**Purpose:**

The focus of the National Integrated Ballistic Information Network (NIBIN) is to provide federal, state and local law enforcement agencies with investigative leads by comparing digital images of fired cartridge cases from different crime scenes. The NIBIN database utilizes BrassTrax HD3D, an automated acquisition station for capturing images of fired cartridge cases, and MatchPoint+, a viewing station for reviewing correlation results. High-resolution images captured by the BrassTrax HD3D acquisition station are stored on regional servers maintained by the Bureau of Alcohol, Tobacco and Firearms and Explosives (ATF). Utilizing MatchPoint+, an analyst can review the correlation results and compare the images side by side on a computer monitor. If a potential association (a lead) is located during the review process, the associated agency(cies) are notified via a NIBIN Lead memo. If the agency desires, confirmation of the lead can be conducted by an examiner using a comparison microscope.



**ATF Minimum Required Operating Standards (MROS)**

**1. Quality Assurance Program**

The Division of Scientific Services (DSS) has a NIBIN terminal in its facility and DSS has a documented quality system that is appropriate to the NIBIN acquisition and correlation processes that comply with ASCLD-LAB and ISO/IEC 17025 and the ATF Standards. The quality system will include the following:

- Goals and Objectives as indicated in the General Laboratory SOPs along with the Firearms Unit SOPs (Standard 1.1.1)
- Organization and Management as represented in GL-1 (Standard 1.1.2)
- Personnel as represented in the General Laboratory SOPs (GL-1, GL-2, GL-3, GL-5, GL-14 and GL-15) and FA SOP-1 which include training, ethics, safety and security (Standard 1.1.3)
- Facilities including the practices or procedures for security to maintain the integrity of firearms evidence and its analysis as indicated in GL-3 and GL-13 (Standard 1.1.4)
- Acquisition, Correlation, NIBIN Lead Dissemination Procedures are articulated in Section 5 of this SOP (Standard 1.1.5)
- Evidence control including the DSS procedures on handling and preserving evidence as indicated in GL-4, GL-12, GL-13 (Standard 1.1.6)
- Validation of new methods or equipment as represented in GL-22 and FA SOP-37 (Standard 1.1.7)
- Equipment calibration and maintenance and the procedures for conducting performance checks as indicated in GL-21, FA SOP-33 and FA SOP-35 (Standard 1.1.8)

- Procedures on how reports are generated and confidentiality as indicated in GL-1, GL-5, GL-18, FA SOP-05 (Standard 1.1.9)
- Review of casework prior to release of results as designated in GL-18 and FA-SOP-06 (Standard 1.1.10)
- Corrective Actions and the Quality System of DSS as described in GL-1 and GL-9 (Standard 1.1.11)
- Participation in internal and external audits as described in GL-7 (Standard 1.1.12)
- Procedure on training and maintenance of reports of training, competency and authorization of NIBIN Users as described in GL-11, GL-14, FA SOP-1 and FA SOP-22 (Standard 1.1.13)
- Procedures in regards to the safe handling of firearms and general safety procedures as described in GL-2, FA SOP-2 and FA SOP-4 (Standard 1.1.14)
- DSS does participate in outsourcing of samples for DNA analysis as described in GL-18, but no outsourcing of firearms testing is being conducted at this time (Standard 1.1.15)



## 2. Organization and Personnel

NIBIN Program Administrator: full-time examiner employed by the Division of Scientific Services the NIBIN site. This individual is designated to communicate with all parties (i.e submitting law enforcement agencies, ATF Crime Gun Intelligence Centers {CGICs}, ATF NIBIN Unit) involved in the NIBIN process. The NIBIN Program Administrator will work with the Case Management Unit and Deputy Director in communicating to the submitting agencies. The NIBIN Program Administrator must be a qualified NIBIN user in good standing and trained by an ATF-approved acquisition and correlation course provided by the ATF, Forensic Technology, Inc. and/or by a NIBIN Authorized Trainer.

