

# MINIMUM REQUIRED OPERATING STANDARDS (MROS) FOR NATIONAL INTEGRATED BALLISTIC INFORMATION NETWORK (NIBIN) SITES

This document consists of definitions and standards, which serve as the minimum required operating standards that establish specific requirements for all NIBIN Sites. Equivalent measures not outlined in this document may also meet the standard if determined sufficient through an assessment process. This MROS outline supersedes all previous publications for NIBIN sites.

## EFFECTIVE DATE:

These standards shall take effect January 1, 2026.

## SECTION 1. SCOPE

The standards describe the minimum operating requirements that Sites accessing and utilizing NIBIN shall follow to ensure the quality and integrity of the ballistic data shared on the NIBIN network. These standards apply to all Sites accessing NIBIN.

## SECTION 2. DEFINITIONS

As used in these standards, the following terms shall have their meanings specified as follows:

- **Accreditation** – Status achieved by an agency that indicates they meet a minimum level of performance mandated by the accrediting agency.
- **Accuracy** – The degree of conformity of a measured quantity to its actual (true) value.
- **Acquisition** – The digital imaging of various firearms-related markings present on cartridge casings into NIBIN.
- **Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF)** – ATF administers the NIBIN network.
- **Association of Firearm and Tool Mark Examiners (AFTE)** – AFTE is the international professional organization for practitioners of Firearm and/or Toolmark Identification and has been dedicated to the exchange of information, methods and best practices, and the furtherance of research since its creation in 1969.
- **Assessment** – A process used to evaluate, confirm, or verify activity related to quality.
- **BRASSTRAX™** – The acquisition station developed by LeadsOnline that captures highly detailed images of fired cartridge casings, to include firing pin impressions on the primer, breech face, extractor and ejector markings. Also referred to as ‘Acquisition Station.’
- **Business Day** – The days of operation of the NIBIN Site based on a 5-day, Monday-Friday, 40-hour week to exclude Federal holidays.

- **Correlation** – The automated comparison of an acquired digital image to other images in the databases using an algorithm that provides a ranked list of potential matches.
- **Correlation Review** – The on-screen comparison of digital images by a Qualified NIBIN User to determine the potential for two cartridge casings to have been fired from the same weapon.
- **Crime Gun Intelligence Center (CGIC)** – An ATF-led interagency collaboration focused on analyzing and investigating gun crime in a local community. CGICs unite cutting-edge technology and a dedicated multiagency investigative team to identify, disrupt and prosecute serial shooters and their sources of crime guns.
- **Employee** – A person either in the service of the applicable Federal, State or local government, subject to the terms, conditions and rules of Federal/State/local employment and eligible for the Federal/State/local benefits of service; or formerly in the service of a Federal, State, or local government who returns to service in the agency on a part time or temporary basis. For purposes of a vendor laboratory, an employee is a person in the service of a vendor laboratory and subject to the applicable terms, conditions and rules of employment of the vendor laboratory.
- **Evidence** – Any item or object collected from a crime scene or as part of a criminal investigation that has been submitted for forensic examination.
- **Firearms Examiner** – A forensic scientist who is an expert in evidence regarding firearms and ballistics. Firearms examiners perform forensic comparisons and analyses, serve as expert witnesses, and prepare courtroom evidence. They may provide training to law enforcement personnel. Also referred to as a Firearm & Tool Mark Examiner.
- **Integrated Ballistics Identification System (IBIS)** – An automated ballistics imaging and analysis system that populates a computerized database of digital ballistic images of bullets and fired cartridge casings from crime guns. IBIS enables the imaging and identification of large quantities of firearms evidence across a network of sites, as well as the automated identification of likely matching bullets or fired cartridge casings.
- **LeadsOnline – (Formerly Forensic Technology, Incorporated)** – Company that created the IBIS System in 1991. Also referred to as FT.
- **MATCHPOINT™** – The system developed by *LeadsOnline* that stores the ballistic images and contains the program for correlation reviews. Also referred to as ‘Analysis Station.’
- **National Crime Gun Intelligence Governing Board (NCGIGB)** – The board consisting of members of ATF and partner organizations that oversees the implementation, function, and improvement of the NIBIN program.
- **National Integrated Ballistic Information Network (NIBIN)** – The program managed by ATF that automates the imaging of the unique identifiers of fired cartridge casings and stores the digital images into a database for comparison across a national network of participating sites.

