1   Open Proficiency Testing

         Each Computer Forensics Analyst will be tested at least once each year with
         an open proficiency test. These tests may be prepared internally and/or may
         be part of an external proficiency testing program.

   9.2   Proficiency Test Files

         The Section SAC will maintain records of all proficiency tests taken, any
         deficiencies noted and corrective action taken. When deficiencies are
         noted, the file will identify the likely cause of the deficiency. (See
         Appendix A for copy of the Proficiency Testing Log)

   9.3   Consequences of error

         If deficiencies are noted as listed above, the analyst will be removed
         from casework and corrective action will be taken. The corrective
         actions may include remedial training, the analyst being placed back
         into a trainee status, or termination of employment.

Appendix A

Proficiency Testing Log

Digital Evidence Unit

Proficiency Testing Log

Employee	Test Number	Issue Date	Completion Date	Results	Comments
Mishoe	00-1	08-14-00	09-14-00	100%	Competency Test / Video Tape
Mishoe	01-1	06-26-01			Competency Test / Computer Forensics
Dilday	01-1	06-26-01			Competency Test / Computer Forensics

10. Audits

Audits are an important aspect of the quality assurance program. They are an independent review conducted to compare the Digital Evidence Unit and performance with a standard for that performance. These audits are designed to provide management with an evaluation on the Digital Evidence Unit s performance in meeting its quality policies and objectives.

10.1   SBI Internal Audit

The SBI Digital Evidence Unit, as a part of the Documents & Digital Evidence Section, is routinely audited by a SBI Inspection Team. This team is composed of several agents and individuals from various SBI divisions. A typical inspection will last one week. During this time, all phases of the operation of the section are scrutinized including: evidence handling and accountability, case turn around time, report writing, note taking, management practices, leave and time management policies, security, records security, inventory of equipment and supplies, personnel records.

10.2   Quality Assurance Audit

The section will undergo an Internal Compliance Audit every year. (See Appendix A)

The Section SAC will review all findings from the audits with the section personnel. A report, along with any documentation of steps taken to resolve any problems detected, will be maintained.

Annual Internal ASCLD/LAB Compliance Audit

APPENDIX A

North Carolina State Bureau of Investigation
Crime Laboratory Division

Annual Internal ASCLD-LAB Compliance Audit (for year _____)

Section Audited: **Documents & Digital Evidence Section** Date:

Page 38						
Laboratory Management - Planning						
1.1.1.1	Does the laboratory have a written statement of its objectives?	Yes		No		N/A	
1.1.1.2	Do the objectives appear to be relevant to the needs of the community serviced by the laboratory?	Yes		No		N/A	
1.1.1.3	Does the laboratory staff understand and support the objectives?	Yes		No		N/A	
1.1.2.1	Does the laboratory or its parent agency have a formal written budget?	Yes		No		N/A	
1.1.2.2	Is the budget adequate to meet the written objectives?	Yes		No		N/A	
Do clearly written and well understood procedures exist for the following:						
1.1.2.3	Handling and preserving the integrity of evidence	Yes		No		N/A	
1.1.2.4	Laboratory security	Yes		No		N/A	
1.1.2.5	Preparation, storage, security and disposition of case records or reports	Yes		No		N/A	
1.1.2.6	Control of materials and supplies	Yes		No		N/A	
1.1.2.7	Calibration of equipment and instruments	Yes		No		N/A	
1.1.2.8	Inventory of equipment and instruments	Yes		No		N/A	
1.1.2.9	Duty hours	Yes		No		N/A	
1.1.2.10	Leave time	Yes		No		N/A	
1.1.2.11	Job requirements and descriptions	Yes		No		N/A	
1.1.2.12	Personnel evaluations and objectives	Yes		No		N/A	
1.1.2.13	Employee grievances	Yes		No		N/A	
1.1.2.14	Does the laboratory have and use a management information system?	Yes		No		N/A	

Laboratory Management - Organizing

1.2.1.1	Does the organizational structure group the work and personnel in a manner that allows for efficiency of operation, taking into account the interpretation of various forensic disciplines?	Yes		No		N/A	
1.2.1.2	Has the laboratory director considered and taken appropriate action to correct any discrepancies with regard to numbers of personnel when grouping work and resources?	Yes		No		N/A	
1.2.2.1	Is the laboratory director s authority well defined?	Yes		No		N/A	
1.2.2.2	Does the laboratory director have authority commensurate with responsibilities?	Yes		No		N/A	
1.2.2.3	Is there sufficient delegation of authority?	Yes		No		N/A	
1.2.2.4	Is authority of supervisors commensurate with their responsibilities?	Yes		No		N/A	
1.2.2.5	Is each subordinate accountable to one and only one immediate supervisor?	Yes		No		N/A	
1.2.2.6	Are performance expectations established and are they understood by laboratory personnel?	Yes		No		N/A	

