

One of the forensic science feature comparison methods discussed in the PCAST report is firearm toolmark analysis. As the passage cited in defendants' motion (R. 838, ¶ 6) makes clear, however, nothing in the PCAST report casts doubt on this Court's findings in its order denying defendants' prior motion to exclude expert testimony on this issue. (R. 781.)

In the Court's order denying defendant's prior motion, the Court found that all the findings to be presented by the government's witness were independently reviewed by a second examiner at the expert's lab. (R. 781 at 1.) The Court stated that the methodology employed by the government's witnesses, the Association of Firearms and Toolmark Examiners ("AFTE") method, has been almost uniformly accepted among the federal courts. (R. 781 at 2.) The Court found that the AFTE method has been tested and subjected to peer review, that three different peer-reviewed journals study the AFTE method, and that a number of reliability studies have analyzed the method. (*Id.*) The Court also found that firearm toolmark analysis is widely accepted beyond the judicial system, and that at least forty-two colleges and universities around the world offer courses in toolmark identification. (*Id.* at 3.)

With respect to firearm toolmark analysis, the PCAST report does not break new ground. Instead, as the quoted passage in defendants' motion makes clear, the report relies heavily on the 2008 report from the National Research Council ("NRC")¹

¹ Committee to Assess the Feasibility, Accuracy, and Technical Capability of a National Ballistics Database, National Research Council, *Ballistics Imaging* (National Academies Press 2008, available at <http://books.nap.edu/catalog/12162.html>) ("2008 NRC Report").

and a related 2009 NRC report². (*See also*, R. 836, Ex. A at 105.) Further, with respect to firearm toolmark analysis, the report focused on studies that predated the NRC reports: “our own extensive review of the relevant literature prior to 2009 is consistent with the National Research Council’s conclusion.” (R. 836, ¶ 6.) Federal courts, however, have already considered the 2008 and 2009 NRC reports, and no court has concluded that the findings of those reports warrant the exclusion of expert toolmark opinion testimony outright. *See United States v. Otero*, 849 F. Supp. 2d 425, 438 (D. N.J. 2012); *United States v. Ashburn*, 88 F. Supp. 3d. 239, 244-46 (E.D.N.Y. 2015). Like the NRC report, the PCAST report states that “whether firearms analysis should be deemed admissible based on current evidence is a decision that belongs to the courts.” (R. 836, Ex. A at 112.)

When the PCAST report did address a development that occurred after the 2008 and 2009 NRC reports, that development, a 2011 study conducted by the Ames Laboratory at Iowa State University (“Ames Lab report”), supports allowing firearm toolmark analysis in court. The PCAST report described this study as “appropriately designed to test foundational validity and estimate reliability” and noted that the study was “conducted by an independent group unaffiliated with a crime laboratory.” (R. 836, Ex. A at 111.) Notably, this study resulted in a false positive rate of 1.5 percent, which corresponds to an estimated error rate of 1 in 66 cases. (*Id.* at 112.) That error rate parallels the known error rate of the AFTE method, which is between 0.9 percent and 1.5 percent. *Otero*, 849 F. Supp. 2d at 433-34. As the Court stated,

² National Research Council, *Strengthening Forensic Science in the United States: A Path Forward*. The National Academies Press. Washington D.C. (2009) (“2009 NRC Report”).

“although the error rate of the [AFTE] method has varied somewhat from study to study, AFTE examiners have been found to have an error rate in the single digits, sometimes better than algorithms developed by scientists.” (R. 781 at 2.)

The PCAST report does not say that firearm toolmark analysis is junk science. Rather, like the NRC report, it calls for additional “appropriately designed studies” like the Ames Lab report. The PCAST report also recommends that when firearm toolmark analysis is presented in court, the error rate from the Ames Lab report also be presented. (Id. at 111-12.) The Court has already ruled that defendants may raise issues regarding the actual error rate of toolmark analysis, and the Ames Lab report error rate corresponds to the known error rate of the AFTE method.

As the Court noted in its order, the government will not elicit on direct examination statements describing firearm toolmark analysis as a science, or the phrase “reasonable degree of certainty.” The Court’s order regarding the scope of cross-examination of the government’s experts obviously still stands and the government does not object to cross-examination of its experts regarding the false positive error rate described in the Ames Lab report.

I. CONCLUSION

For the foregoing reasons, the government respectfully requests that defendants' second joint renewed motion to exclude expert testimony regarding firearm toolmark analysis (R. 838) should be denied without a hearing.

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Respectfully submitted,

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