- ***NIBIN Authorized Trainer (NAT)*** – A technician trained and authorized by ATF to train others in the acquisition of ballistic images.
- ***NIBIN Hit*** – The result of two or more firearms ballistic evidence acquisitions that have been confirmed as a match by a firearms examiner. NIBIN Hits are based on correlation review of digital images by Qualified NIBIN Users via separate, independent MATCHPOINT™ sessions **and** microscopic confirmation by a firearms examiner. This information/intelligence can be used for investigative purposes and is suitable for court purposes.
- ***NIBIN Lead*** – An unconfirmed, potential association between two or more pieces of firearms ballistic evidence based on a correlation review of the digital images in the NIBIN database by either a firearms examiner or a trained NIBIN technician. A NIBIN Lead is intended to provide information for investigative purposes. A NIBIN Lead cannot be disseminated until the Lead has been created after the secondary correlation review has been completed by a Qualified NIBIN User during a second, independent MATCHPOINT™ session.
- ***NIBIN National Correlation and Training Centers (NNCTC I&II)*** – The ATF facilities located in Huntsville, Alabama, and Wichita, Kansas, that perform timely correlation reviews for multiple NIBIN Sites and also provides training for Qualified NIBIN Users.
- ***NIBIN Program Administrator*** – An individual the NIBIN Site has designated to communicate with all parties (i.e., submitting law enforcement agencies, ATF CGICs, etc.) involved in the NIBIN process. The NIBIN program administrator must be a Qualified NIBIN User, unless a technical administrator is appointed, and full-time employee of the NIBIN Site. The NIBIN program administrator should be responsible for implementing and directing policies and procedures of the NIBIN Site.
- ***NIBIN Site*** – Location at which NIBIN acquisition and/or correlation technology is present. NIBIN Sites are located in forensic laboratories, police departments, etc.
- ***NIBIN Technician*** – A trained technician/specialist authorized to use IBIS equipment. A NIBIN technician may be trained for the acquisition and/or correlation review of digital images of firearms ballistic evidence. NIBIN technicians trained for acquisition only must have the appropriate level of training for those duties and be able to capture and submit digital images into the system. NIBIN technicians trained for both acquisition and correlation must have training in both areas and be able to determine potential links of two or more cartridge casings fired from the same weapon. Also referred to as an IBIS technician.
- ***Notification*** – A written or electronic communication to the submitter of firearms ballistic evidence indicating the results of an acquisition/correlation review. Notifications are not Laboratory Reports.
- ***Originating Agency*** – The agency that recovered the firearm and/or fired cartridge case and submitted the items for NIBIN entry.

