

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

UNITED STATES OF AMERICA

v.

**ABU AGILA MOHAMMAD
MAS'UD KHEIR AL-MARIMI**

Defendant.

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Case No. 22-cr-392 (DLF)

**GOVERNMENT'S OPPOSITION TO DEFENDANT'S
MOTION TO EXCLUDE EXPERT TESTIMONY OF ALLEN WILLIAM FERADAY**

The United States of America, by and through its attorney, the United States Attorney for the District of Columbia, respectfully submits this opposition to the defendant's motion to exclude the testimony of the government's proposed expert in the field of forensic examination and analysis of explosives (ECF 170). As discussed in detail below, legal precedent firmly supports the admission of the testimony of Allen William Feraday, a well-qualified and universally accepted expert in that field, to provide critical context for the government's evidence in the case, which will assist the jury in understanding a discreet set of topics beyond the jury's common knowledge. Specifically, Mr. Feraday's scientific, technical, and specialized knowledge in this case will assist the jury to understand the evidence and provide necessary information. The Court therefore should deny the defendant's motion.¹

FACTS

This is a prosecution arising from the bombing of Pan Am World Airways Flight 103 ("Pan Am Flight 103") on December 21, 1988, killing 270 people. The plane was destroyed over

¹ While the defense did not ask for a hearing on this motion, the government asks that the Court not rule until after a *Daubert* hearing. The testimony from Mr. Feraday relevant to a *Daubert* hearing will be elicited during the Rule 15 testimony.

Lockerbie, Scotland, shortly after takeoff from London Heathrow Airport en route to John F. Kennedy International Airport in New York City. The three-count indictment charges the defendant with violations of 18 U.S.C. §§ 32(a)(1) and (2) and 34 (Destruction of Aircraft Resulting in Death) and 18 U.S.C. § 844(i) (Destruction of Vehicle Used in Foreign Commerce by Means of an Explosive Resulting in Death). *See* ECF 7.

After Pan Am Flight 103 crashed to the ground in Scotland, the fragments from the wreckage were scattered over 845 square miles of rural countryside. Almost immediately, scores of Scottish police officers began scouring the countryside, looking for human remains, along with pieces of the wreckage, personal belongings, and luggage from the flight. This effort yielded enough evidence for the British forensic examiners to determine that a bomb had exploded in a baggage carrier in the forward cargo hold of the aircraft. A forensic re-creation of Pan Am Flight 103 from debris recovered from Scottish countryside and Lockerbie was conducted, and forensic reports discussing the findings were produced. The government anticipates that its evidence produced via the findings made by the lead forensic investigator at the time, Allen William Ferday, will explain the forensic process, findings and conclusions that were produced as a result of the scientific findings.

Accordingly, as described below and in the government's expert notice submitted on October 23, 2024, the government intends to call Mr. Feraday to provide expert testimony regarding the general background information regarding the forensic examination of several thousand pieces of evidence arising from the Pan Am Flight 103 explosion. He will describe the items that demonstrated explosive or investigational interest and his report of the findings. Such testimony will provide the jury with an important overview of the scientific process and forensic findings in this investigation. This will allow the members of the jury to have an understanding of

the nature of an often highly complex forensic evidence and will allow other evidence to be placed into context. A copy of the government's notice was filed on the docket, ECF 67 at 3-8, and is attached hereto as Exhibit 1.

ARGUMENT

Legal authority supports the admission of Mr. Feraday's well-founded testimony to assist the jury's understanding of a complicated forensic investigation. Mr. Feraday is clearly qualified to provide such testimony, and the subject matter is relevant, helpful to the jury and not unfairly prejudicial. Indeed, Mr. Feraday's testimony was heard by the Scottish court in the previous trial of the defendant's co-conspirators in 2000-2001, and his findings were expressly relied on by the court there in the resulting 82-page judgment. *See* Opinion of the Court in H.M.A. v. Megrahi and Fhimah, available at <https://www.scotcourts.gov.uk/media/dqfl12g3/lockerbiejudgement.pdf>.

