

# A Review of the FBI's Handling of the Brandon Mayfield Case



UNCLASSIFIED AND REDACTED

Office of the Inspector General  
Oversight and Review Division  
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## **EXECUTIVE SUMMARY**

In May 2004, the Federal Bureau of Investigation (FBI) arrested Brandon Mayfield, an Oregon attorney, as a material witness in an investigation of the terrorist attacks on commuter trains in Madrid, Spain, in March 2004. Mayfield had been identified by the FBI Laboratory as the source of a fingerprint found on a bag of detonators in Madrid that was connected to the attacks. Approximately two weeks after Mayfield was arrested, the Spanish National Police (SNP) informed the FBI that it had identified an Algerian national as the source of the fingerprint on the bag. After the FBI Laboratory examined the fingerprints of the Algerian, it withdrew its identification of Mayfield and he was released from custody.

As a result of these events, the Office of the Inspector General (OIG) initiated an investigation into the misidentification, investigation, and detention of Mayfield. We sought to determine the causes of the misidentification and to assess the FBI Laboratory's responses to the error. We also examined whether the FBI used the USA PATRIOT Act (Patriot Act) in connection with the investigation of Mayfield, whether the FBI targeted Mayfield because of his Muslim religion, and whether the FBI's representations to the United States District Court in support of the requests for a material witness warrant and search warrants were accurate. In addition, we examined Mayfield's conditions of confinement and whether they were consistent with the material witness statute.

### **I. Background**

On March 11, 2004, terrorists detonated bombs on several commuter trains in Madrid, Spain, killing approximately 200 people and injuring more than 1,400 others. The SNP recovered fingerprints on a bag of detonators connected with the attacks and transmitted them to INTERPOL with a request that the FBI Laboratory provide assistance in identifying the fingerprints. On March 19, the FBI Laboratory's Latent Print Units (LPU) identified a United States citizen, Brandon Mayfield, as the source of one of the fingerprints on the bag, referred to as Latent Fingerprint Number 17 (LFP 17). Mayfield's fingerprints had been initially retrieved, along with others, as a potential match to LFP 17 based on a computerized search of millions of fingerprints in FBI databases. This automated search by the FBI's Integrated Automated Fingerprint Identification System (IAFIS) generated a list of 20 candidate prints from the FBI's Criminal Master File. An FBI examiner then began side-by-side comparisons of LFP 17 and the potential matches, one of which was Mayfield's fingerprint. Following a detailed comparison of LFP 17 and Mayfield's known fingerprint, the examiner concluded that Mayfield was the source of LFP 17.

This conclusion was verified by a second LPU examiner and reviewed by a Unit Chief in the LPU, who concurred with the identification.

As a result of this identification, the FBI immediately opened an intensive investigation of Mayfield, including 24-hour surveillance. The FBI determined that Mayfield was an attorney in Portland, Oregon. The FBI also learned, among other things, that Mayfield was a Muslim who had married an Egyptian immigrant, had represented a convicted terrorist in a child custody dispute in Portland, and had contacts with suspected terrorists. However, the FBI's investigation did not turn up any information specifically linking Mayfield to the Madrid train attacks.

As part of the investigation, the FBI obtained authority to conduct covert electronic surveillance and physical searches of Mayfield pursuant to the Foreign Intelligence Surveillance Act of 1978 (FISA).<sup>1</sup> The FBI's electronic surveillance of Mayfield began on [REDACTED] and included, among other things, monitoring [REDACTED]. The FBI also conducted FISA-authorized searches of Mayfield's law office on [REDACTED], and of the Mayfield residence on [REDACTED].

On April 13, the FBI learned that the SNP Laboratory's examination of Mayfield's fingerprints had yielded a "negativo" (negative) result. The FBI therefore dispatched an examiner to meet with the SNP in Madrid on April 21 to explain the basis of the FBI's identification of LFP 17 as belonging to Mayfield. At the end of that meeting, the SNP Laboratory representatives said they would reexamine Mayfield's fingerprints and LFP 17 in light of the FBI's presentation.

In early May, the FBI began receiving media inquiries about a possible American suspect in the Madrid bombings case. The FBI became concerned that its investigation of Mayfield would become publicly known and that Mayfield might flee or destroy evidence. As a result, on May 6 the FBI and Department of Justice (DOJ) attorneys applied to the United States District Court in Oregon for a warrant to detain Mayfield as a "material witness"

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<sup>1</sup> FISA provides for the use of, among other things, covert electronic surveillance and physical searches to gather foreign intelligence information. To obtain FISA authorization to conduct covert surveillance and searches, the government must submit a written application to a special court, the Foreign Intelligence Surveillance Court (FISA Court), which has the authority to grant or deny the application. The written application must establish, among other things, probable cause for the FISA Court to find that the target of the surveillance and searches is either a foreign power or an agent of a foreign power, and that a significant purpose of the surveillance and searches is to obtain foreign intelligence information. A foreign power is defined broadly to include any group engaged in international terrorism.

pursuant to 18 U.S.C. § 3144.<sup>2</sup> The FBI and DOJ also applied to the Court for criminal search warrants for Mayfield's home and office. The FBI submitted affidavits to the Court in support of these requests. On the basis of the representations in these affidavits, the Court issued the material witness warrant and the criminal search warrants.

The FBI arrested Mayfield on May 6 and executed the search warrants that same day, seizing evidence from his home and office. When Mayfield was brought before the Court on May 6, he denied that the fingerprint on the detonator bag was his and said he had no idea how it got there. The Court denied Mayfield's request to be released to home detention and he was incarcerated at the Multnomah County Detention Center (MCDC) in Portland, Oregon.

On May 17, the Court appointed an independent expert to review the FBI's fingerprint identification. On May 19, the independent expert concurred with the FBI's identification of LFP 17 as being Mayfield's fingerprint.

However, on the same day, May 19, the SNP informed the FBI that it had positively identified LFP 17 as the fingerprint of a different person, an Algerian national named Ouhmane Daoud. At the request of the Portland prosecutors, the Court released Mayfield to home detention on May 20. After reviewing Daoud's prints, the FBI Laboratory withdrew its identification of Mayfield on May 24, and the government dismissed the material witness proceeding.

The FBI initially provided a variety of explanations for the fingerprint misidentification, including the poor quality of the digital image of LFP 17, lack of access to the original fingerprint on the bag of detonators, and the similarity of LFP 17 to Mayfield's fingerprint.

After the FBI withdrew its identification, it convened a 2-day session with an International Panel of fingerprint experts to determine how the examination of LFP 17 failed and to make recommendations for changes in FBI fingerprint procedures. The Panel met at the FBI Laboratory in June 2004, and was provided information about the Mayfield case. Several panelists concluded that the initial examiner failed to conduct a complete analysis of LFP 17 before conducting the IAFIS search, which in turn caused him to disregard important differences in appearance between LFP 17 and Mayfield's known prints. Several panelists cited overconfidence in the power of IAFIS and the pressure of working on a high-profile case as contributing to the error. Some panelists

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<sup>2</sup> Pursuant to 18 U.S.C. § 3144, a court may order the arrest of a person if it appears that the testimony of the person is material to a criminal proceeding, and it is shown that it may become "impracticable to secure the presence of the person by subpoena."

stated that the verification was “tainted” by knowledge of the initial examiner’s conclusion. The panelists made recommendations for changes in the FBI Laboratory, including expanded documentation requirements and modified verification procedures.

On July 16, the FBI Laboratory issued a formal report identifying Daoud as the source of LFP 17.

In October 2004, attorneys for Mayfield filed a civil action against the FBI, DOJ, and several individuals. The complaint includes claims for violations of Mayfield’s civil rights, violations of the Privacy Act, and violations of the United States Constitution in connection with the FBI’s investigation and arrest of Mayfield.

## **II. The Methodology of the OIG Investigation**

The OIG’s investigation examined the conduct of the FBI in the Mayfield case. The specific objectives of the OIG’s investigation were: (1) to determine the causes of the fingerprint misidentification; (2) to assess the Laboratory’s responses to the error and, if appropriate, to make additional recommendations for changes in Laboratory procedures to prevent future errors of this type; (3) to determine whether the FBI unfairly targeted Mayfield in the fingerprint identification or in the ensuing investigation because of his religion; (4) to assess the FBI’s conduct in the investigation and arrest of Mayfield; (5) to assess the FBI’s conduct in making certain representations to the United States District Court in support of the requests for a material witness warrant and search warrants; and (6) to assess the conditions under which Mayfield was confined prior to his release.

The OIG’s investigation was conducted by a team of attorneys and a program analyst. The OIG interviewed approximately 70 individuals, including personnel from the DOJ Counterterrorism Section (CTS), the DOJ Office of Intelligence Policy and Review (OIPR), the FBI Laboratory, and the FBI Counterterrorism Division (CTD). In Portland, Oregon, the OIG interviewed personnel from the Portland Division of the FBI, the United States Attorney’s Office (U.S. Attorney’s Office), the United States Marshals Service (USMS), the Multnomah County Sheriff’s Office (MCSO), and the Multnomah County Detention Center (MCDC). The OIG also interviewed four officials of the SNP by telephone. In addition, the OIG interviewed two members of the International Panel of fingerprint experts convened by the FBI Laboratory, as well as the Executive Director of American Society of Crime Laboratory Directors/ Laboratory Accreditation Board (ASCLD/LAB), the organization responsible for accrediting the FBI Laboratory. Mayfield’s attorneys declined the OIG’s request to interview Mayfield.

In addition, the OIG reviewed thousands of pages of documents generated by the FBI, DOJ, the U.S. Attorney's Office, the USMS, and the MCDC pertaining to the fingerprint identification and the investigation, arrest, and detention of Mayfield. This documentation included e-mails, internal memoranda and reports, notes, briefing materials, policy and procedural manuals, timelines, and investigative records, as well as pleadings, transcripts, and orders from court proceedings.

In evaluating the causes of the fingerprint misidentification, the OIG consulted with three distinguished latent fingerprint examiners outside the FBI Laboratory: John D. "Dusty" Clark, formerly of the California Department of Justice and currently with the Western Identification Network; Michael R. Grimm, a Forensic Supervisor with the Virginia State Police; and John R. Vanderkolk, Regional Laboratory Manager for the Indiana State Police. These expert consultants were selected for their achievements and reputations within the latent fingerprint community and for the diversity of viewpoints that they have expressed within the latent fingerprint discipline.

In addition to the OIG's review, the DOJ Office of Professional Responsibility (OPR) also conducted an investigation into aspects of the Mayfield case that involved the conduct of Department attorneys. Initially, the OIG intended to investigate the entire Mayfield matter, including the conduct of DOJ attorneys working with the FBI. We believed that one DOJ oversight entity should investigate the matter, and we also concluded that the OIG had jurisdiction under Section 1001 of the Patriot Act to investigate allegations of civil rights or civil liberties abuse made against all DOJ employees, including DOJ attorneys. However, OPR disagreed, stating that it has the authority generally to investigate allegations involving the professional conduct of DOJ attorneys. Eventually, the Deputy Attorney General decided that OPR would investigate the conduct of DOJ attorneys in the Mayfield case and the OIG would investigate the actions of the FBI.

As a result, OPR (rather than the OIG) evaluated DOJ attorneys' conduct in the Mayfield case, such as the decision to obtain a material witness warrant and the accuracy and sufficiency of the evidence presented by attorneys in support of the warrant. In addition, OPR examined representations made by DOJ attorneys in connection with their request that Mayfield be held in custody and the decision by DOJ attorneys to include certain information about Mayfield in court pleadings.

### **III. Organization of the OIG Report**

The OIG's Report is divided into seven chapters. Chapter One provides an introduction to the report, including the methodology of the OIG's



investigation. Chapter Two sets forth a detailed chronology of events regarding Mayfield's fingerprint identification, investigation, arrest, detention, and subsequent release. Chapter Three provides background information regarding fingerprint identification issues, including a description of the operations of the FBI's LPU and an overview of the latent fingerprint examination process utilized by the Laboratory.

Chapter Four contains the OIG's substantive review of the causes of the erroneous fingerprint identification. Chapter Five presents a review of the Laboratory's responses to the error, including various reforms underway in the LPU, and additional OIG recommendations for the FBI Laboratory.

Chapter Six evaluates the conduct of the FBI with respect to its investigation and arrest of Mayfield. It addresses the issue of whether Mayfield was improperly targeted because of his religion, examines the FBI's use of FISA and the Patriot Act in the investigation, and assesses representations made by the FBI in affidavits submitted in support of the requests for a material witness warrant and criminal search warrants. Chapter Six also examines Mayfield's conditions of confinement. Chapter Seven summarizes the OIG's conclusions.

#### **IV. OIG Assessment of the Causes of the Misidentification**

In this section of the Executive Summary, we discuss the OIG's assessment of the causes of the FBI Laboratory's misidentification of LFP 17.

##### **A. The Primary Causes of the Error**

The OIG found several factors that caused the FBI's misidentification of the fingerprint. The unusual similarity between LFP 17 and Mayfield's known fingerprint was a major factor in the misidentification that confused three experienced FBI examiners and a court-appointed expert. However, we concluded that the examiners committed errors in the examination procedure, and that the misidentification could have been prevented through a more rigorous application of several principles of latent fingerprint identification.

##### **1. The unusual similarity of the prints**

In identifying Mayfield as the source of LFP 17, the FBI examiners relied in significant part on the relationship of "minutiae" or "points" within the prints. These points are places where individual ridges in the fingerprint end ("ending ridges") or split ("bifurcations"). Ten of the points in LFP 17 that were used to identify Mayfield were also later used by different FBI examiners to

identify Daoud as the source of the print. These 10 features in LFP 17 formed a constellation of points that was generally consistent with the constellation of points in the known fingerprints of both Mayfield and Daoud. The unusual similarity is reflected in the relative location of the points, the orientation of the ridges coming into the points, and the number of intervening ridges between the points. Although the OIG found no systematic study of the rarity of such an event, anecdotal reports suggest that this degree of similarity between prints from two different people is an extremely unusual circumstance.

Despite the unusual similarity in the relationship between points on the Mayfield and Daoud prints, however, Mayfield and Daoud did not have identical fingerprints. In several instances, a bifurcation in one print corresponded to an ending ridge in the other. There were also other subtle but important differences between the prints in the positioning of the features. But the unusual similarity in position and ridge counts was a critical factor that misled four examiners and contributed to their overlooking other important differences between LFP 17 and Mayfield's fingerprint.

In addition, the Mayfield case illustrates a particular hazard of the IAFIS computer program. IAFIS is designed to find candidate fingerprints having the most minutiae arrangements similar to the encoded minutiae from the latent print. These candidates should include the correct match of the print (if it is in the FBI database), but will also include the closest possible non-matches. In this case, the true source of the print was not in the IAFIS database, but the computer found an unusually close non-match. The enormous size of the IAFIS database and the power of the IAFIS program can find a confusingly similar candidate print. The Mayfield case demonstrates the need for particular care in conducting latent fingerprint examinations involving IAFIS candidates because of the elevated danger of encountering a close non-match.

## **2. Bias from the known prints of Mayfield**

The unusual similarity of the Mayfield and Daoud fingerprints was not the sole cause of the misidentification. The OIG found that a significant cause of the misidentification was that the LPU examiners' interpretation of some features in LFP 17 was adjusted or influenced by reasoning "backward" from features that were visible in the known prints of Mayfield. This bias is sometimes referred to as "circular reasoning," and is an important pitfall to be avoided. Having found as many as 10 points of unusual similarity, the FBI examiners began to "find" additional features in LFP 17 that were not really there, but rather were suggested to the examiners by features in the Mayfield prints. As a result of this process, murky or ambiguous details in LFP 17 were erroneously identified as points of similarity with Mayfield's prints.

### **3. Faulty reliance on extremely tiny (Level 3) details**

The OIG also found that the FBI examiners gave significant weight to the purported agreement between extremely tiny details in LFP 17 and Mayfield's fingerprint. These details, including shapes interpreted as individual pores, incipient dots between ridges, and ridge edges, are known as "Level 3" details. Because Level 3 details are so small, the appearance of such details in fingerprints is highly variable, even between different fingerprints made by the same finger. As a result, the reliability of Level 3 details is the subject of some controversy within the latent fingerprint community.

The OIG found that none of the purported Level 3 features in LFP 17 used to identify Mayfield corresponded to features in the known prints of the true donor (Daoud). Thus, unlike the case with larger details, the examiners were not confused by any unusual similarity in Level 3 details on the fingers of Mayfield and Daoud. Rather, they apparently misinterpreted distortions in LFP 17 as real features corresponding to Level 3 details seen in Mayfield's known fingerprints.

There were several indications available to FBI examiners at the time of the identification that the purported Level 3 similarities did not provide reliable support for the identification. Although several different examples of Mayfield's known fingerprints were available to the FBI, some of the details that the FBI examiners considered to be important were only visible on one version of those fingerprints, suggesting the possibility that these details were not reliable characteristics for identification. In addition, the examiners involved in the identification appear to have relied on selected Level 3 similarities, while dismissing or discounting other apparent Level 3 details, such as pores, ridge edge shapes, and small between-ridge details in LFP 17, that were not in agreement with the known Mayfield fingerprints. Several other examiners interviewed by the OIG questioned whether the clarity of LFP 17 was sufficient to support any reliance on Level 3 details. The OIG concluded that the examiners' reliance on Level 3 details in this case was misplaced and contributed to the erroneous identification.

### **4. Inadequate explanations for differences in appearance**

FBI fingerprint examiners are governed by the "one discrepancy rule" in which a single difference in appearance between a latent print and a known fingerprint must preclude an identification unless the examiner has a valid explanation for the difference. Latent fingerprint identifications are subject to a standard of 100 percent certainty. Implicit in this standard is the requirement that the examiner have equivalent certainty in the validity of each explanation for each difference in appearance between prints.

The OIG found that the available information did not support this degree of certainty for the explanations that the examiners adopted for several differences in appearance between LFP 17 and Mayfield's fingerprint. For example, the FBI recognized that the entire upper left portion of LFP 17 did not correspond with Mayfield's fingerprint. The examiners explained this difference as being the result of a separate touch, possibly by a different finger or a different person. This explanation required the examiners to accept an extraordinary set of coincidences. The OIG found that the support for this explanation was, at best, contradictory. Although there was a gap in the fingerprint separating the upper left portion from the rest of the print, the ridge flow was consistent across the gap, suggesting a single touch. Most of the "red flags" that would typically indicate a second touch were not present in LFP 17. Deposition pressure was consistent in both parts of the print, indicating that both areas were part of a single print. In light of this conflicting information, the FBI examiners should not have found sufficient certainty in the "double touch" explanation to support an identification.

There were several other differences between LFP 17 and Mayfield's known fingerprint. Although the explanations that the examiners gave for each difference were individually plausible, they cumulatively required too many rationalizations to support an identification with the requisite certainty. The OIG concluded that the FBI examiners did not apply a sufficiently stringent standard for their explanations and thereby failed to appropriately apply the "one discrepancy rule."

#### **5. Failure to assess the poor quality of similarities**

The OIG also found that the FBI examiners failed to give adequate consideration to the incomplete nature of the agreement in points between LFP 17 and Mayfield's fingerprint. As previously described, there was a constellation of as many as 10 points in LFP 17 that bore an unusual similarity to points in the Mayfield fingerprint. However, the limited clarity of LFP 17 prevented the examiners from making an accurate determination of the type of many of these points (that is, whether they were ending ridges or bifurcations). The OIG found that many of the points utilized by the FBI to support the identification suffered from this shortcoming (ambiguity as to feature type), and that accordingly the "quality" of the agreement was inadequate to support the conclusion of identification.

#### **6. Failure to reexamine LFP 17 following the April 13 Negative Report**

The FBI Laboratory missed an opportunity to catch its error when the SNP informed the FBI on April 13 that it had reached a "negativo" (negative) conclusion with respect to matching LFP 17 to Mayfield's fingerprints. At that

time, the FBI Laboratory did not adequately explore the possibility that it had erred in identifying Mayfield. Moreover, the FBI examiners did not attempt to determine the basis of the SNP's doubts before reiterating that they were "absolutely confident" in the identification on April 15, a full week before the FBI Laboratory met with the SNP. We believe that the FBI Laboratory's overconfidence in the skill and superiority of its examiners prevented it from taking the "April 13 Negativo Report" as seriously as it should have. A better response to a conflicting determination by another forensic laboratory would have been first to determine the complete basis for the other laboratory's disagreement before committing anew to the validity of the original determination, and also to arrange for a fresh examination of the relevant prints by a new examiner who had not previously committed himself to a particular conclusion. The FBI Laboratory took neither of these steps.

## **B.     OIG Assessment of Other Potential Sources of Error**

The OIG evaluated three additional factors that potentially caused the FBI's erroneous identification. While we can not definitively state that these factors were sources of the Mayfield error, they create sufficient potential for other erroneous identifications to merit discussion in this report and recommendations for changes in the FBI Laboratory.

First, the OIG examined whether the standard used by the FBI Laboratory for declaring an identification contributed to the error. The FBI Laboratory employs the "Ridgeology Standard" for identification, which does not require the agreement of a predetermined minimum number of characteristics (sometimes referred to as a "Numerical Standard"), but rather emphasizes the expert examiner's assessment of the quality of agreement as well as the quantity. The OIG concluded that the error would not necessarily have been avoided by the application of a Numerical Standard. The examiners believed that they had found at least 15 "points" in LFP 17 in agreement with Mayfield's fingerprint, which would have satisfied the 12-point threshold advocated by many proponents of a Numerical Standard, and the threshold used in several other countries (including Spain). The methodological errors committed by the examiners – such as applying circular reasoning and failing to apply the "one discrepancy rule" with adequate rigor – could lead to an erroneous identification under either the Ridgeology Standard or a Numerical Standard. However, we agree with the Laboratory's decision following discovery of the error to research and develop more objective standards for fingerprint identification.

Second, the OIG examined whether the FBI's verification procedures contributed to the error. FBI procedures require that every identification be verified by a second examiner. However, under procedures in place at the time of the Mayfield identification, the verifier was aware that an identification had

already been made by a prior FBI examiner at the time he was requested to conduct the verification. Critics of this procedure assert that it may contribute to the expectation that the second examiner will concur with his colleague. It was difficult for the OIG to assess whether the FBI's verification procedures contributed to the Mayfield error, primarily because the retired examiner who verified the Mayfield identification declined to be interviewed for this investigation, and because he was not required to document the features or mental processes that led to his conclusion. Yet, the OIG found it significant that the court-appointed expert reached the same conclusion regarding the identification. The pressures that might cause an FBI examiner to hesitate to dispute a colleague's identification should not have impacted the independent expert's impartiality. Thus, the OIG did not find compelling evidence that the FBI's verification procedures introduced a bias that prevented or discouraged the official verifier from challenging the identification in this case. The OIG believes, however, that the existing Laboratory procedures could be improved to assure that verifications involve complete and independent examinations and provide a more stringent safeguard against erroneous identifications.

Third, the OIG considered whether the pressure of working on a high-profile terrorism case was a significant contributing cause of the error in this case. We found no evidence to support this conclusion. FBI examiners work on many high-profile cases without committing such errors. In addition, the examiners were unable to identify most of the latent fingerprints submitted by the SNP as part of its investigation of the Madrid bombings, and the pressure to identify LFP 17 was no greater than the pressure to identify the other prints. The OIG did find, however, that the FBI Laboratory's stated criteria for reporting an "inconclusive" result from a latent fingerprint examination could result in implicit pressure on the examiner to make an identification in a difficult comparison in a case involving a particularly heinous crime, and the OIG recommends that the FBI take several specific steps to reduce any such pressure in the future.

### **C. The Role of Mayfield's Religion in the Identification**

The OIG also investigated whether the FBI fingerprint examiners were aware of and improperly influenced by knowledge of Mayfield's religion when they made the identification of LFP 17. We determined that the FBI examiners were not aware of Mayfield's religion at the time they concluded Mayfield was the source of LFP 17. The records available to the examiners did not reveal his religion, his marriage to an Egyptian immigrant, or his representation of other Muslims as an attorney. The OIG found no evidence that the FBI Laboratory had knowledge of Mayfield's religion until the FBI Portland Division learned this fact in the early stages of the field investigation, after the identification had been made and verified by the FBI Laboratory.

However, whether Mayfield's religion was a factor in the Laboratory's failure to revisit its identification and discover the error in the weeks following the initial identification is a more difficult question. By the time the SNP issued the April 13 Negativo Report, the Laboratory examiners had become aware of information about Mayfield obtained in the course of the Portland Division's investigation, including the fact that Mayfield had acted as an attorney for a convicted terrorist, had contacts with suspected terrorists, and was a Muslim. One of the examiners candidly admitted that if the person identified had been someone without these characteristics, like the "Maytag Repairman," the Laboratory might have revisited the identification with more skepticism and caught the error.

The OIG concluded that Mayfield's religion was not the sole or primary cause of the FBI's failure to question the original misidentification and catch its error. The primary factors were the similarity of the prints and the Laboratory's overconfidence in the superiority of its examiners. However, we believe that Mayfield's representation of a convicted terrorist and other facts developed during the field investigation, including his Muslim religion, also likely contributed to the examiners' failure to sufficiently reconsider the identification after legitimate questions about it were raised.

#### **D. Explanations Found by the OIG Not To Have Contributed to the Error**

The OIG found that several explanations for the error proposed by various sources, including FBI Laboratory spokespersons, were not persuasive.

First, the OIG reviewed the FBI's initial claim that the FBI's lack of access to the original evidence on which LFP 17 was deposited was a cause of the error. The FBI examiners made the identification of Mayfield based on a digital photograph provided by the SNP, and the examiners did not have access to the original bag with the fingerprint. Some FBI examiners suggested that this lack of access prevented the FBI from determining, from the positioning of several fingerprints on the evidence, that LFP 17 was made by a right middle finger, not by a left index finger (the Mayfield digit to which it was erroneously matched). Although the positioning of the prints on the evidence certainly suggested the possibility that LFP 17 was made by a right middle finger, that finger was not the only plausible digit. The OIG reviewed the evidence and concluded that, contrary to the FBI's claims, having access to the bag would not necessarily have prevented the LPU from misidentifying Mayfield.

FBI spokespersons also offered another explanation immediately after the error was discovered: that the FBI was working with a degraded or distorted third-generation digital image of LFP 17 provided by the SNP. The OIG found

that although there was a modest improvement in clarity in the photographic image of LFP 17 that the SNP eventually made available to the FBI, the quality of the digital image initially supplied to the FBI did not cause the error.

We also examined the suggestion made by Laboratory spokespersons that the initial examiner should have determined that LFP 17 was not “of value” for identification because there were many lines of separation or demarcation in the fingerprint creating interruptions to ridge flow. The OIG found that this explanation was inconsistent with the Laboratory’s subsequent determination that the fingerprint was in fact suitable for comparison and could be identified as being made by Daoud. The OIG concluded that the purported interruptions to ridge flow within LFP 17 were not a cause of the erroneous identification.

We also considered the suggestion by some members of the International Panel that the FBI examiners were misled by an excessive faith in the IAFIS technology. The OIG did not find this explanation to be persuasive. The FBI examiners were aware that many IAFIS searches do not result in identifications, and the initial examiner conducted IAFIS searches of at least seven other latent fingerprints submitted by the SNP without declaring an identification. IAFIS did not suggest a single candidate to the FBI examiners; it generated a list of candidate fingerprints from which the initial examiner found Mayfield.

## **V. OIG Assessment of the FBI Laboratory’s Responses to the Error**

Following discovery of the misidentification, the FBI Laboratory initiated several actions, including: (1) an internal review of LPU policies and procedures, (2) a review of prior IAFIS identifications from digital prints, (3) a monthly review of prisoners scheduled for capital punishment who may have been convicted or sentenced based on an FBI fingerprint identification, and (4) corrective action with respect to the examiners involved in the Mayfield misidentification.

The OIG concluded that these are significant steps, and we concur with many of the reforms that the Laboratory has adopted, particularly with respect to the development of more objective criteria for declaring an identification, revision of the Standard Operating Procedures (SOPs) to provide greater detail and more specific procedures, and establishment of meaningful minimum documentation requirements for identifications. These reforms will result in significant modifications of practices in the LPU of the FBI Laboratory that we believe will help prevent future errors.



However, we found that the actions proposed by the Laboratory were not fully responsive to the issues raised by the Mayfield misidentification and that additional or more specific modifications to Laboratory practices should be adopted. Accordingly, the OIG made additional recommendations. These include recommendations that the Laboratory develop criteria for the use of Level 3 details to support identifications, clarify the “one discrepancy rule” to assure that it is applied in a manner consistent with the level of certainty claimed for latent fingerprint identifications, require documentation of features observed in the latent fingerprint before the comparison phase to help prevent circular reasoning, adopt alternate procedures for blind verifications, review prior cases in which the identification of a criminal suspect was made on the basis of only one latent fingerprint searched through IAFIS, and require more meaningful and independent documentation of the causes of errors as part of the Laboratory’s corrective action procedures.

## **VI. Analysis of the Investigation, Arrest, and Confinement of Mayfield**

The OIG also reviewed the FBI’s conduct in the investigation and arrest of Mayfield that followed the FBI Laboratory’s identification of him as the source of LFP 17. This portion of our review included an examination of whether the FBI used the Patriot Act in connection with the investigation and an assessment of the role of Mayfield’s religion in the FBI’s field investigation. We also examined the accuracy and completeness of the FBI’s representations in affidavits filed in support of the material witness and criminal search warrants. Finally, we examined the effect of media leaks on Mayfield’s arrest and issues related to his conditions of confinement.

### **A. Effect of the Patriot Act on the Mayfield Investigation**

In the following sections, we summarize the OIG analysis of the Patriot Act provisions that may have had an impact on the Mayfield investigation. We concluded that the Patriot Act amendments to FISA did not affect either the government’s decision to seek FISA search and surveillance authority in the Mayfield case or the scope of information the government collected about Mayfield pursuant to FISA. We found that the FBI likely would have sought and been able to obtain FISA authorization for the searches and surveillance even without the Patriot Act amendments to FISA. We also found that, contrary to public speculation after Mayfield’s arrest, the FBI did not use certain provisions of the Patriot Act in the Mayfield case. However, the Patriot Act did affect the sharing of information about Mayfield with law enforcement agents and intelligence agents and the amount of information that the government collected through the use of National Security Letters (NSLs).

## **1. Sections 218 and 504 of the Patriot Act**

As mentioned previously, the FBI obtained authority to conduct covert surveillance and searches of Mayfield pursuant to FISA. To obtain FISA authority, the government must submit an application to the FISA Court certifying that a significant purpose of the requested surveillance and searches is to gather foreign intelligence information. The application must also establish probable cause for the FISA Court to find that the target of the requested surveillance and searches is either a foreign power or an agent of a foreign power. A foreign power is defined broadly to include any group engaged in international terrorism.

Prior to the Patriot Act amendments, FISA required the government to certify that “the purpose” of the requested surveillance was to gather foreign intelligence information. In assessing such requests, the Department of Justice and courts applied the “primary purpose” test. This allowed the use of FISA-derived information in a criminal case only if the primary purpose of the FISA surveillance or search was to gather foreign intelligence information rather than to conduct a criminal investigation.

Beginning in the 1980s, the Department of Justice developed procedures that limited the circumstances under which information from intelligence investigations could be shared with criminal prosecutors and criminal law enforcement personnel. As a result, a “wall” developed between Department intelligence personnel and criminal personnel that limited information sharing. In addition, while pre-Patriot Act FISA-derived information could be shared freely with intelligence agencies such as the Central Intelligence Agency (CIA) and the National Security Agency, that same information could not be shared with criminal law enforcement officials without consultation and approval from senior officials in the Department of Justice.

Section 218 of the Patriot Act amended FISA to replace the phrase “the purpose” with the phrase “a significant purpose.” Accordingly, the government can now obtain a FISA warrant by showing that the collection of foreign intelligence information is a “significant purpose” of the investigation, rather than the primary purpose as under the previous standard. In addition, Section 504 of the Patriot Act amended FISA to specify that intelligence investigators conducting FISA surveillance or searches may consult with criminal investigators to coordinate efforts to investigate or protect against international terrorism.

To determine if the Patriot Act affected the course of the Mayfield investigation, the OIG examined whether the government, prior to the Patriot Act, would have sought FISA authority to conduct covert searches and

surveillance of Mayfield, and whether FISA authority could have been obtained under the more rigorous pre-Patriot Act primary purpose standard.

Based on our interviews and review of the evidence known to the FBI when it made the decision to seek emergency FISA authority, we concluded that the government likely would have proceeded with a FISA application even before the Patriot Act. Witnesses from the FBI and DOJ who worked on the Mayfield matter and had both pre-Patriot Act and post-Patriot Act experience stated that even before the Patriot Act, the government would have treated the Mayfield matter at the outset primarily as an intelligence case rather than a criminal case. All of the witnesses stated that the primary purpose at the outset of the Mayfield investigation was to collect foreign intelligence information and that the prospect of criminal prosecution of Mayfield was incidental. In addition, some of the witnesses expressed doubts that the government could have obtained the electronic surveillance information it sought had it attempted to use traditional criminal investigative methods.

We concluded that the Patriot Act did not affect the government's decision to pursue FISA search and surveillance authority in this matter. Further, we believe that the government could have met the more stringent primary purpose standard that existed prior to enactment of the Patriot Act.

However, we found that the Patriot Act did affect the government's dissemination of intelligence information about Mayfield. By dismantling the "wall" between criminal and intelligence investigators, the Patriot Act allowed the government to freely share intelligence information about Mayfield gathered in the FISA surveillance and searches with prosecutors and other criminal law enforcement officials. In addition, Section 203 of the Patriot Act allowed the government to share grand jury information with the intelligence community, some of which could not have been obtained and shared through intelligence methods prior to the Patriot Act.

## **2. National Security Letters**

We found that Section 505 of the Patriot Act also affected the amount of information the government collected through the use of NSLs in the Mayfield investigation. The FBI issued [REDACTED] NSLs in the Mayfield case requesting [REDACTED]. Section 505 of the Patriot Act relaxed the certification requirements for issuing NSLs to allow issuance upon a showing that the information sought is "relevant" to an authorized investigation to protect against international terrorism, rather than requiring specific and articulable facts that the information sought pertained to an agent of a foreign power. Based on our review, we concluded that the FBI

may not have been able to meet the requisite certification under the more rigorous pre-Patriot Act standard to issue some of the NSLs in the Mayfield case.

### **3. Other Patriot Act provisions**

The OIG found that, contrary to some public speculation about the Mayfield case, certain other Patriot Act provisions either were not used in or had no significant effect on the Mayfield investigation. For example, Section 213 of the Patriot Act authorizes delayed notification of the execution of criminal search warrants, which are sometimes referred to as “sneak and peek” searches. We found that there were no such searches conducted in the Mayfield investigation. The covert searches that were conducted of Mayfield’s home and office before his arrest were all conducted pursuant to a FISA warrant, not pursuant to criminal search warrants. After his arrest, the searches were based on overt criminal search warrants and the Patriot Act was not implicated in those searches.

Another provision of the Patriot Act, Section 206, amended FISA to allow the government to seek multi-point or “roving” wiretaps. [REDACTED]

[REDACTED] Thus, Section 206 of the Patriot Act had no impact on the Mayfield investigation.

### **4. Conclusion regarding the impact of Patriot Act amendments on the Mayfield investigation**

In sum, the OIG concluded that the Patriot Act amendments to FISA did not affect the government’s decision to seek FISA authority in the Mayfield case and did not affect the scope of information the government collected about Mayfield pursuant to the FISA surveillance and searches. We also found that the FBI did not use certain provisions of the Patriot Act in the Mayfield case, such as those relating to delayed notification searches. Moreover, the evidence indicated that, even prior to the Patriot Act, the FBI would likely have sought and been able to obtain identical FISA authorization for the searches and surveillance of Mayfield that it conducted.

However, the Patriot Act did permit a significant amount of information about Mayfield to be shared with a wide variety of law enforcement agents and intelligence agents that could not have been shared prior to the Patriot Act. By dismantling the wall between intelligence and criminal investigations, the Patriot Act allowed the government to freely share intelligence information about Mayfield gathered in the FISA surveillance and searches with prosecutors and other criminal law enforcement officials. The Patriot Act also allowed the government to share grand jury information with the intelligence

community that could not previously have been shared. In addition, the Patriot Act affected the amount of information the government collected through use of NSLs in the Mayfield investigation by relaxing the certification requirements for issuing NSLs.

We did not find any evidence that the FBI misused any of the provisions of the Patriot Act in conducting its investigation of Mayfield. However, the increased information sharing allowed by the Patriot Act amplified the consequences of the FBI's fingerprint misidentification in the Mayfield case.