- **Procedure** – Protocol, Standard Operating Procedure (SOP) or other equivalent – The established practice to be followed in performing a specified task or under specific circumstances.
- **Qualified Assessor** – An individual trained by ATF to conduct NIBIN Site assessments for compliance to minimum required operating standards.
- **Qualified NIBIN User** – A technician and/or firearms examiner trained by ATF, LeadsOnline, and/or a NAT program to perform acquisition and/or correlation reviews of ballistic images on the national network.
- **Reception Date** – The reception date is defined as the date ballistic evidence (recovered firearm or fired cartridge case) is initially submitted and/or delivered to the NIBIN Site or its parent laboratory, in the case of those sites that are a component of a larger forensic system, for any forensic analysis (e.g., DNA, latent fingerprints, NIBIN, etc.). For example, if evidence is submitted to the NIBIN Site or the parent laboratory on January 1, 2024, the reception date is January 1, 2024. However, if the parent laboratory receives the evidence on January 1, 2024, but does not deliver the evidence to the NIBIN Site until January 20, 2024, the reception date is still January 1, 2024.
  - **Reception Date for Laboratory Sites:** The date evidence is received at the laboratory site for all forensic analysis. For example, evidence that is submitted for priority processing of DNA evidence prior to NIBIN test fire and/or fired cartridge case (FCC) acquisition will be documented with the reception date in which the evidence first is submitted to the laboratory site, not the first date in which the evidence is available for NIBIN test fire and/or FCC acquisition. Evidence submitted to the laboratory on February 1, 2024, but sent for other processing prior to delivery to the NIBIN Site on February 20, 2024, will use the reception date of February 1, 2024.
  - **Reception Date for Law Enforcement Sites with their own BRASSTRAX:** The date the evidence is recovered and is taken into custody by any duly authorized employee of that law enforcement (LE) agency. For example, evidence is acquired on March 1, 2024, but is held in temporary custody pending transfer to the NIBIN Site until March 20, 2024, will use the reception date of March 1, 2024.
  - **Reception Date for Agencies with Qualified NIBIN Users, Using Another Agency's BRASSTRAX:** The date the evidence is recovered and taken into custody by any duly authorized employee of that LE agency while using another law enforcement agency's BRASSTRAX. For example, evidence is acquired on April 1, 2024, by an employee of an agency that employs a Qualified NIBIN User who utilizes another agency's BRASSTRAX, but that evidence is not transferred to the Qualified NIBIN User until April 20, 2024, the reception date will be recorded as April 1, 2024.
  - **Reception Date for Law Enforcement Agencies, Using Another Agency's BRASSTRAX:** The date the evidence is received by the agency conducting the acquisitions on behalf of the outside agency that does not have a BRASSTRAX or a Qualified NIBIN User. For example, evidence is acquired on May 1, 2024, by an agency that does not have

a BRASSTRAX machine or a Qualified NIBIN User and is not submitted to the outside agency until May 20, 2024. In that case, the reception date will be recorded as May 20, 2024.

- **Secondary review** – The process that ensures the work performed meets quality standards and requires two qualified individuals to concur on the finding. For NIBIN, ATF defines secondary review as a second correlation review or examination by a trained IBIS technician and/or firearms examiner during an independent MATCHPOINT™ session.
- **Suitable ballistic evidence** – All fired cartridge casings and recovered by law enforcement as well as test-fired cartridge casings from firearms recovered by law enforcement that were illegally possessed, used in a crime, or suspected by law enforcement officials of having been used in a crime.
- **Technical NIBIN Administrator** – A Qualified NIBIN User at the NIBIN Site designated to assist the NIBIN program administrator with technical operations. This is required in the event the NIBIN program administrator does not meet the training requirements of a Qualified NIBIN User.
- **Test-Fires** – Fired cartridge casings known to originate from a specific firearm in law enforcement custody.
- **Triage** – The process of assessing cartridge casings to determine the best representative sample from a group of cartridge casings having similar firearm-produced markings for NIBIN entry. This is not, nor should it be, interpreted as a comparative examination to determine how many firearms may have been responsible for firing the cartridge casings.
- **Unified Score** – An automated correlation metric shown on the MATCHPOINT™ analysis station that is used to rank potential matches of ballistic evidence.
- **Work Product** – Materials produced internally by the NIBIN Site such as notes, diagrams, photographs, computer printouts and other supporting documentation of the evidence submitted to the NIBIN Site/laboratory for any forensic analysis.

### SECTION 3. MINIMUM REQUIRED OPERATING STANDARDS:

ATF, through the National Crime Gun Intelligence Governing Board, has established the following minimum required operating standards to ensure the consistency, integrity, and success of NIBIN:

#### STANDARD 1. QUALITY ASSURANCE PROGRAM

- 1.1 The NIBIN Site shall establish, follow and maintain a documented quality system that is appropriate to the NIBIN acquisition and correlation processes.
- 1.2 The documented quality system must be equivalent to or more stringent than what is required by these Standards.
- 1.3 The quality system shall be documented in a manual that includes or references the following elements:
  - 1.3.1 Goals and objectives
  - 1.3.2 Organization and management
  - 1.3.3 Personnel
  - 1.3.4 Facilities
  - 1.3.5 Acquisition, Correlation, NIBIN Lead Dissemination Procedures
  - 1.3.6 Evidence Control
  - 1.3.7 Validation
  - 1.3.8 Equipment Calibration
  - 1.3.9 Reports
  - 1.3.10 Reviews
  - 1.3.11 Improvement Plan
  - 1.3.12 Assessments
  - 1.3.13 Training Records
  - 1.3.14 Safety
  - 1.3.15 Outsourcing

**Discussion:** This Standard sets forth requirements for the Site to establish basic documented quality assurance procedures, regarding NIBIN analysis. While a Site may opt for or be otherwise required to maintain ISO accreditation, this standard does not require such accreditation.