A. Rule 702 establishes the basis for admission of expert testimony and is intended to be broadly interpreted.

Rule 702 of the Federal Rules of Evidence provides:

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:

- (a) The 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) The testimony is based on sufficient facts or data;
- (c) The testimony is the product of reliable principles and methods; and
- (d) The expert has reliably applied the principles and methods to the facts of the case.

Rule 702 therefore prescribes essentially a two-part test: first, the witness must be qualified, demonstrating knowledge, skill, experience, training or education in the field, and second, the testimony must be able to assist the trier of fact. *See Daubert*, 509 U.S. 579 (1993); *United States*

v. Hite, 769 F.3d 1154, 1169 (D.C. Cir. 2014) (the Court “must ensure that the proffered testimony is both relevant and reliable”) (citing *Daubert*, 509 U.S. at 590, n.9).

When reviewing an expert’s qualifications, the Court must ensure that the testimony “rests on a reliable foundation.” *Daubert*, 509 U.S. at 597; accord *Kumbo Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 141 (1999); *United States v. Williams*, 506 F.3d 151, 160 (2d Cir. 2007). To do so, the Court should consider the criteria listed in Rule 702 and may consider other indicia of reliability enumerated in *Daubert*:

(1) Whether a theory or technique has been or can be tested; (2) “whether the theory or technique has been subjected to peer review and publication”; (3) “the technique’s known or potential rate of error” and “the existence and maintenance of standards controlling the technique’s operation”; and (4) whether a particular technique or theory has gained general acceptance in the relevant scientific community.

Williams, 506 F.3d at 160 (quoting *Daubert*, 509 U.S. at 593-940. “The test of reliability is flexible, and *Daubert*’s list of specific factors neither necessarily nor exclusively applies to all experts or in every case.” *Kumbo Tire Co.*, 526 U.S. at 141. Courts have “considerable leeway in deciding in a particular case how to go about determining whether particular testimony is reliable” *Id.* at 152. The object is to “make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.” *Id.*

Rule 702 “is to be broadly interpreted,” and its meaning of expert viewed “very broadly.” *Mannino v. International Manufacturing Co.*, 650 F.2d 846, 849 (6th Cir. 1981). As the Advisory Committee Notes to Rule 702 explain:

The rule is broadly phrased. The fields of knowledge which may be drawn upon are not limited merely to the “scientific” and “technical” but extend to all “specialized” knowledge. Similarly, the expert is viewed, not in a narrow sense, but as a person qualified by “Knowledge, skill, experience, training or education.”

F.R.E. 702 Advisory Committee Notes to 1972 Proposed Rule.

When reviewing the relevance of proposed expert testimony, the Court “must determine whether an expert’s opinion on the subject will ‘assist the trier of fact,’ or, in other words, be helpful to the jury.” *United States v. Kassir*, No. S2 04 Cr. 356 (JFK), 2009 WL 910767, at 7 (S.D.N.Y. Apr. 2, 2009) (denying motion to preclude expert testimony regarding al Qaeda and related topics) (quoting *United States v. DiDomenico*, 985 F.2d 1159, 1163 (2nd Cir. 1993)), *aff’d* *sub nom*, *United States v. Mustafa*, 406 Fed. Appx. 526, 528-29 (2d Cir. 2011). The “Rules of Evidence provide a liberal standard for the admissibility of expert testimony,” *United States v. Dukagjini*, 326 F.3d 45,52 (2d Cir. 2003), as “[e]xpert witnesses are often uniquely qualified in guiding the trier of fact through a complicated morass of obscure terms and concepts.” *United States v. Duncan*, 42 F.3d 97, 101 (2d Cir. 1994), See *United States v. Boney*, 977 F.2d 624, 628 (D.C. Cir. 1992) (recognizing that a decisive factor in determining whether the expert testimony would be helpful is whether the jury has a common knowledge of the subject matter of the testimony).