## **B. The Role of Mayfield's Religion in the Investigation**

The OIG evaluated whether Mayfield's religion improperly influenced the FBI's actions in the field investigation and arrest of Mayfield. As discussed previously, the OIG concluded that the FBI did not initiate its investigation of Mayfield because of his religion. The FBI Laboratory examiners did not know Mayfield's religion when they made the initial fingerprint identification. Similarly, when the Laboratory's fingerprint identification was communicated to the FBI CTD and the Portland Division, neither entity knew about Mayfield's religion. The FBI first learned of Mayfield's religion only after it had opened a full field investigation of Mayfield to gather all intelligence available on him. Thus, we concluded that Mayfield's religion played no role in the FBI's decision to initiate a full field investigation of Mayfield.

In addition, we concluded that the field investigation of Mayfield was not improperly influenced by the FBI's knowledge of Mayfield's religion. Some government witnesses acknowledged, however, that Mayfield's religion was a factor in the investigation. The FBI learned that the SNP believed the Madrid bombings had been carried out by radical Muslims. Thus, several DOJ and FBI witnesses stated that they expected to discover in investigating the case that the suspects would be Muslim. For example, a Portland Assistant United States Attorney (AUSA) called Mayfield's religious beliefs a "mildly corroborating factor." Other FBI witnesses said Mayfield's religion was not a factor in the investigation, but that his contacts with other suspected terrorists were.

We concluded that the FBI's field investigation of Mayfield was initiated because of and largely driven by the identification of his fingerprint on evidence associated with the train bombings, not by his religious beliefs. We believe the FBI would have sought covert search and surveillance authority irrespective of Mayfield's religion. Moreover, we did not find evidence suggesting that the investigation was prolonged because Mayfield is a Muslim.

In our view, the FBI's field investigation appropriately sought information about a subject who had been positively identified by the FBI Laboratory as having left a fingerprint on a bag of detonators found in Madrid. When the FBI

Laboratory continued to declare that the fingerprint was Mayfield's, we do not believe it was unreasonable for FBI agents to aggressively pursue this investigation.

### **C. The FBI's Participation in the Preparation of the Material Witness and Criminal Search Warrants**

Several FBI agents, a Laboratory Supervisory Fingerprint Specialist, and the FBI's Legal Attaché in Madrid participated in the preparation or review of the affidavits submitted to the United States District Court in support of the material witness and criminal search warrants. We examined the accuracy and supportability of representations made in these affidavits.<sup>3</sup>

We found that the affidavits contained several inaccuracies that reflected a regrettable lack of attention to detail. In addition, we found the wording of the affidavits to be troubling in several respects. In particular, the affidavits provided an ambiguous description of the April 21 meeting between the FBI and the SNP, which apparently led the judge to believe that the SNP had agreed with the FBI's fingerprint identification. In fact, the SNP had only agreed to conduct a reexamination of LFP 17. Finally, we believe the material witness warrant affidavit contained an unfounded inference concerning the likelihood of the existence of false travel documents regarding Mayfield.

### **D. The Role of Media Leaks in the Arrest of Mayfield**

The FBI discovered in early May 2004 that several media outlets had inquired about an American suspect in the Madrid bombings. This information caused the FBI, in conjunction with the DOJ CTS and the Portland U.S. Attorney's Office, to obtain a material witness and criminal search warrants on May 6. The media leak disrupted the FBI's investigative plan, which had called for the FBI to finish its intelligence gathering and analytical work concerning Mayfield near the end of May. The FBI then intended to approach Mayfield in early June and attempt to interview him voluntarily, but not necessarily arrest him.

We found insufficient evidence to conclude that anyone in either the FBI or the DOJ caused or contributed to the leak of information about Mayfield in

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<sup>3</sup> The Portland U.S. Attorney's Office participated in the drafting, editing, and approval of the final versions of the affidavits. The DOJ CTS reviewed the affidavits (for legal sufficiency) and made a recommendation to the Deputy Assistant Attorney General and Assistant Attorney General of the Criminal Division regarding the final versions of the affidavits. The Deputy Assistant Attorney General and the Assistant Attorney General were involved in the review and approval of the final versions of the affidavits. As noted previously, DOJ OPR evaluated the conduct of DOJ attorneys in this case.

order to facilitate his arrest. Further, we did not find sufficient evidence to determine who leaked this information about Mayfield to the media.

### **E. The Conditions of Mayfield's Confinement**

After Mayfield was arrested on the material witness warrant and the Court denied his request to be released to home detention, the USMS assigned Mayfield to be confined at the MCDC. From May 6 until May 12, he was housed in the administrative segregation unit where he was kept in his cell for up to 22 hours per day. On May 12, the MCDC moved Mayfield to the less restrictive protective custody unit, where he was still housed in a solitary cell but was permitted more recreation time outside his cell.

We found that Mayfield's conditions of confinement did not violate the material witness statute. We also did not find evidence that Mayfield was mistreated during his confinement. We found that he was housed under conditions that were consistent with the normal practices of the USMS and the MCDC for criminal defendants and material witnesses.

However, the OIG found that the MCDC failed to communicate important information about Mayfield to appropriate prison personnel, including the instruction to keep him separated from other prisoners for his own safety and the fact that he had been booked under an alias to protect grand jury secrecy. These failures resulted in an inadvertent disclosure of the alias to the media and an unnecessary confrontation between Mayfield and a correctional officer who did not know who he was and confronted Mayfield about his true identity.

### **F. Recommendations**

As a result of our investigation, we provided a series of recommendations to the FBI to address the problems we found in the Mayfield case. While we did not find any intentional misconduct by FBI employees, either in the Laboratory or by those conducting the FBI field investigation, we did find performance issues by various FBI employees. Most significantly, we found a series of systemic issues, particularly in the FBI Laboratory, that helped cause the errors in the Mayfield case. While the FBI Laboratory has taken significant steps to address these issues, we made a series of additional recommendations to the FBI to address the Laboratory issues raised by the Mayfield misidentification. We believe our recommendations, if fully adopted, can help prevent similar errors in the future.

## **CHAPTER ONE INTRODUCTION**

### **I. Background**

This report sets forth the results of an investigation by the Office of the Inspector General (OIG) into the misidentification, investigation, arrest, and detention of Brandon Bieri Mayfield, an Oregon attorney. Mayfield was arrested on a material witness warrant in connection with the terrorist attack that took place on March 11, 2004, on commuter trains in Madrid, Spain. On March 19, Mayfield was identified by the Federal Bureau of Investigation (FBI) Laboratory Division as the source of a fingerprint found on evidence from the Madrid attack recovered by the Spanish National Police (SNP). The FBI immediately initiated an intensive investigation of Mayfield, including 24-hour surveillance. Among other things, the FBI learned that Mayfield was a Muslim and had represented a convicted Muslim terrorist in a child custody dispute. On May 6, after receiving media inquiries about an American suspect in the Madrid case, the FBI arrested Mayfield on the material witness warrant.

On May 19, however, the SNP informed the FBI that it had identified an Algerian national, Ouhnane Daoud, as the source of the fingerprint. After receiving Daoud's prints, the FBI Laboratory withdrew its original identification and the FBI apologized to Mayfield and his family. Mayfield was released from detention on May 20 and the material witness proceeding against him was formally dismissed on May 24.

The OIG initiated this investigation on June 16, 2004, approximately three weeks after news of the FBI Laboratory's erroneous identification of Mayfield became public.<sup>4</sup> The objectives of the OIG's review were: (1) to determine the causes of the fingerprint misidentification and to assess the FBI Laboratory's conduct in the matter; (2) to assess the Laboratory's responses to the error and, if appropriate, to make additional recommendations for changes in Laboratory procedures to prevent future errors of this type; (3) to determine whether the FBI unfairly targeted Mayfield in the fingerprint identification or in the ensuing investigation because of his religion; (4) to assess the FBI's conduct in the investigation and arrest of Mayfield; (5) to assess the FBI's conduct in making certain representations to the United States District Court in support of the request for a material witness warrant and search warrants; and (6) to assess the conditions under which Mayfield was confined prior to his release.

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<sup>4</sup> After the OIG opened the investigation on its own initiative, several members of Congress also requested that the OIG investigate the Mayfield case.



In addition to the OIG's review, the Department of Justice (DOJ) Office of Professional Responsibility (OPR) also conducted an investigation into aspects of the Mayfield case that involved the conduct of Department attorneys. Initially, the OIG intended to review the entire Mayfield matter in its investigation. We believed that one DOJ oversight entity should investigate the matter. We also concluded that the OIG had jurisdiction under Section 1001 of the USA PATRIOT Act (Patriot Act) to investigate allegations of civil rights or civil liberties abuse made against all DOJ employees, including DOJ attorneys. However, OPR disagreed, stating that it has the authority generally to investigate allegations involving the professional conduct of DOJ attorneys. Eventually, the Deputy Attorney General decided that OPR would investigate the conduct of DOJ attorneys in the Mayfield case and the OIG would investigate the actions of the FBI.

As a result, OPR (rather than the OIG) evaluated DOJ attorneys' conduct in the Mayfield case, such as the decision to obtain a material witness warrant and the accuracy and sufficiency of the evidence presented by attorneys in support of the warrant. In addition, OPR examined representations made by DOJ attorneys in connection with their request that Mayfield be held in custody and the decision by DOJ attorneys to include certain information about Mayfield in court pleadings.

The OIG conducted its investigation of the FBI's conduct in coordination with the OPR investigation, although the two offices' findings were developed separately.

## **II. Methodology of this Review**

In the course of our review, the OIG interviewed over 70 individuals. In Washington, D.C., the OIG interviewed personnel from the DOJ Counterterrorism Section (CTS), the DOJ Office of Intelligence Policy and Review (OIPR), and the FBI Counterterrorism Division (CTD). OIG investigators toured the FBI Laboratory Latent Print Units (LPU) located in Quantico, Virginia, and interviewed Laboratory and LPU management and staff, including the LPU fingerprint examiners directly involved in the misidentification.<sup>5</sup> The OIG also obtained a written explanation of the misidentification from Kenneth Moses, the court-appointed fingerprint expert who also verified the identification.

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<sup>5</sup> John T. Massey, the fingerprint examiner who verified the Mayfield identification, was an FBI contractor at the time, but his contract has since expired. Massey declined to be interviewed for this investigation. Massey cited the pendency of legal action by Mayfield against him personally as the reason for declining to be interviewed for this investigation.

OIG investigators traveled to Portland, Oregon to interview personnel from the FBI Portland Division, the United States Attorney's Office (U.S. Attorney's Office), the United States Marshals Service (USMS), the Multnomah County Sheriff's Office (MCSO), and the Multnomah County Detention Center (MCDC) who were directly involved in the investigation, arrest, and detention of Mayfield. Additionally, the OIG toured the MCDC where Mayfield was detained for two weeks.

The OIG sought to interview Brandon Mayfield regarding this matter, but Mayfield's attorneys declined this request. Therefore, the OIG reviewed numerous press accounts describing Mayfield's statements regarding the investigation and the conditions of his confinement.

The OIG obtained and reviewed thousands of pages of documents generated by DOJ, the FBI, and the U.S. Attorney's Office pertaining to the fingerprint identification and the investigation and arrest of Mayfield. This documentation included e-mails, internal memoranda and reports, notes, briefing materials, policy and procedural manuals, timelines, and investigative records, as well as pleadings, transcripts, and orders from court proceedings. While in Portland, the OIG reviewed court records, U.S. Attorney's Office documents, and documents seized by the FBI during searches of Mayfield's office and residence. OIG investigators also reviewed USMS and MCDC records pertaining to Mayfield's detention, including Mayfield's prisoner file, MCDC daily shift logs, internal memoranda, and prisoner tracking system logs.

We also interviewed four officials of the SNP by telephone, including the former director and deputy director of the SNP Laboratory, the commissioner of the unit responsible for processing and identifying fingerprints, and the crime scene investigations division section chief, all of whom were either present at one or more meetings with the FBI to discuss the fingerprint identification or who had subsequent contacts with the FBI on the matter.

In addition, the OIG reviewed the unpublished individual reports of all eight members of an International Panel convened by the FBI in June 2004 to review the fingerprint analysis performed by the FBI Laboratory and to make recommendations to help prevent future errors. The OIG also conducted interviews of two of the panelists who provided information on the panel's review process and explained their assessments of the reasons for the fingerprint error.

The OIG also interviewed the Executive Director of the American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB), the organization responsible for accrediting the FBI Laboratory, to ascertain the accrediting process and to determine the organization's policy and procedures for addressing situations where an accredited laboratory has made a significant

error. ASCLD/LAB also provided a copy of an October 2004 report of an interim inspection it conducted of the FBI Laboratory in response to the Mayfield fingerprint misidentification.

In April 2005, the FBI Laboratory provided the OIG with a copy of detailed reports prepared by seven separate Latent Review Teams asked by the Laboratory to perform a comprehensive internal review of LPU policies and procedures. The OIG reviewed and analyzed the Latent Review Teams' recommendations to assess their responsiveness to the causes of the Mayfield error.

The OIG recruited the following recognized experts in latent fingerprint identification to provide expert input and guidance on latent fingerprint examination issues:

- (1) John Dustin "Dusty" Clark, a latent fingerprint examiner formerly with the California Department of Justice and now employed by the Western Identification Network. Clark has been certified by the International Association for Identification (IAI) and is a member of the Scientific Working Group for Friction Ridge Analysis, Study, and Technology (SWGFAST), an organization of latent fingerprint examiners from many laboratories that establishes guidelines for the discipline. He has provided expert identification testimony on over 280 occasions. In addition to providing his expertise to the OIG's investigation, Clark prepared many of the graphic illustrations of the fingerprint comparisons used in this report.
- (2) Michael R. Grimm, Forensic Science Supervisor, Western Laboratory, Division of Forensic Science, Virginia State Police. Grimm has been a latent fingerprint examiner for 30 years and has qualified to testify as a latent print expert more than 250 times. He is certified by the IAI and has served on the IAI Certification Board. He is also a member of SWGFAST.
- (3) John R. Vanderkolk, Regional Laboratory Manager, Indiana State Police. Vanderkolk is a practicing latent fingerprint examiner, an Editorial Board Member of the Journal of Forensic Identification, and a member of SWGFAST. He has published several articles regarding latent fingerprint examination and has conducted latent fingerprint training on numerous occasions.

These experts were selected for their reputations within the latent fingerprint community and for the diversity of views they have expressed in various

debates within the discipline about issues the OIG believed were implicated by the Mayfield misidentification.<sup>6</sup>

### **III. Organization of the OIG Report**

This report is divided into seven chapters. In the remainder of this chapter, we briefly identify the various law enforcement organizations that are relevant to this report. Chapter Two sets forth a detailed chronology of events regarding the fingerprint identification, investigation, arrest, detention, and subsequent release of Mayfield. Chapter Three provides background information regarding fingerprint identification issues, including a description of the FBI Laboratory LPU and an overview of the latent fingerprint examination process utilized by the LPU. Chapter Four contains the OIG's substantive review of the causes of the erroneous fingerprint identification. Chapter Five presents a review of the Laboratory's responses to the error, including various reforms under way in the LPU, and additional recommendations for consideration by the Laboratory.

Chapter Six evaluates the conduct of the FBI with respect to the investigation and arrest of Mayfield. It addresses the issue of whether Mayfield was improperly targeted because of his religion, examines the FBI's use of the Foreign Intelligence Surveillance Act of 1978 (FISA) and the Patriot Act in the investigation, and assesses representations made by the FBI in seeking a material witness warrant and criminal search warrants. It also sets forth the OIG's assessment of the conditions of Mayfield's confinement. Chapter Seven presents a summary of the OIG's conclusions.

### **IV. Description of Organizations Involved in the Mayfield Matter**

Several federal and international law enforcement organizations and components participated in the investigation, arrest, and detention of Mayfield. Background information regarding those organizations and components of particular relevance to the OIG's investigation is provided here.

The FBI Laboratory provides forensic and technical services to federal, state, and local law enforcement agencies, and occasionally to foreign police departments. The Laboratory analyzes crime scene evidence, provides expert

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<sup>6</sup> It should be emphasized that although the OIG's conclusions were informed by opinions and information provided by these consultants, the conclusions are the OIG's alone, are based on all of the information obtained by the OIG, and should not be attributed to the consultants except where specifically stated in this report. The OIG is extremely grateful for the assistance provided by Messrs. Clark, Grimm, and Vanderkolk.

witness testimony, and assists domestic and international law enforcement agencies in large-scale investigations and disasters. Among the components of the Laboratory are the Latent Print Units (LPU), which conduct latent fingerprint examinations.<sup>7</sup> The LPU identified Mayfield as the source of the fingerprint found in Spain. More detailed information regarding the Laboratory and the LPU is provided below in Chapter Three.

The FBI's CTD is responsible for investigating and dismantling terrorist cells and operatives within the United States and worldwide. The CTD is divided into branches, sections, and units, each of which focuses on a different aspect of terrorism. The Investigative Operations Branch of the CTD supports, coordinates, and manages terrorism-related investigations. It is made up of four sections, one of which is the International Terrorism Operations Section I (ITOS I). ITOS I is responsible for FBI international counterterrorism operations related to al Qaeda and Sunni extremist groups. In March 2004, ITOS I encompassed five geographical units – four Continental United States (CONUS) Units and the Extraterritorial Unit (ETIU). CONUS 4 had geographical responsibility for the Portland, Oregon area. The ETIU serves as a liaison with the FBI's Legal Attachés in other countries.<sup>8</sup>

The FBI's Legal Attaché (referred to in this report as the Madrid Legat) in Madrid acts as a liaison between the FBI and law enforcement agencies in Spain and several other countries, and has responsibility for coordinating all FBI investigations in those countries.

The FBI has 56 separate Field Offices located across the United States. The Portland, Oregon Division of the FBI (Portland Division) was the Field Office primarily responsible for the field investigation of Mayfield. The Portland Division worked closely with the U.S. Attorney's Office for the District of Oregon, which is responsible for prosecuting federal cases in Oregon.

DOJ CTS supports law enforcement efforts in combating international and domestic terrorism. The CTS supported and monitored the efforts of the Oregon U.S. Attorney's Office and worked closely with the FBI's CTD in the Mayfield investigation. The DOJ OIPR is responsible for the preparation and filing of all applications for electronic surveillance and physical searches under FISA.

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<sup>7</sup> Although there were three Latent Print Units within the Laboratory at the time of the Mayfield identification, the FBI sometimes referred to the units collectively in the singular as the LPU. The OIG will follow that convention in this report.

<sup>8</sup> Appendix A to this report contains an organizational chart for the CTD and other selected organizations involved in the Mayfield matter as of the time of the Mayfield identification.

The USMS takes custody of those individuals arrested or detained by some federal agencies, including the FBI. This requires housing and transporting the prisoners from the time they are brought into federal custody until they are either sentenced, acquitted, or otherwise released. If sentenced, the USMS transports them to designated prison facilities. Seventy-five percent of the prisoners in USMS custody are detained in state, local, and private facilities under contract to the USMS; the remainder are housed in Federal Bureau of Prisons facilities.

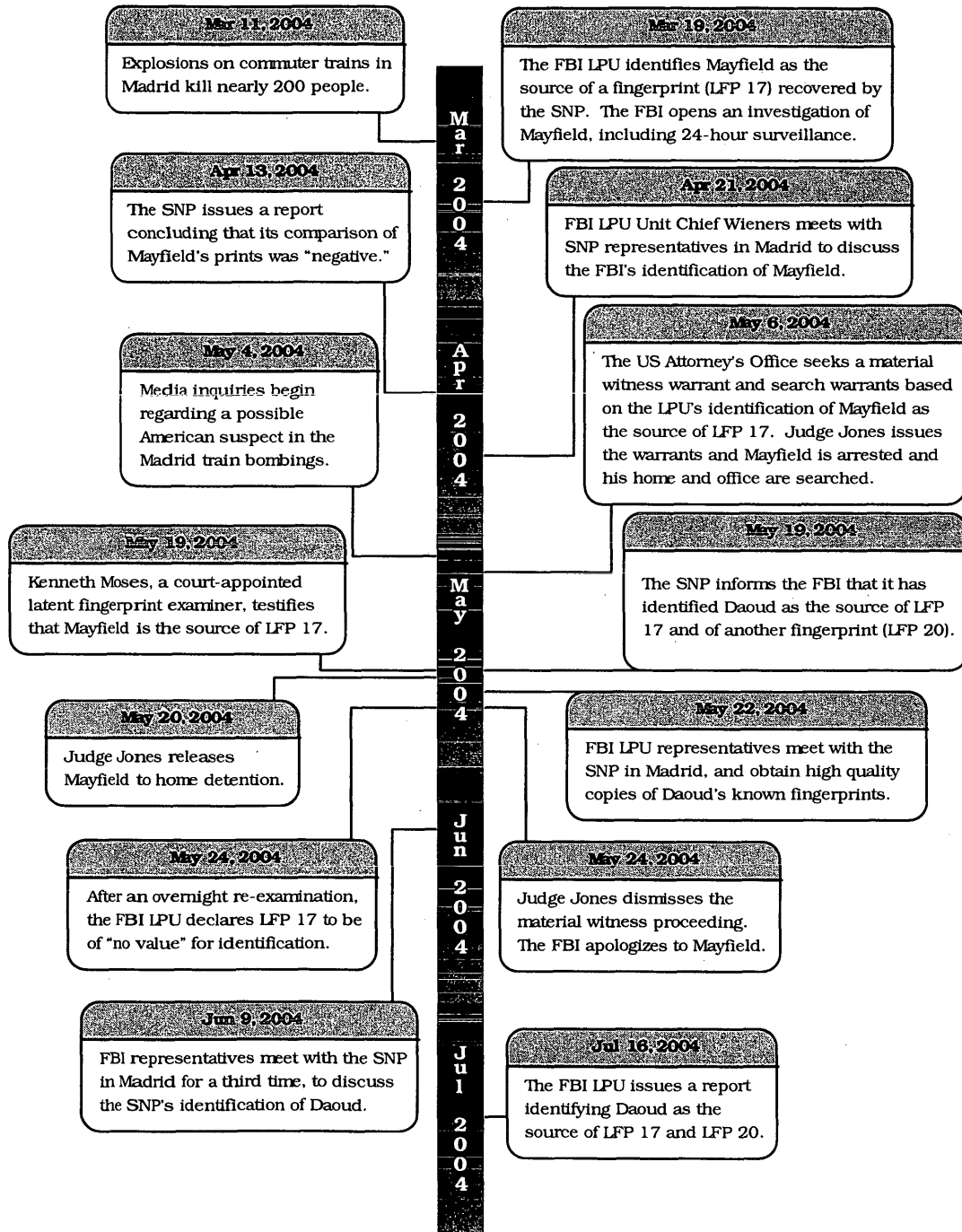
The MCDC, located in Portland, Oregon, is one of the 1,300 detention facilities under contract with the USMS to house federal prisoners under USMS custody. Mayfield was detained in the MCDC.

The SNP is the national police force of the Government of Spain. Like the FBI, the SNP has its own forensic laboratory. The SNP was responsible for investigating the March 11 Madrid train bombings.

INTERPOL is the world's largest international police organization, with 182 member countries. INTERPOL facilitates cross-border police cooperation by providing a global police communication system and a range of criminal databases and analytical services. INTERPOL facilitated initial communications between the SNP and the FBI Laboratory regarding the fingerprint that was identified as belonging to Mayfield.

# FIGURE 1

## Timeline of Major Events



## **CHAPTER TWO**

### **CHRONOLOGY OF EVENTS RELATED TO THE MAYFIELD CASE**

In this chapter, the OIG provides a detailed chronology of events in the Mayfield matter. A timeline of major events is provided in Figure 1.

#### **I. Pre-Arrest Events**

##### **A. The Madrid Train Bombings and the Recovery of Latent Fingerprints 17 and 20**

On March 11, 2004, terrorists detonated a series of devastating bombs on several commuter trains in Madrid, Spain. The explosions killed approximately 200 individuals and injured more than 1,400 others, including 3 United States citizens.

On the day of the attacks, Spanish law enforcement officials located a stolen van near one of the train stations serviced by the commuter trains. Eyewitnesses interviewed by the Spanish National Police (SNP) reported seeing three individuals handling backpacks next to the van before heading toward the train station. During a search of the van, the SNP recovered a blue plastic bag containing several detonators and remnants of explosives. The SNP determined that the detonators and explosives were similar to those recovered from an unexploded bomb found at one of the March 11 bomb sites.

The SNP processed the blue plastic bag for fingerprints. Although numerous fingerprints were found on the plastic bag, the SNP determined that only two of the fingerprints were of sufficient quality to be useful for identification. These were designated as Latent Fingerprint Number 17 (LFP 17) and Latent Fingerprint Number 20 (LFP 20).<sup>9</sup> The SNP also recovered additional fingerprints from the van and from other objects found inside the van.

##### **B. The Identification of Latent Fingerprint 17 by the FBI**

In an effort to obtain international assistance with identifying potential suspects in the March 11 attacks, the SNP forwarded digital images of fingerprints recovered from its investigation to INTERPOL.

On Saturday, March 13, 2004, INTERPOL Madrid submitted digital images of 14 latent fingerprints recovered during the investigation of the

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<sup>9</sup> The term "latent" refers to fingerprints left on evidence, as distinguished from "inked" or "known" fingerprints collected intentionally.



Madrid train bombings to INTERPOL Washington, including LFP 17 and LFP 20. INTERPOL Washington forwarded the images by e-mail to the FBI Laboratory the same day. The only information provided about the images in the initial INTERPOL communication forwarded to the FBI was that they had been recovered in connection with the Madrid train bombings. The communication requested that the Laboratory inform INTERPOL Washington of its results, implicitly requesting the Laboratory to attempt to identify the prints.

Michael Wieners, one of three Unit Chiefs in the FBI Laboratory Latent Print Units (LPU), reported to work that Saturday to respond to this high-priority request. He requested assistance from Terry Green, a supervisor in the LPU. Wieners told the OIG that he selected Green in part because Green had extensive experience and strong skills in conducting computer searches of latent fingerprints using the FBI's Integrated Automated Fingerprint Identification System (IAFIS). IAFIS is an automated system that permits computer searches of FBI databases containing the fingerprints of over 47 million individuals.

Green and Wieners quickly determined that the images from INTERPOL were of low resolution and lacked a scale showing the size of the prints. They attempted IAFIS searches of the images but did not make any identifications. Wieners called the FBI's Supervisory Special Agent (SSA) assigned to INTERPOL Washington to request that the SNP resubmit the latent prints in higher resolution images, with a scale. Wieners told the SSA that without these enhancements, IAFIS results would be unreliable.

On Sunday, March 14, the Laboratory received higher resolution images from Spain, including LFP 17 and LFP 20, with a scale. Green "coded" the prints he found to be suitable for further examination (including LFP 17) by marking selected features on each latent print to permit the computer to compare the print with millions of known prints in the IAFIS databases.

On Monday, March 15, Green searched three databases in IAFIS: a Criminal Master File (containing fingerprints from criminal arrests); a Civil File (containing fingerprints taken in a non-criminal context, such as for military service or government employment); and a Special Latent Cognizant File (containing fingerprints of suspected terrorists).

The IAFIS searches generated separate lists of up to 20 candidate fingerprints for each latent print and each database searched. The program also generated a "score" for each candidate print indicating the degree of similarity detected by the computer. Depending on the database being searched, IAFIS identifies the top 10 to 20 highest scoring candidate fingerprints. The candidate print that receives the highest score from the

computer may not be the true match, which is why the system generates a list of candidate prints rather than just the highest-scoring candidate. The final identification decision is made by the examiner, not by the computer.

On Tuesday, March 16, Green began his comparisons of the latent prints from Spain with the IAFIS candidates. Green made the comparisons on the computer screen and with high resolution printouts of the digital images that he was able to generate in the LPU. According to LPU documents, Green conducted comparisons of LFP 17 to the candidate prints that IAFIS listed from the Civil File and the Special Latent Cognizant File, but did not find a match.

Green also compared LFP 17 to candidate prints from the Criminal Master File. Green told the OIG that during his comparison he began to think he had a match for LFP 17 with one of the candidate prints generated from this search. The computer had scored this candidate fourth-highest on a list of 20. Green asked Wieners to view the images side by side on the computer screen. Green told the OIG that Wieners said the comparison looked good. Wieners likewise told the OIG that he recalled saying words to the effect that Green was "onto something."

Green completed his examination and reached the conclusion that LFP 17 was made by the same source as the fourth candidate print on the list generated by IAFIS from the Criminal Master File. Green told the OIG that, consistent with established LPU practices, he then terminated his comparison of LFP 17 with the other candidate prints on the IAFIS-generated list. Green stated that at the time of the identification decision, he did not know anything about the person whose print he had matched other than the FBI identification number and the fact that the print was from the subject's left index finger. The candidate lists generated by IAFIS did not indicate any of the candidates' names, and the OIG did not find any records suggesting that the Laboratory had additional information about the individual at that time.

Green told the OIG that after making the identification he used the FBI identification number for the candidate print to access FBI identification records in order to determine whether other versions of the candidate's known prints were available. The identification record revealed the name of the subject, Brandon Bieri Mayfield. It also showed that Mayfield's fingerprints were in the Criminal Master File as the result of a 1985 arrest for burglary of an automobile (when Mayfield was a teenager), and that the charge had been dismissed.

The identification record indicated that Mayfield's fingerprints also were recorded in 1989 in connection with Mayfield's service in the United States Army.<sup>10</sup> Nothing on the FBI identification record indicated Mayfield's religion, occupation, current address, or marital status. There was no alias indicating an Arabic or Muslim name. Green told the OIG that none of the information on the printout affected his identification decision in any way.

Green did not find matches for any of the other latent fingerprints submitted by the SNP, including LFP 20. Green did determine that Mayfield was not the source of any of these other latent fingerprints.

On March 16, after reaching his conclusion that Mayfield was the source of LFP 17, Green ordered Mayfield's original civil and criminal inked 10-print cards, which are maintained by the FBI's Criminal Justice Information Services Division (CJIS). Green told the OIG that it was routine procedure to retrieve the original inked prints for comparison with the latent print. He said that when he reviewed these originals within the next few days and compared them with LFP 17, he felt they confirmed his prior determination.

On March 16, Unit Chief Wieners telephoned the SSA assigned to INTERPOL Washington to request that the original evidence (the bag on which LFP 17 was deposited) be obtained from Spain "due to a comparison with a possible person of interest." LPU examiners told us that they generally prefer to work with the original fingerprint if it is available, but it is not unusual for the LPU to examine photographs of latent fingerprints submitted by outside agencies. Wieners stated that he did not expect that the SNP would comply with his request for the original evidence because most law enforcement agencies will not surrender control over evidence of this nature and importance. Wieners also requested information from the SNP about the substrate (the surface on which the print was deposited) and the processing technique used to develop the print.

Pursuant to the FBI Laboratory requirement that any fingerprint identification be "verified" by a second examiner, Wieners asked John T. Massey to examine LFP 17 and the Mayfield known prints.<sup>11</sup> Massey is a retired FBI latent fingerprint examiner with 35 years of experience who was providing services to the LPU on a contract basis. Wieners told the OIG that he

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<sup>10</sup> The inked prints taken during Mayfield's military service were not contained in the IAFIS Civil File, which precluded the computer from retrieving those prints as a possible match. The FBI began including civil prints in the IAFIS databases subsequent to the time that Mayfield's Army prints were taken in 1989, and did not retroactively enter older civil prints.

<sup>11</sup> As noted in Chapter One, Massey declined to provide an interview to the OIG in connection with this investigation.

selected Massey because of Massey's skill and extensive experience. Wieners stated that Massey waited to see Mayfield's original inked prints from CJIS before making his decision, which Wieners considered to be a routine and prudent step. According to Wieners, Massey did not tell him about any particular problems or concerns in the comparison. On Friday, March 19, Massey formally verified the identification of Mayfield as the source of LFP 17.

Wieners stated that after Massey verified the identification, Wieners discussed the examination with Green and Massey. At this stage, however, Wieners had not performed his own complete and independent examination of LFP 17 and Mayfield's known print. Wieners told the OIG he recalled discussing with Green and Massey the fact that there were some differences in appearance between LFP 17 and the Mayfield known prints. Wieners told the OIG that he saw the differences and was satisfied that Green and Massey had reasonable explanations for them. In particular, the upper left portion of LFP 17 contained distinct features that could not be matched to the known Mayfield prints, and Wieners told the OIG that this area gave him "heartburn from the get-go." Green told Wieners that he had concluded that this area was the result of a separate touch, made by a different person or by a different part of Mayfield's finger. Wieners told us that he concurred with Green's explanation.

At least two other examiners in the LPU also looked at the comparison between LFP 17 and Mayfield's prints shortly after Green made the identification. The first examiner told the OIG he was not acting as an official examiner or verifier, and stated that he could not recall who asked him to conduct an informal examination of the prints. He told the OIG that he noticed both similarities and dissimilarities in the comparison. He stated that he had problems with the clarity of the latent image and that he decided the comparison was too difficult to complete in the time he had available.

The other examiner stated that Green asked him to look at the print because he (the other examiner) was the program manager in major incident cases, and because Green was proud of the identification. This examiner told the OIG he also noticed both similarities and dissimilarities in the prints. He told the OIG he was concerned about several dissimilarities, including the upper left portion of the latent print, which had several clear details that did not match the Mayfield known prints. He stated that he did not consider the upper left part of the print to be a separate touch. He also stated that he did not have enough time to study the prints, so he returned them to Green. This examiner told the OIG he might have briefly expressed some concerns about the identification in a passing conversation with Green.

On March 19, Wieners called the SSA at INTERPOL Washington to advise him that the Laboratory had identified Mayfield as the source of LFP 17. On March 20, Green finalized the written report formalizing the identification.

Later on March 20, another LPU Unit Chief performed a “peer review” and “administrative review” of the report to confirm that it was properly formatted and contained the information required under applicable LPU procedures. The third LPU Unit Chief told the OIG that these reviews did not involve a substantive evaluation of the basis for Green’s conclusion that Mayfield was the source of LFP 17.

On March 21, INTERPOL Madrid provided INTERPOL Washington with a description of the blue plastic bag and an explanation of the processing method used to develop and photograph LFP 17. This information was translated and submitted to the Counterterrorism Division (CTD) at FBI Headquarters on March 22. This information was apparently provided in response to the request originally made by Wieners to INTERPOL Washington on March 16 for information about the substrate and the processing method. Wieners and Green both stated they did not recall receiving this information in the LPU at that time, and the information was not included in the files made available to the OIG by the FBI Laboratory. It appears that the CTD did not forward this information to the Laboratory.

By March 23, the CTD also had obtained at least one photograph of the blue plastic bag containing detonators that showed multiple prints on the bag. Again, there is no evidence that the CTD forwarded this photograph to the Laboratory at the time. Green stated that one to three weeks after making the identification he learned that the print was made on a plastic bag, but this information was not useful because it did not specify the type of plastic. Wieners told the OIG that the first time he saw a photograph of the bag was in mid-April, at FBI Headquarters in Washington, D.C.<sup>12</sup>

### **C. Initiation of the FBI Investigation of Mayfield**

#### **1. Notification of the Mayfield identification to the FBI’s CTD and Portland Division**

Shortly after noon on March 19, 2004, the SSA at INTERPOL Washington sent an e-mail to the FBI CTD which stated that, with regard to the Madrid bombings investigation, the FBI LPU had “confirmed that one of the latents is a

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<sup>12</sup> Some examiners suggested to the OIG that if the Laboratory had known about the relative positioning of LFP 17 and other latent fingerprints on the plastic bag, it might not have made the erroneous identification. We address this issue in Chapter Five of this report.



## 2. Initiation of the field investigation of Mayfield by the Portland Division

The Portland SSA told the OIG that the March 19 e-mail from the CONUS 4 analyst contained everything she knew about Mayfield at the time. The Portland SSA said she gave copies of the e-mail to two Special Agents (SAs) who were members of her squad and told them to find out everything they could about Mayfield. The SAs were subsequently designated as the lead case agents (referred to in this report as Lead Case Agent 1 and Lead Case Agent 2) for the Portland Division field investigation of Mayfield. The Portland SSA said she also notified Robert Jordan, the Portland Division Special Agent in Charge (SAC), and the Assistant Special Agent in Charge (ASAC), of the identification of Mayfield. She said that at the time the Portland Division knew Mayfield's fingerprint was associated with the Madrid bombings but did not know where the fingerprint was found.

Lead Case Agent 1 told the OIG he was able to locate current addresses for Mayfield's home and office on March 19. The Portland SSA said that later that afternoon the Portland Division [REDACTED] to confirm that Mayfield was in his office. The FBI began 24-hour surveillance of Mayfield that afternoon.