#### STANDARD 2. ORGANIZATION AND PERSONNEL

The NIBIN Site shall:

- 2.1 Have a managerial staff with the authority and resources needed to discharge their duties and meet the requirements of the Standards in this document.
- 2.2 Have a NIBIN program administrator. For agencies or departments with multiple NIBIN Sites, each Site shall have a designated NIBIN program administrator.

2.3 The NIBIN program administrator shall meet the following qualifications:

- 2.3.1 Be a full-time employee of the Site or a full time contractor with employee privileges.
- 2.3.2 Minimum experience requirements: a Qualified NIBIN User that has completed acquisition training.
- 2.3.3 A Qualified NIBIN User that has completed correlation training (if the site conducts correlations).
- 2.3.4 If the NIBIN program administrator is not a Qualified NIBIN User, the NIBIN Site must have a designated Technical NIBIN Administrator.

2.4 The NIBIN program administrator shall be responsible for the following:

- 2.4.1 Overseeing the site (as it relates to NIBIN) and successes of the NIBIN program.
- 2.4.2 Having the authority to initiate, suspend, and resume NIBIN operations for the site or users.
- 2.4.3 Evaluate and document approval of all methods (as they relate to NIBIN) by the site and propose new or modified procedures as needed.
- 2.4.4 Review the training records for newly Qualified NIBIN Users and approve their qualifications prior to them performing acquisitions or correlations within the IBIS system, and to document such reviews.
- 2.4.5 Coordinate with assessors regarding NIBIN Site assessments.

2.5 The NIBIN Site and/or ATF must have access to the NIBIN Site program administrator to provide onsite, telephone, or electronic consultation as needed.

2.6 In the event that the NIBIN program administrator position of a Site is vacated and there is no individual at the Site who meets the requirements of this standard and can serve as a NIBIN Program administrator, the Site shall immediately contact ATF and submit their contingency plan within 14 days to ATF for its approval. Work in progress by the Site may be completed during this 14-day period but no new NIBIN acquisitions or correlations shall be started until the plan is approved by ATF.

2.7 The NIBIN Site must ensure that all personnel at the site utilizing the IBIS system have the proper level of training and experience for their position and that all individuals performing acquisitions and/or correlation reviews are Qualified NIBIN Users. A

Qualified NIBIN User shall be an employee or contract employee of the Site and meet the following qualifications:

- 2.7.1 The Qualified NIBIN User must complete ATF-approved acquisition training administered by ATF, LeadsOnline, and/or an NAT, or been granted a training waiver, in order to utilize a NIBIN acquisition machine and acquire ballistic images.
- 2.7.2 The Qualified NIBIN User must complete correlation training administered by ATF, LeadsOnline, and/or been granted a training waiver in order to utilize a NIBIN correlation machine and perform correlation review of ballistic images.
- 2.8 The NIBIN Site must maintain records on the relevant qualifications, training, skills, and experience of the NIBIN program administrator and Qualified NIBIN Users.

### **STANDARD 3. FACILITIES**

- 3.1 The NIBIN Site shall have a facility that is designed to ensure the integrity of the NIBIN analyses and evidence, as further described below:
  - 3.1.1 If the physical location of the NIBIN equipment has remained unchanged since the initial installation when it was found to be in compliance with federal security requirements, Standard 3.1 and its subcategories may be considered fulfilled.
  - 3.1.2 The NIBIN Site will comply with all ATF, DOJ and/or other Federal security requirements related to the NIBIN program, network, or systems to ensure the integrity of the program.
  - 3.1.3 The NIBIN Site must house the NIBIN equipment in monitored, physically-restrictive environments and clearly identify the restricted areas.
  - 3.1.4 The NIBIN Site must ensure the NIBIN equipment is in a room that is locked and monitored. The NIBIN Site must be within a secured zone, which may be the entire building or a subsection of the building.
  - 3.1.5 The NIBIN Site must ensure building facilities are secured outside of normal working hours and monitored at all times or locked and alarmed when no one is at the site.
  - 3.1.6 The NIBIN Site must ensure there are security alarm systems (e.g., motion, thermal) or onsite security in the building that houses the NIBIN equipment. (A security alarm does not have to be installed in the NIBIN room.)
  - 3.1.7 The NIBIN Site must ensure the security systems are tested quarterly.