Under this inclusive standard, the admission of Mr. Feraday’s expert testimony on the proposed topics is clearly appropriate. As discussed further below, there can be little doubt that Mr. Feraday’s qualifications are reliable and that his testimony is relevant to the jury’s understanding of the charges at issue.

B. Mr. Feraday is abundantly qualified.

Mr. Feraday has extensive background in the field of forensic examination analysis of explosives. In particular, he has accumulated over 44 years of experience working with and analyzing explosives with particular reference to improvised explosive devices and their means of initiation. During the course of his career, amongst numerous other investigations, he was involved in the examination of approximately 640 explosive incidents attributable to the Provisional Irish

Republican Army (“PIRA”) which occurred in the United Kingdom resulting in 120 deaths. For the majority of these cases, he was the sole investigator. He carried out investigations in various countries including Belgium, Germany, Greece, Gibraltar, Israel, Iraq, Sri Lanka, India, Portugal, and Japan and has given numerous presentations and trainings all over the world. Finally, he has given forensic testimony involving the illegal use of explosive substances in the United Kingdom over thirty times along with forensic testimony in Belgium, Gibraltar, Eire, and Holland. It should be noted that his expert forensic testimony in the Pan Am Flight 103 trial involving was universally accepted by the Scottish tribunal that presided over the trial of the defendant’s co-conspirators at Camp Zeist. He has received numerous awards throughout his career: In 1989 he was presented with the Order of the British Empire (“OBE”) from Her Majesty Queen Elizabeth II for his service provided to Forensic Science in the United Kingdom and Great Britain. In 1994 he received a specialist award from the Royal Aeronautical Society for the investigation of the loss of aircraft through the use of explosives. In 1996, he received a specialist award from the Metropolitan Police Bomb Squad and in 1998, he received a Medal of Honours award from the International Association of Bomb Technicians and Investigations.

Mr. Feraday’s extensive knowledge, experience, training, and education on topics pertaining to forensic examination and analysis of explosives will serve as the basis for his testimony and opinions. There should be no doubt about the extent of his qualifications in forensic science.

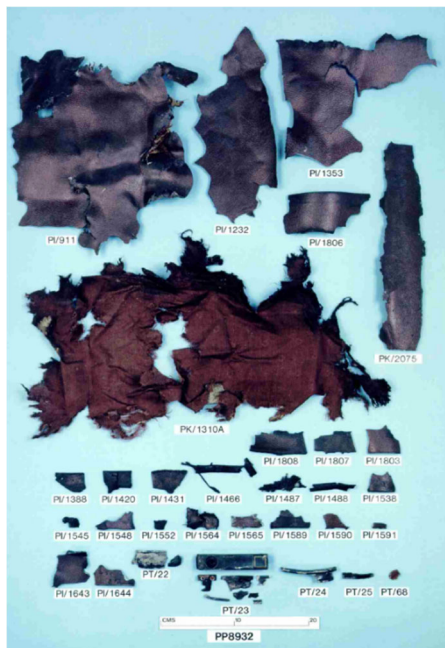
C. Mr. Feraday’s opinions are well-founded and helpful.

The defense first states that Mr. Feraday’s conclusions about the locations of items could only be reached through “omnipotence” and “an ability to see the past.” ECF 170 at 5. They then state that Mr. Feraday’s expertise will not help the jury because one “does not need expert

knowledge to draw a conclusion about what items may have been located where.” *Id.* at 6. These arguments cannot both be right, and in fact both are wrong.

Mr. Feraday’s testimony, previewed in the expert notice, will explain the sound bases upon which he formed opinions about the locations of relevant items. Mr. Feraday and his colleagues authored a comprehensive report detailing their findings regarding the explosion on Pan Am Flight 103. This report was a product of the Royal Armament Research and Development Establishment (“RARDE”), hereinafter referred to as the RARDE report. The RARDE report was produced following an extensive investigation that took several years to complete. Immediately following the crash, Mr. Feraday and his colleagues viewed and analyzed tens of thousands of pieces of evidence that included pieces of the plane, clothing fragments, timer fragments, pieces of radio, as well as comparing them to control samples of the same items. The RARDE investigation also involved travel to various countries, such as Germany, Japan and the United States to collect evidence and conduct explosive tests. All of the evidence was catalogued and photographed. This painstaking process resulted in a 206-page report with an appendix of almost 400 photos.