The Portland SSA said that the Portland Division also ran Mayfield [REDACTED] through FBI databases and found (as did CONUS 4) that [REDACTED] made [REDACTED] <sup>15</sup> She also said that some members of the "Portland Seven" had attended this mosque. <sup>16</sup>

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<sup>15</sup> As discussed in greater detail in Section I.C.3 of this chapter, after the FBI learned of the Mayfield fingerprint identification, it sought authorization to conduct covert surveillance and searches of Mayfield pursuant to the Foreign Intelligence Surveillance Act of 1978 (FISA). In a written application later submitted in support of the request for FISA authority to conduct the covert surveillance and searches, [REDACTED]

<sup>16</sup> The "Portland Seven" matter involved the federal prosecution in Oregon of seven individuals, six of whom had allegedly plotted to travel to Afghanistan and engage in combat against the United States armed forces on behalf of the Taliban and al Qaeda. To date, six of the seven have pled guilty to various charges stemming from their actions, such as conspiracy to levy war against the United States and money laundering, and have been sentenced. A seventh individual charged in the case was killed in Pakistan.

The Portland SSA said that when they learned that Mayfield [REDACTED]

[REDACTED] that Mayfield attended the Bilal mosque, another mosque in the Portland area that was also attended by members of the Portland Seven. Thus, according to the Portland SSA and FBI documents, the FBI first learned that Mayfield was a Muslim after the FBI had been notified of the FBI LPU identification of Mayfield and had initiated the field investigation.

Witnesses and documents reflect that by the end of Friday, March 19, the FBI had Mayfield under 24-hour physical surveillance and identified Mayfield's home and business addresses and telephone numbers. The FBI also learned that Mayfield was a lawyer with his own law practice, that he served in the military from 1985-1994, and that there was no evidence that he had recently traveled abroad.<sup>17</sup> In addition, the FBI learned that Mayfield was a Muslim, was married to a naturalized United States citizen born in Egypt, and had three children. The government also began issuing numerous grand jury subpoenas.

On Saturday, March 20, the FBI learned from a database of court filings that Mayfield had previously represented Jeffrey Leon Battle, who was a member of the Portland Seven, in a child custody dispute. Battle pleaded guilty in October 2003 to conspiracy to levy war against the United States and was subsequently sentenced to an 18-year prison term.

On March 20, Mayfield was placed on the State Department's Visa Lookout list and in the Department of Homeland Security's Treasury Enforcement Communications System. [REDACTED]

On March 23, at the request of the FBI, the United States Attorney's Office (U.S. Attorney's Office) obtained court authorization for the FBI to [REDACTED]

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<sup>17</sup> The Portland SSA told us that sometime during the first week of the investigation, the FBI learned that Mayfield's law practice consisted largely of immigration and domestic relations matters.



[REDACTED]

### **3. Authorization for covert electronic surveillance and physical searches**

ITOS I Section Chief Cummings said that once he learned about the Mayfield fingerprint identification, he ordered agents in ITOS I to seek emergency authorization from the Attorney General to conduct covert surveillance and physical searches concerning Mayfield pursuant to FISA. The ITOS I Assistant Section Chief said he notified the Department of Justice (DOJ) Office of Intelligence Policy and Review (OIPR) of a forthcoming request to the Attorney General for emergency FISA authorization. The ITOS I Assistant Section Chief also said that the CONUS 4 SSA and the CONUS 4 analyst, with input from the Portland Division, were responsible for providing OIPR with justification for the emergency FISA authorization request.

FISA provides for the use of, among other things, covert electronic surveillance and physical searches to gather foreign intelligence information. To obtain FISA authorization to conduct covert surveillance and searches, DOJ OIPR must submit a written application to a special court, the Foreign Intelligence Surveillance Court (FISA Court), which has the authority to grant or deny the application. The written application must establish, among other things, probable cause for the FISA Court to find that the target of the surveillance and searches is either a foreign power or an agent of a foreign power, and that a significant purpose of the surveillance and searches is to obtain foreign intelligence information. A foreign power is defined broadly to include any group engaged in international terrorism. The written application must also include a declaration or affidavit from the FBI establishing the facts justifying the authorization for a FISA warrant. If the Attorney General (or Deputy Attorney General) determines that an emergency situation exists and that there is a factual basis for the issuance of a FISA warrant, the Attorney General (or Deputy Attorney General) may authorize electronic surveillance or a physical search without prior approval from the FISA Court, provided that the FISA Court is notified of the emergency authorization and a written FISA application is submitted to the FISA Court within 72 hours.

The CONUS 4 SSA said that sometime during the day on [REDACTED], he made an oral presentation to an OIPR attorney in support of the request for emergency FISA authorization. [REDACTED]

[REDACTED]

An OIPR attorney (referred to in this report as the OIPR Attorney) said he received the emergency FISA request. Another attorney from OIPR subsequently made an oral presentation to the Attorney General or Deputy Attorney General in support of the emergency FISA application. The emergency application requested electronic surveillance on [REDACTED]

[REDACTED] plus a physical search of [REDACTED]

[REDACTED] OIPR immediately notified the FISA Court of the emergency FISA authorization.

Subsequently, as required by emergency FISA procedures, OIPR submitted a written FISA application to the FISA Court on [REDACTED]. The OIPR Attorney prepared the written FISA application and the CONUS 4 SSA served as the declarant. The written FISA application and declaration stated that there was probable cause to believe that [REDACTED] was a foreign power, that Mayfield was an agent of [REDACTED], that the facilities and places at which electronic surveillance would be directed were being used by Mayfield, and that the premises to be searched contained foreign intelligence information. In support of these assertions, the declaration set forth the background of [REDACTED]

In addition to the authorization requested in the emergency FISA application, the written FISA application requested authorization to conduct physical searches of Mayfield's home and office and [REDACTED]

[REDACTED]<sup>18</sup> The FISA Court approved the FISA application

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<sup>18</sup> According to the Portland SSA, the FBI never [REDACTED]

on [REDACTED] and issued several orders authorizing the requested FISA warrants.<sup>19</sup> The FISA warrants were set to expire in 90 days.

#### 4. Early concerns about a leak

ITOS I Section Chief Cummings told the OIG that because information regarding the FBI's identification of Mayfield had been channeled through INTERPOL, he realized it would be disseminated to other government agencies, and he became concerned that the identification of Mayfield would become public. Cummings said he immediately called a high-ranking official at the State Department to restrict the dissemination of information regarding the investigation.

The Portland SSA said that by either Friday afternoon or Friday evening on March 19, the Portland Division had discussed with the U.S. Attorney's Office for the District of Oregon a contingency plan in case Mayfield tried to flee. According to the Portland SSA, the U.S. Attorney's Office suggested using a material witness warrant to detain Mayfield.<sup>20</sup> The Portland SSA said that the next day, she, Karin Immergut (the U.S. Attorney for the District of Oregon), and two Assistant U.S. Attorneys (referred to in this report as AUSA 1 and AUSA 2) participated in a conference call with FBI SAC Jordan to discuss contingencies in the event that Mayfield tried to flee. AUSA 2 began drafting a material witness warrant for the arrest of Mayfield and criminal search warrants for Mayfield's home and office.<sup>21</sup> The Portland SSA said they also discussed the possibility of a leak regarding the FBI's interest in Mayfield and viewed the material witness warrant as a means of dealing with the possibility of Mayfield fleeing or a leak. The Portland SSA, who was the coordinator for the Joint Terrorism Task Force (JTTF) in Portland, also said she was instructed to restrict the information flow concerning the Mayfield investigation. Based on this, she said she advised all members of her squad, including JTTF personnel, to restrict the information flow to those who were working on the case.

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19 [REDACTED]

<sup>20</sup> Pursuant to 18 U.S.C. § 3144, a court may order the arrest of a person if it appears that the testimony of the person is material to a criminal proceeding, and it is shown that it may become "impracticable to secure the presence of the person by subpoena."

<sup>21</sup> Criminal search warrants are different than the FISA-authorized search warrants referred to previously in this report. FISA-authorized search warrants permit the government to conduct covert searches to gather foreign intelligence information without providing immediate notice to the target of the search. Criminal search warrants permit the government to conduct overt searches to gather evidence of a crime. The target of a criminal search is usually provided with immediate notice of the search.

Specifically, JTTF members were told not to provide information to their respective agencies and that briefings regarding the investigation would be conducted at Headquarters level.

Also on March 22, SAC Jordan sent an e-mail to Gary Bald, the Assistant Director for the CTD, alerting him to the Portland Division's contingency planning. Jordan stated that because Mayfield's identity and potential connection to the Madrid bombings was known to INTERPOL and other agencies, there was an increased danger of a media leak.

Bald told the OIG that on March 21 and 22, he learned of inquiries about Mayfield made by the Secret Service, the Department of Homeland Security, and other law enforcement agencies who were members of the Portland JTTF. Bald said the FBI's biggest concern was that it did not know if Mayfield was part of a second wave of terrorist attacks planned for the United States. Bald said he was also afraid that if information about Mayfield became public, Mayfield might disappear.

Bald stated that as a result of these inquiries, he telephoned contacts at other law enforcement agencies to try to restrict the flow of information concerning Mayfield, and asked Cummings to do the same. Furthermore, on March 25, Bald traveled to Spain to meet with the SNP to address the FBI's concerns that information in the Mayfield matter not be divulged to the international community. Bald said that concerns about potential leaks began to drive the pace of the investigation.

On March 27, David Nahmias, the Deputy Assistant Attorney General of the Criminal Division, authorized the execution of the material witness warrant relating to Mayfield in "truly exigent circumstances." Nahmias told the OIG he was referring to a possible situation in which the FBI's interest in Mayfield became public and he tried to flee.

#### **D. The FBI Laboratory's Response to Initial Concerns of the SNP**

Early on Monday, March 22, the Madrid Legat in Madrid reported in an e-mail to the CTD that the SNP "expressed some concern about the identification of Mayfield through the latent print. . . . They just want to be absolutely sure, as this is so out of character for the subjects they are dealing with." The Madrid Legat told the OIG that at this stage, the SNP's concerns reflected amazement that an American's fingerprint would show up on the evidence, given that the other suspects were local Moroccans. The FBI had not yet provided the SNP with Mayfield's known prints for comparison to LFP 17.

In an e-mail sent later that morning, an SSA from the Extraterritorial Unit (ETIU) requested that the Laboratory prepare “a product like a court room exhibit showing the known prints with the points of comparison to the latents” in order to respond to the SNP’s concerns. He also requested “good copies of the known prints to share with the Spanish.” Green responded by providing digital copies of Mayfield’s criminal and civil prints to ETIU that same day.<sup>22</sup> Later that day, March 22, Green sent ETIU charted enlargements of the identification (the March 22 Charted Enlargements) showing 15 numbered similarities along with several additional “Level 3” details (tiny features such as pores and incipient dots) circled in both prints. The March 22 Charted Enlargements are reproduced below as Figure 2A (showing the charted features on LFP 17) and Figure 2B (showing the corresponding features on Mayfield’s inked fingerprint). Because the official March 20 FBI Laboratory Report of the identification contains no description of the features or similarities on which the Laboratory’s conclusion was based, Figures 2A and 2B provide the earliest written record of the basis of the FBI’s identification.

**E. Course of the Investigation from Late March until Mid-April**

**1. The [REDACTED] FISA search of Mayfield’s office**

The FBI began making preparations to conduct covert searches of Mayfield’s office and residence as soon as the FISA Court granted the FISA application. In a document dated [REDACTED], the Portland Division formally requested the assistance of the [REDACTED], to gain covert entry into Mayfield’s office and residence.

[REDACTED]

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<sup>22</sup> The LPU provided photographic copies of the known fingerprints of Mayfield to ETIU on March 30, and these were apparently delivered to the SNP on April 2.

<sup>23</sup> [REDACTED]

[REDACTED]

The FISA search of Mayfield's office occurred on [REDACTED]

[REDACTED]

The Portland SSA said that the search team included two FBI agents who were also attorneys and that their role was to review documents for attorney-client privilege.<sup>24</sup> The search team also included [REDACTED] who photographed selected documents. FBI records indicate that approximately [REDACTED] documents were photographed during the search. Two Computer Analysis Response Team examiners from Portland also participated in the search and mirrored (copied) the hard drives of the two computers in the office. [REDACTED]

The Portland SSA told the OIG that the search was very successful and the team "was out safely." She also said that she believed that Mayfield was unaware of the search, [REDACTED]

[REDACTED]

The Portland SSA said that the initial review of the documents photographed in Mayfield's office revealed no obvious explanation as to how Mayfield's fingerprint got on the bag of detonators.

**2.** [REDACTED]

On [REDACTED], Portland Division FBI agents began reviewing the documents photographed during the [REDACTED] covert office search. The review of those documents was completed by [REDACTED]

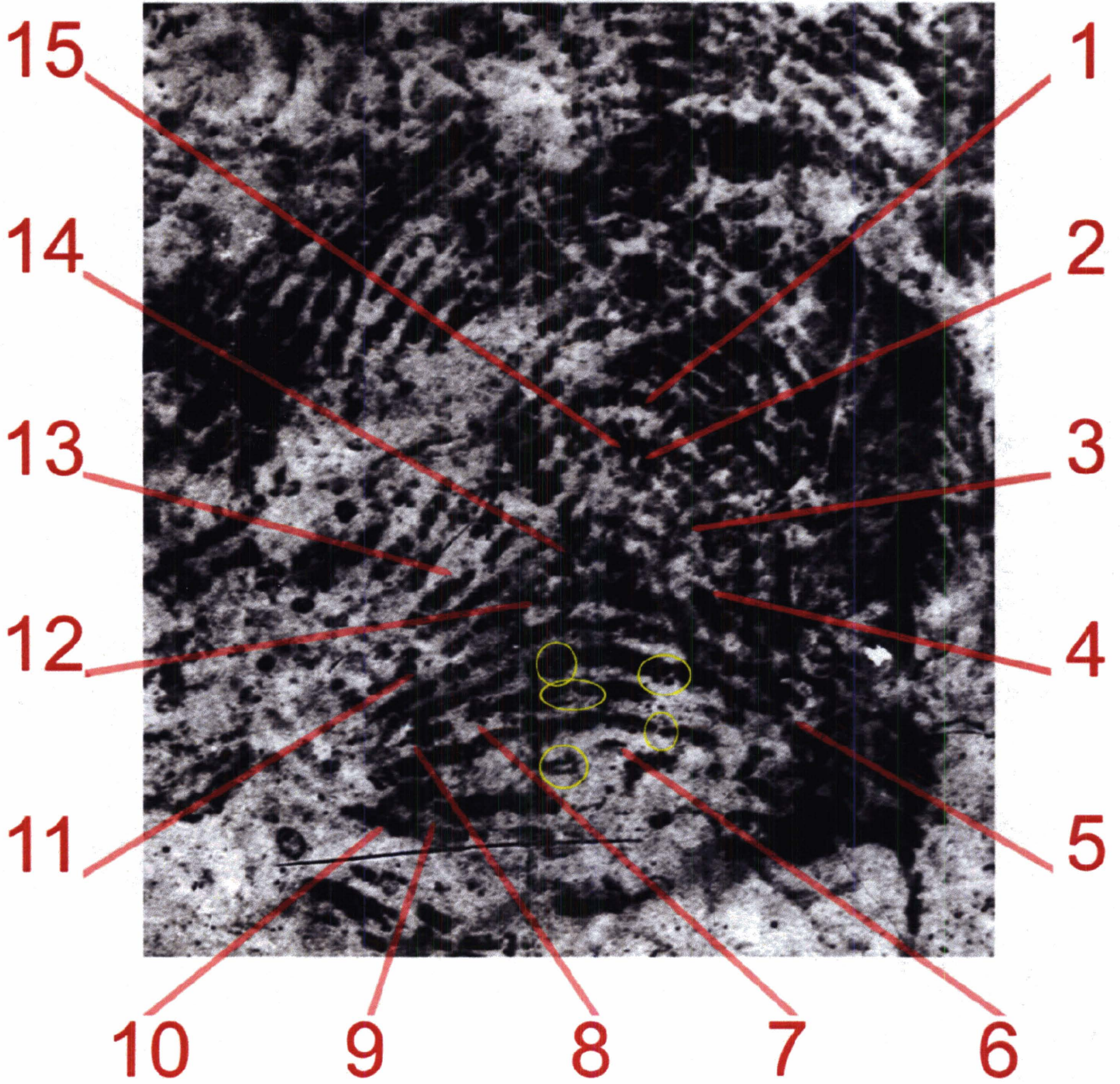
[REDACTED]

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<sup>24</sup> The procedures the FBI followed concerning the handling of privileged documents are discussed in Chapter Six.

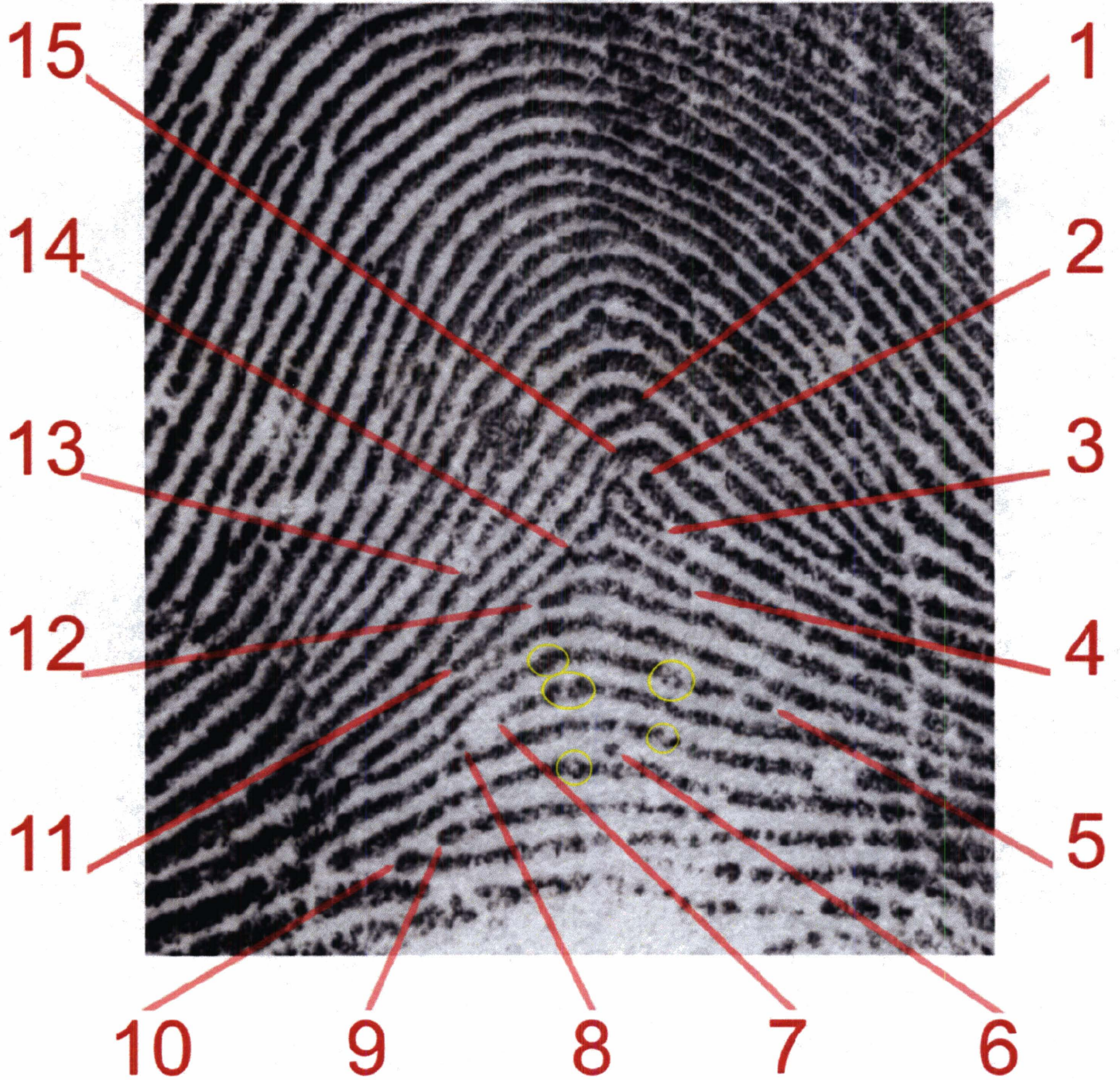
# FIGURE 2A

March 22 Charted Enlargement  
Latent Print



# FIGURE 2B

March 22 Charted Enlargement  
Mayfield Exemplar





Also, by [REDACTED], documents that were marked as potentially privileged were reviewed by an FBI "taint agent."<sup>25</sup>

The examination of the computer hard drives from Mayfield's office took significantly longer. Witnesses told us that "a good initial review" of the hard drives was completed by [REDACTED]

[REDACTED]

On [REDACTED], the FBI searched the trash ("a trash pull") at the complex where Mayfield's office was located, searching for pertinent information and plastic bags similar to the one on which LFP 17 was found. Nothing pertinent was found during this search. The FBI also planned to conduct a trash pull at the Mayfield residence on [REDACTED], but decided not to do so because of concerns the agents would be discovered.

[REDACTED]

[REDACTED]

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<sup>25</sup> The Portland SSA told us that the taint agent was a Portland Division FBI agent who was otherwise minimally involved in the Mayfield investigation. She said the taint agent's sole purpose was to review documents seized from Mayfield's office for possible attorney-client privilege. The Portland SSA said that at one point she felt that the taint agent had marked too many documents as privileged, and thus directed an AUSA to assist in reviewing the documents. This second review, by the AUSA, was completed over the weekend of [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] surveillance of the residence was terminated on [REDACTED] because of fears of being discovered. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

According to the Portland SSA, the FBI search team was ready to conduct a FISA physical search of the Mayfield home as early as [REDACTED], the FBI postponed the FISA home search until [REDACTED].

### 3. The [REDACTED] FISA search of Mayfield's residence

[REDACTED]

[REDACTED]

The Portland SSA said that after this search, the agents conducting surveillance of Mayfield noted that he began [REDACTED]. At the time, FBI witnesses told the OIG that the FBI did not make the connection (as they would later) that Mayfield was suspicious. She said they thought he was [REDACTED].

4. The [REDACTED] FISA search of Mayfield's residence

According to the Portland SSA, the FBI wanted to attempt another FISA search of the Mayfield residence on [REDACTED], but [REDACTED]. She said the FBI planned another FISA search of the home for [REDACTED].

[REDACTED]

[REDACTED]

[REDACTED] Lead Case Agent 1 said he collected 10 DNA swabs and 6 cigarette butts.<sup>27</sup> [REDACTED]

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<sup>27</sup> In connection with their investigation of the Madrid bombings, SNP investigators collected DNA samples from items inside a vehicle which they believed had been occupied by people associated with the bombings. Accordingly, the FBI wanted to obtain DNA samples from Mayfield to compare them to those collected in Spain. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] In addition, the search team photographed several documents. The search team did not find any evidence of obvious connection to the Madrid bombings.

The Portland SSA said that after the search was completed, they returned to the Portland Division office and began planning [REDACTED]. She said that they then learned that there were problems with the search.

[REDACTED]

[REDACTED]

29

28 [REDACTED]

<sup>29</sup> In newspaper articles after her husband was arrested, Mona Mayfield indicated that there were other things that had aroused her suspicions concerning a covert entry in her (continued)

The Portland SSA said she advised her supervisors of these problems. She said that Jordan decided they would not conduct any additional covert physical searches because of the Mayfields' suspicions, and also because of [REDACTED].

#### **F. The April 13 Negativo Report**

On April 13, the Madrid Legat met with an SNP official with responsibility for terrorism investigations. According to a memorandum dated April 14 and approved by the Madrid Legat, the official advised him that the SNP fingerprint examiners had reached an "inconclusive finding" with respect to whether LFP 17 was made by Mayfield. The same memorandum reports that on April 14, the Madrid Legat told the official that he had consulted with the FBI Laboratory and that the FBI "maintains the integrity of the identification" of Mayfield and was willing to send fingerprint examiners to Madrid to explain its identification. Later on April 14, the Madrid Legat obtained a copy of the written report from another member of the SNP. The report stated that the result of the SNP's examination was "negativo" (negative). It will be referred to as the April 13 Negativo Report.

The April 13 Negativo Report was prepared in the form of an official letter from the Forensic Science Division of the SNP to the Spanish National High Court. The FBI translated the April 13 Negativo Report as follows:

**SUBJECT: ANALYSIS AND COMPARISON OF FINGERPRINTS**

In response to your document of reference, in which you requested the analysis and comparison of three deca-dactylar [ten-print] cards belonging to BRANDON BIERI MAYFIELD, from the FBI Laboratory in the United States, we inform you that the Special Proceedings Sections performed the appropriate studies of the above mentioned, with the latent prints discovered during the different crime scene inspections carried out as a result of the 11 March, 2004 terrorist attacks investigations, as well as the deca-dactylar cards of the varied suspects that were given to this Police Precinct. The result was NEGATIVE. We also report that the fingerprints have been entered in our Automatic Dactylar System for their respective study regarding matters connected to

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house. Mona Mayfield stated that she saw footprints in the carpeting and that some blinds in the home were not in their usual position.

the March 11, 2004 attacks, as well as any other criminal activity. The result was also NEGATIVE.

The study of the deca-dactylar impressions is ongoing.<sup>30</sup> If the results are positive, you will be notified accordingly.

The April 13 Negativo Report was signed by the Section Chief of the SNP Crime Scene Investigations Division (referred to in this report as the SNP Section Chief). A translated copy of the report was transmitted to FBI Headquarters, the Portland Division, and the FBI Laboratory. The DOJ Counterterrorism Section (CTS) informed the Portland U.S. Attorney's Office about the report.

FBI Laboratory examiners Green and Wieners both stated that after seeing the April 13 Negativo Report, they took another look at the Mayfield identification. Wieners told the OIG that he was still concerned about the upper left area of the print, and that he searched unsuccessfully on the known prints for all 10 of Mayfield's fingers for details that would correspond to the upper left portion, consistent with a "separate touch" explanation. Green and Wieners both told the OIG that they again concluded that this portion of the print was either made by a different person or was made by a different part of Mayfield's finger (such as the extreme tip) that was not recorded on the inked 10-print cards. As a result, the Laboratory told the CTD that it stood by its identification of Mayfield. Early on April 15, the CONUS 4 SSA of the CTD reported in an e-mail to the Portland Division that, "I spoke with the lab this morning and they are absolutely confident that they have a match on the print. - No doubt about it!!!! - They will testify in any court you swear them into."

On the evening of April 16, the Madrid Legat met with the Director of the SNP Laboratory, and obtained further information regarding the April 13 Negativo Report. The Madrid Legat described this meeting in an e-mail to the CONUS 4 SSA, Cummings, and others, dated April 17:

[The Director of the SNP Laboratory] advised that his fingerprint technicians had reached a preliminary conclusion that the latent was not a match [with Mayfield] based on the number of ridges between two identifiable points to the left of the arch going up to the top left corner and the measurement of a small ridge in that same area. They did see many points of similarity but the above criteria led them to the conclusion of a negative match.

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<sup>30</sup> "Deca-dactylar impressions" are fingerprints for a known individual recorded on a 10-print fingerprint card.

[The Director of the SNP Laboratory] added that the finding was being considered preliminary at this time, NOT FINAL, and that he would be happy to receive [an] FBI expert, to discuss their differences any time next week.

The Madrid Legat's April 17 e-mail reveals that the SNP examiners, like the FBI examiners, found that details in the upper left portion of LFP 17 could not be matched to Mayfield. Unlike the FBI examiners, however, the SNP did not explain this dissimilarity as a separate touch by a different person or a different part of Mayfield's finger.

Several officials in the FBI and DOJ independently came to the conclusion that a meeting should be arranged between the FBI Laboratory and the SNP to discuss the April 13 Negativo Report. SAC Jordan and the U.S. Attorney's Office in Portland urged the FBI Laboratory to send someone to Spain to find out exactly why the SNP was disagreeing with the identification of Mayfield and to resolve any differences between the laboratories. The CTD also believed that the meeting was a way to begin to improve overall communications between the FBI and the SNP. Thus, an SSA from ETIU told the Laboratory in an e-mail that "the fingerprint identification gives us the perfect lead to get people on the ground [in Spain] to assist and to open the flow of information . . . ."

On April 16, the Acting Section Chief in the FBI Laboratory responsible for the LPU cautioned the ETIU in an e-mail response that "we can't be about the business to try and convince another Laboratory to change their conclusion to concur with ours," but agreed that "in light of the situation, it would be productive to have face to face talks with the Spanish to help all involved understand what the Spanish mean when they say 'Negative.' Does that mean their examination resulted in a 'non-identification' conclusion or was the result of their examination 'inconclusive.' This is a very important distinction, which needs to be fleshed out."<sup>31</sup>

The Acting Section Chief in the FBI Laboratory decided to send Wieners to Madrid to meet with the SNP regarding the Mayfield fingerprint identification. In advance of that meeting, Green prepared a new set of charted enlargements for Wieners to use in Spain, along with a textual description of

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<sup>31</sup> As explained in Chapter Three, the FBI LPU distinguishes between an "exclusion" result (which is what the Acting Section Chief was referring to as "non-identification") and an "inconclusive" result. An exclusion result is a finding that the subject did not make the latent fingerprint; an inconclusive result occurs when the examiner is unable to identify or exclude the subject. The SNP witnesses interviewed by the OIG indicated that the SNP does not formally recognize this distinction, but rather assigns a "negative" determination to any comparison that does not result in an identification.



the similarities used to support the identification. The new charted enlargements included several additional Level 3 details (very tiny features such as incipient dots or ridges, pores, and ridge edge shapes) that Green had not previously marked on the enlargements he prepared on March 22. The enlargements and textual descriptions were delivered to the Madrid Legat in Madrid on April 19 and the descriptions were translated into Spanish for the meeting.<sup>32</sup>

Wieners told the OIG that, although he had not performed a complete examination of LFP 17 and the known prints for Mayfield at the time of the original identification, by the time he left for Madrid he had become as familiar with the prints as if he had conducted a complete examination. On approximately April 17, Wieners visited ITOS I in preparation for his April 21 meeting with SNP officials. Wieners told the OIG that this visit was the first time he saw a photograph of the bag. Wieners stated that the photograph made the bag look like a small shopping bag. Wieners did not notice anything in the photograph indicating that more than one fingerprint was found on the bag.

#### **G. The April 21 Meeting in Madrid**

On April 21, Wieners met with officials of the SNP in Madrid to discuss the identification of LFP 17. Wieners was accompanied by the Madrid Legat and an ETIU SSA who was stationed in Madrid at that time. Approximately 10 officials of the SNP attended the meeting. The Director of the SNP Laboratory was unavailable to attend the meeting. A Deputy Director attended the meeting as the senior representative of the SNP Laboratory. The meeting was also attended by the SNP Section Chief who authored the April 13 Negative Report, and his supervisor, along with other fingerprint specialists from the SNP. The Madrid Legat served as translator.

According to Wieners and other participants in the meeting, Wieners made a presentation of the characteristics that the FBI relied on in making its identification, utilizing the charts and textual descriptions that Green had prepared earlier. Among other things, Wieners explained how the FBI relied on Level 3 details to make its identification. According to witnesses and contemporaneous written accounts, an SNP representative acknowledged that the SNP did not utilize such details in comparing the latent print to Mayfield's prints.

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<sup>32</sup> These charted enlargements and textual descriptions are included in Appendix B to this report.

After Wieners completed his presentation, one of the examiners from the SNP gave a presentation regarding the SNP's findings. According to the FBI participants at the meeting, the SNP examiner said that the SNP found eight points of similarity between LFP 17 and Mayfield's known prints, but that the SNP found several differences that concerned them. Among other things, the SNP found that details in the upper left portion of the latent fingerprint did not match Mayfield's prints. The SNP also pointed out that the ridges in the very bottom part of the fingerprint, corresponding with the area of the finger below the joint, were shaped differently in LFP 17 than in Mayfield's print.

According to the FBI participants at the meeting, Wieners provided explanations for each of the dissimilarities identified by the SNP. He explained that the FBI saw a gap between the main part of LFP 17 and the upper portion, possibly related to a wrinkle in the plastic bag, and that the FBI concluded that the upper part of the print was the result of a second touch. Wieners also explained the difference in the area below the joint as being caused by pressure or a separate touch, as evidenced by the large gap in the print in this area.

The FBI participants (the Madrid Legat, an ETIU SSA, and Wieners) told the OIG that most or nearly all of the SNP examiners seemed to be impressed by Wieners' presentation. The Madrid Legat described the SNP's reaction to Wieners' presentation in a memorandum that he prepared the next day:

Unit Chief Wieners provided satisfactory explanations for each of their questions and at the conclusion of the meeting all of the SNP personnel seemed satisfied with the FBI's identification.

In his interview with the OIG, however, the Madrid Legat clarified this statement. He stated that at the end of that meeting he felt that the SNP representatives were sufficiently impressed with Wieners' presentation to agree to go back and conduct a reexamination of the print. The Madrid Legat stated that the SNP was not at the point of agreeing with the identification of Mayfield. He told the OIG that at that time he had no confidence one way or another about what the results of the SNP's reexamination would be.<sup>33</sup> An ETIU SSA

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<sup>33</sup> During his interview, the Madrid Legat also clarified the statement in his memorandum that "*all* of the SNP personnel seemed satisfied" (emphasis added). He told the OIG that there was one SNP examiner who specifically expressed disagreement with Wieners during the meeting, but that other SNP examiners disagreed with the one examiner, who eventually stopped arguing. Wieners and an ETIU SSA also recalled that there was at least one SNP examiner who emphatically disagreed with Wieners during the meeting. The Madrid Legat admitted in his interview that he was not sure whether the dissenting examiner was persuaded; he said that the dissenting SNP examiner did not ever explicitly say he was persuaded that Wieners was right. The Madrid Legat's description of the dissenting SNP examiner during his interview also differed from a statement that he made in a declaration filed in Mayfield's civil action that "I believe there were one or two SNP Laboratory officials who (continued)"

(who spoke Spanish) and Wieners (who was relying on the Madrid Legat for a translation) both told the OIG that they came away from the meeting with the expectation that the SNP would eventually agree with the FBI's fingerprint identification of Mayfield.

However, two SNP officials who participated in the meeting (the SNP Section Chief and his supervisor) gave a different account of the meeting to the OIG. These witnesses stated that the SNP participants were impressed with the detail and meticulousness of Wieners' presentation, but they denied that anyone from the SNP expressed agreement with the FBI's conclusions. The SNP witnesses said that at the end of the April 21 meeting, they agreed to take another look at the identification. The Director of the SNP Laboratory (who has since accepted another position) told the OIG that following the April 21 meeting he ordered three teams from the Laboratory to reexamine LFP 17 and the Mayfield prints.

#### **H. Late April - Early May**

##### **1. The aftermath of the [REDACTED] search**

According to FBI witnesses and documents, the Mayfields continued to be suspicious after the [REDACTED] FISA search of their home. [REDACTED]

[REDACTED] Also, FBI documents reported that on the evening of [REDACTED] Mayfield "began an attempt to make surveillance, as apparent from his driving. He engaged in pulling into driveways and cul-de-sacs, only to quickly turn around. He would drive into parking lots, sit for a few moments and then pull out. He circled his residence several times and drove slowly. When he eventually pulled into the driveway, he sat in the car for an extended period."

[REDACTED] Mayfield located the van at the store whose name appeared on the outside of the van. The FBI believed that Mayfield was checking to ensure that the van belonged to a legitimate business enterprise. On April 16, Mona Mayfield was observed using binoculars in the parking lot of Mayfield's law office. [REDACTED]

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initially expressed disagreement, but they eventually appeared to be persuaded by their SNP colleagues that Unit Chief Wieners' explanations were satisfactory."

[REDACTED]

[REDACTED]

[REDACTED]

**2. The FBI's investigative plan and theories regarding Mayfield's involvement in the bombings**

In mid-to-late April, as the investigation of Mayfield neared the end of its first month, the FBI evaluated the status of the investigation and the theories regarding Mayfield's involvement in the bombings. For instance, in an e-mail dated April 16, the CONUS 4 SSA told the Portland Division that he was being asked for a "game plan" concerning the Mayfield investigation and asked the Portland Division how long it would take to review the evidence [REDACTED] to date. He proposed the following investigative timetable:

Our FISA expires [REDACTED] - to date we have no additional evidence linking Mayfield to the bombings. As [Portland Lead Case Agent 2] expressed - if he is guilty - he is one cool customer. Thus - after you have reviewed all the evidence - and feel comfortable stating that you have exhausted all investigative avenues in linking Mayfield to the bombings - I would suggest bringing him in for an

interview (Polygraph?) – [REDACTED]  
[REDACTED]. If we use the first week in June as a target date for an interview – that would give us a solid 5-6 weeks to review the evidence we have and to make a well founded investigative determination as to Mayfield’s involvement.<sup>34</sup>

In an e-mail to an ETIU SSA and the Madrid Legat dated April 19, the CONUS 4 SSA stated:

To date – we have found no corroborating evidence linking Mayfield to the bombing. [REDACTED], searches on his home and office are negative to date – but we continue to review [REDACTED]  
[REDACTED] physical surveillance has revealed very little. Records reveal no travel by Mayfield or his wife as both have expired passports. . . . At this time, we are leaning toward the theory that Mayfield touched the bag in the U.S. and the bag was transported by a third unknown party to Europe. If no additional evidence is found – our rough/preliminary investigative plan is to conduct an interview of Mayfield [REDACTED]  
[REDACTED]. If additional evidence is found, we will continue with FISA coverage and the investigation.