Laboratory Management - Directing

1.3.1.1	Is there constructive discussion between supervisors and subordinates?	Yes		No		N/A	
1.3.1.2	Do supervisors carefully and objectively review laboratory activities and personnel?	Yes		No		N/A	
1.3.1.3	Do the supervisory techniques encourage creative, objective thinking and recognize meritorious performance?	Yes		No		N/A	
1.3.2.1	Do clear vertical, horizontal and diagonal channels of communication exist within and external to the laboratory?	Yes		No		N/A	
1.3.2.2	Are vertical channels of communication used for administrative functions?	Yes		No		N/A	
1.3.2.3	Are staff meetings held on a regular basis?	Yes		No		N/A	
1.3.3.1	Does the laboratory have and use a documented training program in each functional area for employees who are new, untrained or in need of remedial training?	Yes		No		N/A	
1.3.3.2	Does the laboratory have an employee development program?	Yes		No		N/A	

Page 38							
1.3.3.3	Does the forensic library contain current books, journals, and other literature dealing with each functional area?	Yes		No		N/A	
1.3.3.4	Does a system exist to encourage each examiner to review appropriate new literature?	Yes		No		N/A	
Laboratory Management - Controlling							
1.4.1.1	Does the laboratory have a written or secure electronic chain of custody record with all necessary data which provides for complete tracking of all evidence?	Yes		No		N/A	
1.4.1.2	Is all evidence marked for identification?	Yes		No		N/A	
1.4.1.3	Is evidence stored under proper seal?	Yes		No		N/A	
1.4.1.4	Is evidence protected from loss, cross transfer, contamination and/or deleterious changes?	Yes		No		N/A	
1.4.1.5	Is there a secure area for overnight and/or long-term storage of evidence?	Yes		No		N/A	
1.4.2.1	Does the laboratory have a quality manual?	Yes		No		N/A	
1.4.2.2	Is an individual designated as the quality manager?	Yes		No		N/A	
1.4.2.3	Are audits of the management operations and disciplines of the laboratory completed and documented annually?	Yes		No		N/A	
1.4.2.4	Does the laboratory conduct and document an annual review of its quality system?	Yes		No		N/A	
1.4.2.5	Are the procedures used generally accepted in the field or supported by data gathered and recorded in a scientific manner?	Yes		No		N/A	
1.4.2.6	Are new technical procedures scientifically validated before being used in casework and is the validation documentation available for review?	Yes		No		N/A	
1.4.2.7	Are the technical procedures used by the laboratory documented and are the documents available to laboratory personnel for review?	Yes		No		N/A	
1.4.2.8	Are appropriate controls and standards specified in the procedures and are they used and documented in the case record to ensure the validity of examination results?	Yes		No		N/A	
1.4.2.9	Is the quality of the standard samples and reagents adequate for the procedure used?	Yes		No		N/A	
1.4.2.10	Does the laboratory routinely check the reliability of its reagents?	Yes		No		N/A	
1.4.2.11	Are the instruments/equipment adequate for the procedures used?	Yes		No		N/A	
1.4.2.12	Are the instruments/equipment in proper working order?	Yes		No		N/A	