The NIBIN Program Administrator will work in conjunction with Management and the Quality Section in implementing and directing policies, procedures and operations of the NIBIN site along with any subsequent audits. The NIBIN Administrator will recommend to Management to initiate, suspend and resume NIBIN operations for the site or an individual. In general, the NIBIN Program Administrator is usually the individual designated as having technical responsibility for the Firearms Unit. (Standards 2.1, 2.2 and 2.2.1 and 2.2.3)

In the event that the NIBIN Program Administrator position is vacated and there is no employee present who meets the requirements of the above standard, DSS will immediately contact the ATF and submit a contingency plan to the ATF within 14 days for approval. No new casework involving the use of NIBIN can be started until such plan is approved. (Standard 2.2.4.1)

If the NIBIN Program Administrator position is vacated, the Deputy Director will notify the Director and Quality Manager. The Director and Deputy Director will, within 7 days of the

NIBIN Program Administrator's position being vacated, designate an individual from the Firearm Unit as the Interim NIBIN Program Administrator. A memo from DSS Laboratory Management will be generated informing the appointee of the appointment. The Interim NIBIN Program Administrator must meet the requirements as listed in Standard 2.2.4.1.

The ATF will be contacted with the name and qualifications of the named Interim NIBIN Program Administrator. Once the contingency plan is approved, this individual will named the NIBIN Program Administrator.

If the NIBIN Program Administrator does not meet the training requirements of a Qualified NIBIN User for both acquisition and correlation, the site may also have a Technical NIBIN Administrator, who is a qualified NIBIN User trained in both acquisition and correlation and is designated to assist the NIBIN Program Administrator with technical operations. (Standard 2.2.1.2)

NIBIN Users: Assigned Unit personnel or other laboratory-authorized individuals who have successfully completed an ATF-approved acquisition and correlation course provided by the ATF, Forensic Technology, Inc., and/or a NIBIN Authorized Trainer to use the equipment to perform Acquisition and/or Correlation. (Standard 2.3)

Records of training, qualifications, skills and experience of the NIBIN Administrator and NIBIN Users are maintained by the DSS Quality Section (Standard 2.3, 2.4 and GL 11).



**3. Facility and Security of NIBIN Equipment:**

DSS will comply with all ATF, DOJ and/or Federal security requirements related to the NIBIN program including its network and systems to ensure the integrity of the NIBIN analysis as well as the evidence. (Standard 3.1)

DSS will contain the NIBIN equipment in a room that has a locked door and access limited to personnel assigned to the Firearms Unit or other employees as designated by the Director. DSS has proximity cards and keys assigned to all employees. The proximity cards have permission levels that are set that limit access to the NIBIN area as designated by the NIBIN Administrator and Management. (Standards 3.2, 3.3, 3.4, 3.6, 3.7/ GL-3)

Employees no longer authorized to use the NIBIN equipment will be limited to room containing the NIBIN equipment via a change in the proximity access level and/or removal of the keys. (Standards 3.5, 3.8 / GL-3)

DSS is a secure facility that has security monitoring and limited access via proximity cards. This facility is alarmed when employees are not in the building. Main doors to the operational areas are locked and require an appropriate proximately card to acquire access. This security system is tested quarterly and records of testing are maintained. (Standards 3.3 / 3.4 / GL-3)

Visitors to DSS are are escorted and required to follow the guidance as provided in GL 3 "Security" Section 2 "DSS Facility Access to Visitors". (Standard 3.9)

DSS accepts NIBIN related evidence through its Evidence Receiving Unit. Submitting agencies are granted access by staff in Evidence Receiving area to enter the location. This procedure is outlined in GL-3 Section 1. B. ii. (Standard 3.5)

**4. Evidence Control:**

The Firearms Unit uses GL-13 "General Evidence Handling" and FA SOP-4 as guidance on the proper handling of evidence to main the forensic integrity of case materials. Evidence in this unit will be handled in a manner that appropriately documents custody and storage locations. (Standard 4.1 / 4.3)

Evidence submitted to DSS is given a unique identifier as to the case number submitted to the case along with a unique identifier for the evidence submitted. Guidance for the case numbering, submission numbering and evidence tracking is clarified in GL-4 "LIMS". The evidence when submitted to DSS is given a barcode that is used for tracking of this evidence to personnel or evidence storage locations. (Standard 4.1)

The Chain of Custody for the items of evidence submitted for NIBIN entry are tracked electronically via the barcode of the evidence and a unique PIN for each examiner. A record of the chain of custody is maintained in the Justice Trax database and can be printed when needed. (Standard 4.2)

Access to evidence locations are limited to personnel authorized by the Director or their designee. This access is designated in the Justice Trax permissions and only authorized personnel can transfer the evidence into or out of specific storage locations. (Standard 4.4)



**5. Procedure:**

**1) NIBIN Entry Protocols (Standard 5)**

If the case has multiple exhibits, the examiner should refer to FA SOP-21 "Screening Cases for NIBIN". (Standard 5.2.1.)