FBI witnesses stated that the FBI intended to follow the investigative plan outlined in the e-mails set forth above. Lead Case Agent 1 told us that the FBI anticipated having the analytical work completed or substantially completed [REDACTED], at which point FBI agents would approach Mayfield and request an interview. He said that the plan did not call for them to arrest Mayfield at that time. Similarly, Lead Case Agent 2 said that the plan was to continue surveillance of Mayfield, continue analyzing the information already collected, and then approach Mayfield in late May or early June for an interview. The Portland SSA said that the Portland Division wanted to use the remainder of April and May to complete its review and analysis of the material seized pursuant to the FISA searches and then have Lead Case Agent 1 and Lead Case Agent 2 approach Mayfield for an interview. She also said that FBI Headquarters and the U.S. Attorney’s Office were in agreement with this plan. AUSA 2 told the OIG that the investigative plan called for the FBI to conduct a “[REDACTED] approach” of Mayfield in June, which

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<sup>34</sup> Lead Case Agent 2 told us that she had referred to Mayfield as “one cool customer” because after the Madrid bombings there were several related events (primarily an April 3 apartment bombings in Madrid involving suspects in the SNP’s March 11 train bombings investigation) [REDACTED]  
[REDACTED]. She said that if Mayfield had any connections to these activities, “he was the coolest person I’ve ever seen.”

meant that the FBI would attempt to interview, but not necessarily arrest, Mayfield at that time.

Witnesses and documents also indicated that, by late April, the FBI was primarily pursuing two theories regarding Mayfield's involvement in the Madrid bombings. According to an FBI summary of the Mayfield investigation prepared by the CONUS 4 analyst and approved by the Portland SSA and Lead Case Agent 1:

Either Mayfield himself traveled to Spain and had contact with the bag there, perhaps while knowingly participating in the bombings; or Mayfield came into physical contact with the bag while it was in the United States, after which he or some other individual shipped the bag to Spain or some other individual traveled with it to Spain. To date, investigation suggests it is extremely unlikely Mayfield traveled under his own name to Spain, although the possibility exists that he has an alias that has not yet come to light. Given the character and known terrorism ties of several of his associates, it appears possible that someone else in the community is the link between Mayfield and the Madrid bombings.

Indeed, ITOS I Section Chief Cummings told us that while he initially believed that Mayfield was knowingly involved in the Madrid bombings, as time passed and the results of the investigation were reviewed, he came to believe that Mayfield was probably an unwitting participant.

**3. The FBI discovers material** [REDACTED]

[REDACTED]

[REDACTED]



## **I. The Decision to Arrest Mayfield on a Material Witness Warrant**

The Madrid Legat told the OIG that on May 4, 2004, he received a telephone call from a reporter in the Paris Bureau of the Los Angeles Times, who asked whether two fingerprint experts could disagree over a single print. According to the Madrid Legat, the reporter also asked “what about this American” whose print was found in connection with the Madrid bombings. The Madrid Legat said he referred the reporter to the SNP and he notified the ETIU of the reporter’s inquiry. Based on our investigation, this was the first indication of a leak of information about Mayfield.

The Portland SSA said that she learned about the possible media leak early on May 4, and notified others in the Portland Division and the U.S. Attorney’s Office. Later that day, a meeting was held between Immergut (the U.S. Attorney), SAC Jordan and others from the Portland Division, and the U.S. Attorney’s Office to discuss the appropriate steps in light of the leak. According to witnesses, Jordan stated at this meeting that he wanted to execute the material witness warrant because he could not guarantee that the Portland Division would be able to keep Mayfield under 24-hour surveillance and prevent him from fleeing if a media leak occurred. Immergut told the OIG that shortly after the meeting, she called Chris Wray (Assistant Attorney General for the DOJ Criminal Division) and David Nahmias (Deputy Assistant Attorney General for the DOJ Criminal Division) to discuss the leak issue and whether to seek a material witness warrant at that time. She said that, among other things, they discussed whether to delay using the material witness warrant to gather additional intelligence. According to Immergut, Nahmias told her that the DOJ Criminal Division would approve filing the material witness warrant against Mayfield and pursuing criminal search warrants if the FBI felt strongly that it was necessary to proceed quickly to ensure against risk of flight and destruction of evidence. At this stage, the information known to the FBI and the U.S. Attorney’s Office regarding the fingerprint dispute between the FBI and SNP was that the SNP was still reviewing the relevant prints after Wieners’ April 21 meeting in Madrid with SNP officials and they had not yet issued a final report.

According to numerous witnesses interviewed by the OIG, there was considerable discussion, and some disagreement, both within and between the FBI and DOJ concerning whether to seek a material witness warrant as a result of the leaks. Cummings (Section Chief of ITOS I) told the OIG that FBI Headquarters got into a “heated” discussion with FBI Portland about what to

do as a result of the leaks. Cummings said that the Portland Division wanted to “take Mayfield down” because of the leaks, since agents were worried they might lose him. Cummings said he told the Portland Division that its job was intelligence collection and that agents should not take Mayfield into custody until all intelligence had been gathered. Cummings said he told Portland to get more people for surveillance if needed. He said he also told Portland that there was more work to be done and he did not want to lose the opportunity to possibly “recruit” Mayfield to cooperate with the FBI concerning additional potential suspects. Ultimately, Cummings agreed to let Portland agents approach Mayfield for an interview with a material witness warrant “in their pocket” to be used only if needed. Cummings told us that he stressed to the Portland Division that the goal was to approach Mayfield quietly and privately so that Mayfield might cooperate. Cummings said he was adamant that he did not want Mayfield simply arrested.

One of the Deputy Chiefs in the DOJ CTS said that from the outset he had reservations about authorizing the arrest of Mayfield as a material witness. The Deputy Chief said, “I was concerned that we didn’t have enough to show that Mr. Mayfield was unlikely to appear if we served him with a subpoena.” The Deputy Chief said he discussed his concerns with others, including the Portland AUSAs and “the leadership of the [DOJ],” some of whom shared his concerns. However, he said he also felt that if Mayfield was involved in any way with the Madrid bombings, it would provide him with an extremely strong incentive to flee and “that it really wasn’t that much of a stretch to conclude that we had enough.” In that regard, the Deputy Chief further said he did not think the use of a material witness warrant was inappropriate but rather a judgment call as to whether there was enough evidence to support a finding that Mayfield was unlikely to appear in response to a subpoena. He said, “[A]nd to the extent that it might have been a close case, that the way to go was to let the judge decide conclusively whether there was enough.”

Immergut said that because of the gravity of the Madrid bombings, the escalating leaks in the case, and because Mayfield appeared to suspect he was under surveillance, the SAC of the FBI Portland Division felt strongly that the government should seek a material witness warrant.<sup>35</sup> She said she supported the SAC’s judgment on this issue.

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<sup>35</sup> On May 5, the Madrid Legat reported that the Spanish magazine, *El Tiempo*, had called the U.S. Embassy in Spain to ask about an American suspect in the Madrid bombings. *El Tiempo* indicated it would publish a story about the bombings in the near future. Also, on May 6, while Mayfield was in custody but before the details of his arrest had been made public, a reporter from *Newsweek* called the SAC of the Portland Division and advised that he was aware of specific facts concerning the investigation, including the existence of a latent fingerprint, a subject residing in Portland, and an impending arrest.



Nahmias told us that there was a significant concern about risk of flight and that the Mayfield matter was a “classic case for a material witness warrant.” In an e-mail dated May 5, Nahmias said of Mayfield, “He is at this point what the ‘material witness’ designation is all about, and that is how we should approach him.” Nahmias said that Assistant Attorney General Wray ultimately made the decision to authorize the use of the material witness warrant based upon Immergut’s recommendation. Wray acknowledged that he authorized the material witness warrant.

Witnesses from the FBI CTD, the FBI Portland Division, the DOJ CTS, and the U.S. Attorney’s Office stated that they did not believe the government had enough evidence to charge Mayfield with a criminal offense at that time. We found no evidence that anyone in the FBI or at DOJ advocated that course of action.<sup>36</sup>

Witnesses from the FBI Portland Division and the U.S. Attorney’s Office said the prosecutors planned to present the material witness and criminal search warrants to the judge for authorization on the morning of May 6. The FBI and DOJ wanted the Portland Division agents to approach Mayfield and seek to interview him. The plan contemplated that if he agreed to be interviewed, the agents would call the U.S. Attorney’s Office to see if they should still execute the material witness warrant. If Mayfield refused to be interviewed, the agents would execute the material witness warrant and take Mayfield into custody.

## **J. Preparation of the Affidavits in Support of the Material Witness and Search Warrants**

As previously noted, FBI Portland and the U.S. Attorney’s Office had begun preparing a material witness warrant and supporting affidavit in late March as a “contingency plan” in the event that the FBI’s interest in Mayfield became public. The U.S. Attorney’s Office also prepared criminal search warrants and affidavits for Mayfield’s home, cars, and law office. The U.S. Attorney’s Office prepared a separate affidavit for the law office search because

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<sup>36</sup> In an e-mail dated May 5, 2004, the Public Affairs Specialist for the FBI Portland Division stated that “there is not enough other evidence to arrest [Mayfield] on a criminal charge.” She told the OIG that as a Public Affairs Specialist, she knew the Mayfield case would be a high-profile matter and she attended several briefings in the Portland Division concerning the Mayfield investigation to learn more about the case. She said that agents in the Portland Division did not believe there was sufficient evidence to charge Mayfield criminally. In an August 4, 2005, letter to the OIG and OPR, Mayfield’s attorneys stated that the May 5 e-mail demonstrates that “the FBI did not have probable cause to arrest [Mayfield] for a crime.” As stated previously, numerous government witnesses told the OIG that they believed that there was not sufficient evidence to charge Mayfield criminally, but there was sufficient evidence to arrest him as a material witness.

of the need to describe additional safeguards to minimize the disclosure of material subject to the attorney-client privilege. A Portland SA (referred to in this report as the original FBI affiant) was originally assigned to serve as the affiant and participated in preparing early drafts of the affidavits. AUSA 2 was the primary participant from the U.S. Attorney's Office.

In April, the decision was made that Lead Case Agent 1 would be the affiant because he was a more experienced investigator than the original FBI affiant. In early May, however, Lead Case Agent 1 became concerned that he might be "tainted" as an affiant because he had previously reviewed potentially privileged documents seized from Mayfield's law office during the [REDACTED] FISA search.

On May 5, 2004, the Portland SSA decided to replace Lead Case Agent 1 as the affiant with SA Richard Werder. Werder had only limited involvement in the Mayfield investigation prior to that time. Werder said he then spent two to three hours reviewing a stack of documents provided to him by Lead Case Agent 1 to verify the information in the affidavits. Lead Case Agent 1 and Werder told the OIG that Werder made, at most, minor edits to affidavits, which previously had been drafted by AUSA 2, the original FBI affiant, and Lead Case Agent 1. On May 6, Werder signed the affidavits and they were submitted to the Court.

The Werder affidavits contain a detailed summary of the FBI's investigation of Mayfield and the basis for the FBI's belief that Mayfield was a material witness and that he was in possession of evidence relevant to the investigation of the Madrid train bombings. Three sections of the affidavits became the focus of the OIG's review: a paragraph describing the original identification of Mayfield by the FBI Laboratory LPU, a paragraph describing the doubts expressed by the SNP regarding the FBI's fingerprint identification and the April 21 meeting in Madrid, and two paragraphs describing the FBI's beliefs regarding the likelihood that Mayfield had traveled to Spain under a false or fictitious name. These paragraphs are discussed in the subsections below.

#### **1. Affidavit description of the FBI Laboratory's identification of Mayfield**

Paragraph seven of the affidavit submitted in support of the material witness warrant stated:

On March 17, 2004, the SNP provided the FBI with photographic images of latent fingerprints that were recovered from the plastic bag containing the detonators that was found in the Kangoo van, including Latent Finger Print # 17 (hereinafter

LFP#17). All the fingerprints were provided to the Latent Print Unit at the FBI Laboratory in Quantico, Virginia. Senior Fingerprint Examiner Terry Green, submitted LFP#17 into the Automated Fingerprint Identification System (AFIS) for possible matches. BRANDON BIERI MAYFIELD was identified as a potential match to the unknown print. Senior Fingerprint Examiner Green then requested and received two known fingerprint cards of MAYFIELD. The first card contained the known prints of MAYFIELD's obtained in connection with a criminal arrest for burglary in Wichita, Kansas on December 22, 1984. The second fingerprint card contained the known prints of MAYFIELD obtained during his service in the United States Army. Both cards containing the known fingerprints of MAYFIELD were compared to LFP#17 received from Madrid. Senior Fingerprint Examiner Green identified in excess of 15 points of identification during his comparison and has advised the affiant that he considers the match to be a 100% identification of BRANDON BIERI MAYFIELD. The 100% identification was verified by Supervisory Fingerprint Specialist Michael Wieners, Unit Chief, Latent Print Unit, and Fingerprint Examiner John T. Massey, who is a retired FBI fingerprint examiner with over 30 years of experience on contract with the Latent Fingerprint Section of the FBI Laboratory.

This paragraph was originally drafted by the original FBI affiant and by AUSA 2. AUSA 2 and the original FBI affiant said they each called Terry Green at the FBI Laboratory LPU on March 23, to obtain detailed information about the identification of Mayfield for the affidavit. AUSA 2's handwritten notes of her conversation with Green shortly after the identification was made include the words "positive - 100% identification." Green and AUSA 2 both stated that AUSA 2 read the draft language regarding the identification of LFP 17 to Green on March 23, and that Green approved it. Lead Case Agent 1 told the OIG that he confirmed this language again in late April by reading it over the telephone to Green.

## **2. Affidavit description of the SNP doubts and the April 21 meeting**

In late April, Lead Case Agent 1 took responsibility for drafting language for the affidavits describing the April 13 Negative Report and the April 21 meeting in Madrid. The language submitted to the Court in paragraph eight of the affidavit supporting the material witness warrant stated:

In mid-April it became apparent that the preliminary findings of the Forensic Science Division of the SNP concerning the fingerprint were not consistent with those of the FBI Laboratory.

As a result, a meeting was held between a representative of the FBI's Latent Fingerprint Unit and approximately ten members of the Forensic Science Division of the SNP, including representatives from both the automatic fingerprint identification section and the latent fingerprint section on April 21, 2004. Before the meeting SNP personnel indicated that their report of the examination of LP#17 was preliminary and that a final determination had not been rendered. The SNP also indicated that they had not gone into the level three characteristics (ridge edges, ridge breaks, pores, and incipient ridge events) utilized by the FBI when making their initial comparison. At the conclusion of the meeting it was believed that the SNP felt satisfied with the FBI Laboratory's identification of LFP#17 and indicated that the Forensic Science Division intended to continue its analysis of the latent print comparison. I have been advised that the FBI lab stands by their conclusion of a 100% positive identification that LFP#17 as [sic] the fingerprint of BRANDON BIERI MAYFIELD.

This language, which does not specifically mention the April 13 Negative Report, was considerably less specific in its final form than the language in earlier drafts regarding the SNP's doubts about the fingerprint identification. Lead Case Agent 1 had originally drafted language that stated:

On April 13, 2004, the Forensic Science Division of the SNP issued a report indicating that it conducted an analysis and comparison of three photographic copies of fingerprint cards of BRANDON BIERI MAYFIELD with the "latent prints discovered during the different crime scene inspections" carried out after the March 11, 2004 terrorist attacks. An English translation of the laboratory report indicates that the result of the comparison was negative, although it is unclear whether this term was used to indicate that the examination resulted in a "non-identification," was "inconclusive," or carried some other meaning. The report also indicates that analysis of the impressions is ongoing leaving uncertainty whether the comparison was complete and a finale [sic] determination rendered. Given the FBI Laboratory's definitive identification and uncertainties over the SNP report, a meeting was arranged . . . .

On April 29, Lead Case Agent 1 sent the draft affidavit to the Madrid Legat for his review to ensure that the affidavit was accurate. The Madrid Legat responded by e-mail that the April 13 Negative Report had been provided by sources in the SNP in confidence, without the approval of the judge in charge of the investigation in Spain, and should not be described in detail in the affidavits. However, the U.S. Attorney's Office insisted that some reference

to the April 13 Negativo Report be disclosed in the affidavit. In the next draft, dated May 4, the U.S. Attorney's Office and the Portland Division had substituted the less specific language that was contained in the final version of the affidavit. This less specific description was included in the affidavit despite the Madrid Legat's continued objection to making any reference to the April 13 Negativo Report public.

Lead Case Agent 1 told the OIG that the description of the April 21 meeting used in the final affidavit, including the statement that the SNP "felt satisfied with the FBI's identification," was derived from the April 22 memorandum written by the Madrid Legat regarding the meeting. As previously noted, the Madrid Legat's April 22 memorandum stated that "at the conclusion of the meeting all of the SNP personnel seemed satisfied with the FBI's identification." Lead Case Agent 1 told the OIG that he did not read this description to Green, and that he could not recall whether he reviewed it with anyone who attended the April 21 meeting. The Madrid Legat told the OIG that he did not recall discussing this statement in the affidavit with Lead Case Agent 1.

### **3. Affidavit description of the FBI's beliefs regarding travel by Mayfield to Spain**

The affidavit submitted in support of the material witness warrant also contained statements pertaining to Mayfield's alleged travel in connection with the Madrid bombings. Specifically, paragraph 21 of the affidavit stated: "The investigation thus far has revealed no records of travel outside the United States in the name of BRANDON BIERI MAYFIELD." Paragraph 23 stated: "Since no record of travel or travel documents have been found in the name of BRANDON BIERI MAYFIELD, it is believed that MAYFIELD may have traveled under a false or fictitious name, with false or fictitious documents." Paragraph 24 stated: "I believe that based upon the likelihood of false travel documents in existence, and the serious nature of the potential charges, Mayfield may attempt to flee the country if served with a subpoena to appear before the federal grand jury." Variants of these statements appeared in the earliest drafts of the affidavit prepared by AUSA 2 and the original FBI affiant in late March.

The Portland SSA told us she reviewed the affidavits in her role as supervisor. She stated that the basis for the statement in paragraph 24 of the affidavit about "the likelihood of false travel documents in existence" was that when the FBI had conducted the FISA search of Mayfield's home, [REDACTED]

[REDACTED] Werder (who signed the affidavit) also told us that he was aware that the FISA search [REDACTED].

However, we determined that the language referring to “the likelihood of false travel documents in existence” was first drafted in [REDACTED], before the FISA searches of the Mayfield residence were conducted. The FBI and U.S. Attorney’s Office witnesses we questioned about this language did not identify any other evidence supporting “the likelihood of false travel documents,” except the Laboratory’s identification of Mayfield as the source of a fingerprint found in Spain.

## **II. The Arrest of Mayfield and Subsequent Events**

### **A. Arrest of Mayfield**

The Portland SSA told the OIG that she had a meeting with Lead Case Agent 1 and Lead Case Agent 2 prior to May 6 (the day of the arrest), to discuss the approach of Mayfield. She said the agents concurred with the plan to attempt to “smooth talk him and try to get him to cooperate.” The Portland SSA selected another FBI SA (referred to in this report as the Assisting Agent) with international terrorism experience to assist Lead Case Agent 2 on approaching Mayfield. The Assisting Agent said he met with Lead Case Agent 2 on May 4, to “get up to speed on the case.” On May 5, there was a briefing on the matter with Portland Division agents and the U.S. Attorney’s Office. Witnesses stated that SAC Jordan emphasized at this meeting that Mayfield should be approached and treated professionally.

On the morning of May 6, the government presented to Robert E. Jones, Senior District Court Judge for the District of Oregon, the material witness warrant and criminal search warrants for Mayfield’s office, residence, and four vehicles. The judge authorized all of the warrants. With respect to the search of Mayfield’s law office, the judge imposed specific procedures to be employed during the search to safeguard materials subject to attorney-client privilege.

Lead Case Agent 2 said she and the Assisting Agent went to Mayfield’s office at approximately 9 or 9:30 a.m. on May 6. She said there was no one other than Mayfield in his office. Another FBI agent waited outside in case any of Mayfield’s clients came to the office. Lead Case Agent 2 and the Assisting Agent said that they knocked on the door to the office and Mayfield let them in. They said they identified themselves as FBI agents and that Mayfield immediately made it clear that he did not want to talk with them. Lead Case Agent 2 said Mayfield said, “I don’t want you in my office. I have client files in here. I don’t want to talk with you.” The Assisting Agent also told the OIG that Mayfield stated that he had client files in his office.

Both Lead Case Agent 2 and the Assisting Agent said that they did not get a chance to explain their presence to Mayfield because as soon as he saw their FBI identification he said he wanted them out of his office. They said that the Assisting Agent then told Mayfield he was under arrest and that they had search warrants for his house and office. The Assisting Agent handcuffed Mayfield's arms behind his back. He said Mayfield was cooperative but would not "engage" with the agents. Lead Case Agent 2 said that the Assisting Agent read the material witness and search warrants to Mayfield. The Assisting Agent said he read the search warrants to Mayfield and let Mayfield read the cover page of the material witness warrant. Neither the Assisting Agent nor Lead Case Agent 2 gave Mayfield the affidavit supporting the material witness warrant at that time.

Lead Case Agent 2 and the Assisting Agent said that the Assisting Agent then tried to talk to Mayfield about why the FBI was there. They said Mayfield responded that he wanted to have his hearing, that he knew the judge, and that he could not believe that the judge had signed the warrant. Lead Case Agent 2 said that neither she nor the Assisting Agent mentioned the Madrid bombings at that point, but that the search and material witness warrants mentioned the nature of the potential charges against Mayfield. The Assisting Agent said they were at Mayfield's office for approximately 20 minutes.

The Assisting Agent and Lead Case Agent 2 led Mayfield to the FBI squad car. The Assisting Agent asked Mayfield for his car keys to conduct the search of Mayfield's car. The Assisting Agent told us that at that point, he told Mayfield, "as far as I know, the media is right behind us and we don't want to make a scene."<sup>37</sup> The Assisting Agent and Lead Case Agent 2 both said that Mayfield declined to provide his car keys. Mayfield then asked for his handcuffs to be placed in the front because he had an old shoulder injury that caused him discomfort. Lead Case Agent 2 said they normally do not comply with such requests, but they did so in this case. The Assisting Agent said he agreed to switch the handcuffs in the hope that it would encourage Mayfield to talk and be cooperative.

Lead Case Agent 2 said they drove Mayfield to the courthouse, which took approximately 15 minutes. The agents asked Mayfield if there was anyone they could call for him, and Mayfield said no. The Assisting Agent said that after discussing the matter with the AUSAs, he gave a copy of the material witness warrant affidavit to Mayfield and asked Mayfield if he had an attorney

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<sup>37</sup> The Assisting Agent told us that he had no specific knowledge that the media would be there, but was aware that the media follows FBI activity via scanners and that the reason the arrest was happening on that date was because of a possible media leak. He also said that his mention of the media was part of his effort to get Mayfield to talk and cooperate in the search of the car.

they could call for him. Mayfield asked them to call Tom Nelson, a local attorney. AUSA 1 called Nelson and informed him of Mayfield's arrest.

The FBI then transferred custody of Mayfield to the United States Marshals Service (USMS), which fingerprinted and photographed Mayfield. The FBI did not request or receive fingerprints or photographs from the USMS.

## **B. Criminal Searches and Witness Interviews**

The FBI executed all of the search warrants on May 6. According to FBI documents, the search of Mayfield's office began at 10:18 a.m. and was concluded at 3 p.m. The search team removed approximately six boxes of documents and items, including approximately two boxes of client files, a Rolodex, numerous business cards, telephone logs, two computer hard drives, multiple computer CDs and diskettes, a cellular telephone, and receipts and bills.

In conducting the search of the law office, the FBI assigned two lawyer-agents (among others) to the search team. According to documents filed with the court, the search team seized no material from the law office until the lawyer-agents made an initial determination that the material fell within the scope of the warrant. The search team reported that it seized approximately 25 percent of the office files. The files that were seized were further screened by a "privilege AUSA" to identify and segregate privileged and non-privileged material.

FBI documents indicate that the FBI spent three hours searching the Mayfield residence on May 6, beginning at approximately 11:15 a.m. Prior to executing the search warrant at the Mayfield residence, two Special Agents interviewed Mona Mayfield, who denied that she or her husband had any involvement in the Madrid bombings or any other terrorist acts. FBI agents also interviewed or attempted to interview other Mayfield family members and relatives, including Mayfield's mother, father, brother, and stepmother.

The two Special Agents who interviewed Mona Mayfield sat with her while the search was conducted. Lead Case Agent 1 was present for this search, along with six other FBI agents. He said he was in charge of the search of the residence and that the search team did a "good job" of getting in and out without alerting the neighbors or the media. He also said that the search team left the house in good condition.<sup>38</sup> From the home, the FBI seized

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<sup>38</sup> Mona Mayfield was quoted in press accounts as stating that after the search, the house looked as if it had been robbed, with rooms ransacked, closets emptied, and drawers overturned.



approximately 80 items, including 4 computers, numerous computer diskettes and CDs, credit cards, checkbooks, shipping receipts, passports, bank receipts, videotapes, cassette tapes, 2 firearms, and other miscellaneous papers.

### **C. Post-Arrest Developments**

#### **1. Mayfield's initial court appearance**

On the afternoon of May 6, Mayfield was brought before Judge Jones for his initial appearance on the material witness warrant. Mayfield was represented by Tom Nelson. The judge advised Mayfield that, as a material witness, he was subject to being held without bail pending his appearance before a grand jury. The judge also advised Mayfield that his options were to "take the Fifth Amendment before the grand jury or . . . to testify in deposition in perpetuation of your testimony or to testify before the grand jury." The judge also told Mayfield that as soon as his testimony was obtained, Mayfield could be released. The judge then ordered that the grand jury be brought in on May 11 or that Mayfield be permitted to give deposition testimony by May 11.

Mayfield stated in court that the fingerprint was not his and if it was, he had no idea how it got there. After consulting with his attorney, Mayfield asked the judge if he could be released if he consented to a deposition that day. The judge declined, stating that a deposition on that date would not be meaningful because the government had not had enough time to finish conducting the searches of the Mayfield residence, law office, and vehicles. Mayfield also requested that he be released on special conditions pending his appearance before the grand jury. The judge declined to release Mayfield, stating that because of the "gravity of the matter, there is no way I can ensure the appearance . . . of this material witness at this time."<sup>39</sup>

The judge placed a "gag order" on the government and Mayfield's counsel, but he told Mayfield that he could tell people he was being held as a material witness. The judge also prohibited the release of the affidavit by anyone, including Mayfield. Further, the judge ordered that the agents executing the search warrants return the premises to the condition they were prior to the search. The Portland SSA, who attended the initial appearance,

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<sup>39</sup> Although Mayfield was not charged with any criminal offenses at the time of his arrest, the application and affidavit for the material witness warrant set forth several potential federal crimes being investigated by a federal grand jury in connection with the Madrid bombings. A conviction for those crimes carried a maximum sentence of death. In a subsequent court hearing on May 17, Judge Jones stated: "If it's his fingerprint, unexplained in - with detonators in Spain, [it] is a powerful reason for him to flee if he's facing capital punishment."

told us she left the hearing and called the search team to make sure they left the house in good condition.

## **2. The FBI's continuing investigation of Mayfield**

During the May 6 searches, the FBI discovered keys to a bank safe deposit box. On May 10, the government obtained a search warrant for that safe deposit box. Inside the box the FBI found, among other items, \$10,000 in \$100 bills. It was subsequently determined that the cash was the legitimate property of Mona Mayfield, acquired pursuant to an inheritance.

In addition, after the execution of the searches, the FBI began reviewing and analyzing the items, documents, and computer materials seized during those searches. Among other things, the FBI found that the home computers had accessed websites relating to the Spanish rail system, Spain's largest airline, a Spanish airport, and a Spanish terrorist group known as "ETA." The FBI also discovered pilot training logs demonstrating Mayfield's experience as a small aircraft pilot in the 1980s and a book chronicling the development of al Qaeda.

## **3. Subsequent court proceedings involving Mayfield**

On Friday, May 7, the Federal Public Defender, Steven Wax, and one of his assistants, Christopher Schatz, were appointed to replace Nelson as Mayfield's counsel. On that same day, according to the court docket, the judge advised counsel for Mayfield and the government that Mayfield's deposition could begin at 1:30 p.m. that day, Mayfield could be released for the weekend on electronic monitoring, and the deposition could resume on the morning of Monday, May 10. After consulting with his counsel, Mayfield declined to be deposed on that date. As a result, Mayfield remained incarcerated.

In a court hearing on May 10, the judge expressed concern about leaks of sealed information to the media and noted that "there's been leakage on both sides." The judge read into the record portions of several newspaper articles that quoted anonymous government officials, Mayfield's prior counsel, and Mayfield's relatives and family members discussing a variety of topics, including the fingerprint identification, the conduct of the FBI's investigation of Mayfield, Mayfield's detention under a false name, and the Mayfield family's suspicion that his home had recently been entered surreptitiously.<sup>40</sup> Counsel

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<sup>40</sup> Documents indicate that almost immediately after the arrest of Mayfield, the DOJ, the FBI, and the U.S. Attorney's Office began receiving numerous press inquiries concerning Mayfield's arrest. As a result, the judge imposed a general "gag order" on May 6. However, the newspaper articles read into the record by the judge on May 10 cited, among others, anonymous government officials as their sources, in clear violation of the judge's May 6 "gag order." An e-mail from a DOJ Public Affairs Officer said that he was told by two reporters that (continued)

for both parties indicated to the judge that they were also concerned about leaks and had begun drafting a joint “gag order.”<sup>41</sup>

Also on May 10, Mayfield’s counsel requested that the grand jury session be postponed from May 11 to allow him additional time to consult with his client. The attorney requested an adjournment until May 20, and later agreed to May 21 as the date for Mayfield’s grand jury appearance. The attorney also agreed to notify the judge and the government in advance if Mayfield planned to assert his Fifth Amendment privilege and refuse to testify. The judge stated: “Apparently he is willing to remain in custody until this grand jury – until he gets your advice.” Mayfield’s attorney responded: “That’s correct, Your Honor.”

Mayfield’s counsel asked the judge to halt the government’s review of the evidence seized from Mayfield’s law office, alleging that the review was improper, and instead asked the judge to appoint a special master to assume control of the evidence. The government objected and explained to the judge the “taint procedure” it had followed as ordered by the judge upon execution of the law office search warrant. The judge declined to halt the ongoing review and instead ordered that the client files that were already reviewed by the taint AUSA be brought to his chambers for his review. Those files were delivered to the judge that same day.

On May 11 and May 14, Mayfield’s counsel filed numerous motions challenging the material witness procedure and the criminal searches of Mayfield’s home, office, and vehicles. Also on May 11, the judge entered an order indicating that he had reviewed all of the seized attorney-client files and withdrew from further government review certain privileged matters. All non-privileged files were copied by the government and subsequently returned to Mayfield’s counsel.

During this period, counsel for both the government and Mayfield met frequently to discuss possible scenarios under which Mayfield’s testimony

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their sources were from Portland. However, witnesses from both the FBI Portland Division and the U.S. Attorney’s Office denied that anyone from their offices leaked information about the Mayfield case to the media. In addition, both the FBI Portland Division and the U.S. Attorney’s Office in May 2004 jointly requested that the FBI Office of Professional Responsibility, in conjunction with the DOJ Office of Professional Responsibility, conduct an internal investigation to attempt to discover the source of the leaks. The source of the leaks was never uncovered.

<sup>41</sup> Counsel subsequently presented to the judge a more stringent “gag order” which prohibited the dissemination of sealed information by any government official, employee, or counsel associated with Mayfield. The judge approved the gag order on May 11.

could be obtained prior to May 21. To that end, on May 13, the government presented Mayfield's counsel with a "proffer letter" outlining the terms under which an interview of Mayfield could be arranged before or in lieu of the scheduled May 21 grand jury appearance. The parties thereafter exchanged correspondence negotiating the terms of a proposed proffer, but could not agree on several issues, including the scope of any immunity that would be granted to Mayfield in connection with his interview.

In a court hearing on May 17, the parties indicated to the judge that they were thus far unable to negotiate the terms of a mutually agreeable proffer agreement. The judge noted the challenges faced by both parties:

As I look at it, both sides are in a catch-22 position. Legally, the defense doesn't want to commit to giving a proffer or deposition or grand jury testimony until they know what the Government's got against them. The Government doesn't want to tell the . . . material witness what they have . . . so that answers can't be tailored to any questions that they normally have to ask of a witness. And so they don't want to . . . get rehearsed testimony to questions.

The judge also asked AUSA 1 what the government would do in the event that Mayfield asserted his Fifth Amendment privilege before the grand jury. AUSA 1 responded that it would be forced to make a decision whether to compel Mayfield's testimony pursuant to a grant of immunity. AUSA 1 also added that the government would probably ask that the Court continue the matter for several weeks in order to allow the government to finish its review of the evidence seized during the May 6 searches in order to make the decision whether to immunize Mayfield.

#### **D. Mayfield's Detention**

Following Mayfield's court appearance on May 6, the USMS transported Mayfield to the Multnomah County Detention Center (MCDC), a maximum security adult correctional facility in Portland.<sup>42</sup> The material witness statute provides that if detention is ordered, the witness shall be confined in a corrections facility and kept "separate, to the extent practicable, from persons awaiting or serving sentences or being held in custody pending appeal." 18 U.S.C. § 3142(i)(2). The MCDC is under contract to the USMS to provide detention facilities to the federal government. The USMS chose this facility to

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<sup>42</sup> Following his release, Mayfield made statements to the media regarding the conditions of his confinement and its appropriateness in light of his status as a material witness. The OIG addresses these issues here and in Chapter Six.

house Mayfield because its location is convenient to the courthouse where Judge Jones ordered Mayfield's detention.

On May 6, 2004, AUSA 2 sent a memorandum to the USMS stating that because Mayfield was being detained as a material witness, not a criminal defendant, his arrest was governed by Federal Rule of Criminal Procedure 6(e) and was considered to be secret. The AUSA's memorandum instructed the USMS that neither the USMS nor the jail should release any information regarding Mayfield's custody status, including his photographs. Because the MCDC booking records are open to the public, the USMS and the MCDC agreed that Mayfield would be booked under an alias, "Randy Taylor."

The AUSA's memorandum to the USMS did not give any further guidance regarding how or where Mayfield should be confined. The Operations Supervisor for the USMS made a handwritten notation on AUSA 2's memorandum that stated "SUBJECT SHOULD BE KEPT SEPARATE FROM ALL INDIVIDUALS FOR HIS OWN SAFETY," and forwarded the memorandum, by facsimile, to the MCDC. The Operations Supervisor told us that she had a telephone conversation with AUSA 2 at the time, but that she did not recall whether she made the notation in response to something AUSA 2 said or on her own initiative out of concern for Mayfield's safety.

At the MCDC Mayfield was searched for contraband, screened for medical conditions, and sent to the classification station where a deputy conducted a risk assessment to determine the section of the MCDC in which Mayfield would be housed. The deputy on duty at the classification station told us that at the time he was unaware that Mayfield was using an alias. He stated that when he did a database search for prior arrest records under Mayfield's alias, he found several from Florida. He then confronted Mayfield about his failure to disclose these arrests. Mayfield did not reveal his identity, but did deny the prior arrests. The deputy stated that he sent Mayfield back to the waiting area while he completed his risk assessment. He stated that he assessed Mayfield as low-risk, and accordingly assigned him to a cell within the general prison population. The deputy told the OIG that he then happened to recognize Mayfield from an internet news report. The deputy stated that he then called Mayfield up to the desk and confronted him about not being truthful regarding his identity. Mayfield responded that the USMS had told him not to disclose his real name. The deputy told the OIG he became concerned that other prisoners would recognize Mayfield, so he assigned Mayfield to a cell in closed custody for Mayfield's protection.

From May 6 through May 12, 2004, Mayfield was housed in the MCDC's fourth floor administrative segregation unit, a restrictive area where the more dangerous and high-profile inmates are also maintained. Prisoners in the segregation unit are each housed in separate cells and locked inside their cells

for 22 hours a day. The MCDC Captain said that although Mayfield still needed to remain in restrictive custody for his protection, it was subsequently determined that Mayfield was not a threat to the guards or to other prisoners and therefore he was transferred on May 12 to the protective custody unit, the lesser of the two restrictive custody units. The MCDC also houses other prisoners in this unit who it considered to be “vulnerable” (those who are physically weaker, who are new to the prison system, or have minor mental disorders). Like other prisoners in this sixth floor unit, Mayfield was allowed to commingle with other inmates in a common area for several hours per guard shift. The cells in both the administrative segregation and the protective custody units are enclosed by walls on all sides with a small, square opening in the door, allowing the inmate to look out.