Just one example of the work that went into each opinion is demonstrated in support of his opinion that a particular suitcase housed the bomb. Mr. Feraday identified 56 items that he



determined to be “component parts of” that suitcase, an inference reached through detailed observations such as that “smooth inner surface” of one “was lined in one area with the partially charred remains of a brown woven fabric which had a cream coloured thin reticulated plastics foam underlay.”²

Some of those 56 “component parts” are pictured at left. To identify the luggage that was positioned near the bomb suitcase, Mr. Feraday looked for “characteristic explosion damage [indicating] having been in relatively close proximity

to” the bomb, based on “known short range blast effects of high performance explosives coupled with the observed very localised damage to” the baggage container.³ These opinions flow logically from the underlying facts in a way the Court can see is reliable.

At the same time, none of this is the kind of analysis the jury can do on its own. Mr. Feraday’s process involved the analysis of countless pieces of recovered luggage, clothing, equipment, and fuselage, as well as the partial reconstruction of a disintegrated 370,000-pound aircraft. The government cannot simply pile all this debris in the courtroom and ask the jury to reach its own conclusions. Moreover, what makes Mr. Feraday’s opinions helpful is not just all the time and labor that went into them, but also his specialized knowledge and insight as an expert in explosives. His background empowers him to make observations and draw inferences that

² RARDE Report at 12.

³ RARDE Report at 24.

would escape a layperson. Mr. Feraday's testimony accordingly "will help the trier of fact to understand the evidence [and] to determine a fact in issue." Fed. R. Evid. 702(a).

Defense counsel is certainly able to cross-examine Mr. Feraday regarding his scientific process and resulting forensic conclusions, however it is difficult to see how Mr. Feraday's well-established qualifications and extensive history and work on Pan Am Flight 103 would not assist the trier of fact in evaluating an enormous and complex forensic investigation.

D. The government will not elicit an opinion about "terrorist" motives.

Regarding Mr. Feraday's statement that the bomb was placed on the plane by a terrorist, defense counsel is correct in the assertion that the government is offering Mr. Feraday solely as an expert in the field of forensics. ECF 170 at 7-8. We would not think to submit Mr. Feraday as an expert regarding an individual's intent behind placing a bomb on an aircraft carrying 270 people. Any conclusion drawn regarding the purpose for the placement of the bomb on Pan Am Flight 103 is beyond the scientific expertise for which he is offered. His own common-sense assumption behind why a bomb would be placed on a commercial airline is not being offered as part of his expert opinion.

* * *

CONCLUSION

WHEREFORE, for all of the above-stated reasons, the United States respectfully requests that this Court deny the defendant's motion to preclude the testimony of the government's proposed expert.

Respectfully submitted,
JEANINE FERRIS PIRRO
UNITED STATES ATTORNEY

By: /s/ Jennifer Burke
JENNIFER BURKE (MD Bar No. 9706250061)
KATHLEEN CAMPBELL (MD Bar No. 9812170031)
Trial Attorneys
Counter Terrorism Section
National Security Division
950 Pennsylvania Avenue NW
Washington, D.C. 20530

ERIK M. KENERSON (OH Bar No. 82960)
CONOR MULROE (NY Bar No. 5289640)
BRITTANY KEIL (D.C. Bar No. 500054)
Assistant United States Attorneys
JEROME J. TERESINSKI (PA Bar No. 66235)
Special Assistant United States Attorney
National Security Section
United States Attorney's Office
601 D Street NW
Washington, D.C. 20530
(202) 252-7201