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1.4.2.13	Are the instruments/equipment properly calibrated?	Yes		No		N/A	
1.4.2.14	Do the examiners generate and does the laboratory maintain, in a case record, all the notes, worksheets, photographs, spectra, printouts, charts and other data or records used by examiners to support their conclusions?	Yes		No		N/A	
1.4.2.15	Does the laboratory maintain case related administrative documentation generated and received, in a retrievable form?	Yes		No		N/A	
1.4.2.16	Does the laboratory have, use and document a system of peer review of the reports to ensure that the conclusions of its examiners are reasonable and within the constraints of scientific knowledge?	Yes		No		N/A	
1.4.2.17	Does the laboratory conduct and document administrative reviews of all reports issued?	Yes		No		N/A	
1.4.2.18	Does the laboratory monitor the testimony of each examiner at least annually and is the examiner given feedback from the evaluation?	Yes		No		N/A	
1.4.2.19	If the laboratory has an indication of a significant technical problem, is there a procedure in writing and in use whereby the laboratory initiates a review and takes any corrective action required?	Yes		No		N/A	
1.4.3.1	Does the laboratory have a documented program of proficiency testing?	Yes		No		N/A	
1.4.3.2	Does the laboratory participate in proficiency testing programs conducted by approved test providers, where available?	Yes		No		N/A	
1.4.3.3	Does each DNA examiner participate in at least one external proficiency test from an approved test provider?	Yes		No		N/A	
1.4.3.4	Was each examiner proficiency tested annually in each subdiscipline in which casework was performed?	Yes		No		N/A	
1.4.3.5	Does the laboratory conduct proficiency testing using reexamination or blind techniques?	Yes		No		N/A	
Personnel - Management							
2.1.1	Does the laboratory director possess a degree in a natural science, criminalistics or in a closely related field, or is the laboratory director supported by scientific personnel of sufficient managerial rank and authority?	Yes		No		N/A	
2.1.2	Does the laboratory director have at least five years of forensic science experience?	Yes		No		N/A	
2.1.3	Does the laboratory director have some formal training in management?	Yes		No		N/A	
2.1.4	Does the laboratory director have at least two years of	Yes		No		N/A	

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	managerial experience?						
Personnel - Controlled Substances							
2.2.1	Does each examiner possess a baccalaureate degree in a natural science, criminalistsics or in a closely related field and does each have experience/training commensurate with the examinations and testimony provided?	Yes		No		N/A	
2.2.2	Does each examiner understand the instruments, and the methods and procedures used?	Yes		No		N/A	
2.2.3	Did each examiner successfully complete a competency test prior to assuming casework responsibility?	Yes		No		N/A	
2.2.4	Did each examiner successfully complete an annual proficiency test?	Yes		No		N/A	
Personnel - Toxicology							
2.3.1	Does each examiner possess a baccalaureate degree in a natural science, criminalistsics or in a closely related field and does each have experience/training commensurate with the examinations and testimony provided?	Yes		No		N/A	
2.3.2	Does each examiner understand the instruments, and the methods and procedures used?	Yes		No		N/A	
2.3.3	Did each examiner successfully complete a competency test prior to assuming casework responsibility?	Yes		No		N/A	
2.3.4	Did each examiner successfully complete an annual proficiency test?	Yes		No		N/A	
Personnel - Trace Evidence							
2.4.1	Does each examiner possess a baccalaureate degree in a natural science, criminalistsics or in a closely related field and does each have experience/training commensurate with the examinations and testimony provided?	Yes		No		N/A	
2.4.2	Does each examiner understand the instruments, and the methods and procedures used?	Yes		No		N/A	
2.4.3	Did each examiner successfully complete a competency test prior to assuming casework responsibility?	Yes		No		N/A	
2.4.4	Did each examiner successfully complete an annual proficiency test?	Yes		No		N/A	
Personnel - Serology							
2.5.1	Does each examiner possess a baccalaureate degree in a natural science, criminalistsics or in a closely related field and does each have experience/training commensurate with the examinations and testimony provided?	Yes		No		N/A	
2.5.2	Does each examiner understand the instruments, and the	Yes		No		N/A	

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	methods and procedures used?						
2.5.3	Did each examiner successfully complete a competency test prior to assuming casework responsibility?	Yes		No		N/A	
2.5.4	Did each examiner successfully complete an annual proficiency test?	Yes		No		N/A	
Personnel - DNA							
2.6.1	Does each examiner have education, training and experience consistent with those required by the DNA Advisory Board (DAB)?	Yes		No		N/A	
2.6.2	Does each examiner understand the instruments, and the methods and procedures used?	Yes		No		N/A	
2.6.3	Did each examiner successfully complete a competency test prior to assuming casework responsibility?	Yes		No		N/A	
2.6.4	Did each examiner successfully complete two proficiency tests annually?	Yes		No		N/A	
Personnel - Firearms/Toolmarks							
2.7.1	Does each examiner possess a baccalaureate degree with science courses?	Yes		No		N/A	
2.7.2	Does each examiner understand the instruments, and the methods and procedures used?	Yes		No		N/A	
2.7.3	Did each examiner have extensive training from a qualified examiner and does each have experience commensurate with the examinations and testimony provided?	Yes		No		N/A	
2.7.4	Did each examiner successfully complete a competency test prior to assuming case work responsibility?	Yes		No		N/A	
2.7.5	Did each examiner successfully complete an annual proficiency test?						
Personnel - Questioned Documents							
2.8.1	Does each examiner possess a baccalaureate degree with science courses?	Yes		No		N/A	
2.8.2	Does each examiner understand the instruments, and the methods and procedures used?	Yes		No		N/A	
2.8.3	Did each examiner have extensive training from a qualified examiner and does each have experience commensurate with the examinations and testimony provided?	Yes		No		N/A	
2.8.4	Did each examiner successfully complete a competency test prior to assuming case work responsibility?	Yes		No		N/A	
2.8.5	Did each examiner successfully complete an annual proficiency test?						