**a. Exhibits that may be entered:**

i. Cartridge cases fired in semiautomatic and fully automatic pistols.

ii. Cartridge cases fired in semiautomatic, fully automatic, bolt action, pump/slide action and lever action rifles.

iii. Shotgun shells fired in semiautomatic, slide/pump action, lever action and bolt action shotguns.

iv. Any firearm that is magazine fed and/or designed to eject cartridge cases after firing.

**b. Exhibits that should not be entered:**

i. Cartridge cases or shotgun shells that lack sufficient or repeatable characteristics within the breech face and firing pin impressions to assist in the correlation review. The analyst's discretion will be used to make this determination.

ii. Images of cartridge cases or shotgun shells fired in revolvers, break open shotguns, derringers and single shot firearms.

iii. Evidence cartridge cases that are consistent with having been fired in the above type weapons.

iv. Any law enforcement officer's duty weapon, unless extenuating circumstances apply.

**2) Entering Case Information into BrassTrax HD3D**

**a. Creating case records** (Standard 5.2.1.4)

i. The procedure outlined in the BrassTrax HD3D users guide will be utilized to create a new case record and to enter the case information.

ii. Case ID – The "DSS" or "ID" number section or the eleven digit Weapon Destruction Unit number. A dash (-) separating DSS or ID and the case number digits is optional.

Examples: DSS13-1234, ID-13-9876, or 40001652345

iii. Event Type – Will be selected based on the information provided by the submitting agency. The event type should be the offense associated with the case.

iv. Occurrence Date – The date of offense provided by the submitting agency.

v. Case Supervisor – The analyst responsible for the case.

vi. Originating Agency – The police agency submitting the evidence. If the agency is not listed, a note of the submitting agency should be made in the comment field.

vii. Originating Agency Contact – The name of the lead investigator listed in the case.

viii. Originating Agency Reference – The submitting police agency's case number.

ix. High Profile – Shall be used at the discretion of the analyst.

x. Comment – Any additional comments about the case can be entered at the discretion of the analyst.

**b. Creating cartridge case exhibit records**

i. The procedure outlined in the BrassTrax HD3D users guide will be utilized to create a new cartridge case exhibit and to enter the exhibit information.

ii. Exhibit number:

a) Cartridge cases from an unknown firearm will use the case submission number or the number designated by the analyst.

b) Test fired cartridge cases will include the submission number of the firearm, the test fire number, and "TFCC".

iii. The following fields will be added in the cartridge case exhibit screen:

Caliber

Make of ammunition

Firing Pin shape

Firearm exhibit number (if applicable)

Composition (composition of cartridge case: nickel-nickel, brass-nickel, etc.)

Breech face class characteristics

Reception date

Category:

- Crime Evidence (items collected from a crime scene)
- Test Fire – Returned (use for firearms which will be returned to their rightful owner, or otherwise released from law enforcement custody)
- Test Fire – Terminated (use for all other firearms). If test fires are obtained from a firearm submitted in the case, the event type for the cartridge case exhibit will be changed to "test fire".

**c. Creating firearm exhibit records**

i. The procedure outlined in the BrassTrax HD3D users guide will be utilized to create a new firearm exhibit and to enter the exhibit information.

ii. Firearm exhibit number - Use the submission number of the weapon or the number designated by the analyst.

iii. The following fields will be added in the firearm exhibit screen:

Caliber

Make

Model (if known)

Type

Serial Number

- If obliterated and later restored, the serial number field shall be updated.
- If the serial number could not be restored, enter "Obliterated" or "Oblit."
- If the firearm does not have a serial number, enter "N/A" or "none."

**d. Acquisition Parameters**

i. **Centerfire Cartridge Cases/Shotshells**

a) The analyst will acquire the following regions of interest:

Breech Face

Full Headstamp

Firing Pin

Ejector marks (at the discretion of the analyst)

ii. **Rimfire Cartridge Cases**

a) The analyst will acquire the following regions of interest:

Full Headstamp

Firing Pin

iii. **Other Acquisition Parameters**

a) The analyst will follow the BrassTrax HD3D acquisition protocols outlined in the BrassTrax HD3D users guide to orient the cartridge case/shotgun shell and capture the digital images.

b) If a cartridge case/shotgun shell is oriented outside of the above parameters, a remark shall be made in the comment field stating the reason for the deviation.

c) In the event that reference collection parts (e.g. firing pin, slide, etc.) are used to obtain test fired cartridge cases/shotgun shells, the images of the respective areas need not be captured. A remark shall be made in the comment section describing which parts were replaced.

