



*American Academy of Forensic Sciences  
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**PROBLEM:** There is a significant and growing workforce shortage of firearm/toolmark examiners in the United States forensic science community. A critical need for trained firearms/toolmark examiners has developed due to the retirements of current firearms examiners, along with a dramatic and continuing increases in cases submitted to crime laboratories. This can be directly related to the high rate of gun violence across the nation. Many jurisdictions are implementing robust gun violence initiatives in an attempt to address this increase in violence. The ability to resolve this shortage of examiners is complicated due to the requirement for extensive initial hands-on analyst training, a lack of qualified instructors, and the lack of equipment essential in providing the training. Further, there has been an inability of many applicants to pass the background or polygraph requirements of law enforcement agencies in the last few years, suggesting that background investigations need to be completed by law enforcement before the training as not to waste time and resources training individuals that are not employable in criminal justice agencies. While the time commitment of training is not as extensive for NIBIN Technicians and Correlation Review Specialists, there is also a shortage of trained NIBIN entry and correlation personnel. As a result of these shortages, violent crime cases involving firearms may languish in the laboratory.

**BACKGROUND:**

Firearms Examiner: While firearms examiners typically have a college degree, it is a very precise and hands-on job that requires several years of an apprenticeship with an experienced examiner in a laboratory environment. Firearms trainees must have access to a reference collection of various firearms for training tasks. This can be very difficult for some training locations to achieve due to state and local laws or educational/training entity policy. Training consists of learning how toolmarks are created and how to prepare test marks to compare to toolmarks conveyed to the evidence. This requires a deep knowledge of how various firearms are manufactured and function and how each firearm imparts a toolmark on items such as cartridge cases and bullets. Training in these areas requires hundreds of hours of comparing known test marks. Once this level of expertise exists, the examiner must document and test the functionality of the firearm including such aspects as how much force is needed to pull the trigger and if the safeties are functioning correctly. In addition, the examiner must be able to estimate the muzzle to target distance. It typically takes several years in a forensic laboratory environment to fully train an examiner.

NIBIN Technicians and Correlation Specialists: Entry of markings from fired cartridge cases into the National Integrated Ballistic Identification Network (NIBIN) has historically been performed in the crime laboratory. However, this function has been migrating outside of the laboratory and is performed by trained law enforcement investigators or other civilian trained individuals. ATF has created a program for the training of these individuals. To be qualified to perform NIBIN entry students must complete a 40-hour course and pay a nominal fee. To perform correlation reviews to determine if any potential leads are viable after the entry of the markings, the potential Correlation Review Specialist must complete an 80-hour course. While the ATF has created a “National Correlation Center,” there is a need to increase the number of correlations at the center to take the correlation workload off laboratory personnel. If these correlations are not performed at the national center, they must be done by overburdened state and local personnel.

Confirmation Specialists: If NIBIN Correlation Specialists determine there are viable leads, a NIBIN lead notification is sent to the originating agency (the law enforcement agency owner of the evidence). If the originating agency wants the potential lead confirmed, they need to send a request to their partner forensic science service provider (laboratory) for a fully trained firearm/toolmark examiner to perform a confirmation (i.e. a determination if there is a “correspondence” or “identification” made between two samples or cases). This creates an additional burden and need for trained firearm/toolmark examiners in state and local forensic science laboratories that was identified above.

**CONCLUSION:** While ATF currently hosts a firearms training academy for new hires at state and local laboratories, the course does not have adequate capacity to address the present needs or anticipated needs. In addition, the course is taught by state and local firearm/toolmark examiners on loan/detail to the ATF training course. When training at the course, firearm/toolmark examiners cannot be performing casework or training examiners at their own state or local forensic science lab. This capacity deficit is causing the workforce shortage to grow as there is little capacity to train prospective new examiners. In summary, the training that is required for firearm/ toolmark examiners requires a significant hands-on apprenticeship work. As such, crime laboratories are currently seeking to increase their funding for equipment and personnel, collaborate among the community, and partner with universities to ensure that qualified firearms examiners and NIBIN personnel are trained to competency in an attempt to address this national crisis.