MCDC and Multnomah County Sheriff’s Office (MCSO) officials told us that their detention facility procedures reflect their sensitivities to the large Muslim population that lives in the Portland area. The Multnomah County detention facilities contain the only two Halal-certified kitchens in the states of Oregon and Washington.<sup>43</sup> In addition, the detention facilities maintain a supply of Korans and prayer rugs which are available to prisoners upon request. Mayfield was provided with both.

According to USMS records, during his 2-week incarceration, Mayfield was transported to the courthouse by the USMS four times. In addition, on May 12, 2004, the USMS transported Mayfield to a judicial conference room so he could meet with Oregon State Bar Professional Liability Fund counsel to arrange to have another attorney cover his clients while he was incarcerated. In accordance with USMS procedures, each time Mayfield was transported he was handcuffed and shackled.

Also, in accordance with MCDC procedures, Mayfield was allowed to have “contact” visits with his attorneys and “non-contact” visits (separated by a window wall) with designated family members and friends. Because of the possibility of contraband being provided to the inmate either intentionally or unintentionally during “contact” visits, Mayfield was, according to MCDC officials, routinely strip searched after these visits. He was also strip searched when he was first booked in and each time he returned from court. Mayfield had visitors, either family members or attorneys, on 9 of the 13 days that he was incarcerated (excluding the day he was first incarcerated and the day he was released). According to MCDC records, the only times visitors were denied access to Mayfield were when Mayfield was at court and therefore unavailable, when visits occurred outside the standard visiting hours, or when a visitor was not on the approved list of visitors that had been designated by Mayfield.

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<sup>43</sup> In Halal-certified kitchens, the meat is prepared as prescribed by Muslim law.

According to the Chief Deputy for Corrections for the MCSO, special accommodations were made for Mayfield regarding his attorneys' visits. Mayfield's attorneys wanted to use a separate room, bring in documents, and use a tape recorder. The Chief Deputy said that the MCDC was concerned about the volume of materials that Mayfield's attorneys wanted to bring into the MCDC because of the possible introduction of contraband, but they made an exception and allowed them to do so. He said that it was a matter of trying to balance Mayfield's legal needs against the MCDC's security needs. He also stated that, while these meetings were observed by MCDC personnel for security reasons, they were not monitored for content.

At the direction of the judge, the USMS made a conference room available for Mayfield to work on his client files and to meet with a member of the Oregon bar to arrange for another attorney to take over his cases.

#### **E. The SNP's Reexamination of Latent Fingerprint 17**

At the same time that the events leading to Mayfield's detention were unfolding, the SNP was conducting its own reexamination of LFP 17 as promised at the April 21 meeting in Madrid. In the weeks following the April 21 meeting, the Madrid Legat repeatedly asked officials in the SNP for updates regarding the status of the SNP's reexamination of LFP 17 and Mayfield's prints. On May 4, the FBI CTD transmitted an FBI Letterhead Memorandum (LHM) to the Madrid Legat for dissemination to the Spanish government. The Madrid Legat told the OIG that he did not specifically recall this LHM, but he had no reason to believe that it was not delivered to the Spanish government. The LHM stated, among other things:

Because Mayfield's name and/or FBI investigation of Mayfield appears likely to become public in the very near future, our plans to interview Mayfield have been significantly advanced. To effectively interview Mayfield, we need the authority to detain him; currently we cannot obtain such authority from our courts without an official Spanish report identifying Latent Print #17 from the plastic bag recovered by your service from within the suspect Kangoo van as Mayfield's. We would greatly appreciate a final forensic report from your service as soon as possible, in an unclassified format suitable for use in U.S. judicial proceedings.

As we discuss in Chapter Six, however, the statement in the LHM that Mayfield could not be detained unless the SNP Laboratory identified him as the source of LFP 17 was inaccurate.

As noted above, the former SNP Laboratory Director told the OIG he had assigned three teams to reexamine LFP 17. The findings of these teams were reported to him on or shortly after May 5. The findings of these review teams were described to the OIG by three SNP officials who were involved in the process. No written report of this reexamination was ever shared with the FBI or the OIG.

According to the SNP officials we interviewed, the Spanish review teams found that there were seven characteristics in LFP 17 that appeared to match Mayfield, but that there were differences between the prints that could not be reconciled. In particular, the SNP found that the dissimilarity in the upper left portion of LFP 17 could not be explained as a "second touch" because the pressure applied in that portion of the print was consistent with the rest of the print and therefore indicated a single touch. The SNP also found discrepancies in the spacing between details in the lower portion of the prints and discrepancies in the curvature of some ridges in the prints. The former SNP Laboratory Director told the OIG that on May 7 or May 8, he requested additional opinions regarding LFP 17 from two outside experts affiliated with other Spanish forensics laboratories. He stated that only one of the outside experts had time to review LFP 17 and the Mayfield prints, and that this expert told him that the print did not match Mayfield's prints.

There are conflicting accounts as to whether the SNP immediately informed the FBI of the findings of these review teams. The former SNP Laboratory Director told the OIG that he informed the Madrid Legat of the results of the SNP's reexamination on May 11 or 12, when the SNP asked the Madrid Legat for additional fingerprints of Mayfield. The Madrid Legat denied to the OIG investigators that anyone from the SNP informed him that the SNP had concluded that the FBI was wrong prior to May 19, when the SNP informed him that it had identified Ouhnane Daoud. The OIG found no documentary evidence showing that the SNP informed the FBI that it had concluded that Mayfield was not the source of LFP 17 prior to May 19.

The contemporaneous documentation reviewed by the OIG reveals, however, that at least by May 7, the day after Mayfield was arrested, the FBI had been told by the SNP that there were disagreements within the SNP Laboratory regarding the Mayfield identification, and the FBI had related this fact to the U.S. Attorney's Office. During the period following the April 21 meeting, the Madrid Legat had made a number of calls to the SNP seeking information on the status of the SNP's reexamination of LFP 17. On May 7, the Madrid Legat wrote the following in an e-mail to an ETIU SSA and the ITOS I Assistant Section Chief:

Regarding the SNP fingerprint report, it is still undecided as of today. Some of their people agree with our finding, there is still a



few who don't, according to the [Deputy Director], they hope to resolve this tomorrow when the Director General [of the SNP Laboratory Director] returns.

On the same day, a DOJ CTS attorney (referred to in this report as the CTS Attorney) sent an e-mail to DOJ and the U.S. Attorney's Office that described the same conversation, as related to her by the Madrid Legat:

With respect to the fingerprint report, it is still incomplete. [The Madrid Legat] met with the laboratory guys today and there is apparently still some disagreement among the Spanish. He will meet with them again on Monday.

The CTS Attorney stated during her OIG interview that she did not recall what the "disagreement" was, but told the OIG she did not interpret this information from the Madrid Legat to mean that the SNP was about to exclude Mayfield. However, her use of the word "still" in the e-mail suggests that this was not the first time the FBI or DOJ had been made aware of disagreements within the SNP Laboratory.

The OIG interviewed the Madrid Legat and the SNP Deputy Director regarding their May 7 conversation. The Madrid Legat said he had no recollection of the conversation beyond what was stated in his May 7 e-mail. The SNP Deputy Director said he recalled only that the Madrid Legat called him frequently and that the SNP Deputy Director always referred him to the Director of the SNP Laboratory for information. The SNP Deputy Director told the OIG he did not believe that he told the Madrid Legat that there was disagreement within the SNP about the identification.

On May 8, a Spanish newspaper (El Pais) reported that the SNP was "very doubtful" that Mayfield was the source of LFP 17. By May 10, media reports regarding SNP doubts had reached Mayfield's attorneys and the U.S. Attorney's Office. On May 12, the Madrid Legat sent an e-mail to FBI Headquarters and the Portland Division stating:

This past weekend, there were a series of articles in the Spanish press which quoted Spanish officials as stating . . . [t]he SNP Laboratory disagrees with the FBI findings and do not consider our fingerprint identification techniques sound. . . .

As of yesterday afternoon [May 11], the SNP Laboratory still had not finalized their report on the fingerprint, informing me they would let me know whenever they finished.

The Madrid Legat did not comment on the accuracy of the Spanish media reports in his e-mail. He told the OIG that he was generally skeptical of the accuracy of reports in the Spanish newspapers. He stated that by this time, however, he was beginning to think that the SNP Laboratory might not agree with the FBI because it was taking them so long to complete their report.

Later on May 12, the SNP delivered a letter to the Madrid Legat requesting additional inked fingerprints for Mayfield. The Madrid Legat arranged for the translation of the letter and forwarded it to the CTD and the Portland Division.

As translated, the letter stated that the available inked prints for Mayfield “do not contain sufficient detail in all areas and in particular the upper portion, as to compare with the prints lifted during the [March 11 attacks], information that is essential to proceed with the issue of a corresponding forensic report.” Accordingly, the May 12 letter requested that the FBI obtain “[t]hree complete, original fingerprint cards, of the 10 fingers with the largest print area possible, including the marginal upper area and marginal area on both sides.” The letter also requested DNA samples for Mayfield.

The SNP officials we interviewed each told the OIG that after Mayfield was arrested, the SNP realized that there was an opportunity to obtain a better set of inked prints from Mayfield. In addition, the former Director of the SNP Laboratory told the OIG that at the time he delivered the May 12 letter to the Madrid Legat, he specifically told the Madrid Legat that the SNP had reached the conclusion that LFP 17 was not a match to Mayfield.

The Madrid Legat provided a different version of events to the OIG. He told the OIG that he inferred from the SNP’s May 12 letter that the SNP was still considering Mayfield as the possible source of LFP 17. He said he spoke to the SNP Laboratory Director around May 12 but that the Director did not indicate which way the SNP Laboratory was leaning.

The FBI obtained a new set of inked fingerprints from Mayfield in Portland late on May 13, and these prints were forwarded to the FBI Laboratory. Green told the OIG he examined these prints to determine whether additional details from the extreme tips of Mayfield’s finger could be matched to the upper left portion of the print to substantiate the theory of a second touch, but he discovered that once again that area of Mayfield’s finger was not recorded.<sup>44</sup>

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<sup>44</sup> Before the fingerprints were forwarded to Spain, the SNP identified Daoud as the source of LFP 17 and withdrew its request for additional Mayfield prints.

On May 14, the CTS Attorney wrote an e-mail describing a telephone call from the Madrid Legat in which he said that the SNP had “probably determined that their initial report is wrong and that they have requested an additional copy of the prints in order to save face.” During his interview with the OIG, the Madrid Legat said he could not recall any details regarding this conversation or the basis of his statement to the CTS Attorney.

#### **F. The Court-Appointed Fingerprint Expert**

On May 17, Judge Jones held a hearing on a motion by Mayfield’s attorneys seeking his release. Among other things, Mayfield’s attorneys argued that the primary basis on which the government sought Mayfield’s detention – the validity of the FBI’s identification of LFP 17 – had come into question as a result of press reports indicating that the SNP had doubts about the FBI’s conclusions. Judge Jones responded by stating “I have no affidavit from any Spanish authorities as to questioning the fingerprint. The only information I have is that after consulting with the FBI, that they agreed with the 100 percent identification.” However, the judge ordered the United States to produce a copy of LFP 17 to a fingerprint expert chosen by the defense. The U.S. Attorney’s Office provided the names of three potential experts recommended by the FBI Laboratory to Mayfield’s attorneys, including Kenneth R. Moses of Forensic Identification Services in San Francisco. Mayfield’s attorneys designated Moses as the fingerprint expert.<sup>45</sup>

Moses was certified as a latent print examiner by the International Association for Identification (IAI). He served as a crime scene investigator in the San Francisco Police Department Crime Laboratory from 1971 to 1998, and received numerous honors and awards. The judge found him to be qualified as an expert, and digital images of LFP 17 were delivered to him later on May 18.

On May 19, Moses testified telephonically as to the results of his identification. He stated, “I compared the latent prints to the known prints that were submitted on Brandon Mayfield, and I concluded that the latent print is the left index finger of Mr. Mayfield.” Moses stated that there were 16

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<sup>45</sup> On May 18, at the request of the United States and with the agreement of Mayfield’s counsel, the judge modified his order to provide that the expert would be designated as a court expert rather than a defense expert. The government obtained this modification with the consent of counsel for Mayfield in order to avoid the precedent of being ordered to provide discovery to a grand jury witness to justify seeking the witness’s testimony. During the hearing on that day, AUSA 1 stated: “There have been leaks in the press indicating some question about [the FBI’s identification of Mayfield] by the Spanish government. To the extent that we had any knowledge of that, we provided that to the Court in the material witness affidavit. As far as I know the Spanish position hasn’t changed one way or another since then.”

minutiae in the latent print that corresponded to the minutiae on Mayfield's finger. He stated that the identification was "quite difficult," citing distortion and blotting out by residue from the development process. He stated that he would have liked to examine the original evidence, but he testified that the digital image of the latent print that he received was sufficient to make the identification.

### **G. The SNP's Identification of Daoud**

On May 19, the same day that Moses testified that LFP 17 was Mayfield's print, the FBI and the U.S. Attorney's Office learned that the SNP had identified LFP 17 as belonging to a different person, an Algerian named Ouhmane Daoud. The events that led the SNP to Daoud began on April 3, when Spanish law enforcement authorities raided an apartment building in suburban Madrid in an effort to arrest suspects in the March 11 train bombings. The suspects blew themselves up, also killing a Spanish policeman. In the course of sifting through evidence found at the site of the suicide blast, the SNP discovered documents bearing Daoud's name. The SNP discovered that Daoud's fingerprints were on file as a result of an immigration violation. On approximately May 15, the SNP fingerprint examiners determined that Daoud's right middle finger was the source of LFP 17, based on a correspondence of 14 points of identity. The SNP also determined that Daoud's right thumb was the source of LFP 20, found on the same bag, based on a correspondence of eight points of identity.

The SNP found that Daoud's print was consistent with the upper left portion of LFP 17 (which did not match Mayfield and which the FBI had explained as a separate touch). According to notes taken by the Portland SSA at a June 9 meeting between the SNP and the FBI, the SNP officials stated that they examined the bag and determined there was no fold in it that would explain the appearance of a break in the print separating that portion of the print from the rest of the print. The SNP told the FBI that they concluded that the gap or separation between the upper left portion of the print and the center of the print was the result of an imperfection in the development technique rather than a second touch or a fold in the bag.

The Director of the SNP Laboratory told the OIG that before announcing the identification, he sought independent verification from the three groups he had convened to study the Mayfield prints and from the outside expert. All agreed that Daoud was the source of LFP 17 and LFP 20.

On May 19, the SNP delivered a letter to the Madrid Legat advising him that the SNP Laboratory had identified Daoud as the source of LFP 17 and LFP 20. He immediately forwarded the letter and digital copies of Daoud's prints to an SSA in ETIU, who in turn forwarded the material to the third LPU Unit Chief

and Terry Green at the Laboratory. The Madrid Legat also alerted the Portland Division, which in turn alerted the U.S. Attorney's Office.

Judge Jones called the U.S. Attorney's Office at approximately 9:15 a.m. on May 19 to inform it that Moses had concluded that LFP 17 matched Mayfield's known prints and that Moses would testify about his conclusion at 10:30 a.m. that day. During that telephone call, AUSA 1 informed the judge that the U.S. Attorney's Office had received information from Spain casting doubt on the identification, that the U.S. Attorney's Office was trying to gather additional information, and would address the issue with the judge at the 10:30 a.m. hearing.

On May 20, the SNP completed its detailed Expert Report explaining the identification of Daoud as the source of LFP 17 and LFP 20. This report was turned over to the FBI on May 26, but FBI records do not reflect when it was received by the Laboratory.

#### **H. The Release of Mayfield**

Immediately after receiving the new information from the SNP on May 19, the FBI Laboratory began reexamining LFP 17. Wieners told the OIG that as soon as he saw the upper left portion of Daoud's print, his "heart sank," as he realized that it matched LFP 17 in the area that Mayfield's prints did not. The Laboratory requested that the Madrid Legat obtain higher resolution copies of Daoud's prints from the SNP to use in the examination. On the same day, the major case prints (10-print cards) obtained from Mayfield after his arrest in Portland were delivered to the LPU. Wieners told AUSA 2 that it would take a couple of days for the LPU to resolve the issue.

The Moses testimony took place at approximately 10:30 a.m., Pacific Time, on May 19. Immediately after Moses testified, AUSA 1 reported to the judge, in vague terms, that classified information from Spain had cast doubt on the identification. Judge Jones accepted AUSA 1's offer to brief him *in camera* regarding the information from Spain. After hearing the information, Judge Jones returned to open court and stated that the new information "is not of such a caliber that would justify immediate release of the material witness." The judge did not explain or elaborate on this conclusion.

Early on May 20, the Madrid Legat obtained higher resolution digital copies of Daoud's known fingerprints from the SNP and e-mailed them to the Laboratory. That same morning, Wieners called AUSA 2 to reiterate that it would take more time to resolve the conflicting identifications. Wieners had heard that Mayfield was scheduled to go before the grand jury and wanted to warn the U.S. Attorney's Office about where things were going. AUSA 2 memorialized the conversation in a file memorandum. According to the

memorandum, Wieners told AUSA 2 that the LPU “see[s] what the Spanish see” and that there may be merit in the SNP comparison. AUSA 2’s memorandum quoted Wieners as stating (in reference to the discovery of a second potential match to LFP 17) that he had “never seen anything like this” in 25 years of fingerprint examination. According to AUSA 2, Wieners stated that “in light of the potential industry wide effect beyond this matter, the lab would be taking a cautious and judicious approach to this issue realizing time is sensitive.” He indicated that the FBI Laboratory would likely be sending examiners to Spain to discuss the matter with the SNP.

In light of this development, the U.S. Attorney’s Office recommended to DOJ that the government disclose the information to Mayfield’s attorneys and seek Mayfield’s immediate release. By early afternoon on May 20, Criminal Division Deputy Assistant Attorney General David Nahmias authorized the U.S. Attorney’s Office to move for release on strict conditions.

At a hearing that afternoon, AUSA 1 informed the judge and Mayfield that the Spanish government had identified another individual in Spain as the source of LFP 17. AUSA 1 stated that “it is our position that it is still Mr. Mayfield’s print on that blue bag. But in light of this information, it is our request that Mr. Mayfield be released pending further proceedings in this material witness proceeding.” Judge Jones granted Mayfield’s release to “home detention” but denied the government’s request for electronic monitoring.

#### **I. The FBI Laboratory’s Reexamination of LFP 17**

As noted above, the FBI Laboratory began a reexamination of LFP 17 on May 19, when it received a copy of Daoud’s known prints from the SNP. Wieners, Green, and two other examiners became involved in the reexamination. Green told the OIG that at that time, he still thought LFP 17 was Mayfield’s print. Wieners told the OIG that he quickly became persuaded that the source of the print was Daoud, but he lacked confidence in his objectivity and did not voice his opinion. The two other examiners hypothesized that the lower portion of the print might have been made by Mayfield and the upper portion made by Daoud. Wieners also reported that a fifth examiner also looked at the prints and told Wieners he thought it was Daoud’s. The fifth examiner told the OIG he did not do a complete examination.

The Laboratory did not resolve the issue immediately after receiving Daoud’s known prints. The examiners were unwilling to identify Daoud as the source because there were a few dissimilarities between LFP 17 and Daoud’s known prints that they were not sure could be explained, and at least one place in LFP 17 that seemed to match Mayfield’s prints better than Daoud’s.

DOJ pushed for a resolution of the issue. The Assistant Attorney General for the Criminal Division, Christopher Wray, discussed the matter with Deputy FBI Director Bruce Gebhardt on May 20, and stated that answers were needed immediately. Gebhardt called Joseph DiZinno, Assistant Director of the FBI Laboratory, and CTD Section Chief Cummings and told them to develop a strategy in consultation with Nahmias to resolve the issue quickly.

At approximately 6 p.m. Eastern Time on May 20, DiZinno contacted an LPU Unit Chief and instructed him to catch the next flight to Spain to gather firsthand information and the evidence, if possible, from the SNP so that the Laboratory could make its own determination regarding whether Daoud was the source of LFP 17. The LPU Unit Chief took DiZinno's instructions to mean that he should obtain a high-quality photograph of the latent print, the original evidence (if possible), and the known prints of Daoud. The LPU Unit Chief was selected for the trip because Wieners was unavailable to travel. An additional Senior Fingerprint Specialist who had not previously been involved in the case was selected to accompany the LPU Unit Chief to Spain.

On May 21, after DiZinno instructed the examiners to go to Spain, the Laboratory received better digital images of Daoud's prints from the SNP. Nevertheless, the Laboratory examiners were unable to resolve the identification issues.

The earliest flight the LPU Unit Chief and the other examiner could catch left Washington on May 21 and arrived in Madrid early on Saturday, May 22. The Madrid Legat met the examiners at the airport and drove them directly to a meeting with approximately 10 officials of the SNP Laboratory, most of whom had also attended the April 21 meeting with Wieners. The SNP Laboratory Director displayed the blue plastic bag on which LFP 17 was found. He explained that the original latent fingerprints had been destroyed as a result of processing, but that their locations were marked on the bag. The Director explained that the SNP examiners believed that LFP 20 and LFP 17 corresponded to Daoud's thumb and middle finger and that a third, unidentifiable latent print (LFP 19) likely corresponded with his index finger, so that all three prints were made simultaneously. He also displayed the original inked fingerprint cards for Daoud. The LPU Unit Chief took digital photographs of the bag and the original fingerprint cards. The SNP Laboratory Director also gave the third LPU Unit Chief a copy of LFP 19.

The Madrid Legat gave the third LPU Unit Chief additional materials that the SNP Laboratory Director had provided to him the day before, including photographs of Daoud and photographs of Daoud's 10-print cards. It is not clear whether the SNP provided additional photographs of LFP 17 to the third

LPU Unit Chief at this time; if so, they apparently were not distinguishable from the digital images previously provided to the FBI.

The representatives of the SNP were prepared to explain their identification of Daoud at the May 22 meeting, but the LPU Unit Chief told the OIG he declined to enter into such a discussion because he had been up all night, did not have much background on the case, and wanted to remain independent in his review of the materials. The Madrid Legat told the OIG that the SNP representatives were disappointed at the unwillingness of the FBI to discuss the identification at that time.

The LPU Unit Chief and the other examiner traveled back to Washington on Sunday, May 23, and arrived in Quantico at about 10 p.m. The LPU Unit Chief delivered the materials he had obtained in Spain to the LPU, including better quality known prints for Daoud. Green, Wieners, Stephen Meagher (another LPU Unit Chief), and a fourth examiner were waiting to examine the new materials. Wieners told the OIG that he asked Meagher to get involved in the reexamination of LFP 17 because Meagher had not been involved in the identification up to that time, and Wieners felt Meagher was the least biased examiner and the most able to conduct an objective examination. The witnesses told the OIG that the LPU Unit Chief who had traveled to Madrid briefed Meagher and Wieners on what the SNP had told him, including the potential for simultaneous impressions. The LPU Unit Chief and the examiner who traveled with him to Spain did not participate further in the effort to resolve the issue that night.

The team of FBI Laboratory examiners worked through the night. They told the OIG that they had been directed by DiZinno or Dwight Adams (Director of the Laboratory) to produce an answer first thing in the morning.

The four examiners had slightly different recollections of events during the overnight examination, but all agreed that Meagher ultimately decided to declare LFP 17 to be of "no value." Meagher told the OIG that after examining the materials and asking some questions, he went to his office by himself to conduct a detailed examination, which took about an hour and a half. He told the OIG that he concluded that because he was lacking key information regarding the fingerprint and its processing technique, he could not offer a reasonable explanation for the dissimilarities that he found between LFP 17 and both the Mayfield and Daoud prints. Meagher stated he needed to see the original evidence (the plastic bag) and know more about the processing and photographic techniques used to make the image in order to reach a proper conclusion. He stated that he therefore concluded that without this additional information, LFP 17 was of "no value" for identification.



Wieners stated that after Meagher completed his independent examination, Meagher pointed out that they still did not have the best image available. Wieners said Meagher noted the issue of possible simultaneous prints and the existence of multiple lines of demarcation and separation in the print. According to Wieners, Meagher stated that based on the fact that he could “make it work” with both Daoud and Mayfield, which should never be the case, it was necessary to declare this print of no value. Thus, the determination of no value was based in part on the fact that by using proper identification techniques, it was possible to match this latent to two different sources. However, Meagher did not mention this rationale in his interview with the OIG.

Green told the OIG that Meagher made the determination that the print was of no value because he saw inconsistencies with both the Daoud and Mayfield prints. Green stressed that this was strictly Meagher’s decision. Green stated that in his view there were parts in the latent fingerprint that seemed to match Mayfield better than Daoud. Green told the OIG that nothing that happened during the May 23-24 overnight reexamination convinced him that he had made a mistake.

The fourth examiner told the OIG that when Meagher emerged from his office that night, he stated that he believed Mayfield could be excluded, but that he thought that the latent was not necessarily “of value” for identification. He said he thought the FBI Laboratory should err on the side of caution and not make another mistake.

Meagher and Wieners prepared a written summary of the Laboratory’s reexamination, which was circulated to the CTD and the FBI Portland Division on the afternoon of May 24. The summary describes how the Laboratory reached the “no value” determination:

As this controversy burgeoned, the LPU supervisory staff began analyzing the latent print in question and many differing opinions arose. Some were convinced the latent print belonged to Mr. Mayfield. Others were equally convinced the latent print belonged to [Daoud]. Obviously, since fingerprints are unique and can only be attributed to a single source, only one position can be correct. Still others thought the latent print was actually two prints overlaid and that one portion belonged to Mr. Mayfield and the other belonged to [Daoud]. Each camp, in reaching their conclusion, noted dissimilarities between the latent print and the respective known prints that were difficult to explain. As the four Examiners met on Sunday night/Monday morning, the same schisms were manifest. At that point, the focus returned to the latent print and it was re-analyzed. The four Examiners

conducting this re-analysis consisted of two Unit Chiefs and two Supervisory Fingerprint Examiners with a combined total of ninety-three years of experience in the latent print science. The one constant in all of their arguments was that the latent print had multiple separations. In other words, the latent print was divided by many lines of demarcation possibly caused by creases in the plastic bag, multiple touches by one or more fingers or both. Based on the lack of sufficient quality and/or quantity of ridge detail in any one area of the latent print, a no value determination was made.

In the morning, after the reexamination was complete, Wieners and Meagher briefed Adams and DiZinno.

At this point, miscommunications within the FBI and DOJ about the LPU's conclusions and the reasons for the error began to proliferate. Meagher told the OIG that he probably left Adams and DiZinno with the impression that there was enough information available to conclude that the latent print was not Mayfield's, but *not* enough to identify Daoud.<sup>46</sup> As the Laboratory's findings were conveyed to the Director and to DOJ, however, this message became confused. An e-mail from a senior DOJ official to the U.S. Attorney's Office and the Criminal Division at DOJ on May 24 stated:

At the briefing this morning with the Director, we learned that the Lab has concluded that the Spanish are correct about the print – the FBI lab has now concluded it belongs to the Algerian. They no longer think it is a match for Mayfield. FBI management found out this morning. FBI management does not yet have an understanding of how this happened, except that the image they were looking at was not as clear as the original.

Later on May 24, Assistant Attorney General Wray set up a conference call involving Adams, U.S. Attorney Immergut, and others. According to Immergut, Adams stated that the problem was caused by the FBI's use of a third-generation image. Immergut said she understood from this call that the FBI examiners who met with the SNP in Madrid on May 22 saw a better image of LFP 17.

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<sup>46</sup> Meagher told the OIG that he advised Adams and DiZinno that the Laboratory lacked sufficient information about the evidence and processing techniques to provide proper and adequate explanations for certain dissimilarities between LFP 17 and Daoud's known fingerprint.

Contrary to the e-mail describing the Director's briefing, the Laboratory had not determined at that time that Daoud was the source of the print, and had not determined that the image they had used to identify Mayfield was not as clear as the original. Indeed, nobody from the Laboratory had ever seen the original print or anything other than a digital copy of a photograph taken of LFP 17.

The OIG believes that Meagher's explanation to Adams and DiZinno regarding the error became garbled because the Laboratory personnel involved in the overnight reexamination were not involved in the subsequent briefings of the Director and of the DOJ. In addition, there was a miscommunication of what the examiners had brought back from Spain. They retrieved a better copy of Daoud's known prints during the May 22 meeting with the SNP, not a better version of LFP 17.<sup>47</sup>

#### **J. Dismissal of the Material Witness Proceeding**

On May 24, after learning that the Laboratory had withdrawn its identification of Mayfield as the source of LFP 17, the U.S. Attorney's Office filed a Motion To Dismiss Material Witness Proceeding. The Motion described the Laboratory's overnight reexamination of the print, and repeated the explanation from the summary provided by Meagher and Wieners:

The four examiners concurred that the latent print had multiple separations – *i.e.* that it was divided by many lines of demarcation possibly caused by creases in the underlying material, multiple touches by one or more fingers, or both. Utilizing the additional information acquired this weekend in Spain, the FBI lab has now determined that the latent print previously identified as a fingerprint of MAYFIELD to be of no value for identification purposes.

The Court dismissed the material witness proceeding and ordered the return of materials seized from Mayfield.

On the same day, the FBI National Press Office issued a press release which apologized to Mayfield and his family and which described the discovery of the misidentification as follows:

Soon after the submitted fingerprint was associated with Mr. Mayfield, Spanish authorities alerted the FBI to additional

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<sup>47</sup> The LPU Unit Chief who traveled to Madrid was unavailable to clarify this confusion until May 26.

information that cast doubt on our findings. As a result, the FBI sent two fingerprint examiners to Madrid, who compared the image the FBI had been provided to the image the Spanish authorities had.

Upon review it was determined that the FBI identification was based on an image of substandard quality, which was particularly problematic because of the remarkable number of points of similarity between Mr. Mayfield's prints and the print details in the images submitted to the FBI.

In Portland, SAC Jordan also held a press conference on May 24 in which he apologized to Mayfield.

### **K. Aftermath**

During the period from May 25 into early June, FBI and DOJ officials sought to clarify the causes of the misidentification, to provide explanations for Congress and others, and to address the inconsistency between the SNP's identification of LFP 17 to Daoud and the FBI LPU's declaration that LFP 17 was of "no value." On May 25 and 26, FBI Laboratory Director Adams briefed several congressional committees about the error. Adams described these briefings in an e-mail to Meagher, Wieners, and others in the Laboratory that stated "[a]ll groups seem to understand the reasons behind the identification after I explain the quality issue, lack of complete information and access to originals, and the remarkable similarity to Mayfield." During these briefings, Adams indicated that the FBI examiners who met with the SNP in Madrid on May 22 had seen a better quality image of LFP 17.<sup>48</sup>

U.S. Attorney Immergut also raised questions about the FBI Laboratory's change in position, which led to a conference call on May 26 between the U.S. Attorney's Office, the Portland Division, and the FBI Laboratory. During this call, the Laboratory explained that the examiners had not seen a better image of LFP 17 in Spain. The LPU examiners also stated it was unlikely that seeing a better quality image of LFP 17 would change the Laboratory's conclusion, because the problem was the quality of the latent print, not the image. According to an e-mail recounting the call, Wieners indicated that at least part of the decision to classify LFP 17 as being of "no value" included a consideration that it should not be possible to identify a single latent fingerprint (LFP 17) to two different sources (Mayfield and Daoud). Both SAC Jordan and SA Werder told the OIG that they came away from the call with the

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<sup>48</sup> Again, this inaccurate information resulted from a misunderstanding of what the examiners who met with the SNP on May 22 had retrieved from Spain.

impression that at least some examiners in the Laboratory still felt on May 26 that Mayfield could not be ruled out as the source of the print – an impression that Wieners later confirmed. Jordan, Immergut, and AUSA 1 all expressed frustration with the Laboratory’s “no value” determination in light of the fact that the Laboratory had never seen the best available image.

On May 27, Green signed a memorandum to the Acting Section Chief in charge of the LPU acknowledging his error in identifying Mayfield as the source of LFP 17. He stated: “After reviewing my original analysis of Latent 17, I determined that I was in error in concluding it was of value for comparison. I should have made an initial decision that Latent 17 is not of value for comparison purposes, not only because of the quality of the image, but that there was no background information about the image to aide in my findings of explainable dissimilarities.” Green told the OIG he was instructed to prepare this memorandum as part of the corrective action process. He said that at the time he wrote the memorandum, he had not yet excluded Mayfield or accepted that the print was Daoud’s, so the “no value” conclusion was the only possible result.

On May 28, the FBI Office of Legislative Affairs circulated draft talking points intended to be used in telephone calls to the congressional committees to correct the information that Adams had provided earlier. These draft talking points suggested that information gathered during the Madrid trip enabled the FBI “to exclude Mr. Mayfield as the contributor of the questioned latent print,” and described the “challenges” the Laboratory faced in making the original identification. This draft elicited a strong response from U.S. Attorney Immergut, who pointed out that the LPU still had not excluded Mayfield, but instead declared the print of no value, and that the Laboratory had never mentioned any challenges or uncertainties when Green told the U.S. Attorney’s Office it was a “100 percent” identification.

In response to the issues raised by Immergut, Deputy Assistant Attorney General Nahmias scheduled a meeting at DOJ in Washington on June 2 “to sort through exactly what the facts are.” The meeting was attended by a large number of officials from DOJ, the U.S. Attorney’s Office, the FBI Portland Division, FBI Headquarters, and the FBI Laboratory. At the June 2 meeting, the Laboratory acknowledged that Mayfield still could not be excluded as the source of LFP 17 because the print was of “no value.” The Laboratory also attributed its mistake to “practitioner error” as distinguished from a failure of the science. The Laboratory representatives stated that the latent print was divided into small segments by many creases and lines of interference and that there were not enough details within any one contiguous area to make an identification.

During the June 2 meeting, Gary Bald, the FBI's Assistant Director of the CTD, pointed out that the FBI Laboratory's position that the print was of "no value" could have an adverse impact on the SNP's case, which was based on the SNP Laboratory's positive identification of the print as Daoud's. Bald, Assistant Attorney General Wray, and others stated that another trip to Madrid was needed to reconcile the inconsistent positions between the FBI and the SNP. Among other things, Wray's list of action items at the end of the meeting included the trip to Spain, the preparation of new talking points explaining the error, and a closer look at other cases which might be adversely affected by the Mayfield misidentification.

An ETIU SSA was directed to work with the Madrid Legat to arrange another meeting with the SNP in Madrid. In an e-mail circulated on June 2, later in the same day as the meeting at DOJ, the ETIU SSA stated:

The purpose of this trip is to examine the original photographic image of the latent print (i.e. the best evidence available) and to discuss the SNP's findings relative to Mayfield. . . . The primary concern which will be shared by everyone, is how we went from a positive identification to an inconclusive and the Spanish have arrived at a positive identification of a different suspect. We need to know if there is something in the Spanish comparison/presentation which can conclusively illustrate that latent #17, is indeed that of their suspect [Daoud], and not of Mayfield.

On June 9, a contingent of FBI and DOJ personnel met with the SNP for a third time to discuss LFP 17. The U.S. representatives included the Madrid Legat, an ETIU SSA, LPU Unit Chiefs Meagher and Wieners from the FBI Laboratory, the Portland SSA and Lead Case Agent 1 from the Portland Division, the Portland AUSA, and the CTS Attorney. The SNP contingent included many of the same persons who attended prior meetings, except that the Director of the SNP Laboratory had been replaced as a result of the change in Spanish governments.

The meeting lasted approximately three hours. According to the participants we interviewed, the SNP representatives provided a detailed description of how the fingerprints on the blue plastic bag were discovered, developed, and photographed. They also explained how they reached the "negativo" finding in the April 13 Negativo Report. In addition, the SNP representatives described their reexamination of LFP 17 after the April 21 meeting with the FBI and the sequence of events leading to the identification of Daoud as the source of LFP 17 and 20. They acknowledged that LFP 17 was a "bad quality" print that was "difficult" to identify, and described how they determined that the LFP 17, 19, and 20 might have been placed simultaneously by someone holding the rolled-up or crumpled bag. At the

same time, however, the SNP acknowledged that the bag was laid out flat before it was processed for prints and that there was no way to determine or reconstruct the configuration of the bag as it was found in the van.

During the June 9 meeting, the FBI was given the opportunity to examine the bag closely with a magnifier, and to see the relative positioning of the prints from the outlines that remained on the bag. The SNP also provided the FBI with high-quality photographs of the latent prints made from the original silver halide negatives. This was the first time the FBI obtained copies of the latent prints that had not been digitized.

