

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MARYLAND**

**UNITED STATES OF AMERICA**

v.

**JOVON LOVELLE MEDLEY,**

**Defendant**

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**Case No. PWG-17-CR-242**

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**GOVERNMENT’S RESPONSE TO DEFENDANT’S MOTION *IN LIMINE*  
TO EXCLUDE FIREARM IDENTIFICATION EVIDENCE, OR  
IN THE ALTERNATIVE, TO LIMIT SUCH TESTIMONY (ECF NO. 68)**

The United States of America, by and through its attorneys, Stephen M. Schenning, Acting United States Attorney for the District of Maryland, Thomas M. Sullivan, Assistant United States Attorney, and Christian J. Nauvel, Special Assistant United States Attorney for said District, respectfully submits this response to the Defendant’s Motion *in Limine* to Exclude Firearm Identification Evidence, or in the Alternative, to Limit such Testimony (ECF No. 68). At the crux of the Defendant’s motion is the conclusion that firearm identification is not “science,” and therefore both the firearm identification and the Government’s proposed expert should be excluded under Federal Rule of Evidence 702. The Government rejects this conclusion. But even assuming, *arguendo*, the validity of the Defendant’s conclusion, his motion fails because—as this Court has previously found—Federal Rule of Evidence 702 also governs the admission of “technical” or “specialized” evidence, under certain conditions, which are present in this case. These conditions include: (1) that the examination at issue was conducted by the Government’s proposed expert witness, Prince George’s County Firearm and Toolmark Examiner Scott McVeigh, who is highly qualified and experienced in the field of toolmark analysis; (2) that in performing his examination, Mr. McVeigh adhered to the very same methodology already found to be reliable, and that he

accurately documented the steps taken during this process; and (3) that Mr. McVeigh will offer the appropriate qualifications regarding the accuracy of his testimony. The Government has also complied with its obligations under Rule 16 of the Federal Rules of Criminal Procedure—providing ample disclosures and discovery on the proposed testimony, well in advance of trial. The Defendant’s motion therefore fails to demonstrate why, under the prevailing standards, the evidence at issue should be excluded, or why the proposed expert testimony should be limited in the manner suggested. To the contrary, the Government suggests that Mr. McVeigh be permitted to state his opinion to the jury, to a reasonable degree of certainty. Furthermore, given the widespread acceptance of almost identical firearm identification evidence and expert testimony in federal courts across the country—including within this District—a *Daubert* hearing on this topic is unnecessary. Accordingly, the Government requests that the Court deny the pending motion and in support thereof submits the following:

**I. FACTUAL AND PROCEDURAL BACKGROUND**

On December 30, 2016, members of the Prince George’s County (Maryland) Police Department (“PGPD”) responded to 3801 Southern Avenue, Suitland, Maryland for a report of a carjacking, wherein they located an adult victim suffering approximately five gunshot wounds to the lower extremities. *See* Prince George’s County Police Investigator’s Notes at JLM\_000109, JLM\_000114, attached hereto as Ex. 1; *see also* PGPD Witness Statement at JLM\_000154-60, attached hereto as Ex. 2. Later that same day, PGPD recovered .45 caliber shell casings from the scene. PGPD Crime Scene Report at JLM\_000095, attached hereto as Ex. 3.

On January 23, 2017, Detective Darren Dalton of PGPD received a lead from the National Integrated Ballistic Information Network (“NIBIN”) database, that the shell casings recovered

from the shooting and carjacking scene had been identified as having been fired from a .45 caliber firearm recovered during the Defendant's arrest in Washington DC, on December 31, 2016. Ex. 1 at JLM\_00120; *see also* NIBIN at JLM\_01036-39, attached hereto as Ex. 4. On January 25, 2017, Detective Dalton contacted PGPD's Firearms Examinations Unit ("FEU") in order to compare the two cases. *Id.* On January 27, 2017, Detective Dalton received the official comparison from FEU (authored by Mr. McVeigh) confirming that the shell casings found at 3801 Southern Avenue had been fired from the .45 caliber Rock Island Armory pistol, model M1911-A1 CS, serial number RIA1578527 recovered during the Defendant's arrest in Washington, DC. Ex. 1 at JLM\_00121; *see also* Firearm Analysis at JLM\_00773, attached hereto as Ex. 5.

On May 8, 2017, a grand jury returned a three-count indictment which charged the Defendant with Carjacking Resulting in Serious Bodily Injury in violation of 18 U.S.C. 2119(2); Using, Carrying, Brandishing, and Discharging a Firearm During and in Relation to a Crime of Violence in violation of 18 U.S.C. 924(c)(1)(A)(iii); and Possession of a Firearm as a Convicted Felon in violation of 18 U.S.C. 922(g)(1). On March 21, 2018, the Defendant filed a motion *in limine* to exclude firearm identification evidence, or in the alternative, to limit such testimony (henceforth referred to as "Def's Mot."), which is currently pending before this Court.