**e. Correlation Results** (Standard 5.3)

i. Acquired exhibits will automatically correlate against the CT site and other surrounding area servers. In the event an agency requests a search of other geographical locations, the analyst will perform a manual correlation for the region requested. A manual correlation may also be conducted to search the CT only site.

ii. Using the Rank Sort feature, the analyst will review at minimum the first thirty (30) images of the correlation.

iii. Once the correlation results have been reviewed and there are no leads, the Rank Sort results will be printed and kept in the case file. The date of review will be indicated on the worksheet and/or printout to the correlation results.

iv. The correlation request may be deleted from the correlation results list.

**f. Generating Leads**

i. If the analyst reviewing the correlation results locates a potential lead, they will mark the cases as an unconfirmed lead according to the MatchPoint+ users guide protocols after a second analyst has reviewed the potential lead.

ii. If a lead has been microscopically confirmed by a firearms examiner, the analyst will mark the lead as "confirmed," using the steps outlined in the MatchPoint+ users guide. The analyst will note in the comments field who confirmed the lead.

**g. Case Records and Memos** (Standard 5.4)

i. A preliminary NIBIN Lead memo will be issued for unconfirmed hits.

a) NIBIN Lead memos are generated via the MatchPoint+ Unit. The case information for each part of the lead is auto-populated by the equipment.

b) The memo will be reviewed and signed by the analyst and the reviewer of the NIBIN lead.

c) The original memo will be furnished to the main case file located in the Evidence Receiving Unit.

d) A hardcopy of the memo will be sent to the associated agencies.

e) A scanned copy will be sent via email to the associated agencies.

f) A copy of the memo along with the email will be maintained in the firearms case file.

g) The "Related Laboratory Cases" field in JusticeTrax will be used to link together cases in a NIBIN lead.

h) If the unconfirmed lead involves a destruction gun from the Special Licensing and Firearms Unit, the analyst will fill out the Weapon Destruction Unit form letter and attach it to the memo.

i) If a candidate for comparison is not found, the case can remain in the custody of the laboratory until either the case is completed, or a report is issued stating that NIBIN entry was made, no hits were developed, the evidence is being returned to the submitting agency unworked, and if further examination is required, to contact the laboratory.

**h. NIBIN Maps**

i. If the submitting agency requests a NIBIN map, a NIBIN map may be created using a word processing program and will be saved in the folder "NIBIN Hit Maps" located on the network drive. The map will be part of the NIBIN Lead memo and is subject to review.

ii. Each box on the map shall contain the laboratory case number, the agency and agency case number, the type of crime, and the caliber(s) of submitted cartridge cases.

a) Firearms submitted in the case will have the caliber/make/model/serial number listed.

b) Different colored fonts and arrows will represent cartridge cases that share/may share a common origin.

c) Dotted arrows will indicate unconfirmed hits. Solid arrows will indicate confirmed hits.

d) Maps will be updated as additional hits are made and/or hits are confirmed on the microscope.

e) Updated maps will be added to the associated case jackets as additional documentation.

**i. Maintenance and Quality Assurance**

i. The NIBIN monthly check will be completed, by the fifth of each month, by the assigned analyst. The Rank Sort correlation results and case information pages will be printed and stored in the NIBIN Monthly Control Log binder located in the NIBIN room. Refer to FA SOP-33 Equipment Maintenance Schedule for instructions.

ii. Every fifty (50) correlations, the BrassTrax unit will undergo an automatic self-check. In the event that BrassTrax fails the self-check, the unit will be marked as out of service and Forensic Technology, Inc. will be notified via customer support (1-866-384-4247).

iii. Tests and Calibrations activities are maintained in the BrassTrax HD3D software. This report can be generated at will.

**6. Corrective Action**

The NIBIN Site is incorporated in the Firearms Unit of DSS and will follow guidance provided in GL-9 in regards to corrective actions, root cause analysis, remediation, implementation and evidence of effectiveness.

**7. Audits (Standard 7)**

The NIBIN Site is incorporated in the Firearms Unit of DSS and will follow guidance provided in GL-7 in regards to participation in internal and external audits.



**Equipment:**

1. BrassTrax HD3D acquisition station
2. MatchPoint+ viewing station

**References:**

1. BrassTrax HD3D users guide (located on the BrassTrax computer)

2. MatchPoint+ users guide (located on the MatchPoint+ computer)
3. FA SOP-33 Equipment Maintenance Schedule
4. Minimum Required Operating Standards (MROS)