Personnel - Latent Prints

2.9.1	Does each examiner possess a baccalaureate degree with science courses?	Yes		No		N/A	
2.9.2	Does each examiner understand the instruments, and the methods and procedures used?	Yes		No		N/A	
2.9.3	Did each examiner have extensive training from a qualified examiner and does each have experience commensurate with the examinations and testimony provided?	Yes		No		N/A	
2.9.4	Did each examiner successfully complete a competency test prior to assuming case work responsibility?	Yes		No		N/A	
2.9.5	Did each examiner successfully complete an annual proficiency test?						

Personnel - Technical Support

2.10.1	Do technical support personnel meet the requirements of their job descriptions?	Yes		No		N/A	
2.10.2	Are the job descriptions and the duties in agreement?	Yes		No		N/A	
2.10.3	Did each member of the technical support staff successfully complete an appropriate competency test prior to assuming casework responsibility?	Yes		No		N/A	
2.10.4	Did all technical support personnel successfully complete an appropriate proficiency test, annually?	Yes		No		N/A	

Personnel - Crime Scene

2.11.1	Do examiners meet the requirements of their job descriptions?	Yes		No		N/A	
2.11.2	Does each examiner understand the equipment, methods and procedures used?	Yes		No		N/A	
2.11.3	Did each examiner have extensive training from a qualified examiner and does each have experience commensurate with the examinations/documentation and testimony provided?	Yes		No		N/A	
2.11.4	Did each examiner successfully complete a competency test(s) prior to primary responsibility for the examination, documentation and processing of a crime scene?	Yes		No		N/A	
2.11.5	Did each examiner successfully complete an annual proficiency test?	Yes		No		N/A	

Physical Plant

3.1.1	Does each employee have adequate work space to accomplish assigned tasks?	Yes		No		N/A	
3.1.2	Is there sufficient space provided for storage of supplies, equipment and tools?	Yes		No		N/A	

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3.1.3	Is there adequate space available for examiners for writing reports and other official communications?	Yes		No		N/A	
3.1.4	Is there adequate and appropriate space available for records, reference works and other necessary documents?	Yes		No		N/A	
3.1.5	Is adequate space available for each instrument to facilitate its operation?	Yes		No		N/A	
3.1.6	Are accessories stored near each instrument to facilitate its use and operation?	Yes		No		N/A	
Physical Plant - Design							
3.2.1	Does the physical design permit the efficient flow of evidence from the time of its acceptance until its proper disposal?	Yes		No		N/A	
3.2.2	Do the relative locations of functional areas facilitate the use of equipment and instruments?	Yes		No		N/A	
3.2.3	Is there adequate and proper lighting available for personnel to carry out assigned tasks?	Yes		No		N/A	
3.2.4	Is there adequate and proper plumbing and wiring available and accessible to carry out assigned tasks?	Yes		No		N/A	
3.2.5	Does the laboratory have proper general ventilation?	Yes		No		N/A	
3.2.6	Is the heating, cooling and humidity control in the laboratory adequate?	Yes		No		N/A	
Physical Plant - Security							
3.3.1	Is access to the operational area of the laboratory controllable and limited?	Yes		No		N/A	
3.3.2	Do all exterior entrance/exit points have adequate security control?	Yes		No		N/A	
3.3.3	Do all internal areas requiring limited/controlled access have a lock system?	Yes		No		N/A	
3.3.4	Is distribution of all keys, magnetic cards, etc., documented and is distribution limited to those individuals designated by the laboratory director to have access?	Yes		No		N/A	
3.3.5	Is the laboratory secured during vacant hours by means of an intrusion alarm or by security personnel?	Yes		No		N/A	
3.3.6	Does the laboratory have a fire detection system?	Yes		No		N/A	
Health and Safety							
3.4.1	Does the laboratory have an effective health and safety program documented in a manual?	Yes		No		N/A	
3.4.2	Is an individual designated as the health and safety	Yes		No		N/A	