## **II. ARGUMENT**

Without resorting to a *Daubert* hearing, the Court should deny the Defendant's motion, finding the firearm admissible and permitting Mr. McVeigh to state his opinion to the jury, to a reasonable degree of certainty because: (1) firearm identifications are the result of rigorous and reliable analysis, are grounded in science, and employ a well-tested methodology that has achieved general acceptance in courts across the country (including in this District); (2) regardless of

whether the discipline is considered “science,” the firearm identification at issue is admissible under Rule 702 as “technical” or “specialized” evidence; (3) Mr. McVeigh is an experienced firearms examiner, who is more than qualified to conduct the toolmark identification analysis involved in this case, and who will ultimately help the trier of fact understand important evidence; (4) Mr. McVeigh’s proposed testimony is based on sufficient facts; (5) Mr. McVeigh has reliably applied the principles and methods of firearms identification analysis to this case, while accurately and contemporaneously documenting his steps in the process; and (6) the Government, via prior disclosures, discovery, and this very submission, has satisfied its obligations under Rule 16.

**A. The Firearm Identification and Expert Testimony Are Admissible Under Rule 702 and *Daubert***

**i. Relevant Law**

Under Rule 702 of the Federal Rules of Evidence, a witness who is qualified as an expert by knowledge, skill, experience, training or education may testify in the form of an opinion or otherwise if the: (a) expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) testimony is based on sufficient facts or data; (c) testimony is the product of reliable principles and methods; and (d) expert has reliably applied the principles and methods to the facts of the case. Fed. R. Evid. 702.

In addition, the following factors are to be evaluated by the court in reference to the subject matter of the proposed expert testimony: (1) whether the particular scientific theory “can be (and has been) tested”; (2) whether the theory “has been subjected to peer review and publication”; (3) the “known or potential rate of error”; (4) the “existence and maintenance of standards controlling the technique’s operation”; and (5) whether the technique has achieved “general acceptance” in the relevant scientific or expert community.” *United States v. Hassan*, 742 F.3d 104, 130 (2014);

see *United States v. Crisp*, 324 F.3d 261, 265-66 (4th Cir. 2003) (quoting *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579, 593-94 (1993)).

**ii. Firearm Identifications are the Result of Rigorous and Reliable Analysis, are Grounded in Science, and Employ a Well-Tested Methodology that Has Achieved General Acceptance in the Courts**

**a. Firearm Identification is Clearly a Science**

The Defendant relies heavily on three reports—the first two issued in 2008 and 2009 by the National Research Council (“NRC”),<sup>1</sup> and the third issued in 2016 by the President’s Council of Advisors on Science and Technology<sup>2</sup> (“PCAST”).<sup>3</sup> Extrapolating from these reports, the Defendant claims that with respect to firearm identification, “there is no scientific theory or technique that is generally accepted by the relevant scientific community, and there is no evidence that examiners regularly reach accurate conclusions.” Def’s Mot. at 10. This assertion is false. Firearm identification has been a forensic science discipline in the United States since the 1930s, and its theories, principles and techniques have been used internationally for nearly a century—to both identify and exclude specific firearms as the source of fired bullets and cartridge cases. See Response of the Association of Firearm and Toolmark Examiners (“AFTE”) to the National Academy of Sciences 2008 Report Assessing the Feasibility, Accuracy, and Technical Capability of a National Ballistics Database, 40 AFTEJ 3 at 237-238 (August 20, 2008), attached hereto as

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<sup>1</sup> The reports are: NRC, Committee to Assess the Feasibility, Accuracy, and Technical Capability of a National Ballistics Database, *Ballistic Imaging* (2008), hereinafter “2008 NRC Report,” and NRC, Committee on Identifying the Needs of the Forensic Science Community, *Strengthening Forensic Science in the United States: A Path Forward* (2009), hereinafter, “2009 NRC Report.”

<sup>2</sup> Executive Office of the PCAST, *Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods* (Sept. 2016), henceforth referred to as “2016 PCAST Report.”

<sup>3</sup> It is worth noting that this Court carefully considered the implications of both the 2008 NRC Report and the 2009 NRC Report in the Report and Recommendation prepared for the *Mouzone* case and adopted by the Court in the related *Willock* case. See *United States v. Willock*, 696 F. Supp. 2d 536, 569, 571–72 (D. Md. 2010), *aff’d sub nom. United States v. Mouzone*, 687 F.3d 207 (4th Cir. 2012) (finding that the existing standards and methods permitted a trained examiner to provide reliable and helpful testimony although with certain qualifications).