At the end of the meeting, Meagher and Wieners indicated that the LPU would be reexamining LFP 17 and 20 in light of the new information made available by the SNP.

#### **L. The FBI's Identification of Daoud as the Source of Latent Fingerprint 17 and Latent Fingerprint 20**

After the June 9 meeting in Spain, examiners in the LPU conducted another reexamination of LFP 17 and officially concluded that the print was made by Daoud. On June 14, Meagher began the formal reexamination of LFP 17 and LFP 20. By June 15, he concluded that LFP 17 was made by Daoud's right middle finger, and that LFP 20 was made by Daoud's right thumb. Meagher charted 18 points of similarity on LFP 17 and 15 points of similarity on LFP 20.<sup>49</sup> Meagher found enough matching detail in both prints to identify each individually, without relying on the prints having been deposited simultaneously.

On June 15, Meagher asked another examiner in the Laboratory to perform a verification of his identifications. Meagher told the OIG that he selected an examiner who had never seen the relevant prints before. The examiner subsequently verified the identification of Daoud. On June 22, Meagher requested verification as a "technical/peer review" by a third LPU examiner, who also verified the identification of Daoud. Meagher instructed the two verifying examiners each to prepare charted enlargements of their identifications.<sup>50</sup> The charts prepared independently by Meagher and the two verifying examiners revealed that the three examiners all relied on many of the same points of similarity in identifying Daoud as the source of the prints. Meagher completed the final report of this identification on July 16.

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<sup>49</sup> Meagher's charted enlargements of the Daoud identification are provided in Appendix C.

<sup>50</sup> The charts are provided in Appendices D and E. We have not included copies of the charts for LFP 20 (the thumbprint) as this print was never identified to Mayfield and hence was not the source of the error.

### **M. Mayfield's Civil Action**

On October 4, 2004, attorneys for Mayfield filed a civil action in the United States District Court in Oregon against the FBI and DOJ. The complaint also named Werder, Green, Massey, Wieners, and "John Does I-X," as individual defendants. Mayfield's complaint includes claims for civil rights violations based on the allegation that Mayfield was selected for arrest and imprisonment based upon his Muslim religion, a Privacy Act claim relating to the leaking of confidential information to the media regarding Mayfield, and a claim challenging the constitutionality of the provisions of the Patriot Act and FISA allegedly used to collect and retain information about the Mayfields. The case remains pending.



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**CHAPTER THREE**  
**BACKGROUND FOR THE OFFICE OF THE INSPECTOR GENERAL'S**  
**ANALYSIS OF FINGERPRINT ISSUES RAISED BY THE MAYFIELD CASE**

In this chapter, OIG provides background information regarding the FBI Laboratory Latent Print Units (LPU) and latent fingerprint examination methodology. This information is relevant to the OIG's assessment of the causes of the FBI Laboratory's misidentification of Latent Fingerprint 17 (LFP 17) and the OIG's review of the Laboratory's programmatic responses to the error. Part I of this chapter describes the LPU. Part II provides an overview of the latent fingerprint examination process.

**I. Description of the FBI Laboratory LPU**

Organization. At the time of the Mayfield fingerprint identification, latent fingerprint examinations were conducted by three latent print units (referred to collectively as the LPU), located within the FBI Laboratory's Forensic Analysis Section. Each latent print unit included two teams of fingerprint examiners (each headed by a team leader) and one or more programmatic groups (each headed by a program manager). The examiner teams were responsible for casework while the programmatic groups were responsible for a variety of other functions, including quality control, technology development, and other management and administrative issues. The team leaders each supervised three to five fingerprint examiners, and the program managers were responsible for administering their programs and the personnel assigned to those programs. As of September 2004, the 3 LPUs consisted of 92 employees: 78 fingerprint examiners, 8 photographers, 5 technicians, and 1 management analyst.

Case Work. Although the LPU performs fingerprint examinations primarily in connection with FBI investigations, it also conducts examinations on behalf of state, local, and other federal agencies. In FBI investigations, the LPU typically has custody of the evidence on which the fingerprint was deposited and processes the fingerprints itself. In other investigations, the requesting agencies sometimes send photographs of the latent prints to the LPU for examination. LPU supervisors assign cases to individual examiners based on various factors, including examiner caseload, case priority (more experienced examiners may be assigned to high-priority cases), and the examiner's prior experience with the case.

Along with the latent fingerprint, the LPU may also be provided with the known fingerprints or the name of a suspect. If known prints for the suspect are available to the LPU, the examiner will first compare the suspect's prints with the latent print. If an identification occurs, the examination is concluded.

If no identification occurs, the examiner initiates a search for potential candidates through the FBI's Integrated Automated Fingerprint Identification System (IAFIS). IAFIS is an automated system that permits computer searches of FBI databases containing over 470 million fingerprints. An IAFIS search is also initiated if the examiner is not provided with any potential suspects. Once the examination is completed, the examiner prepares a report of the results which is sent to the originating agency.

Accreditation. Since 1998, the FBI Laboratory has been accredited by the American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB). ASCLD/LAB accreditation is voluntary. As of June 12, 2005, 289 laboratories were accredited by ASCLD/LAB. Accreditation requires a demonstration that the laboratory's management, personnel, procedures, equipment and facilities satisfy minimum standards. ASCLD/LAB makes its accreditation decisions based on documentation submitted by the applicant laboratory and periodic on-site inspections.

Training and Certification. Prior to 1999, the Laboratory certified its latent fingerprint specialists based upon satisfactory completion of the training program, which included competency testing throughout the training period, moot court testimony, and casework review. All individuals hired into the position of fingerprint specialist up to 1999 were required to have at least five years of prior experience in fingerprint classification and searching fingerprint files. Upon successful completion of their training within the Laboratory, they were certified by the Laboratory as latent fingerprint specialists. Green, Wieners and Massey followed this career path.

Beginning in 1999, the pre-requisite of five years of experience was removed and a new formal certification process was adopted. Prospective LPU examiners (now called "Physical Scientists") now undergo a 24-month training program within the LPU. LPU certification requires passing a 3-day test that includes a written examination and fingerprint comparisons. Examiners who had previously been certified under the pre-1999 procedures are grandfathered into certification.

In 1977, the International Association for Identification (IAI), the leading professional organization of forensic identification specialists in the United States, initiated a testing and certification program for latent fingerprint examiners. The IAI Program is voluntary; it is not a prerequisite to performing latent fingerprint examinations or testifying as an expert in most courts. Wieners was certified by the IAI after taking the IAI test. Massey was grandfathered into IAI certification. Green never sought certification by the IAI.

Periodic Proficiency Testing. ASCLD/LAB requires accredited laboratories to implement annual proficiency testing. The LPU has conducted annual proficiency testing of all of its latent fingerprint examiners, including supervisors and unit chiefs, since 1995. Initially, the LPU developed its own proficiency tests, but since 2002 the LPU has used tests provided by Collaborative Testing Services, the only supplier of latent fingerprint proficiency tests approved by ASCLD/LAB. To pass the proficiency test, LPU examiners are required to obtain a perfect score. A corrective action plan is implemented for any examiner who fails the test.

## **II. Overview of the Latent Fingerprint Examination Process in the FBI Laboratory LPU**

This section describes basic principles and procedures of latent fingerprint examination as practiced by the FBI Laboratory LPU. It is not intended to provide an exhaustive or definitive treatment of latent fingerprint examination techniques, but rather to provide background for understanding the OIG's review of the causes of the fingerprint identification error in the Mayfield case.

### **A. Policies and Procedures Governing the LPU**

The FBI Laboratory has adopted several Standard Operating Procedures (SOPs) to govern the LPU, including Standard Operating Procedures for Examining Friction Ridge Impressions (the Examination SOPs). The Examination SOPs cite two brief references prepared by The Scientific Working Group for Friction Ridge Analysis, Study, and Technology (SWGFAST) for further detail regarding the examination process: The SWGFAST Friction Ridge Examination Methodology for Latent Print Examiners, (the SWGFAST Methodology) and the SWGFAST Standards for Conclusions (SWGFAST Standards).<sup>51</sup> The versions of the Examination SOPs, the SWGFAST Methodology, and the SWGFAST Standards that were in effect at the time of the Laboratory's identification of LFP 17 are provided in Appendices F, G, and H. In general, the examination processes described in the following sections are those set forth in these three documents.

In addition, the Examination SOPs cite David R. Ashbaugh's text, "Quantitative-Qualitative Friction Ridge Analysis" (hereinafter "Ashbaugh"), as

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<sup>51</sup> SWGFAST is an organization sponsored by the FBI Laboratory comprising latent fingerprint examiners from many laboratories. Since 1995, SWGFAST has established guidelines for latent fingerprint examination.

a reference for FBI latent fingerprint examiners.<sup>52</sup> Accordingly, Ashbaugh is cited and quoted extensively in the following description of the latent fingerprint examination process. Other references are cited to explain additional aspects of the latent print examination discipline of relevance to the Mayfield matter. Areas of disagreement within the discipline – including disagreements that some examiners have raised with the approach set forth in Ashbaugh – are also described below.

## **B. Friction Ridges and the Premises of Fingerprint Identification**

A fingerprint is a reproduction of the pattern of friction ridge formations of the surface of a finger, made as the result of the transfer of oil or other matter during contact between the finger and an object. Friction ridges are the ridges on the skin of the fingers, palms, and feet, which produce increased friction for gripping. Friction ridges form prior to birth in patterns that are attributed to a combination of genetic and environmental causes.<sup>53</sup>

Friction ridge patterns and fingerprints are frequently described in terms of three “levels of detail.” Level 1 detail refers to ridge flow, encompassing familiar patterns such as loops, whorls, and arches. Figure 3 depicts common Level 1 patterns.<sup>54</sup>

Level 2 detail refers to the details that occur on individual ridge paths, including the turns that each ridge takes, the size and shape of each ridge, and the places where ridges terminate or split, also known as ridge path deviations. Ridge path deviations include features such as ending ridges (where a single ridge comes to an end); bifurcations (where a single ridge splits to form two adjacent, roughly parallel ridges); and dots (extremely short ridges). An “enclosure” is formed where a ridge bifurcates into two ridges that rejoin at a second bifurcation to form a single ridge again. A human fingerprint may contain 75-175 ridge path deviations. Common Level 2 details are shown in Figure 4. As a major ridge path deviation develops in the friction skin, other ridge formations develop around it. For example, when a ridge ends, the adjacent ridges will tend to converge, as illustrated in Figure 4. Ridge path deviations, sometimes called “points” or “minutiae,” have long been a major focus of latent print examination, but the evaluation of Level 2 details also considers ridge paths and the *absence* of deviations (continuous ridges). Some

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<sup>52</sup> David R. Ashbaugh, *Quantitative-Qualitative Friction Ridge Analysis, An Introduction to Basic and Advanced Ridgeology* (CRC Press 1999).

<sup>53</sup> See generally Ashbaugh, Ch. 3.

<sup>54</sup> The images contained in Figures 3-5 were obtained from <http://fingerprints.tk/>, and are reproduced with permission.

examiners identify Level 2 details by making tracings of individual ridge paths on an enlargement of the fingerprint.

Level 3 detail refers to extremely tiny features of the friction ridges, such as the shape of ridge edges, the width of ridges, and the shape and relative location of pores along the ridges. Each ridge is made up of “ridge units.” Each ridge unit includes one sweat gland and one pore opening. According to Ashbaugh, Level 3 features are created by differential growth or random damage (such as from scarring) at the ridge unit level.<sup>55</sup> Common Level 3 details are shown in Figure 5.

One premise of fingerprint identification is that friction ridge formations persist throughout life except for (1) changes associated with growth, (2) temporary damage to the skin surface, and (3) permanent damage due to scarring of the underlying tissues. A second premise is that friction ridges and their formations are unique to each individual, even within a very small area of the friction skin. These premises are commonly referred to as “permanence” and “uniqueness.” Some critics of latent fingerprint identification claim that these premises have never been scientifically proven,<sup>56</sup> while latent fingerprint examiners respond that the premises are firmly grounded in more than a century of experience as well as in principles of genetics, fetal development, and cellular biology.<sup>57</sup>

### **C. Latent Fingerprints**

The term “latent fingerprint” is commonly used to describe an accidental fingerprint left at a crime scene. Forensic laboratories use a variety of physical and chemical processing techniques to enhance the visibility of latent prints and to photograph them for comparison purposes.

Latent fingerprints are typically assessed in terms of both the quantity and quality of friction detail that is reproduced. Quantity refers generally to the amount of detail available and is affected by many factors, including the size of the latent prints. In many latent prints, only a small fraction of the friction ridge detail on a complete finger is reproduced.<sup>58</sup> Quality is used

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<sup>55</sup> Ashbaugh, p. 143.

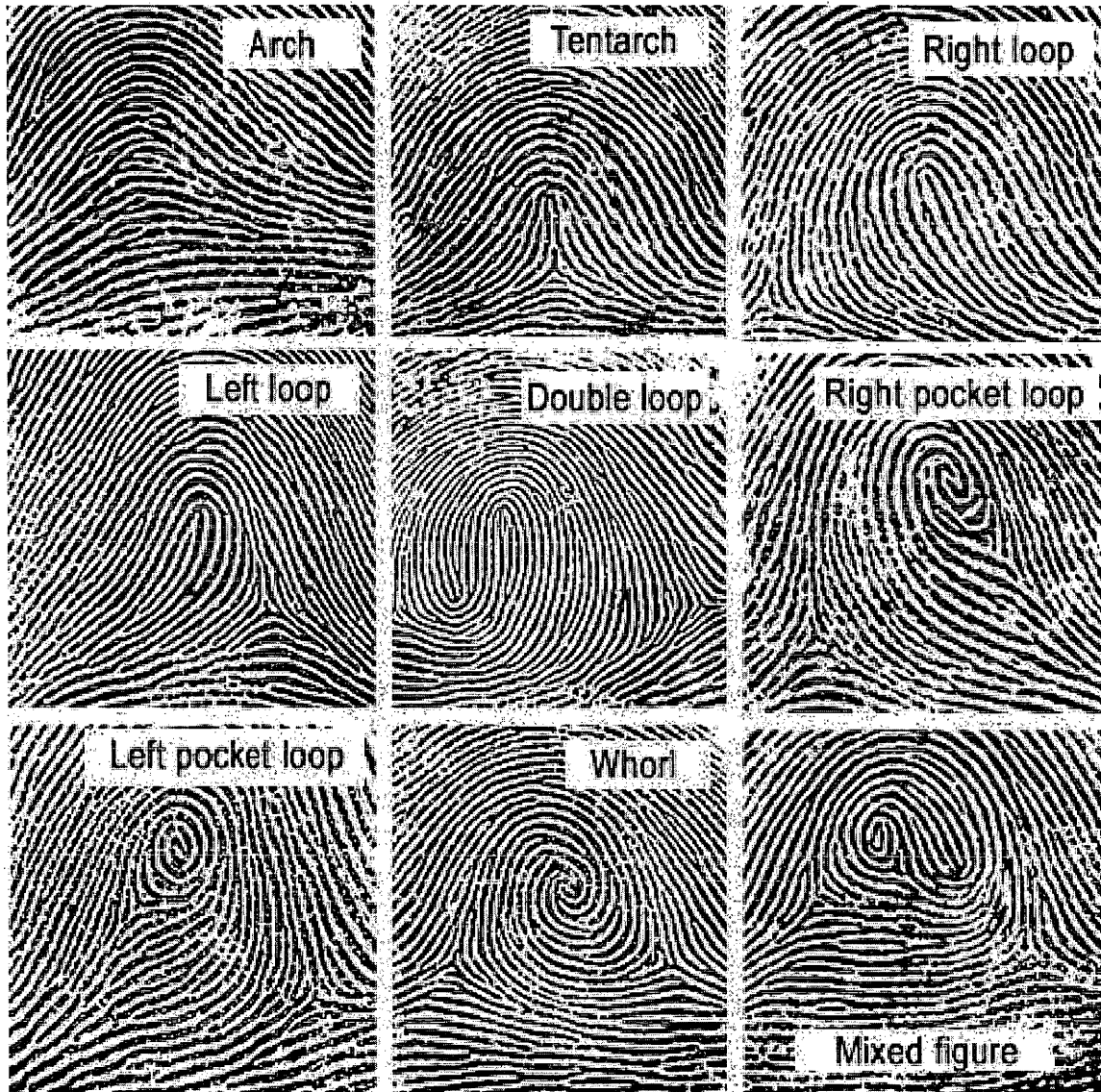
<sup>56</sup> E.g., Robert Epstein, “Fingerprints Meet *Daubert*: The Myth of Fingerprint ‘Science’ Is Revealed,” *Southern Cal. L. Rev.* Vol. 75, 2002, pp. 612 and 625; David A. Stoney, “Scientific Status, Fingerprint Identification,” *Modern Scientific Evidence: The Law and Science of Expert Testimony*, 2002, § 27-2.1.2[6].

<sup>57</sup> E.g., Ashbaugh, pp. 61-85.

<sup>58</sup> *United States v. Mitchell*, 365 F.3d 215, 221, 225 n. 5 (3d Cir. 2004) (testimony suggested that the typical latent print is perhaps 1/5 the size of a full fingerprint)

# FIGURE 3

## Common Level 1 Patterns



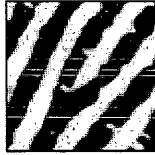
Copyright: <http://www.FINGERPRINTS.TK>

Images obtained from <http://www.fingerprints.tk/>. Reproduced with permission.

# FIGURE 4

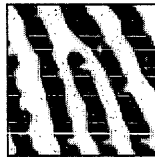
## Common Level 2 Details

BIFURCATION

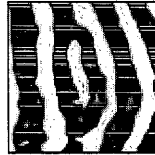


ENDING RIDGE

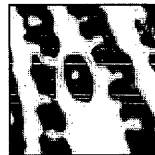
(note convergence of adjacent ridges)



ENCLOSURE



DOT



Images obtained from <http://www.fingerprints.tk/>. Reproduced with permission.



# FIGURE 5

## Common Level 3 Details

PORES



RIDGE EDGE SHAPES



INCIPIENT RIDGES



SCARS



Images obtained from <http://www.fingerprints.tk/>. Reproduced with permission.

interchangeably with “clarity” and is defined as how well the details from three-dimensional ridges are reproduced in a two-dimensional fingerprint.<sup>59</sup>

Numerous factors may affect the transfer of detail from the friction ridges of a finger to an impression on an object, potentially obscuring some of the differences between one finger and another. Unlike friction ridges, fingerprints are usually two-dimensional. Inevitably, some unique detail is lost when a three-dimensional friction ridge pattern is reproduced as a two-dimensional print.

One factor affecting the clarity of a latent fingerprint is the surface or “substrate” upon which a latent fingerprint is deposited. Different substrates affect the amount of detail from the friction ridges that is transferred to the print, and may introduce distortions to the print.<sup>60</sup> For example, a flexible substrate (such as a plastic bag like the one on which LFP 17 was found) can cause distortion as a result of the pliability of the material or the existence of folds or wrinkles. “Double taps,” where a single print is deposited in two distinct applications of pressure, are a common type of distortion with flexible substrates.<sup>61</sup>

Distortion can also be introduced by the substance that is actually deposited by the finger to form the impression of the friction ridge details (the “matrix”), such as sweat, sebaceous oils, blood, or mud. Matrices differ in viscosity, adherence, and other attributes that affect how clearly and accurately friction ridge features are recorded in latent prints.<sup>62</sup>

“Deposition pressure” refers to downward pressure during the deposition of a print. Among other things, it will affect the apparent width of the ridges and furrows, and can significantly affect the appearance of ridge edge shapes. “Lateral pressure” refers to a sideways or lateral force that may result in sliding of the friction ridges resulting in smearing in the fingerprint or a double tap.<sup>63</sup> Both types of pressure can distort the appearance of a latent print.

There are many different development media used to enhance the visibility of latent fingerprints, such as fingerprint powder and various chemicals. The development medium utilized in a particular case will depend

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<sup>59</sup> SWGFAST Methodology § 3.1.1.; SWGFAST Glossary (definitions of “clarity” and “qualitative”); Ashbaugh, p. 93.

<sup>60</sup> Ashbaugh, pp. 114-118.

<sup>61</sup> Ashbaugh, p. 114.

<sup>62</sup> Ashbaugh, pp. 118-120.

<sup>63</sup> Ashbaugh, pp. 123-129.

on the substrate and other factors. Each development medium can affect the appearance of a latent print and the accuracy with which details are reproduced.<sup>64</sup> Some development media will tend to fill in gaps in the fingerprint, obscuring Level 3 details and even causing ending ridges to appear as bifurcations. Other media may cause apparent breaks in a continuous ridge. Once developed, latent prints are often photographed for purposes of dissemination and comparison; photographic processes and digital imaging can also affect the appearance of a latent print.

Each of the foregoing factors may affect the clarity of a latent print. Because of these factors, latent fingerprints are not perfect reproductions of the friction skin, even over a small area. The premise that friction skin is unique in a very small area only applies to a fingerprint to the extent that clarity is present in the print.<sup>65</sup> The problem for the latent print examiner is to determine whether there is sufficient reliable detail in a latent print to determine that it was made by a particular finger, to the exclusion of all others.

#### **D. Known or Exemplar Prints**

The identification of a latent fingerprint is established through the agreement of friction ridge formations between the latent print and the known print of a particular candidate. "Known" or "exemplar" fingerprints are friction ridge impressions known to be those of a particular person, taken under controlled circumstances, such as during an arrest. Historically, exemplar prints have been made with ink, although in recent years the use of electronic fingerprint capture devices has become more commonplace. In a "rolled print," the image is made by rolling the surface of the finger from nail edge to nail edge in an effort to capture as much detail as possible. A "flat impression" or "plain impression" is made by pressing the fingers onto the card simultaneously, without rolling. In many cases when a subject is fingerprinted, a record is made of both individual rolled prints for all 10 fingers plus flat prints, and sometimes palm prints.

Because known prints are taken under controlled conditions, the quantity and quality of detail captured in known prints is typically (but not always) greater than is available in the latent print of interest. Factors such as over-inking may adversely affect the quality of known prints, however.

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<sup>64</sup> Ashbaugh, pp. 120-122.

<sup>65</sup> Ashbaugh, p. 93.

## **E. The ACE-V Process for Latent Print Identification**

The FBI Laboratory and many other crime laboratories utilize the “ACE-V” method for examining latent fingerprints. ACE-V is an acronym for the four steps of the method: Analysis, Comparison, Evaluation, and Verification. The Examination SOPs in effect in the FBI Laboratory at the time of the identification of LFP 17 did not describe the ACE-V process in detail. They referenced the SWGFAST Methodology, the SWGFAST Standards, and Ashbaugh, and stated that the methodology “includes both qualitative and quantitative analysis.” The individual steps of the ACE-V process are described below.

### **1. Analysis**

The SWGFAST Methodology defines “Analysis” as “the assessment of a friction ridge impression to determine suitability for comparison,” and lists various factors to be considered in the analysis stage, including the quality (clarity) of detail at all three levels and the various factors described above that may affect the appearance and reliability of details reproduced in a latent print (e.g., substrate, matrix, deposition, development method).

Another function of the analysis stage is to establish the friction ridge details that can be seen in the latent print and hence are available to utilize in the comparison phase. The examiner considers all three levels of detail in this phase. According to LPU Unit Chief Meagher, the analysis should be performed on the latent print *before* consideration of any available known prints, in order to “limit or try to restrict any bias in terms of what appears in the known exemplar.”<sup>66</sup> In other words, analysis of the latent is performed prior to the examination of the relevant exemplar, in order to avoid having the

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<sup>66</sup> Testimony of Stephen Meagher in *United States v. Llera-Plaza*, No. 98-CR-00362-10 (E.D. Pa.), February 25, 2002, p. 40. An internal LPU document titled “Questions Following a Review of the International Expert Panel Review,” dated 7/21/05, revised as of 8/16/05, states at page 9 that “[c]omparisons proceed only after full analysis is complete.” Another experienced examiner expressed the point as follows:

The reason for working from the unknown image to the known has its foundation in human psychology. When dealing with a less clear image, usually the latent or unknown print, the brain is subject to influence by “mind-set.” If a feature is first observed in a clear image, the brain may form an expectation and be tricked into seeing the same feature in an unclear image even though it does not actually exist there. . . . To avoid this possibility, a cautious examiner always finds the features in the unknown print first, free from mind-set, then locates and evaluates the corresponding features in the known print.

Pat A. Wertheim, “Scientific Comparison and Identification of Fingerprint Evidence,” *The Print*, Vol. 16, No. 2, September-October 2000, p. 18.

known print suggest features in the latent print to the examiner. Ashbaugh describes the problem this way:

During forensic comparison one must maintain an objective state of mind to guard against seeing things that are not there. For example, during the comparison process, examining the clear inked known impression *prior to carrying out an analysis of an unknown print* could cause the brain to jump to a conclusion and see details in the murky unknown ridge structures that may not actually be there.<sup>67</sup>

Several examiners we interviewed inside and outside of the FBI described analysis as an iterative process in which the examiner's initial interpretation of a latent fingerprint may be adjusted during the comparison phase as it is informed by features seen in the known print. John Vanderkolk, a SWGFAST member and experienced examiner with the Indiana State Police who served as an OIG consultant in the Mayfield matter, described this as a "recurring, reversible and blending" application of the analysis, comparison, and evaluation phases of the ACE-V model, and distinguished it from a linear process of proceeding from analysis to comparison to evaluation.<sup>68</sup>

During the analysis phase, the examiner brings to bear his understanding of how friction ridges form and how they tend to appear in latent prints. For example, the examiner must attempt to distinguish between an incompletely reproduced ridge (a gap in the reproduction of a continuous ridge resulting from the circumstances under which the latent print was deposited) and an ending ridge (a Level 2 detail in the friction skin where a ridge terminates). In the case of an ending ridge, the adjacent ridges on either side will tend to fill in any void left by the ending ridge and this directional change will be visible on the ridge path of those adjacent ridges. An example of this convergence of ridges is shown in Figure 4. Analysis of this type enables the examiner to distinguish those features on a latent print that reflect true events in the friction skin from those features that result from the imperfect conditions under which latent prints are often made or developed.

Another function of the analysis step is to evaluate the factors that might cause distortion of the friction ridge impression. These factors may be apparent from the appearance of the print (such as indications in the appearance of a latent print that a "double tap" occurred), or evidence external to the image (such as information about how the substrate might distort the

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<sup>67</sup> Ashbaugh, p. 105 (emphasis added).

<sup>68</sup> See also John R. Vanderkolk, "ACE+V: A Model," *Journal of Forensic Identification*, Vol. 54, No. 1, 2004, pp. 45-52.

appearance of the print). Understanding such factors is critical to determining whether dissimilarities between a latent print and an exemplar are “explainable” or whether they compel a conclusion that the subject did not make the print. (See discussion in Section II.E.3.b below regarding the treatment of dissimilarities during the “evaluation” phase of ACE-V.)

Ashbaugh recommends that the results of the analysis stage be committed to writing in certain cases:

When the print is complex, involving more than two distortion issues, a written report should be prepared by the expert carrying out the analysis, describing the details of the distortions observed. . . . In very serious cases a complete written analysis should always be completed. . . .

Preparing a written analysis prior to comparison promotes objectivity and demonstrates professionalism. It also removes the opportunity for anyone to suggest that one is seeing friction ridge details where none exist. . . . [W]hen the print has some distortions which may require explanation at a later date . . . , then a written analysis should be used.<sup>69</sup>

However, FBI policies in place at the time of the Mayfield identification did not require the examiner to create a written record of the analysis in any category of case.

## **2. Comparison**

The SWGFAST Methodology defines the “Comparison” phase of ACE-V as “the direct side-by-side observation of friction ridge detail [in the latent and known prints] to determine whether the detail in two impressions is in agreement based on similarity, sequence, and spatial relationship.” Ashbaugh describes comparison as a process of making comparative measurements, which are commonly performed visually by the examiner but sometimes are conducted physically.<sup>70</sup>

The comparison of the latent print with the exemplar may be conducted under a magnifier utilizing a one-to-one scale (life-sized) photograph of the latent, which permits direct comparison with the original inked fingerprint card. Alternatively, the examiner may utilize photographic enlargements or scanned images on a computer screen. This is a matter of preference for the

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<sup>69</sup> Ashbaugh, pp. 112-113.

<sup>70</sup> Ashbaugh, p. 136.

examiner; no FBI standards or protocols dictate that a comparison be conducted at a particular scale.

The examiner often uses Level 1 detail to place the latent and exemplar prints in the same orientation in order to facilitate a comparison. Differences in ridge flow, such as a “whorl” pattern in the latent versus an arch pattern in the exemplar, may enable the examiner to exclude the exemplar even without a comparison of Level 2 or Level 3 detail.

Assuming the exemplar is deemed sufficiently similar to merit a more rigorous side-by-side comparison, the examiner compares the prints on a ridge-by-ridge basis, looking for similarity and dissimilarity at all three levels of detail. Major ridge path deviations (Level 2 details) are a primary focus during the comparison, although if clarity is excellent Level 3 details may also be compared.<sup>71</sup>

Matching Level 2 ridge deviations in the latent and known prints are sometimes referred to as “points of similarity,” and are often used in enlargements to demonstrate identifications, but the term can be misleading because the comparison process involves more than the mere tallying of such features. Each such ridge deviation is compared with respect to its relationship to other features (measured by distance, direction, and the number of intervening ridges), its location within the print, its type (e.g., bifurcation versus ending ridge), and its orientation (e.g., which way an ending ridge points). Moreover, the comparison is not limited to the consideration of ridge deviations; what happens along the ridges between the deviations is also important identifying information.<sup>72</sup>

Level 3 details are sometimes used to support identifications, but the reliability of these very small details in latent prints is the subject of continuing debate within the fingerprint community. For example, John D. “Dusty” Clark, a SWGFAST member and former California Department of Justice examiner (currently with the Western Identification Network) who served as an OIG consultant in this matter, has written:

There is such a degree of variation of appearance in the 3rd level detail due to pressure, distortion, over or under processing, foreign or excessive residue on the fingers, surface debris and surface irregularity, to name a few. The repeatability of the finite detail that is utilized in the comparison process has never been subjected

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<sup>71</sup> Ashbaugh, p. 93.

<sup>72</sup> Ashbaugh, p. 141 (“It is just as important to establish where the path goes as where it starts, stops, or bifurcates.”).

to a definitive study to demonstrate that what is visible is actually a true 3rd level detail or an anomaly.<sup>73</sup>

An additional factor complicating comparison of Level 3 detail is the fact that each ridge unit contains a pore, so that pores occur repeatedly and frequently along every ridge in the friction skin. Accordingly, finding a pore at a particular location in a latent print has limited identifying power, compared to a Level 2 ridge deviation. Ashbaugh emphasizes the need to consider relative pore location by triangulation across adjacent ridges, but cautions that this practice “is not advised over more than one ridge.”<sup>74</sup> Unlike pores, Level 2 ridge deviations do not repeat in regular intervals across all ridges.

### **3. Evaluation**

Section 3.3 of the SWGFAST Methodology defines the “Evaluation” phase of the ACE-V process as “the formulation of a conclusion based upon analysis and comparison of friction ridge impressions.” There are three possible conclusions that an FBI examiner may reach under the Examination SOPs and the SWGFAST Methodology: individualization (identification), exclusion, and inconclusive.

#### **a. Individualization (identification)**

Individualization is a determination that two friction ridge impressions (e.g., the latent print and the exemplars) “originated from the same source, to the exclusion of all others.” The SWGFAST Methodology states that the individualization is the result when the compared impressions contain “sufficient quality (clarity) and quantity of friction ridge detail in agreement.” The SWGFAST Standards for Conclusions state: “The standard for individualization is agreement of sufficient friction ridge details in sequence.” SWGFAST provides no elaboration regarding how much “agreement” is “sufficient” beyond stating that the determination must be based on both the “quantity” and “quality” of friction ridge details. Indeed, the SWGFAST Standards state that “[t]here is no scientific basis for requiring that a predetermined number of corresponding friction ridge details be present in two impressions to effectuate individualization.” Accordingly, the FBI’s Examination SOPs state that “no minimum number of friction ridge detail is [sic] required to establish an identification.”

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<sup>73</sup> Dusty Clark, “What is the Point,” [http://www.latent-prints.com/id\\_criteria\\_jdc.htm](http://www.latent-prints.com/id_criteria_jdc.htm), December 15, 1999.

<sup>74</sup> Ashbaugh, p. 155, Fig. 5.2.



Despite rejecting a minimum point standard for declaring an identification, the FBI Laboratory SOPs in place at the time of the Mayfield identification required that “when less than 12 points of level two detail are utilized in making an identification, it must receive supervisor approval before being reported as an identification.” This requirement was imposed in addition to the verification requirement applicable to all identifications, as described in Section II.E.4 below. The Laboratory has since discarded this requirement.

As noted above, the Examination SOPs and the SWGFAST Standards require that an identification determination be based on both qualitative and quantitative considerations. The SWGFAST Glossary defines “quantitative” in the context of the identification conclusion as “the amount of information contained in a friction ridge impression.” In practice, this means that although no minimum number of features in agreement is required to establish individualization, the more features in agreement, the easier it is for the examiner to exceed his threshold of doubt and reach the conclusion of identification.<sup>75</sup>

The SWGFAST Glossary defines “qualitative” as “the clarity of information contained within a friction ridge impression.” The clarity of a latent print will dictate whether extremely small Level 3 details can be used to support an identification. The clarity of the print will also affect the ability of the examiner to distinguish between different types of Level 2 details, such as bifurcations and ending ridges.

According to the SWGFAST Methodology, an individualization cannot be determined solely on the basis of agreement in Level 1 detail, for the simple reason that many people share similar overall ridge patterns such as whorls, arches, and loops. An individualization may be based on sufficient agreement of Level 2 details such as ending ridges and bifurcations and the individual ridge paths between these ridge events. The SWGFAST Methodology states that Level 3 detail is used “in conjunction with” Level 1 and Level 2 detail to individualize, but the Methodology permits an examiner to identify on the basis of agreement of Level 1 and Level 2 detail without reference to Level 3.

In practice, it appears to be an unusual event to encounter a latent print lacking sufficient ridge deviations or other Level 2 details to support an identification but having clear Level 3 details that are in agreement with an

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<sup>75</sup> See, e.g., John R. Vanderkolk, “Levels of Quality and Quantity in Detail,” *Journal of Forensic Identification*, Vol. 51 No. 5, 2001, pp. 461-468 (describing the process of achieving “sufficiency” as the examiner finds increasing quantity or quality of detail in agreement, crossing a threshold or “gray area” of doubt).

exemplar.<sup>76</sup> As previously noted, there is dispute within the discipline as to the reliability with which Level 3 friction ridge details are reproduced in latent fingerprints. Ashbaugh clearly advocates utilizing Level 3 detail to make identifications, but cautions that: “Identifications based mostly on the individualizing weights of third level details are considered an advanced identification technique. Novices should seek the advice of an experienced identification specialist when this type of print is encountered.”<sup>77</sup>

Neither the Examination SOPs nor the SWGFAST Standards provide any further criteria or thresholds for declaring an identification. As described in more detail below in Section II.F., there is a vigorous debate within the discipline regarding the need for objective minimum criteria for declaring an identification.

FBI Laboratory fingerprint examiners only express a conclusion of individualization in terms of absolute certainty, with a zero likelihood that the latent fingerprint was made by a different person.<sup>78</sup> This approach is consistent with the SWGFAST Methodology, which states: “Probable, possible or likely individualization (identification) conclusions are outside the acceptable limits of the friction ridge identification science.” This certainty, based on finding sufficiency of detail in agreement, is achieved in the course of an examination as the examiner evaluates the quality and the quantity of information available in the images.<sup>79</sup> However, the claim of absolute certainty has been questioned by some academics and defense counsel.<sup>80</sup>

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<sup>76</sup> John Thornton, “Setting Standards In The Comparison and Identification,” (transcript of speech), <http://www.latent-prints.com/Thornton.htm>, May 9, 2000, (“If I have a print that is clear enough to show reliable level three detail, it invariably has an abundance [of] level two detail as well.”). An example of an identification based solely or primarily on the agreement of Level 3 details such as incipient (incompletely formed) ridges and ridge edge shapes is described in Robert D. Reneau, “Unusual Latent Print Examinations,” *Journal of Forensic Identification*, Vol. 53, No. 5, 2003, pp. 531-534 (2003). An example of an identification that relies heavily on Level 3 detail appears in Ashbaugh, p. 159.

<sup>77</sup> Ashbaugh, p. 143.

<sup>78</sup> See, e.g., David L. Grieve, “Possession of Truth,” *Journal of Forensic Identification*, Vol. 46 (1996), pp. 521, 527-528. See also CBS News Transcripts, 60 Minutes, January 5, 2003, which includes the following exchange between Leslie Stahl and LPU Unit Chief Meagher:

STAHL: Does an FBI agent or any fingerprint expert ever go into court and say, “I believe it’s a match with 80 percent certainty” or 90 percent certainty?