	manager?						
3.4.3	Is the health and safety program monitored regularly and reviewed annually to ensure that its requirements are being met?	Yes		No		N/A	
3.4.4	Does the laboratory have available and encourage the use of safety devices, particularly those required by its health and safety manual?	Yes		No		N/A	
3.4.5	Does the laboratory have proper equipment and material available for the handling of carcinogenic, toxic and/or dangerous material spills?	Yes		No		N/A	
3.4.6	Does the laboratory have a safety shower and eye wash equipment in appropriate locations and in good working condition?	Yes		No		N/A	
3.4.7	Are sufficient exhaust hoods available to maintain a safe work environment?	Yes		No		N/A	
3.4.8	Are sufficient first-aid kits available and strategically located?	Yes		No		N/A	
3.4.9	Does the laboratory have an adequate number of personnel holding current certificates in first-aid training?	Yes		No		N/A	
3.4.10	Is appropriate space provided for safe storage of volatile, flammable, explosive and other hazardous materials?	Yes		No		N/A	
3.4.11	Are the emergency exits from the laboratory adequate for safe exit in an emergency?	Yes		No		N/A	
3.4.12	Is there general cleanliness and apparent good-housekeeping in the laboratory?	Yes		No		N/A	
Supplemental Criteria for Computer Forensics (Digital Evidence Unit)							
	Does each examiner possess a baccalaureate degree and meet the requirements of their job description?	Yes		No		N/A	
	Does each examiner understand the instruments, and the methods and procedures used?	Yes		No		N/A	
	Did each examiner have extensive training from a qualified examiner and does each have experience commensurate with the examinations and testimony provided?	Yes		No		N/A	
	Did each examiner successfully complete a competency test prior to assuming case work responsibility?	Yes		No		N/A	
	Did each examiner successfully complete an annual proficiency test?	Yes		No		N/A	

11. Safety

    Policy

    The Digital Evidence Unit will operate in strict concordance with the regulations of the pertinent federal, state, and local health and safety authorities.

    Written Manuals

    General Laboratory Safety guidelines are covered in the N. C. Department of Justice Employee Safety and Health Manual and the N. C. State Bureau of Investigation Crime Laboratory Procedure Manual. Each employee is expected to follow these guidelines.

12.   Terminology

Internet Service Provider (ISP):   A company that provides individual Internet connections (i.e. AOL, MindSpring, CompuServe, etc.)

Modem: A piece of computer equipment that hooks your computer to the phone line so that you can connet to the Internet.

Network: A group of computers that are connected to each other.

Plug-Ins: Additional software that enhances the main software application. It allows you to do more with the original software.

SPAM: Junk e-mail; unwanted or unsolicited commercial e-mail.

URL: Uniform Resource Locator. The address or name assigned to each web page. (Begins with http:// or www.)

TCP/IP: Transmission Control Protocol / Internet Protocol. This is the way all computers on the Internet communicate with each other.

ISDN Line: Stands for   Integrated Subscriber Digital Network   A digital replacement for regular telephone connections. Allows for faster transmittal of data.

IRC: Internet Relay Chat. An online equivalent to a CB Radio, allowing user-to-user chat in real time.

Search Engine: A web service for searching web sites for specific topics, words and/or phrases. Popular search engines include: Yahoo!, Lycos, Excite, AltaVista, etc.

Bookmark: A collection of web page addresses that you may want to return to in the future. Also referred to as   Favorites.

Cache: The space your browser uses to store web pages you have visited. This speeds up repeated access to those pages.

Cookies: A small data file stored on your computer by a web server to help it identify you and make your next visit to that server and/or web site smoother.

Hyperlink: Reference to a web page that allows you to click on a link and immediately be connected to that web page.

Download: The process of copying a file from the Internet to your computer.

History: A web browser display for review of past pages visited by the browser. Saved on your hard drive in a subfolder called History.

Home Page: The main entry page for a web site.

Chat Room: AOL s term for a group of people chatting online. Chat Rooms can be topic-specific, age-specific, etc.

13.   Signature / Initial Log

The following log is provided to assist you in more easily recognizing and interpreting signatures, initials or other personal identifying information found on case notes, reports, and/or evidence.

Section: Digital Evidence Unit

Name	Signature	Initials	Evidence Identifier