- 3.1.8 The NIBIN Site must maintain security system test records for review.
- 3.1.9 The NIBIN Site must control and limit access to the site in a manner to prevent access by unauthorized personnel, but allow for the timely submission of evidence by serviced police departments/agencies.
- 3.1.10 The NIBIN Site must ensure that all exterior entrance/exit points require security control.
- 3.1.11 The NIBIN Site must safeguard access to NIBIN equipment areas via key, access card/fob, and/or cipher lock.
- 3.2 The NIBIN Site must ensure the distribution of all keys, combinations, etc., are documented and limited to the personnel designated by the NIBIN program administrator.
- 3.3 The NIBIN Site must have procedures in place to collect and/or change access into the NIBIN room for personnel no longer directly using NIBIN equipment. (Note: The lock needs to be changed and/or the access keys/cards/fobs need to be collected after a change in personnel.)
- 3.4 The NIBIN Site must document visitor procedures to restrictive areas and maintain and update a restrictive area authorized personnel roster. All visitors must be escorted at all times by personnel authorized to access the NIBIN room.

#### **STANDARD 4. EVIDENCE CONTROL**

The NIBIN Site shall have and follow a documented evidence control system to ensure the integrity of physical evidence, as further described in the subsections below.

- 4.1 Evidence shall be marked with a unique identifier on the evidence package.
- 4.2 The Site shall clearly define what constitutes evidence and what constitutes work product.
- 4.3 The Site shall have and follow a method to distinguish each sample throughout processing.
- 4.4 The chain of custody for all evidence shall be documented and maintained in physical or electronic format.
- 4.5 The chain of custody shall include the signature, initials, or electronic equivalent of each individual receiving or transferring the evidence, the corresponding date for each transfer, and the evidentiary item(s) transferred.

- 4.6 The Site shall have and follow documented procedures designed to minimize loss and/or deleterious changes to evidence.
- 4.7 The Site shall have secure, controlled access areas for evidence storage and work product in progress.

## **STANDARD 5. PROCEDURES**

- 5.1 The Site shall have and follow written procedures for all steps of the NIBIN process.
- 5.2 The written procedures for all steps of the NIBIN process must be approved by the NIBIN program administrator.
- 5.3 The NIBIN Site must ensure it does not have any policies that inhibit or restrict NIBIN submissions of suitable ballistic evidence to the Site by any serviced law enforcement agency/department.
- 5.4 The NIBIN Site must document and follow standard operating procedures for the acquisition of all ballistic images.
- 5.5 The NIBIN Site must perform acquisition reviews of all suitable ballistic evidence submitted to the site.
- 5.6 The NIBIN Site must document and follow procedure for the triage or grouping of multiple items of ballistic evidence from the same firearm.
- 5.7 The NIBIN Site must perform acquisitions of the most suitable examples of ballistic evidence following the triage process.
- 5.8 The NIBIN Site must conduct timely acquisition of ballistic evidence, as follows:
  - 5.8.1 Gold Standard: The site performs acquisitions of all suitable ballistic evidence within two (2) business days of the reception date.
  - 5.8.2 Silver Standard: The site performs acquisitions of all suitable ballistic evidence within five (5) business days of the reception date.
  - 5.8.3 Bronze Standard: The site performs acquisitions of all suitable ballistic evidence within ten (10) business days of the reception date.
  - 5.8.4 Basic Compliance: The site performs acquisitions of all suitable ballistic evidence within twenty (20) business days of the reception date.
- 5.9 The NIBIN Site will accurately enter all required information pertaining to the ballistic evidence during the acquisition process.