Mr. MEAGHER: No. We go in with a – a 100-percent certainty that we have an identification.

<sup>79</sup> See, e.g., Vanderkolk, *Levels of Quality and Quantity*, pp. 463-465.

<sup>80</sup> See, e.g., Simon A. Cole, “Grandfathering Evidence: Fingerprint Rulings from Jennings to Llera Plaza and Back Again,” *American Criminal Law Review*, Vol. 41, 2004, pp. 1196-1202; Epstein, pp. 611-612; Stoney, §§ 27-2.1.2[7] and 27-2.3.1[1].

## **b. Exclusion**

The second permissible conclusion under the Examination SOPs is “exclusion,” which is defined in the SWGFAST Methodology as a determination that “two friction ridge impressions originated from different sources.” The SWGFAST Standards define the standard for exclusion as “disagreement of friction ridge details.” Unlike an individualization, an exclusion may be declared in some circumstances merely on the basis of Level 1 detail, such as when the exemplar is clearly a whorl pattern and the latent is clearly an arch pattern.

The SWGFAST Standards state that “[t]he presence of one discrepancy is sufficient to exclude.” This is known as the “one discrepancy rule.” As a logical counterpart, the standards also require the absence of any “discrepancy” as a condition of individualization. The SWGFAST Glossary defines a “discrepancy” as a “difference in two friction ridge impressions due to different sources of impressions.” The SWGFAST Standards state that: “Distortion is not discrepancy and is not a basis for exclusion.” “Distortion” is defined in the SWGFAST Glossary as “variances in the reproduction of friction skin caused by pressure, movement, force, contact surface, etc.” Under these definitions, events such as smears, double taps, and incomplete impressions may cause differences in appearance that are considered “distortions.” Under the SWGFAST Standards, a “distortion” need not preclude an identification that is otherwise supported by sufficient detail in agreement elsewhere in the print.

Thus, one critical task for the examiner in the evaluation stage is to determine whether any differences in appearance between the prints are “discrepancies” (requiring exclusion) or “distortions” (which may permit individualization). According to several LPU examiners interviewed by the OIG, the “one discrepancy rule” means that if there is a difference in appearance between a latent print and an exemplar, an identification cannot be declared unless the examiner has an explanation for the difference.<sup>81</sup>

The nature of the explanation required is an extremely case-specific analysis and there are no criteria stated in the Examination SOPs or the SWGFAST Methodology or Standards for adopting an explanation. Among

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<sup>81</sup> Latent fingerprint examiners are not consistent in their use of this terminology for differences in appearance. Some LPU examiners use the term “dissimilarity” to refer to an explainable difference and the term “discrepancy” to refer to an unexplained difference that precludes identification. However, the SWGFAST Glossary defines both “dissimilarity” and “discrepancy” the same way, as “a difference in two friction ridge impressions due to different sources of the impressions (exclusion).”

other things, explanations will depend on the level of detail at which the difference occurs. As noted above, Level 3 details, such as pores and ridge edge shapes, are extremely small and are understood to vary in appearance from one impression to another as the result of differences in pressure, matrix, or substrate. Accordingly, depending on the clarity of the prints, examiners are generally tolerant of differences in appearance in Level 3 details and are more willing to explicitly or implicitly explain them as being the result of distortions. Indeed, some examiners told the OIG that they would not declare an exclusion based on Level 3 detail, and Unit Chief Meagher has testified that “you have to be very carefully [sic] with Level 3 in exclusion,” because factors like processing technique and substrate can distort Level 3 details.<sup>82</sup> By contrast, a difference in appearance at Level 2 – such as a bifurcation occurring in a latent print when the corresponding location in the exemplar appears as a single continuous ridge – may be much more difficult to explain as the product of mere distortion, and therefore may be more likely to require a conclusion of exclusion.

### **c. Inconclusive**

The third permissible conclusion in latent print examination under the SWGFAST Standards is “inconclusive,” defined as a determination that the latent examiner is “unable to individualize or exclude the source of an impression.” The SWGFAST Methodology cautions, however, that “[i]nconclusive results must not be construed as statements of probability. Probable, possible or likely individualization (identification) conclusions are outside the acceptable limits of the friction ridge identification science.” This rejection of probabilistic identifications is consistent with the philosophy of absolute certainty in identification decisions described above.

There is an important but subtle relationship between the “inconclusive” conclusion and the purpose of the analysis phase as adopted by SWGFAST. As noted above, the SWGFAST Methodology states that the purpose of the analysis phase is to “determine suitability [of the relevant fingerprints] for comparison.” According to OIG consultant John Vanderkolk, a member of SWGFAST who participated in the deliberations regarding this definition, the “suitability for comparison” standard represented a meaningful revision of the benchmark traditionally employed in the discipline, which was “sufficient for identification” or “of value for identification.” Vanderkolk stated that historically, many examiners were reluctant to utilize the “inconclusive” conclusion in a case in which they had previously found the latent print to be “of value for identification.” If the examiner was unable to identify or exclude, he would revert to the analysis phase and declare the latent print to have “no value.”

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<sup>82</sup> Meagher testimony in *Llera Plaza*, p. 48.

Vanderkolk stated that the purpose of SWGFAST's adoption of the "suitable for comparison" benchmark was to eliminate the tension in the SWGFAST definitions that was discouraging examiners from utilizing the "inconclusive" result in appropriate cases. Under the revised definitions, a print might be deemed "suitable for comparison" during the analysis phase and yet during the comparison phase, the examiner might find that there is too much uncertainty to declare a result of individualization or exclusion. For example, the examiner might find differences between the prints, but be unable to resolve uncertainty regarding whether these differences were mere distortions, or the result of having been made by different people. A conclusion of "inconclusive" would be appropriate in such a case. Dusty Clark and Michael Grimm, two other SWGFAST members who served as consultants to the OIG, agreed with this interpretation of the revised SWGFAST Methodology.<sup>83</sup>

Although the FBI LPU has incorporated the SWGFAST Standards into the Examination SOPs by reference, it is not clear that this change in terminology and attitude toward the "inconclusive" result has been integrated into LPU practice. The FBI examiners that we interviewed still generally described the analysis step as involving a determination of whether the print is "of value," i.e., whether there is sufficient information in the print to effect an individualization, and not merely whether the print is "suitable for comparison." LPU Unit Chief Meagher told the OIG that most instances of "inconclusive" results in the LPU occur when the exemplar print turns out to be of poorer quality than the latent print.<sup>84</sup> If the quality of the exemplar is

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<sup>83</sup> The shift to a "suitable for comparison" standard that admits to the possibility that the latent fingerprint will nevertheless ultimately prove to be unidentifiable was advocated at least as early as 1988 in David L. Grieve, "The Identification Process: Attitude and Approach," *Journal of Forensic Identification*, Vol. 39, No. 5, 1988, p. 211.

<sup>84</sup> Meagher's characterization of the Laboratory's usage of the "inconclusive" result is confirmed by a recent revisions to the Laboratory's Examination SOPs, which state in relevant part that "[i]nconclusive evaluation results when a qualified latent print examiner is unable to individualize or exclude the source of an impression because the corresponding areas of friction ridge detail are absent, i.e. the impression to be compared is from the tip or lower joint of a finger and the corresponding area (tip or lower joint) is not captured on the known card or second impression, or is unusable due to distortion." According to the Laboratory, this revision does not reflect a change in FBI Laboratory practice but rather is consistent with practice existing at the time of the misidentification of LFP 17. Apparently this circumstance (lack of usable detail in a relevant portion of the exemplar print) is not unusual. According to the Laboratory, a recent sampling of cases indicated that approximately 50 percent of all FBI Laboratory latent print reports include at least one comparison that resulted in an "inconclusive" determination. (Because many case reports involve a large number of comparisons, the 50 percent does not represent the frequency of the inconclusive result among all individual comparisons.) We do not believe that the Laboratory's definition of the "inconclusive" result is consistent with the revised SWGFAST Methodology, as described above.

good but the examiner is unable to reach the level of certainty required to declare a conclusion of either individualization or exclusion, it is the practice of some FBI examiners to revisit the analysis phase and declare the latent print to be of “no value.” For example, Terry Green told the OIG that this was his practice. Meagher stated that in the case of an “inconclusive” result, the LPU would not normally inform the investigators that there is a potential subject who cannot be excluded as the source of the latent fingerprint.

#### **4. Verification**

The Examination SOPs and the SWGFAST Methodology require that all identifications be verified. “Verification” is defined simply as “the independent examination by another qualified examiner resulting in the same conclusion.” The verification procedures in the LPU are undergoing revision as a result of the Mayfield matter. The following description pertains to the procedures that were in place at the time of the Mayfield identification.

The LPU Quality Assurance Manual, Procedures for Reviewing a Report of Examination, required that a supervisor select the second examiner for verification comparisons. LPU Unit Chief Meagher told the OIG that in practice, if the supervisor was unavailable, the examiner could simply ask another examiner in the LPU to perform the verification. Meagher stated that although the verifier was aware of the fact that the first examiner had made an identification, the verifier would not know which features in the print were relied upon by the initial examiner in reaching his conclusion.

There was no policy within the LPU addressing the issue of whether consultation between the initial examiner and the verifier is appropriate. In practice, LPU verifiers sometimes consulted with the initial examiner, particularly for the purpose of assisting in an initial orientation of the prints so that the verifier did not spend too much time simply finding the portion of the exemplar that the initial examiner found to be a match to the latent print.

The LPU Quality Assurance Manual provided that if the second examiner reached a different conclusion, the matter “must be referred to the supervisor and/or the Unit Chief for resolution.” No formal statistics regarding the frequency of this occurrence have been maintained by the LPU, but LPU witnesses interviewed by the OIG stated that a refused verification was as an extremely unusual event. One option available to the supervisor was to select another verifier if the first verifier declined to confirm the identification. In that instance, there was no policy requiring that the first verifier’s disagreement be documented in the case file.

## **F. Standard for Declaring a Match**

Neither the Examination SOPs nor the SWGFAST Standards for Conclusions specify how much “agreement” is “sufficient” to support a conclusion of identification. Historically, many examiners have required that a minimum number of Level 2 ridge deviations be in agreement in order to declare an identification, although the specific threshold varied among jurisdictions, laboratories, and examiners. The FBI Laboratory and SWGFAST currently reject any requirement that a “predetermined number of corresponding friction ridge details” be in agreement, however. Instead, the determination is committed to the judgment and expertise of the individual examiner, who is instructed to take into account both the quantity and quality of available friction ridge detail. Ashbaugh explains this standard as follows:

A frequently asked question is, “How much is enough?” The opinion of individualization or identification is subjective. It is an opinion formed by the friction ridge identification specialist based on the friction ridge formations found in agreement during comparison. The validity of the opinion is coupled with an ability to defend that position, and both are founded in one’s personal knowledge, ability and experience. . . . [I]t must be clearly understood that if there is any doubt whether there is sufficient specific detail present to individualize, then an opinion of individualization cannot be formed.

How much is enough? Finding adequate friction ridge formations in sequence that one knows are specific details of the friction skin, and in *the opinion* of the friction ridge identification specialist that there is sufficient uniqueness within those details to eliminate all other possible donors in the world, is considered enough. At that point individualization has occurred and the print has been identified. The identification was established by the agreement of friction ridge formations in sequence having sufficient uniqueness to individualize.<sup>85</sup>

This standard is utilized not only by the FBI LPU, but by many other forensic laboratories in North America and Great Britain. This standard is often associated with “Ridgeology,” an expression coined by David Ashbaugh to mean “the study of the uniqueness of friction ridge structures and their use for personal identification.”<sup>86</sup> Ashbaugh states that “over the years ridgeology has

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<sup>85</sup> Ashbaugh, p. 103 (emphasis in original).

<sup>86</sup> Id. at 8.

gained acceptance as a word describing a friction ridge identification process based on a quantitative-qualitative analysis as opposed to the old static [numerical threshold] method.”<sup>87</sup> For convenience, therefore, the standard in place in the FBI Laboratory at the time of the Mayfield identification is referred to as the “Ridgeology Standard” in this report.

The alternative to the Ridgeology Standard is the utilization of a numerical standard for declaring an identification based on a specific number of minutiae or “points” in correspondence as to type, orientation, and relative position (the “Numerical Standard”). The premise of establishing such a standard is that the probability of encountering two different fingers that share that number of minutiae in common is infinitesimal and can be disregarded.

Although the Numerical Standard approach has been rejected by SWGFAST, the FBI, and other forensic laboratories in the United States, this approach is utilized in many other countries. A 2002 survey reported a variety of numerical standards utilized in different European countries ranging from 8 to 16 points.<sup>88</sup> The Spanish National Police Forensic Science Division utilizes a minimum of 8 to 12 points, but permits an examiner to attest to an identification based on a smaller number under certain circumstances.

There is a vigorous debate among fingerprint examiners, other forensic scientists, academics, and lawyers regarding the comparative merits of the Ridgeology Standard and the Numerical Standard. Opponents of the Ridgeology Standard have made the following criticisms, among others:

- Because the Ridgeology Standard lacks objective criteria, there can be no assurance that different examiners will reach the same result.
- Because the Ridgeology Standard provides no statistically or experientially based margin of safety, its use increases the risk that an erroneous identification will occur.
- The Ridgeology Standard encourages increased reliance on Level 3 details, the reliability and reproducibility of which are in dispute.
- Although the standard purports to permit the examiner to take into account the “uniqueness” of different kinds of friction ridge details, research into the relative frequencies with which different characteristics

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<sup>87</sup> Id.

<sup>88</sup> “European Fingerprint Standards (A ‘Pointless’ Exercise), *Fingerprint Whorld*, Vol. 28, No. 107, January 2002, p. 19. Great Britain abandoned a 16-point standard in 2001.



or combinations of features appear is lacking, and there is no consensus among examiners about which characteristics are more unique and hence have more identifying power.

Opponents of utilizing a Numerical Standard have made the following arguments, among others:

- The numerical thresholds utilized by many examiners were based on little more than educated conjecture. There is no formal scientific probability study or other validation study justifying a minimum point standard.
- The Numerical Standard omits consideration of the clarity of the minutiae.
- The Numerical Standard lacks consideration of Level 3 detail, which may have significant identifying power.
- The Numerical Standard fails to take account of the greater individualizing power of particularly rare features in the prints.
- The practice of merely counting minutiae tends to distract the examiner from conducting a complete comparison of all aspects of the print, including the distance and ridge path between points.

It is beyond the scope of the OIG's investigation to offer conclusions or recommendations regarding the relative merits of Ridgeology or a Numerical Standard. In Chapter Four of this report, however, the OIG examines the relationship between the standard utilized by the FBI Laboratory in the Mayfield case and the erroneous identification.

### **G. Integrated Automated Fingerprint Identification System (IAFIS)**

The FBI's IAFIS is a system for conducting computerized searches of FBI databases containing the known fingerprints of over 47 million individuals (over 470 million separate prints). The LPU examiners use IAFIS to attempt to identify latent fingerprints in cases lacking known subjects. The IAFIS databases include a Criminal Master File containing known prints taken pursuant to local, state, and federal arrests; a Civil File containing known prints taken in a non-criminal context, such as for military service or government employment; a Special Latent Cognizant File containing the known fingerprints of terrorism suspects and victims; and an Unsolved Latent File containing unidentified latent fingerprints from unsolved crimes.

To conduct an IAFIS search, the examiner “encodes” the latent print on his computer screen by marking selected ridge deviations such as ending ridges and bifurcations. The IAFIS program compares the pattern of points in the latent print, as encoded by the examiner, with the patterns of points in millions of known fingerprints in its databases.

When encoding a latent print for an IAFIS search, the examiner marks both the location of the point and its orientation (the direction of the ridges as they leave the point). The encoder distinguishes between ending ridges and bifurcations by marking the direction of the point differently.<sup>89</sup>

The examiner does not necessarily encode every point he can find in the latent print. LPU examiners have learned through experience with the IAFIS program which types of points are most likely to yield a correct match. LPU Unit Chief Meagher told the OIG that examiners are taught to avoid encoding points in areas of high curvature ridge flow, such as the extreme core of a print. Unit Chief Wieners and Supervisor Green told the OIG that IAFIS does not do well when asked to search prints in which points have been encoded in two or more clusters separated by a gap. One reason is that IAFIS gives significant weight to the ridge count between points. If the ridge count between two clusters of points in a latent is unclear, IAFIS may fail to retrieve the true source of the print. Thus, an examiner will not necessarily encode every point that can be seen in a latent fingerprint, but rather may limit his encoding to points in a defined area in which the ridge count between points is clear.

There is an important distinction between the IAFIS encoding process and the analysis phase of the ACE-V process as described above. To encode a print for IAFIS, an examiner utilizes only part of the information that is collected during the analysis phase – specifically, the location and orientation of the selected minutiae. Among other things, the encoding process does not utilize information about the complete ridge path between points, and does not utilize Level 3 details. Nevertheless, as to the encoded points, the encoding record does reflect the examiner’s contemporaneous analysis at a stage prior to the introduction of any possible bias as a result of comparison to an exemplar print.

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<sup>89</sup> For an ending ridge, the encoder marks the direction of the point by drawing a line back up the ridge itself. For a bifurcation, the encoder indicates the orientation by drawing the line between the two forking ridges, essentially bisecting the angle formed by the bifurcating ridges. In some cases the encoder will not be certain whether a point in a latent fingerprint is a bifurcation or an ending ridge, and the way he encodes the point is an educated guess. The IAFIS program does not distinguish between ending ridges and bifurcations, and has sufficient tolerance for differences in the orientation of points to find the proper candidate even if a particular bifurcation is incorrectly marked as an ending ridge or vice-versa.

The examiner selects which databases to search and uses available information to narrow the scope of the databases that are searched by the computer. Because no more than 30 percent of the huge Criminal Master File database can be searched at one time, the examiner must narrow the scope of the search by specifying information about the fingerprint or the subject. This information might include the race or sex of the subject, the particular digit being searched (such as a right index finger), or the Level 1 pattern (such as whorls, loops, or arches). If the available information about the latent fingerprint is insufficient to achieve this limitation, it can be achieved artificially, such as by breaking the search into ten separate searches, one for each possible digit.

The IAFIS program generates a list of 10 or 20 candidates whose known fingerprints score the highest according to a complex algorithm that measures the correspondence of points in the known prints with the encoded points, considering location, orientation, and relationship to other points. Contrary to the impression given by some popular television crime shows, the computer does not make an identification of the latent fingerprint. The examiner conducts a manual examination of the candidate prints, utilizing the ACE-V procedure described above. The examiner initially compares the candidate prints side-by-side with the latent fingerprint on his computer screen, but he may retrieve the original 10-print cards for further comparison before reaching a final conclusion.

Many IAFIS searches do not result in identifications. Among other reasons, the known fingerprints of the person who made the latent fingerprint may not be in any of the IAFIS databases. Since IAFIS was placed in service in 1999, the LPU has declared approximately 1200 identifications of latent fingerprints from IAFIS searches. This is a small fraction of the IAFIS searches that have been conducted during that time.

The examiners interviewed by the OIG stated that the numerical score generated by IAFIS is less significant than the gap between the top scoring candidate and the other candidates. If there is a large gap, this tends to be suggestive that the top candidate is in fact the source of the print. Data provided by the FBI Laboratory indicates that the scoring formula is quite effective in ranking the candidates. In those cases in which an IAFIS search resulted in an identification, the candidate identified by the LPU as the source of the print received the highest score over 80 percent of the time, and received one of the top three scores over 90 percent of the time. However, the Laboratory does not use a print's IAFIS score as a criterion for declaring an identification, and there is no FBI SOP, policy, or fingerprint identification reference that suggests it should do so. The algorithm used by IAFIS to generate candidate rankings does not take into account much of the information that human examiners use to reach the conclusion of

identification, such as the path taken by a ridge between two points or Level 3 details. IAFIS is a tool for narrowing the field of candidates to a manageable size utilizing computer technology; it is not a substitute for a complete ACE-V examination.

## **H. Simultaneous Impressions**

Latent fingerprints sometimes appear on evidence in a relationship to one another that permits the examiner to infer that the prints were deposited simultaneously by different fingers of the same hand. There are a variety of potential indicators that a simultaneous touch may have occurred, such as when the location and anatomy of latent prints on opposite sides of a piece of paper suggest that the paper has been grasped by a thumb and index finger.

The determination that two latent prints were deposited simultaneously has several potential uses in identification. The determination may reveal which digit was associated with each separate print (as in the thumb-index finger example above), which may permit the examiner to specify the digit to be searched in IAFIS and to focus on the correct digit on the 10-print card during the comparison phase.

A second use of simultaneous impressions is to permit identifications in cases where the detail in each individual latent print is insufficient to support an identification standing alone, but the cumulative detail in both prints in agreement with the exemplar prints is sufficient to individualize.<sup>90</sup> At the time of the identification of LFP 17, Section 5.1 of the Examination SOPs stated: “When the friction ridge impressions of two or more fingers of one hand, each in a natural relationship with the other, are found then the information from all impressions is used to reach a conclusion.” The LPU Quality Assurance Manual, Procedures for Reviewing a Report of Examination, required the approval of a supervisor and/or Unit Chief for any identification of simultaneous prints in which neither latent print contains 12 or more Level 2 characteristics.

Neither the LPU’s SOPs nor the SWGFAST Methodology specify any methodology or criteria for determining whether two latent prints were deposited simultaneously, although such modifications are currently under consideration in the LPU. Ashbaugh provides a brief 2-page discussion of the issue, cautioning that an identification based on cluster prints is an “advanced

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<sup>90</sup> Ashbaugh, pp. 134-135.

technique” and that novices should seek advice from senior specialists before attempting such a comparison.<sup>91</sup>

## **I. Documentation and Review Requirements**

Fingerprint identifications by the FBI LPU are documented in reports compiled pursuant to procedures set forth in the FBI LPU Quality Assurance Manual. As detailed in Chapter Five, the LPU documentation requirements are undergoing substantial revision. The following description relates to the procedures that were in place at the time of the Mayfield identification.

The procedures required that a fingerprint identification report contain the following sections: (1) administrative information about the request for examination; (2) a listing and description of the evidence submitted to, or examined in, the LPU; (3) a remarks section; and (4) a “Results of Examination” section. The wording used to convey the results was left to the discretion of the examiner, subject to the approval of the Unit Chief. There was no requirement that the different phases of the ACE-V examination process be described or explained in any way beyond the statement of a conclusion, such as “latent fingerprint X was identified as a fingerprint of John Doe.” The examiner was not required to identify any matching details upon which the identification was based, specify any differences in appearance between the latent print and the exemplars, or document any explanations adopted by the examiner with respect to such differences. The documentation could include a set of photographs that the examiner had “pin-punched” to mark important points on which he had relied. Detailed charted enlargements of the comparison were usually not prepared unless needed for a trial. The documentation requirement for a verification was satisfied when the second examiner wrote the word “verified” on the case notes followed by his signature and date. The FBI’s documentation requirements, which were similar to those in place in other forensic laboratories, satisfied ASCLD/LAB standards. The FBI Laboratory was accredited by ASCLD/LAB beginning in 1998.

The LPU Quality Assurance Manual required that a supervisor conduct a Peer Review and an Administrative Review of each Report of Examination before the report was issued. The Peer Review involved ensuring that appropriate examinations had been performed and that any identifications had been verified and documented. According to the LPU Quality Assurance Manual, the Peer Review also ensured that “conclusions are supported in the examination documentation and are within the limitations of the discipline.” The LPU examiners interviewed by the OIG confirmed, however, that in practice the Peer Review did not involve a substantive review of the basis of the

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<sup>91</sup> Id.

examiner's conclusion and did not constitute a separate examination of the relevant fingerprints. In the absence of any requirement that the basis of the examiner's conclusions be described or recorded in the Report of Examination, in practice the Peer Review could not actually involve a determination of whether an identification was "within the limitations of the discipline."

The Manual required the Administrative Review to ensure that the Report of Examination was "clear, concise, accurate and complete," and that the documentation conformed to the FBI Laboratory Caseworking Procedures Manual: Procedures for Examination of Evidence. The LPU examiners interviewed by the OIG described the Administrative Review as ensuring that the format of the Report is in compliance with applicable policies. Like the Peer Review, the Administrative Review did not involve a separate examination of the fingerprints.

The LPU Quality Assurance Manual also required that at least one Technical/Casework review be conducted per month for each case-working examiner. Case reviews involved the selection of a case and assessment of the latent fingerprint development techniques used by the examiner (processing reviews) or a complete review of the ACE-V examination carried out in the case (comparison reviews).

## **J. Errors**

Conceptually, there are two kinds of errors that an examiner can make in reaching a conclusion about a latent fingerprint: an erroneous individualization ("false positive") or a missed identification ("false negative"). According to Section 2.2.1 of the SWGFAST Quality Assurance Guidelines for Latent Print Examiners, "[a]n erroneous identification is the most serious error a latent print examiner can make in casework." By contrast, a missed identification may or may not be the result of a deficiency in the examination. For example, even if two friction ridge impressions are from the same source, there may not be sufficient detail available in one of the prints to permit the examiner to reach a conclusion of identification, or the examiner may not be able to explain perceived differences in appearance between the prints with sufficient certainty to effect an identification. In such a case, the proper conclusion for the examiner would be either a determination that the print was not "suitable for comparison" or an "inconclusive" determination. A missed identification may be the result of applying a conservative approach to identification in order to prevent false positives. A missed identification of a fingerprint is only considered an error if the examiner should have been able to make the identification with a proper application of the ACE-V methodology.

According to SWGFAST, two experts having different levels of training, experience, and ability may differ in their conclusions between inconclusive and identification, or between inconclusive or exclusion, without either of them having committed an error.<sup>92</sup> However, conflicting opinions of identification and exclusion denotes an error on the part of one expert.<sup>93</sup>

In addressing the question of whether mistakes can be made in the examination of fingerprints, SWGFAST states: “In any human endeavor, there is a potential for error. Adherence to SWGFAST guidelines for training and quality assurance minimize the risk for human error. Human error should not be confused with methodological or scientific error.”<sup>94</sup> In the same document, SWGFAST describes erroneous identifications and missed identifications as types of “human error” but does not explicitly identify any types of “methodological or scientific” errors.<sup>95</sup> Some examiners have testified in court that the error rate for the ACE-V methodology, properly applied, is zero or nearly zero, and several examiners interviewed by the OIG made the same assertion.<sup>96</sup> Critics of such claims have argued that in the absence of an objective standard for identification, it is impossible to distinguish between a methodological error rate and a practitioner error rate, because the examination process is inextricably linked with the human examiner.<sup>97</sup>

In 2002, prior to the misidentification of LFP 17, LPU Unit Chief Meagher testified that to his knowledge, no FBI fingerprint examiner had ever testified to an erroneous identification in court.<sup>98</sup> Meagher testified that he was unaware of any instance in which any *other* fingerprint expert had ever testified that an FBI examiner had made an erroneous in-court identification. Meagher testified that he was aware of one instance in which an FBI examiner discovered her own erroneous identification in 1999 while preparing for trial. The verifier had also made an erroneous identification of this latent print. Meagher testified that, on the basis of conversations with other LPU Unit Chiefs and other examiners, “on average, the FBI has made an erroneous identification about once every 11 years.”<sup>99</sup> However, other instances of erroneous identifications

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<sup>92</sup> SWGFAST Press Kit, Section 13, available at [www.swgfast.org](http://www.swgfast.org).

<sup>93</sup> *Id.*

<sup>94</sup> *Id.*, Section 7.1.

<sup>95</sup> *Id.*, Section 8.

<sup>96</sup> See, e.g., *U.S. v. Mitchell*, 365 F.3d at 239 (“the existence of any error rate at all seems strongly disputed by some fingerprint examiners”), 246 (“some latent fingerprint experts insist that there is no error rate associated with their activities”).

<sup>97</sup> See, e.g., *Stoney*, § 27-2.3.2; *Cole*, p. 1232.

<sup>98</sup> Meagher testimony in *Llera Plaza*, pp. 108-114.

<sup>99</sup> *Id.*, p. 114. The OIG did not attempt to confirm this reported error rate.

by non-FBI fingerprint examiners have been reported, some of which have received significant publicity.<sup>100</sup>

Section 7.1. of the LPU Quality Assurance Manual governs steps that must be taken in the event of an error. These provisions are discussed in greater detail in Chapter Five of this report in connection with their application to the examiners involved in the Mayfield error.

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<sup>100</sup> See, e.g., cases described in Cole, p. 1231, n. 176, including *State v. Caldwell*, 322 N.W.2d 574, 581-82 (Minn. 1982). In the Caldwell case, the Minnesota Supreme Court reversed a murder conviction that had been based, in part, on the testimony of the prosecution's latent fingerprint expert. The court found the identification was erroneous, based on the post-trial testimony of other examiners, that the print was illegible or that the comparison was inconclusive. See also CBS New Transcript, 60 Minutes, January 5, 2003, describing the Ricky Jackson case. In that case, the FBI examiners helped to uncover an error made by local police department examiners that resulted in a murder conviction. After the trial, the defendant's experts obtained a determination by the IAI that the identification was erroneous. According to the CBS News transcript, the district attorney asked the FBI for an opinion, and the FBI Laboratory determined that the identification was wrong. Jackson was released after more than two years of incarceration.



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**CHAPTER FOUR**  
**OFFICE OF THE INSPECTOR GENERAL'S ASSESSMENT**  
**OF THE CAUSES OF THE FINGERPRINT MISIDENTIFICATION**

In this chapter, the OIG presents its analysis of the causes of the FBI's misidentification of Latent Fingerprint 17 (LFP 17). At the outset, we note that the OIG's investigation was not the only review of these causes. Shortly after the error was discovered, the FBI Laboratory assembled an International Panel of seven latent fingerprint experts to determine how the examination of LFP 17 failed, and to make recommendations for changes in the FBI Laboratory Latent Print Units (LPU). Part I of this chapter summarizes the findings of the Panel and describes the difference in scope and procedure between the Panel's review and the OIG's investigation. Part II of this chapter sets forth the OIG's analysis of the causes of the misidentification of LFP 17.

**I. The International Panel Review**

**A. Findings of the International Panel**

The FBI Laboratory recruited five latent fingerprint examiners to serve on the International Panel: Alan McRoberts (Chairman of SWGFAST), C. Lee Fraser (Royal Canadian Mounted Police), Ron Smith (Ron Smith & Associates), Bruce Grant (New Scotland Yard), and Gregoire Michaud (Michigan State Police). In addition, the Laboratory requested that the International Association for Identification (IAI) and the American Society of Crime Laboratory Directors (ASCLD) nominate two other panelists. The IAI selected Ken Smith (U.S. Postal Inspection Service) and ASCLD selected Frank Fitzpatrick (Orange County Sheriff, Coroner Laboratory). The OIG interviewed panel members Ron Smith and Ken Smith for this investigation.

The Panel met at the FBI Laboratory in Quantico, Virginia, on June 17-18, 2004. The Laboratory provided the Panel with two volumes of documentation consisting primarily of numerous images of the latent fingerprints that were transmitted to the Laboratory from the Spanish National Police (SNP) (many of which were not copies of LFP 17 or LFP 20), copies of the known prints of Mayfield and Daoud, and the FBI Laboratory reports regarding the SNP submissions. LPU Unit Chief Wieners also made a PowerPoint presentation to the Panel demonstrating the similarities and dissimilarities with the Mayfield prints observed by the FBI examiners during the examination of LFP 17. The panelists were not permitted to take the documents with them at the end of the meeting for further review. The Panel was permitted to interview LPU personnel Green, Wieners, and Meagher. Following the 2-day meeting, each panel member prepared a separate report. The Laboratory

prepared a synopsis of the comments submitted by the individual panelists, which was published in the *Journal of Forensic Identification*.<sup>101</sup> The panelists identified the following as the primary causes of the misidentification:

- Failure to follow properly the Analysis, Comparison, Evaluation and Verification (ACE-V) steps in fingerprint examination. In particular, Green failed to conduct a complete analysis of LFP 17 before conducting the Integrated Automated Fingerprint Identification System (IAFIS) search, which in turn caused him to disregard important differences in appearance between LFP 17 and Mayfield's known prints.
- The power of the IAFIS match and the pressure of working on a high-profile case influenced Green's initial judgment and created a mind-set in which his examination became biased by an expectation that the prints were a match.
- The subsequent examinations by Massey and Wieners were "tainted" by knowledge of Green's conclusion.

The panelists made several recommendations for changes in the procedures utilized by the FBI Laboratory. Chief among these was the adoption of procedures to require more detailed documentation of all steps of the examination process, including documentation of any discrepancies in the prints and explanations for those discrepancies. The panelists also recommended that the Laboratory implement several changes to its verification procedures, including blind verifications (i.e., previous conclusions unknown to the verifier) and second verifications in designated cases.

## **B. Differences Between the OIG Investigation and the International Panel Review**

The scope of the OIG's investigation of the Mayfield matter was much broader than the questions posed by the Laboratory to the International Panel. For example, part of the OIG's investigation involved determining the sequence of events leading up to and following the error. The OIG collected much more information about the identification process than was provided to the Panel. The FBI Laboratory also provided the Panel with many facts as a "given," prior to any detailed investigation of what occurred. In addition, the OIG addressed many non-fingerprint issues raised in connection with the Mayfield matter, issues that were outside the scope of the International Panel Review.

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<sup>101</sup> Robert B. Stacey, "A Report on the Erroneous Fingerprint Individualization in the Madrid Train Bombing Case," *Journal of Forensic Identification*, Vol. 54, No. 6, 2004, p. 707.

With respect to the question of the causes of the erroneous identification, which both the OIG and the International Panel addressed, the OIG had advantages in preparing this report that were not available to the Panel. The Panel was convened very quickly after the FBI withdrew its identification of Mayfield and met for only two days. At the time the Panel met (June 17-18, 2004), the FBI Laboratory still had not issued its final report identifying Daoud as the source of LFP 17. The Laboratory's determination that the print was of "no value" had not yet been formally withdrawn. Although the Panel was given access to the relevant fingerprint images, Panel members were not permitted to remove those images from the meeting room and could not utilize the images in their individual reports. Probably as a result, the conclusions of the Panel members tended to be expressed in highly generalized terms and did not reference specific features in the prints.

The OIG had access to a far larger collection of materials than did the International Panel and was able to interview a much larger number of witnesses over a longer period of time. The OIG had access to the charted enlargements prepared by the LPU examiners who ultimately identified Daoud, which were not made available to the International Panel – indeed, some of the charted enlargements apparently did not yet exist at the time the Panel met. The availability of these enlargements assisted the OIG and its consultants to conduct a comprehensive, ridge-by-ridge and feature-by-feature assessment of the erroneous identification that included a comparison of the features used in the Mayfield identification with the features later used to identify Daoud. This information provided an opportunity for a detailed examination of the erroneous identification that was informed by access to exemplars from the true source of the latent – information that is often unavailable in the case of erroneous identifications. We believe that the differences in time and information available to the OIG are the primary reasons for the differences between the conclusions reached by the OIG and those of the Panel.

## **II. OIG Assessment of Causes of the Erroneous Identification**

In this section, the OIG describes its assessment of the causes of the misidentification of LFP 17. In the first subsection, the OIG sets forth the factors that it determined to be major contributing causes to the error. In the second subsection, the OIG addresses three additional potential causes of the error. Although we did not find sufficient evidence to conclude that these three additional factors caused the error in this case, we did find that there is potential for these factors to contribute to future errors. We therefore made specific recommendations for action by the Laboratory to address these factors. In the third subsection, we address the specific allegation that the LPU error was the result of discrimination based on Mayfield's Muslim faith. In the fourth subsection, the OIG discusses explanations for the error that have been

suggested previously by the FBI and other sources, but that the OIG specifically found did not contribute to the misidentification.

## **A. Major Contributing Causes of the Error**

### **1. The unusual similarity of the prints**

The OIG concluded that the unusual similarity in the pattern of Level 2 details within the friction ridges on the fingers of Mayfield and Daoud was a significant factor in the misidentification. Although the friction ridges of Mayfield and Daoud were not identical, there was sufficient similarity between them to cause confusion in identifying the source of an imperfectly reproduced latent fingerprint (LFP 17). This unusual similarity confused at least three experienced examiners in the FBI (as well as the expert selected by Mayfield's attorneys), and was an important factor contributing to the erroneous identification. This conclusion was based on interviews of witnesses, consultation with experts, and detailed review of the documentation relating to the identification of Mayfield and Daoud.

This similarity is illustrated by considering the Level 2 features in the latent print that were utilized by different LPU examiners to identify both Mayfield and Daoud. As previously noted, on March 22, 2004, shortly after making the identification of Mayfield, Green prepared charted enlargements for the SNP showing 15 Level 2 details in common between LFP 17 and Mayfield's known fingerprint (Figures 2A and 2B). Of these 15 features in the latent print, 10 were also later used by other examiners in the Laboratory to identify Daoud as the source of the print. These common features are illustrated in Figures 6A-6C. A detailed description of these features is presented in tabular form in Appendix I.