Ex. 6. Firearm identification is a subset of the broader forensic science discipline known as toolmark identification, which trains examiners to associate the marks left by tools (toolmarks) on any variety of surfaces with the tool that produced the mark. Firearms are simply a subset of tools that impart marks on bullets and cartridge cases. *Id.*

Forensic firearm identification is an applied science. It is congruous with applied research, which relies upon certain research communities' accumulated theories, knowledge, methods and techniques in order to achieve a specific commercial or client-driven purpose. *See* SWGGUN and AFTE Committee for the Advancement of the Science of Firearm and Toolmark Identification, *Response to 25 Foundational Firearm and Toolmark Examination Questions Received from the Subcommittee on Forensic Science ("SoFS"), Research, Development, Testing, & Evaluation Interagency Working Group ("RDT&E IWG")* at 1 (June 14, 2011), attached hereto as Ex. 7. The forensic science of firearm identification is derived from several validated bodies of knowledge in the physical sciences, including: physics (e.g., studies of pressure, temperature, friction, and heat), metallurgy (including plastic deformation, failure mechanics, compression, torsion, and shear), material science (including fatigue, fracture mechanics, hardness, texture, and tribology), and machining. *Id.* at 1-2. Numerous peer-reviewed studies of both an empirical<sup>4</sup> and a practical

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<sup>4</sup> *See, e.g.,* Gouwe, J., Hamby, J.E., Norris, S., *Comparison of 10,000 Consecutively Fired Cartridge Cases from a Model 22 Glock .40 S&W Caliber Semiautomatic Pistol*, 40 AFTEJ 1, 57-63 (2008) (finding that after 10,000 .40 S&W caliber cartridge cases fired from a Glock, model 22, pistol were compared, all 10,000 fired cases could be identified to each other—validating previous durability studies that showed identifiable markings from a tool could persist for a long period of time); Fadul, T. G., *An Empirical Study to Evaluate the Repeatability and Uniqueness of Striations/Impressions Imparted on Consecutively Manufactured Glock EBIS Gun Barrels*, 43 AFTEJ 1, 37-44 (Winter 2011) (describing an empirical study of ten consecutively manufactured Glock barrels containing the Enhanced Bullet Identification System (EBIS), validating the repeatability and uniqueness of striated markings in gun barrels, as well as the ability of a competent examiner to reliably identify fired bullets to the barrels that marked them); and Yoshimitsu Ogihara et al., *Comparison of 5000 Consecutively Fired and Cartridge Cases from a .45 Caliber M1911A1 Pistol*, 15 AFTEJ 127 (1983).

nature<sup>5</sup> support the proposition that a properly trained and experienced forensic firearms examiner can correctly associate a fired bullet or cartridge case with the specific firearm that discharged it.<sup>6</sup>

**b. Firearm Identifications are the Result of Rigorous and Reliable Analysis, and are Therefore Widely Accepted in Federal Courts**

Firearm examiners are trained to recognize three types of markings, also known as “characteristics,” which are often imparted onto bullets and cartridge cases: (1) class characteristics; (2) subclass characteristics; and (3) individual characteristics. Ex. 6 at 238. Class characteristics are predetermined during the manufacturing process. They include such features as caliber, number of lands and grooves, the widths of the lands and grooves and the direction of twist of the rifling. *Id.* Subclass characteristics occupy a position between class and individual characteristics, and can exist within a particular production run, occasionally arising from: (1) imperfections in a machine tool that persist during the production of multiple firearm components; (2) extreme hardness differences between the machine tool and the work pieces; or (3) particular manufacturing processes, such as casting or molding. *Id.* Contrary to the Defendant’s suggestion, based on outliers,<sup>7</sup> qualified examiners are trained to distinguish subclass characteristics from

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<sup>5</sup> See, e.g., Katterwe, H, *Modern Approaches for the Examination of Toolmarks and Other Surfaces*, Forensic Science Review, Vol. 8, No. 1, 46-71 (June 1996) (exploring the effects of the production of toolmarks on different materials’ surfaces); Biasotti, A.A., *Rifling Methods—A Review and Assessment of the Individual Characteristics Produced.*, 13 AFTEJ 3, 34-61 (1981)(reviewing the various methods of rifling barrels and the types of marks that they produce on bullets).