- 5.10 The NIBIN Site will document and follow standard operating procedures for the correlation review of ballistic images. [Note: Standards 5.10 - 5.18 do not apply to NIBIN Sites serviced by the NIBIN National Correlation and Training Center (NNCTC).]
- 5.11 In the performance of correlation reviews, the Qualified NIBIN Users at the site must examine ballistic images rated, at a minimum, between 1.2 to 2.0 and higher for a unified score (previously Rank Sort). [Note: A Site may choose to set its minimal examination threshold for all correlation reviews at any point between a unified score 1.2 and 2.0. Sites may not exceed a minimum review threshold of a 2.0 unified score.]
- 5.12 The NIBIN Site must document and follow procedure for the correlation review of potential NIBIN Leads.
- 5.13 The NIBIN Site must perform and document a second correlation review of potential NIBIN Leads. This secondary review will be performed by a second Qualified NIBIN User during an independent MATCHPOINT session prior to the creation and dissemination of a NIBIN Lead.
- 5.14 The NIBIN Site must ensure both the initial and secondary correlation reviews of NIBIN Leads are completed within two (2) business days of the acquisition of the ballistic images of the item of evidence.
- 5.15 The NIBIN Site must ensure the documentation of any correlation review (primary or secondary) include, at a minimum, the primary case identifier(s), date of the review, the name of the NIBIN user, the items of evidence involved in the correlation, and the result of the review.
- 5.16 The NIBIN Site must document and follow standard operating procedures for the dissemination of NIBIN Leads.
- 5.17 The NIBIN Site must record the date of dissemination for each NIBIN Lead.
- 5.18 The NIBIN Site must ensure NIBIN Leads are disseminated to the agency or investigator submitting the specific ballistic evidence and/or their authorized representative within twenty-four (24) hours of the creation of the Lead in IBIS. When NIBIN Leads are disseminated beyond the twenty-four hour window, the Site will record and preserve an explanation for the delay. Such records will not constitute an exemption from the twenty-four hour dissemination requirement; they serve only to document the reason for the delay.

## **STANDARD 6. IMPROVEMENT PLAN**

- 6.1 The NIBIN Site shall establish and follow an improvement plan to address processes and procedures when the minimum required operating procedures are not met.

- 6.2 The NIBIN Site must ensure that, prior to implementation, all improvement plans have the documented approval of the NIBIN program administrator.
- 6.3 The Improvement Plan, at a minimum, must address the following:
  - 6.3.1 Identify possible causes for noncompliance with MROS.
  - 6.3.2 Address plans and measures to meet MROS.
- 6.4 In reference to any findings of noncompliance, the following actions shall apply:
  - 6.4.1 First MROS Noncompliance: The site must submit a written improvement plan to ATF within thirty (30) days of receipt of the Assessment report.
  - 6.4.2 Second (consecutive) MROS Noncompliance: The site will be placed on a quarterly MROS assessment cycle.
  - 6.4.3 Third (consecutive) MROS Noncompliance: The site must participate in a NIBIN partnership conference with the Special Agent in Charge (SAC) of ATF's Firearms Operations Division.

## **STANDARD 7. ASSESSMENTS**

ATF-designated assessors will assess NIBIN Sites based on MROS. They will review the site's overall NIBIN processes, current data, and its acquisition, correlation, and NIBIN lead statistics. Sites are required to communicate directly with NIBIN assessors when they request information or documentation as outlined below.

Each site must be in full compliance with the standards in order to maintain access to NIBIN. All NIBIN Sites will undergo an ATF assessment once every two years and must be MROS compliant to maintain access to the network. During non-assessment years, each NIBIN Site must submit a self-assessment to ATF to gauge the current site performance.

- 7.1 The NIBIN Site must maintain and make available all required documentation and records of the NIBIN analysis of submitted ballistic evidence pertaining to the accuracy and timeliness of acquisitions, correlation reviews, and NIBIN Lead disseminations.
- 7.2 The NIBIN Site must maintain and make available all required documentation of training and experience for the NIBIN program administrator and Qualified NIBIN Users.
- 7.3 The NIBIN Site must maintain and make available all required documentation and records to verify compliance with all NIBIN standards identified as part of MROS.