<sup>6</sup> See also Grzybowski, R., Miller, J., Moran, B., Murdock, J., Nichols, R., and R. Thompson, *Firearm/Toolmark Identification: Passing the Reliability Test under Federal and State Evidentiary Standards*, 35 AFTEJ 2, 209-241 (Spring 2003)(describing how the classical scientific method is used in firearm and toolmark identification); Stephen G. Bunch & Douglas P. Murphy, *A Comprehensive Validity Study for the Forensic Examination of Cartridge Cases*, 35 AFTEJ 201 (2003)(finding that forensic firearm and toolmark examination is “sufficiently well-documented as to support a reasonable hypothesis of its validity”); and Hamby, J.E., Brundage, D., Thorpe, J., *The Identification of Bullets Fired from 10 Consecutively Rifled 9mm Ruger Pistol Barrels: A Research Project Involving 507 Participants from 20 Countries*, 41 AFTEJ 2, 99-110 (Fall 2009)(finding that of the 6600 answers returned over a 10-year period, there were 6593 correct assignments, seven inconclusive examinations and no false positives).

<sup>7</sup> The defense’s expert refers to an image (of unknown magnification) for the proposition that subclass characteristics can confuse examiners. However, upon closer review, the article identifies this image as an outlier, produced by a broken tool, and ultimately concludes that qualified examiners are able to distinguish subclass from individual

individual characteristics, because identifications cannot be made from subclass characteristics. *Id.* Individual characteristics consist of microscopic, random imperfections along the bore of a firearm created by the manufacturing process, wear, corrosion, erosion, or normal use. *Id.* For firearm barrels, these unintended characteristics are initially caused by changes in the tool as the bore of each barrel is produced on the production line. *Id.* They typically undergo slow modification and change with the passage of time and repeated use of the firearm. *Id.*

Since the inception of firearm and toolmark identification as a forensic discipline, examiners have been using a method known as “pattern matching” to determine whether sufficient similarity exists between firearm-generated toolmarks to warrant a conclusion that two bullets or two cartridge cases came from the same firearm. *Id.* These “patterns” consist either of arrays or groups of consecutively matching striae (in the case of striated toolmarks), such as those found on fired bullets, or corresponding (matching) impression toolmarks, such as those found on a fired cartridge case. *Id.* The Defendant, relying in part on the 2016 PCAST Report, claims that firearms examiners use subjective pattern-matching methodology without “standard or protocol,” and that that the AFTE theory of identification is “circular.” Def’s Mot. at 9. This is incorrect, and is based on a “lack of adequate investigation and understanding on the part of the PCAST.” AFTE, *Response to PCAST Report on Forensic Science*, 2 (October 31, 2016), attached hereto as Ex. 10.

In 1992,<sup>8</sup> AFTE memorialized the Theory of Identification in order to explain the basis of opinions in common origin in toolmark comparisons. Ex. 6 at 239. The Theory of Identification enables opinions of common origin to be made when the unique surface contours of two toolmarks

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characteristics. See Def’s Mot., Ex. F at 6-7 (citing to Rivera, G., Subclass Characteristics in Smith & Wesson SW40VE Sigma Pistols, 39 AFTEJ 3, 247, 251 (2007))

<sup>8</sup> The 2016 PCAST report incorrectly states that the AFTE Theory of Identification was issued in 2011. See 2016 PCAST Report at 59, attached hereto as Ex. 8.



are in “sufficient agreement.” *Id.* “Sufficient agreement” is a term of art, which means that there is significant duplication of random toolmarks. *Id.* Significance is determined by first defining, then comparing the relative height or depth, width, curvature and spatial relationship of the individual peaks, ridges and furrows within one set of surface contours with the corresponding features in the second set. *Id.* Agreement is “significant” when it exceeds the best agreement demonstrated between toolmarks known to have been produced by different tools and is consistent with agreement demonstrated by toolmarks known to have been produced by the same tool. *Id.* The statement that “sufficient agreement” exists between two toolmarks means that the agreement is of a quantity and quality that the likelihood another tool could have made the mark is so remote, as to be considered a practical impossibility. *Id.*

Currently, it is true that the final step in the AFTE’s identification process involves some degree of subjectivity during the final phase of the examination protocol—when the examiner evaluates the degree of correspondence in patterns between two toolmarks with similar class characteristics. Ex. 6 at 239. But even this final phase is founded on scientific principles and is based on the examiner’s training and experience. It is preceded by a number of objective measurements and observations that greatly narrow the possible source firearms, including caliber determination, land/groove count and widths, shape of the firing pin, finish on the breechface, and the spatial relationship between the extractor and ejector in semi-automatic firearms. *Id.* Any subjectivity is neither fatal to the identification process, nor unique to firearm and toolmark identification. *Id.* For example, a chemist comparing two matching infrared spectra will see small differences between one or more absorption bands. *Id.* These small differences do not preclude or even detract from the correct identification of the unknown substance, because the analytical

chemist knows through his or her training and experience that small variations in absorption peak intensities or shapes do occur from sample to sample of the same material. *Id.*

As a result of the above, firearm identification has achieved widespread acceptance in federal courts—to such an extent that a full *Daubert* hearing would be unnecessary. As stated by the Fourth Circuit in *United States v. Crisp*, 324 F.3d 261, 324 (4th Cir. 2003), which rejected a *Daubert* challenge to testimony regarding fingerprint and handwriting analysis, “the touchstones for admissibility under *Daubert* are two: reliability and relevancy.” Courts in this District and elsewhere have routinely confirmed the reliability of firearms identification. *See, e.g., United States v. Willock*, 696 F. Supp. 2d 536, 546–47 (D. Md. 2010) (holding that expert testimony by firearms examiners regarding procedures for comparing and identifying spent cartridge casings was reliable under *Daubert*); *United States v. Foster*, 300 F.Supp. 2d 375, 376–77 & n. 1 (D. Md. 2004) (same); *United States v. McLean*, 695 F. App’x 681, 685 (4th Cir. 2017)(upholding the expert’s district court testimony because it was based specialized knowledge of firearms, independent research, and information from the ATF—to formulate a conclusion which was helpful to the jury); *United States v. Davis*, 103 F.3d 660, 672 (8th Cir. 1996) (upholding the use of expert testimony to link bullets from a crime scene to a firearm associated with the defendant); *United States v. Chester*, No. 13-CR-00774, at 3 (Northern D. Ill. Oct. 7, 2016) (“PCAST report does not undermine the general reliability of firearm toolmark analysis or require exclusion of the proffered opinions”); *United States v. Santiago*, 199 F. Supp. 2d 101, 111 (S.D.N.Y. 2002) (“The Court has not found a single case in this Circuit that would suggest that the entire field of ballistics identification is unreliable.... To the extent that [the defendant] asserts that the entire field of ballistics identification is unacceptable ‘pseudo-science,’ the Court disagrees”); *United States v.*

*Cooper*, 91 F.Supp. 2d 79, 82–83 (D.D.C. 2000) (implying that ballistics identification involves “well-established” scientific principles); cf. *United States v. Scheffer*, 523 U.S. 303, 313–14 (1998) (contrasting polygraph evidence with more accepted expert testimony, including ballistics).

**c. The 2016 PCAST Report is Unreliable in Several Key Respects**

Because of the great reliance the Defendant places on the 2016 PCAST Report, it is worth noting that this document is rife with errors and misunderstandings—most notably, it seriously mischaracterizes the results of four of the nine validation studies used in its analysis of firearm and toolmark identification. See Organization of Scientific Area Committees (“OSAC”), *Response to the PCAST Call for Additional References Regarding its Report “Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods,”* at 11 (December 14, 2016), attached hereto as Ex. 9 (cataloguing the more significant errors and omissions in the 2016 PCAST Report). Additionally, at least six validation studies were completely ignored by PCAST. Hence, while the Defendant hangs his hat on PCAST’s conclusion that firearm identification “falls short of the criteria for foundational validity,” he is, in fact, relying on a report that mischaracterizes four of the nine validation studies, ignores critical details in the remaining five, and does not address an additional six studies. See Ex. 9 at 2.

The 2016 PCAST Report is highly critical of any research that is not considered a “black box” study. But there is quite a difference between identifying potential problems with “closed set” studies, and discrediting the results entirely. While AFTE agrees that “black box” studies are valuable and should be utilized more going forward, AFTE correctly points out that this is not the sole standard by which good science is measured. Ex. 10 at 1. PCAST’s central argument is that “closed set” studies skew the error rate, because the correct answer is always present. See 2016

PCAST Report at 106. The assumption is that examiners might deconstruct the test design—which PCAST likens to solving a “Sudoku” puzzle. *Id.* But this analogy misrepresents the challenge posed by these tests. Ex. 9 at 3. For example, three of the criticized validation studies used consecutively manufactured firearms, which have been shown to have the potential for subclass characteristics. *Id.* at 3-4. Though consecutively manufactured firearms are not likely to be encountered in actual casework, the authors used them in an attempt to create a worst-case scenario (i.e., the potential best known non-matches). *Id.* at 4. Additionally, each test used more questioned samples than knowns (15 questioned samples from 10 consecutively manufactured firearms). Therefore, unlike in a Sudoku puzzle, obtaining a perfect score was not as simple as figuring out a few of the correct answers and then deducing the rest. *Id.* Since consecutively manufactured samples were used, it was just as important to know if examiners could correctly identify samples as it was to know if samples were falsely identified. *Id.* These studies independently show a low overall error rate (approximately 0.02%),<sup>9</sup> and therefore provide evidence that firearm and toolmark examiners can reliably and accurately associate questioned toolmarks to the correct source tool. PCAST’s conclusion that there has only been one adequately designed firearms identification study, and its recommendation that all testimony should refer to this study as the singular foundation of firearm and toolmark examination is “irresponsible and inaccurate, and suggests a fundamental lack of understanding about the range of analyses done in this forensic discipline.” *See* Ex. 10 at 1 (referring to the 2016 PCAST Report at 110). For, while a “global and numerically precise” error rate would be useful in evaluating this analytical technique, of greater relevance is the performance of the individual examiner—as demonstrated by their

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<sup>9</sup> See 2016 PCAST Report at 111 (the estimated error rate in the four set-to-set/closed set studies was 1 in 5103).

participation in proficiency and similar testing. *Id.* It is worth noting that the error rate in the “black box” study was generally consistent with the other studies (1.5%). 2016 PCAST Report at 111.

**iii. Regardless of Whether Firearm Identification is Considered a “Science,” it is Admissible as “Technical” or “Specialized” Evidence**

It is hardly the first time that this Court has considered the issue of whether to admit firearm identification evidence—including the question of what to do if the Court is unwilling (or unable) to opine on the issue of whether firearm identification is considered a “science.” It has been found that even if courts were to accept the Defendant’s contention that firearms toolmark identification is not “science,” that “would not presage the exclusion of all firearms toolmark identification evidence” because Rule 702 is not limited to admissibility of scientific evidence alone, but also governs “technical” or “specialized” evidence which, by necessity, does not meet the rigors of scientific analysis. *United States v. Willock*, 696 F. Supp. 2d 536, 569 (D. Md. 2010), *aff’d sub nom. United States v. Mouzone*, 687 F.3d 207 (4th Cir. 2012). In fact, Rule 702 permits the introduction of technical or specialized evidence if it is given by qualified witnesses, based on sufficient facts, and produced through reliable methods that have been applied reliably to the facts of the case, so long as it is “helpful” to the jury’s understanding of the case or will assist the jurors in making their factual determinations. *Id.* Hence, the identification at issue and the testimony of the Government’s expert should be admissible, if only as technical or specialized evidence—based on the rigorous and reliable methodology described above.

Ultimately, the court in *Willock* found that the available training and proficiency testing demonstrated the existence of standards governing the methodology of firearms-related toolmark examination, and enabled a properly-trained examiner to provide in-court technical testimony that was sufficiently reliable and helpful to assist a jury in determining whether bullets or cartridges

were fired from a particular firearm. *Id.* at 571–72. However, the court included two qualifications: (1) the conclusion expressed by a firearms toolmark examiner that a match exists “is only as good as the underlying photographs, sketches, and notes that support it”; and (2) firearms toolmark identification evidence is only relevant, reliable, and helpful to a jury if it is offered with the proper qualifications regarding its accuracy. *Id.* at 572. The *Mouzone* Report and Recommendation offers additional details. It found that firearm identification evidence is relevant, reliable, and helpful to a jury if offered: (a) by a qualified examiner; (b) who followed the AFTE theory; and (c) who documented with notes, photographs, or sketches, the conclusions reached in sufficient detail to permit (d) confirmation by a second qualified examiner of how an identification was reached (and, at trial, challenge by a defense expert if one has been engaged for this purpose), so long as (e) the examiner is prevented from making outlandish and unsupported pronouncements about the degree of certainty of his or her identification, and (f) the Government complies strictly and timely with its Rule 16 obligations to enable defense counsel to evaluate the conclusions and bases, and determine whether to test or challenge them. *Id.* at 569–70.

**iv. Mr. McVeigh is Qualified to Preform Firearms Identification Analysis and Will Help the Trier of Fact Understand Important Evidence**

Scott McVeigh is a senior Firearm and Toolmark Examiner in the In Prince George’s County Police Department’s Firearm Examinations Unit (“FEU”). Mr. McVeigh has over 30 years of professional law enforcement experience, having served as a patrol officer, detective, senior evidence technician, firearm evidence technician, and crime lab coordinator (among other things) in addition to his current role. *See* McVeigh CV at JLM\_00793-796. He has received extensive training in the field of forensics and firearms, including from the Federal Bureau of Investigation (“FBI”), the Bureau of Alcohol, Tobacco, Firearms and Explosives (“ATF”), the U.S. Department

of Justice (“DOJ”), and the firearms manufacturers themselves. *Id.* Mr. McVeigh has been a member of AFTE for approximately 15 years. *Id.* He is a published author on the topic of firearms and toolmark examinations, a frequent presenter at professional conferences. *Id.* Mr. McVeigh has been an instructor and lecturer, on the topic of firearm and toolmark identification, at the ATF National Firearms Examiner Academy, and Prince George’s County Community College, among others. Mr. McVeigh has worked on numerous criminal investigations, and has testified 86 times over the course of his career, mostly in state court. The Government will seek to qualify Mr. McVeigh as an expert in this case based upon: (1) his ability to explain the theory behind and steps involve in firearm identification; (2) his ability to describe what information and evidence he has relied upon to formulate his opinions; and (3) his ability to walk jurors through the salient portions of his report; (4) the notion that firearm identification has proven to be accurate by law enforcement around the country and has been accepted by federal courts as reliable evidence; and (6) the fact that he has been qualified and testified as an expert in the field of firearm analysis numerous times in federal courts, including in this very courthouse.<sup>10</sup>

**v. Mr. McVeigh’s Proposed Testimony Is Based on Sufficient Facts; He Reliably Applied the Principles and Methods of Firearms Identification Analysis to this Case, and Accurately Documented His Steps**

Mr. McVeigh’s report contains his analysis of five cartridge cases and two bullets recovered from 3801 Southern Avenue on December 30 2016. *See* Ex. 5. These items were microscopically intercompared to test fire exemplars from the .45 caliber Rock Island Armory pistol, model M1911-A1 CS, serial number RIA1578527. Mr. McVeigh concluded that the recovered items had been fired from the aforementioned pistol. *See* Ex. 5 at JLM\_00773. The

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<sup>10</sup> *See, e.g., U.S. v. Moreno-Aguilar, et al.*, RWT-13-0496 (May 6, 2016).

crime scene evidence, along with the test fired exemplars are sufficient—given the rigorous and reliable approach described above—for Mr. McVeigh to base his testimony upon.

The defendant claims that “Mr. McVeigh provided neither contemporaneous documentation of his adherence to any methodology, nor any other documentation of the similarities or differences he purports exist between the items he compared.” Def’s Mot. at 4. This both misinterprets the standard articulated in *Willock*, and makes erroneous factual claims. The court in *Willock* refers back to the AFTE standard, which provides that:

The case record must contain documentation of the observations that serve as the basis for a reported conclusion. Laboratories are afforded latitude in establishing how this should be accomplished. At a minimum, the documentation must include interpretable depictions or descriptions of the agreement or disagreement of individual and/or class characteristics to the extent that another qualified firearm and toolmark examiner, without the benefit of the evidence itself, can review the case record, understand what was compared, and evaluate why the examiner arrived at the reported conclusion.... Standardization of Comparison Documentation, 38 AFTE J 1, 72–73 (2006).

Courts have found that the twin requirements of adequate documentation and peer review can “ensure the reliability of the expert’s results and the testability of the opinion.” *United States v. Willock*, 696 F. Supp. 2d 536, 561 (D. Md. 2010), aff’d sub nom. *United States v. Mouzone*, 687 F.3d 207 (4th Cir. 2012) (citing to *United States v. Monteiro*, 407 F.Supp.2d 351, 355 (S.D.N.Y.2006)). These requirements have been fulfilled in this case.

Mr. McVeigh’s report contains the results of his examination, which describe: (1) the technique used (microscopic intercomparison); (2) the items which were compared to the test fire exemplars; (3) the ultimate conclusion of the examination; (4) the items which resulted in a match (in this case, the fired cartridge cases (“FCCs”) and the bullets); (5) the specific toolmarks which



show this match (both the breach face impression (“BFI”) and marks at the rim for the FCCs, and land impressions (“LIMPS”) for the bullets); and (6) the identity of Mr. McVeigh’s peer-reviewer (Stephen W. Chase with respect to the FCCs, and Edward L. Gesser with respect to the bullets). *See* Ex. 5 at JLM\_00773-774. Since Mr. McVeigh first received Detective Dalton’s request for a firearm analysis on January 25, 2017, and the final firearms report was issued on January 27, 2017, it is clear that everything was documented contemporaneously. Ex. 1 at JLM\_00120.

The most crucial part of the report are the images (five in total) showing side-by-side comparisons of the toolmarks. *See* Ex. 5 at JLM\_00775-776. These comparisons serve as the required “depictions” of the “agreement... of individual and/or class characteristics.” *See* Standardization of Comparison Documentation, 38 AFTE J 1, 72–73 (2006). It is worth noting that, contrary to what one might infer by reading the Defendant’s motion, AFTE requires only “depictions *or* descriptions” of the agreement, and that “laboratories are afforded latitude in establishing how” to document these bases for the firearms examiner’s opinion. In addition to the depictions, Mr. McVeigh has also included brief descriptions on each of the images—which provide a wealth of information to a qualified firearms examiner. For example, on the third page of the report, notations below or on the images themselves show: (1) the software used (IrfanView); (2) the magnification used (36x on the left, 56x on the right); (3) the item being compared to the test-fire (“PW5”); (4) the specific type of toolmark being compared (a breach face impression on the left, and “marks at the rim” on the right); (5) the fact that on January 27, 2017, examiner # C-1259 (McVeigh) had found that these images constituted a match between PW5 and the test-fire (denoted by McVeigh’s use of the term “ID”); and (6) that on the same day, this conclusion was peer-reviewed by a fellow examiner (identified by his initials), who also found a

match (denoted by the handwritten “ID”). Ex. 5 at JLM\_00775. Hence, the Defendant’s allegation that Mr. McVeigh provided no “documentation of the similarities or differences he purports to exist between the items he compared” is baseless. Def’s Mot. at 4.

The Defendant’s allegation that Mr. McVeigh did not provide “contemporaneous documentation of his adherence to any methodology” is further belied by the earlier notes taken by Mr. McVeigh on January 16, 2017, before a lead as to the weapon had been generated. The pages in question are entitled “Fired Cartridge Case Worksheet” and “Bullet/Projectile Worksheet.” See Ex. 5 at JLM\_00778-779. These pages were designed for the precise purpose of methodically recording some of the characteristics of the recovered items and the toolmarks found on them. For example, certain key characteristics of the recovered items, such as their weight, diameter, and core material were tracked. *Id.* Fields such as “breech face,” “case body marks,” “lands/grooves,” “land impression (inches),” and “groove impression (in.),” were completed, in order to track some of the important toolmarks left on these items. *Id.*

Finally, the FEU’s laboratory is governed by strict standard operating procedures, as well as separate procedures for quality assurance/quality checks.<sup>11</sup> Adherence to these procedures is independently verified by regular audits, as a requirement of the laboratory’s International Organization for Standardization (“ISO”) certification. The FEU has passed its audits,<sup>12</sup> which serves as an additional verification that Mr. McVeigh adhered to the strict standards imposed—in spite of the Defendant’s allegations. Given all of the above, it is clear that: (1) Mr. McVeigh’s proposed testimony is based on sufficient facts; and (2) he has reliably applied the principles and methods of firearms identification analysis to this case, while accurately documenting his steps.

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<sup>11</sup> Produced at JLM\_1072 – 1235 and JLM\_1049 – 1071 respectively, but not included here due to the volume.

<sup>12</sup> Produced at JLM\_1393 – 1466, but not included with this filing due to the volume.

**B. The Government Has Complied with Its Obligations Under Rule 16.**

Under Federal Rule of Criminal Procedure 16(a)(1)(G), the Government must provide a written summary of any expert testimony that it intends to introduce at trial. The Defendant claims that the Government has “not adequately laid out the basis for its expert’s opinions.” Def’s Mot. at 16. As the prior section has made clear, this is untrue. The bases for Mr. McVeigh’s opinions are the observations and comparisons that he made between the recovered items and the test fire exemplars—all of which are set forth in his January 27, 2017 report (produced on January 22, 2018). *See* Discovery 4 Letter, attached hereto as Ex. 11. Furthermore, on February 28, 2018, in response to the Defendant’s voluminous follow up requests, the Government produced: (1) an additional five hundred pages of discovery; (2) two CDs of materials (which did not lend themselves to bates numbering); and (3) detailed answers to several questions. *See* Discovery 7 Letter, attached hereto as Ex. 12. It is well established that “[a] defendant is prejudiced under Rule 16 only when he is unduly surprised and lacks an adequate opportunity to prepare a defense, or when the violation substantially influences the jury.” *United States v. De La Rosa*, 196 F.3d 712, 716 (7th Cir.1999). Hence, the Defendant’s contention that he “has been denied the opportunity to challenge the Government’s evidence” is nonsensical. Def’s Mot. at 16. All of the above, in addition to the information in the Government’s January 22, 2018 disclosure, (attached hereto as Ex. 13) satisfies the Rule 16 requirements, and the defense’s contentions as to insufficiency are therefore without merit. Defense counsel should have all documentation they need to challenge the validity of Mr. McVeigh’s conclusions. The Government has provided relevant materials without delay, and given the fact that trial in this case is not currently scheduled until June 18, 2018—even if there were to have been delay, it has certainly not been prejudicial.



**CERTIFICATE OF SERVICE**

This is to certify that on this 9th day of April, 2018, I caused a copy of the foregoing document to be filed on all parties through ECF.

\_\_\_\_\_  
/s/

Christian J. Nauvel  
Special Assistant United States Attorney

Thomas M. Sullivan  
Assistant United States Attorney