As shown in the Figures, these 10 Level 2 details in the latent print were at least generally consistent with features in the known prints for both Mayfield and Daoud in location, direction, and ridge count, and hence were utilized in both identifications. An appreciation of the consistency can be obtained by working one's way from point to point on all three images. The useful starting point in the comparison of these prints is the distinctive feature in the bottom center of the latent print that Green marked as Point 6 in the March 22 Charted Enlargements. This feature was incorrectly interpreted as a "dot" in the Mayfield exemplar, but it turned out to be the top edge of an incompletely reproduced "enclosure" visible in the Daoud exemplar.<sup>102</sup>

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<sup>102</sup> As shown in Figure 4, an "enclosure" is formed by two opposing bifurcations, so that a single ridge splits into two and then rejoins into one over a short distance.

Using Point 6 as a starting point, it appears that the direction from one point to the next is similar in all three prints, and the number of intervening ridges is consistent as well. For example, Point 5 on LFP 17 and on the Mayfield exemplar is an ending ridge three ridges up from Point 6 and to the right. There is an ending ridge three ridges up from the enclosure and to the right on the Daoud exemplar as well. In charting Point 5 (and all the other points shown in Figures 6A-6C, for that matter) as a similarity to Mayfield, the LPU examiners were misled by the fact that there was indeed a Level 2 detail in the friction ridge patterns of Daoud, the true source of LFP 17, bearing a similar relationship in ridge count and location to the other plotted details. What is remarkable is that this relationship in location and ridge count maintains a general consistency among as many as 10 points in the exemplars for both Mayfield and Daoud.

The fact that many features were utilized in both identifications is not in itself surprising. The use of the same features in the correct identification of Daoud confirms, however, that based on his analysis of LFP 17, Green did not err in finding that Level 2 ridge deviations occurred at or very near to these 10 marked locations in the latent print. As to these features at least, the LPU examiners were misled not by distortions in the print, but rather by close similarities in the friction ridge formations on the fingers of Mayfield and Daoud, which complicated the problem of determining the true source of LFP 17.

The OIG confirmed during interviews of Supervisory Fingerprint Specialist Green and Unit Chief Wieners that these 10 points were an important factor in reaching their conclusion that Mayfield was the source of the print.<sup>103</sup> Kenneth Moses, the court-appointed expert who agreed with the Mayfield identification, described the reasoning that led to his conclusion in presentations at two forensic science conferences. Moses pointed out eight corresponding Level 2 details between the latent print and the Mayfield exemplars that strongly influenced him toward making an identification. Most of the minutiae that Moses identified were among the same 10 features marked in Figures 6A-6C.

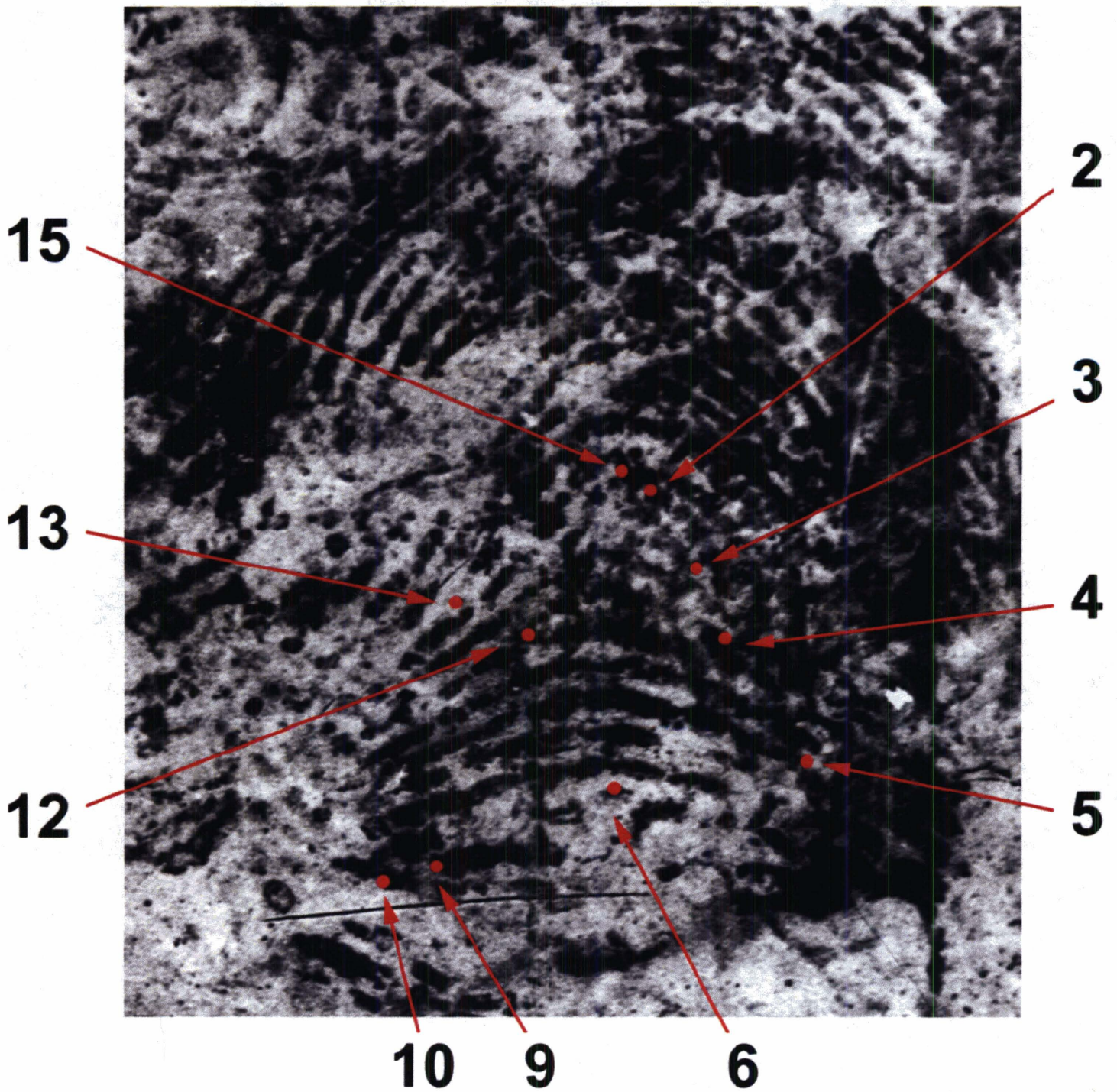
In observing the similarity in the location, direction, and ridge count for these features as between the Mayfield and Daoud prints, the OIG is not suggesting that the prints, or these 10 features, are identical. As can be seen

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<sup>103</sup> As noted above, John T. Massey, the examiner who verified the identification, did not consent to be interviewed for this investigation. FBI policies at the time did not require Massey to document the similarities forming the basis for his verification, and there is no written record of whether he also relied on these 10 "common points," although it seems highly likely that he did.

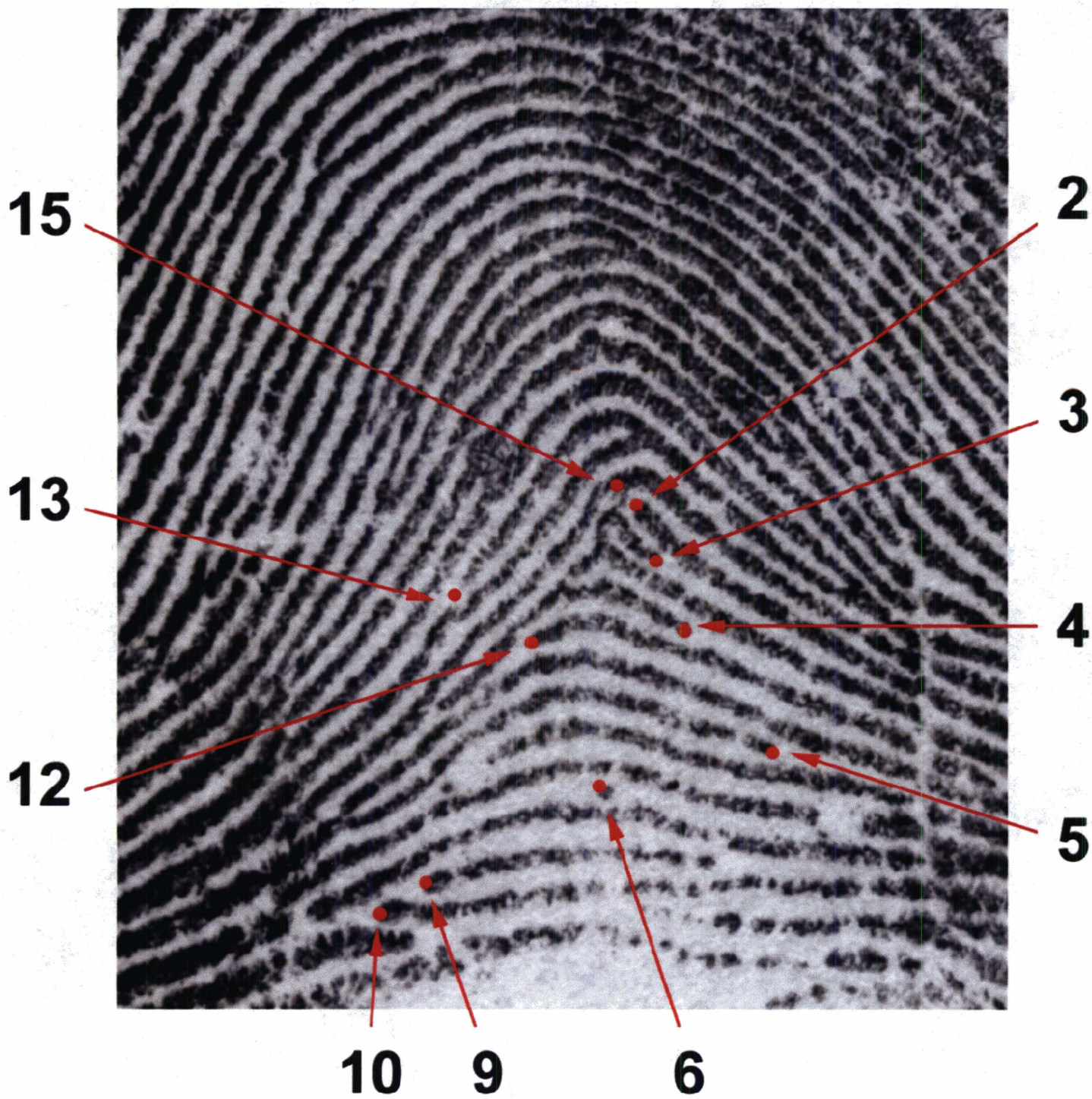
# FIGURE 6A

Level 2 Details Used To Identify Mayfield Also Used To Identify Daoud (LFP 17)



# FIGURE 6B

Level 2 Details Used To Identify Mayfield Also Used To Identify Daoud (Mayfield Exemplar)





# FIGURE 6C

Level 2 Details Used To Identify Mayfield Also Used To Identify Daoud (Daoud Exemplar)



[OPEN]

in Figures 6B and 6C, in many instances the *type* of feature (ending ridge versus bifurcation) turned out to be different on the Mayfield exemplars compared to the Daoud exemplars. As explained in Chapter Three, it can be difficult to distinguish between an ending ridge and a bifurcation in a latent print of imperfect clarity, and it is not extraordinary for an examiner to withhold final determination of the type of feature until the comparison phase. There are also other subtle dissimilarities in the positioning of these 10 features between the prints, and other dissimilarities in appearance between the latent print and the Mayfield exemplars.

Even taking into account the ambiguity as to whether particular features were ending ridges or bifurcations, the correspondence of 10 Level 2 details in prints from different sources, in sequence and with consistent ridge counts, is an extremely unusual event. Although the OIG found no exhaustive or systematic study of the rarity of such an event, anecdotal reports in the literature of similar fingerprints from different sources suggest that nobody has yet demonstrated more than eight or nine Level 2 details in sequence from different sources, even using prints that were artificially cropped to omit dissimilarities.<sup>104</sup> In describing his error, Moses emphasized the unusual nature of this many minutiae in agreement:

It was at this point that my mind shifted toward agreement with the Bureau's identification. I had never personally seen or read in the literature where two friction ridge images could share eight minutiae and still belong to different persons. Many state, local, and federal labs currently use eight minutiae as their ex officio comfort level for quality assurance purposes.<sup>105</sup>

Thus, the OIG concluded that there were as many as 10 Level 2 ridge formations on the fingers of both Daoud and Mayfield, forming a similar constellation with consistent intervening ridge counts on both fingers, which

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<sup>104</sup> See, e.g., Thornton (describing spurious comparison of cropped palm prints with nine points of agreement); John D. "Dusty" Clark, "ACE-V – Is it Scientifically Reliable and Accurate?" *Journal of Forensic Identification*, Vol. 52, No. 4, 2002, pp. 401-408 (illustrating cropped impressions with eight matching ridge deviations, with some variance in relative location); Y. Mark and D. Attias, "What is the Minimum Standard of Characteristics for Fingerprint Identification?" *Fingerprint Whorld*, Vol. 22, No. 86, October 1996 (reporting discovery of non-identical prints with seven matching characteristics). The correspondence of features in the Mayfield matter may not be as dramatic as in these other cases due to the ambiguity in the latent as to the types of features (bifurcation versus ending ridge) and the dissimilarities in other parts of the prints.

<sup>105</sup> Kenneth Moses, "The Mayfield Case – Anatomy of an Error," PowerPoint presentation, 2005, p. 6. See also Stoney, p. 381, stating that in the United States, seven or eight corresponding ridge characteristics are generally regarded as sufficient for identification if they satisfy an experienced examiner.

contributed substantially to an erroneous identification made by 4 different experienced examiners. In making this finding, the OIG is not suggesting that the error could not have been avoided, however. Despite the unusual similarities between the fingers of Daoud and Mayfield, there were differences in appearance between LFP 17 and Mayfield's prints that should have alerted the examiners that an identification should not have been made. The Laboratory's treatment of dissimilarities is addressed below in Section II.A.4 of this chapter.

The fact that the FBI examiner found a candidate fingerprint that was so unusually similar to LFP 17 without being an actual match demonstrates a particular hazard associated with the use of IAFIS. IAFIS is designed to select candidates whose prints most closely resemble the subject print. The inclusion of Mayfield's print among the candidates selected by IAFIS reflects IAFIS performing exactly as intended.

The Mayfield case demonstrates the potentially misleading power of IAFIS. Working with databases containing the fingerprints of more than 47 million individuals (i.e., 470 million separate prints), IAFIS is designed to find not only the source of the print (if it is in the database), but also the closest possible non-matches. In other words, although no two people have identical fingerprints, there are some that may be sufficiently close to confuse an examiner dealing with a latent of imperfect clarity. An IAFIS search of a huge database is designed to find those prints most likely to confuse an examiner. The likelihood of encountering a misleadingly close non-match through an IAFIS search is therefore far greater than in a comparison of a latent print with the known prints of a suspect whose connection to a case was developed through an investigation.

The OIG interviewed Ken Smith, a U.S. Postal Inspection Service fingerprint examiner who served on the International Panel. Smith served for 14 years on the IAI Certification Board, which was responsible for investigating complaints of erroneous identifications by IAI-certified examiners. Smith told the OIG that during his tenure on the Board he encountered 25 to 30 erroneous identifications, mostly by local law enforcement agencies. Smith said that all but one of these errors occurred in cases involving candidates selected as a result of automated computer searches. Smith stated that the Mayfield case, like almost all of the other erroneous identifications he has encountered, demonstrates the need for special care in conducting comparisons involving IAFIS candidates because of the elevated danger of encountering a close non-match. We agree with this conclusion.

## 2. Bias from the exemplar prints (circular reasoning)

We found evidence that the LPU examiners' interpretations of some features in LFP 17 were adjusted or influenced during the comparison phase by reasoning "backward" from features that are visible in the Mayfield exemplars. This bias is sometimes referred to as "circular reasoning" and has been described as "a premature assumption of donorship [that] leads to transplantation of data from the 'original' [the known print] into the latent print."<sup>106</sup>

Part of the evidence that circular reasoning infected the Mayfield identification was found in the prints themselves. In this case, knowing the true source of the latent print enabled us to determine which features were charted as part of the identification of Mayfield that in fact were not present in the friction ridges of the true source. We found five examples of features that the LPU interpreted as Level 2 ridge deviations (ending ridges, dots, or bifurcations) in identifying Mayfield as the source of LFP 17, which turned out to correspond to no similar features in the known prints of the true source, Daoud. These features are shown in Figures 7A-7C, which show: (1) where the LPU charted these features in LFP 17, (2) the corresponding features that the LPU charted in the Mayfield exemplar, and (3) the corresponding locations in the Daoud exemplar showing that no such features actually occurred in these locations.<sup>107</sup>

The OIG discussed these features in detail with Green and Wieners, and with our three expert consultants. The OIG and its consultants concluded that there was little or no support within LFP 17, considered without reference to any known print, for determining that there were Level 2 ridge deviations at these five locations. There was no evidence that Green identified these five features as Level 2 details in his initial analysis of LFP 17, prior to seeing the Mayfield prints. None of these five features were among the seven features in the latent print that Green encoded for IAFIS prior to the comparison to the Mayfield exemplars.

The Laboratory's error in relying on the five features illustrated in Figures 7A-7C cannot be attributed to unusually confusing distortions in the latent print that gave a strong appearance of true Level 2 detail. Rather, these five features are all at best ambiguous or blurred in the latent print. Two of the

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<sup>106</sup> Interpol European Expert Group of Fingerprint Identification II, "Method for Fingerprint Identification, Part 2; Detailing the method using common terminology and through the definition and application of shared principles" ("INTERPOL Method Part 2"), available at <http://www.interpol.int/Public/Forensic/fingerprints/>, § 8.9.1.

<sup>107</sup> Further information on these features is provided in Appendix J.

features that Green interpreted as ending ridges (Points 11 and 8) occur at the outer edge of the latent, which is an area in which a determination that a ridge comes to an end can be particularly dangerous.<sup>108</sup> In reality, Daoud's ridges did not end at these points, but continued beyond the edge of the latent print. Another feature (Point 7) was also interpreted as an ending ridge despite the absence of convergence in the surrounding ridges. Ashbaugh specifically cautions against such an interpretation:

Distinguishing between ridge endings and ridge breaks (incompletely reproduced ridges) requires understanding that in the case of ridge endings, the ridges on either side will fill in any void left by the ending ridge and this directional change will be visible on the ridge path. Unless visible in both prints [the latent and the exemplar], ridge breaks should be treated as if the ridge is continual.<sup>109</sup>

The other two features (Points 1 and 14) are at best very unclear and the OIG concluded that they would never have been identified as Level 2 details with confidence unless they had been suggested to the examiner by the exemplar prints during the comparison phase.

Based on these facts and the opinions of its consultants, the OIG concluded that the LPU examiners' reliance on these particular features was influenced by "circular reasoning" that occurred after the Mayfield prints were compared to LFP 17. This reverse reasoning appears to have been an instance of loss of objectivity that Ashbaugh warned against:

During forensic comparison one must maintain an objective state of mind to guard against seeing things that are not there. For example, during the comparison process, examining the clear inked known impression prior to carrying out an analysis of an unknown print could cause the brain to jump to a conclusion and see details in the murky unknown ridge structures that may not actually be there.<sup>110</sup>

We concluded that the other similarities in the prints, described in the preceding section, which stemmed from the general similarity in the constellation of Level 2 details between Mayfield and Daoud, caused Green to begin to see additional similarities based on features that were not in fact

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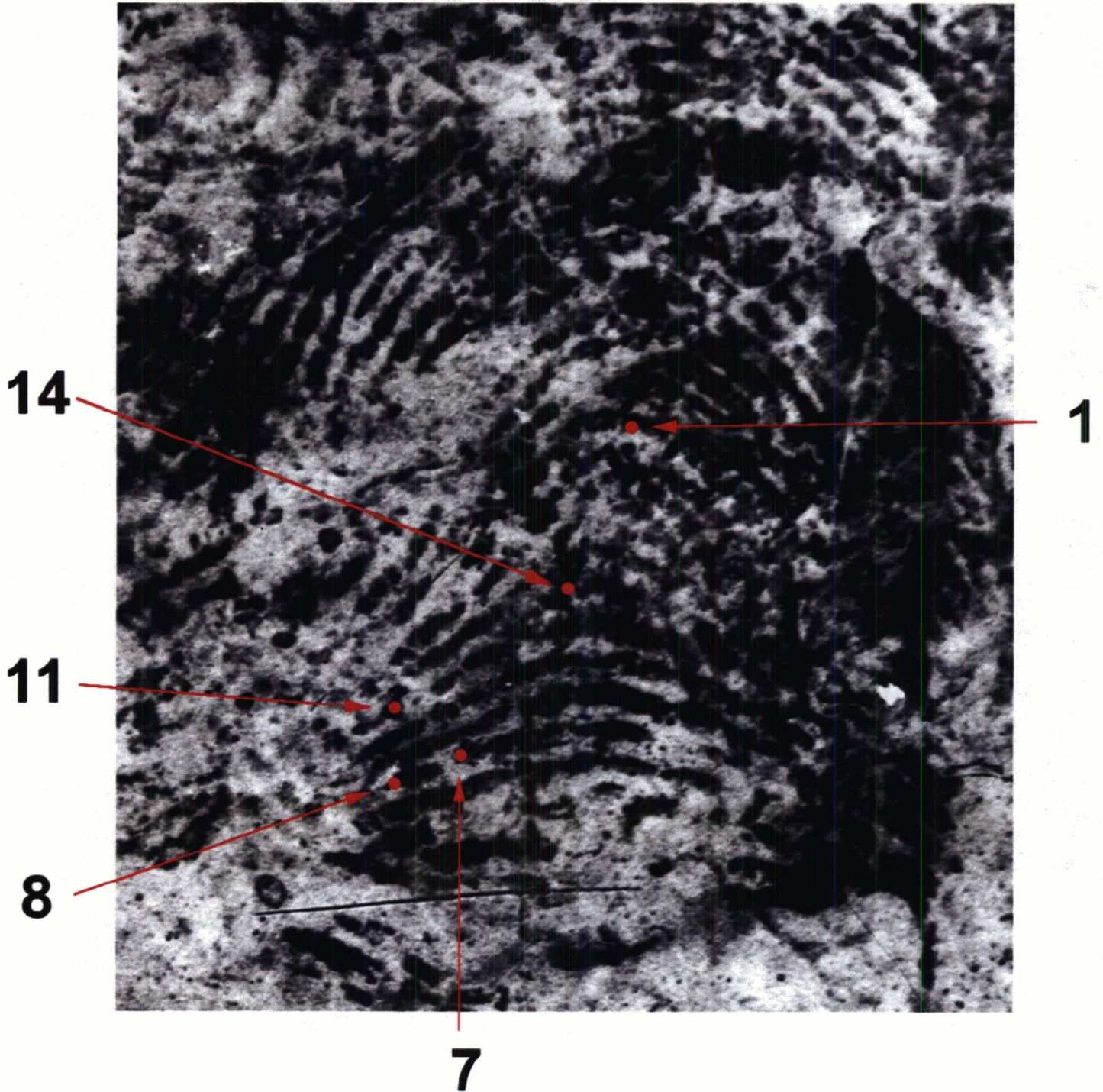
<sup>108</sup> See, e.g., Interpol Method Part 2 at § 8.4.

<sup>109</sup> Ashbaugh, pp. 132-133.

<sup>110</sup> Ashbaugh, p. 105.

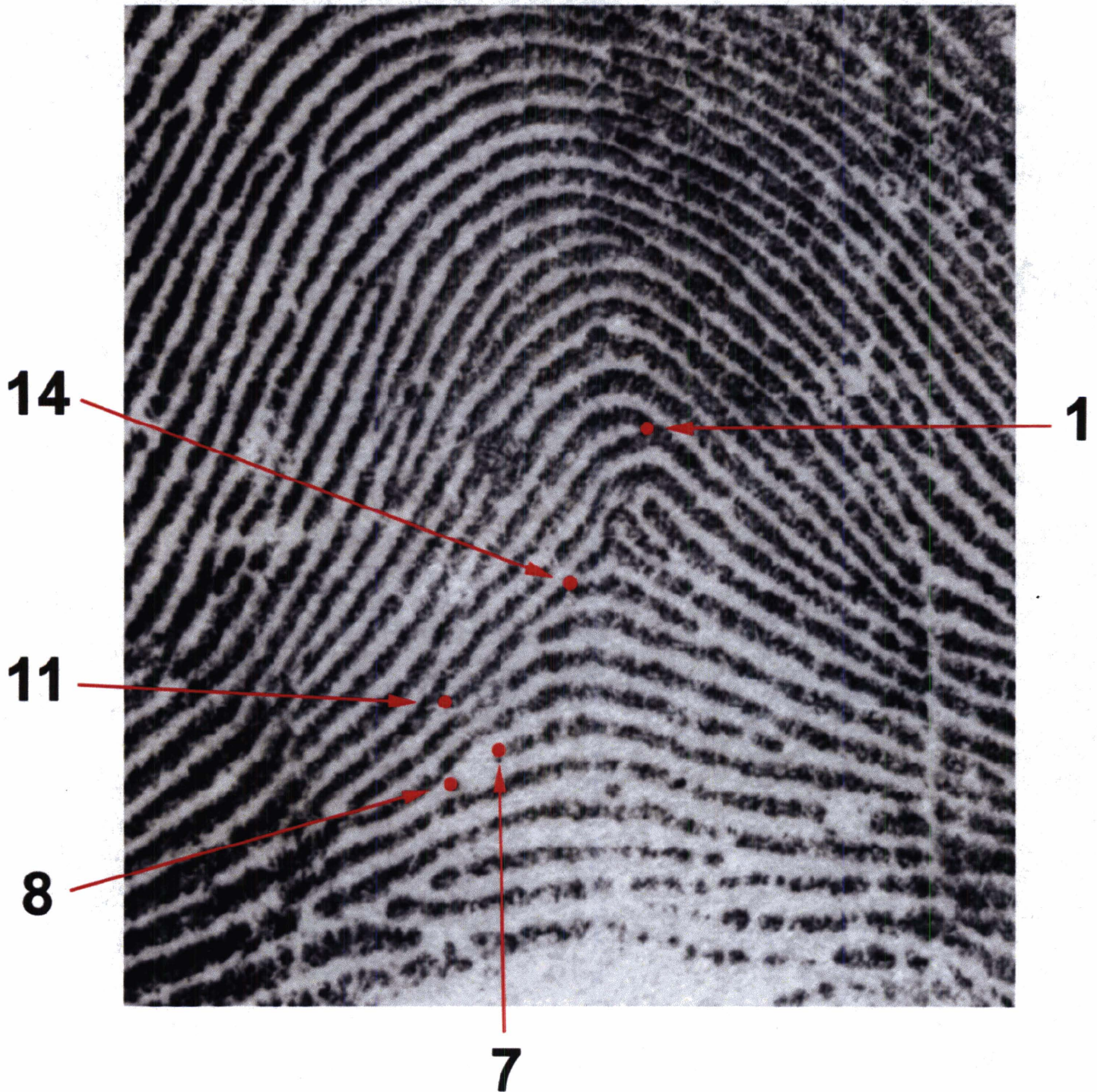
# FIGURE 7A

Level 2 Features Used To Identify Mayfield Having No Source in the Daoud Exemplars (Do Not Exist) (LFP 17)



# FIGURE 7B

Level 2 Features Used To Identify Mayfield Having No Source in the Daoud Exemplars (Do Not Exist) (Mayfield Exemplar)





# FIGURE 7C

Level 2 Features Used To Identify Mayfield Having No Source in the Daoud Exemplars (Do Not Exist) (Daoud Exemplar)



[OPEN]

present.<sup>111</sup> In this way, the number of Level 2 similarities that Green was able to chart increased from 10 to 15.<sup>112</sup>

There are other, more subtle indications that Green permitted his review of the Mayfield prints to influence his interpretation of LFP 17 in a process of reverse reasoning. The best available contemporaneous evidence of Green's unbiased analysis of the LFP 17 is the way he coded the print for the IAFIS search, as shown in Figure 8A. At that time, he had never seen the Mayfield exemplar and could not be influenced by it. Green encoded seven Level 2 details for the IAFIS search: four points as ending ridges and three points as bifurcations. After comparing the Mayfield exemplar, Green changed his interpretation of three points from bifurcations to ending ridges, as illustrated in Figure 8B. He also changed his interpretation of another point from an ending ridge to a bifurcation, and moved the location of yet another point (an ending ridge) one ridge down. In other words, after seeing the Mayfield prints, Green changed the interpretation of five of his original seven points in type or location, with the result that the five points were reinterpreted to be more consistent with the Mayfield exemplar.

The bias that this reinterpretation introduced can be appreciated by comparing Green's original coding with the Daoud exemplars. For four of the five points that Green changed as to type or location after seeing the Mayfield prints, it turned out that his original interpretation was correct (i.e., was consistent with the Daoud exemplar), as shown in Figure 8C. For those points, Green's original analysis, still unbiased by any comparison to Mayfield, was in fact more accurate than the adjusted interpretation he made after seeing the Mayfield exemplars.<sup>113</sup>

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<sup>111</sup> Gregoire Michaud, the Latent Print Unit Program Coordinator for the Michigan State Police, served on the International Panel and described this process as "confirmation bias" or "context effect," resulting from the "unique similarity" between some Level 2 details in LFP 17 and the Mayfield prints that induced the examiner to expect to find additional matching details. See Gregoire Michaud, "Concept Paper for an International Review of the Madrid Bombing Latent Fingerprint" (unpublished), 2004, at 2, citing "Intuitive Judgment and the Evaluation of Evidence," commissioned by the National Academy of Science's Committee on Techniques for the Enhancement of Human Performance, Washington, D.C. 1987, and Saks, et al., "Context Effects in Forensic Science," *Science & Justice*, Vol. 43, No. 2, 2003. Ron Smith, another member of the International Panel, described the same process as a "mindset" in which the initially detected similarities led to an unintentionally incorrect interpretation of additional features as matching. Ron Smith, "Report of Case Review, Madrid, Spain Bombing FBI Latent Print Examination" (unpublished), 2004, p. 2; see also Wertheim, p. 6, describing the same "mind-set" phenomenon.

<sup>112</sup> We found further evidence of bias from the exemplar prints influencing the examination in the examiners' utilization of Level 3 detail to support the Mayfield identification, a topic addressed in the next section.

<sup>113</sup> Further detail regarding the way points were originally coded for IAFIS and subsequently reinterpreted may be found in Appendix I.

Green's description of his examination of LFP 17, given during his interview with the OIG, provided further support for the conclusion that Green allowed the Mayfield exemplar prints to color his interpretation of the latent print through a process of circular reasoning. Green stated that during the comparison phase, his practice was to ignore the way he encoded the latent print for IAFIS and to reconsider the latent print from a new perspective. When asked whether it was unusual to change the interpretation of points during the comparison phase, Green stated that he does not even consider the way he originally encoded a latent print at this stage of an examination. This approach appears to be at odds with one of the primary purposes of the analysis phase of ACE-V: to interpret the latent print before the comparison phase in order to avoid reasoning backward from the known print. By discarding at least some of the information developed during the original analysis, Green was able to modify his initial interpretation of the latent print to match the exemplar without ever asking or answering the question of why his initial interpretation was wrong. As discussed above, Green made several such modifications in his interpretation of the location and type of Level 2 details in order to find a similarity to Mayfield, and also apparently added at least five Level 2 details to his interpretation of LFP 17, details that in fact were not present. The OIG concluded that these errors were the result of bias resulting from circular reasoning from the Mayfield exemplars.<sup>114</sup>

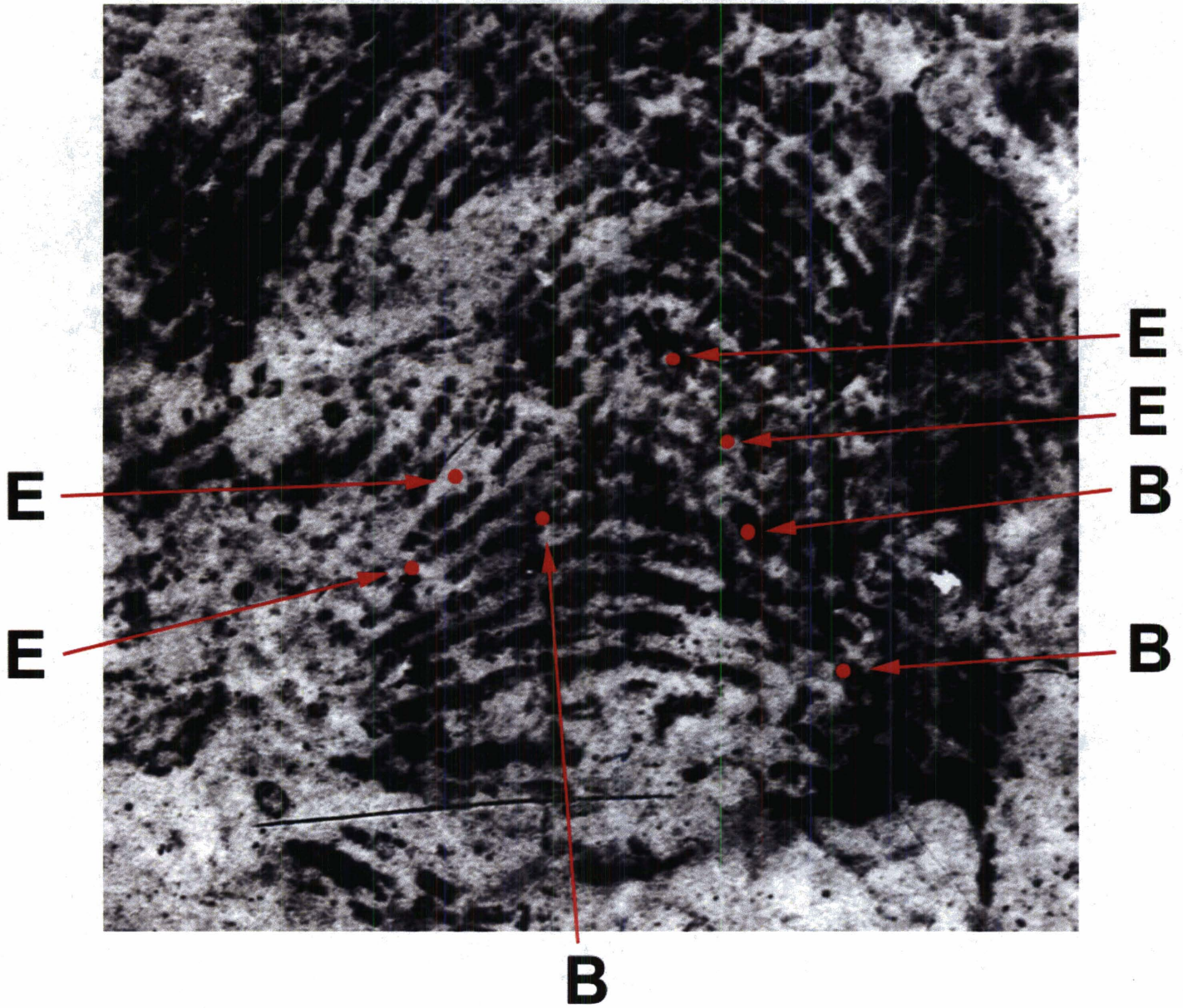
There is nothing in any Standard Operating Procedure (SOP) or other policy or standard applicable to the FBI Laboratory that prohibits an examiner from revising his initial analysis regarding the type or location of a feature in a latent print to match what he finds in an exemplar more closely, but the hazards of such a reversible approach to the analysis phase are well demonstrated in this case. Indeed, in the absence of any requirement to document the initial, pre-comparison analysis of the latent print and to record what is seen at that time, it is impossible to know with certainty which features in the latent were clear to the examiner before the comparison phase and which features only became apparent to the examiner after being suggested by the exemplar prints. The IAFIS encoding, if it occurs, is at best an incomplete record of what features are perceived because the examiner typically will not encode every Level 2 feature in a latent print. Under these circumstances, with

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<sup>114</sup> Under LPU policy in effect at the time, written supervisory approval was required prior to reporting any identification based on fewer than 12 points of Level 2 detail. By finding 15 Level 2 points of similarity, Green thus potentially eliminated an additional level of review beyond the verification required for all identifications. The OIG recognized, however, that Unit Chief Wieners performed an informal review of the identification after it was declared, and concurred with the result. Unit Chief Wieners likely would have been the supervisor who would have been required to approve the identification under the "12-point rule." Accordingly, the OIG did not conclude that additional review pursuant to the "12-point rule" would have prevented the error.

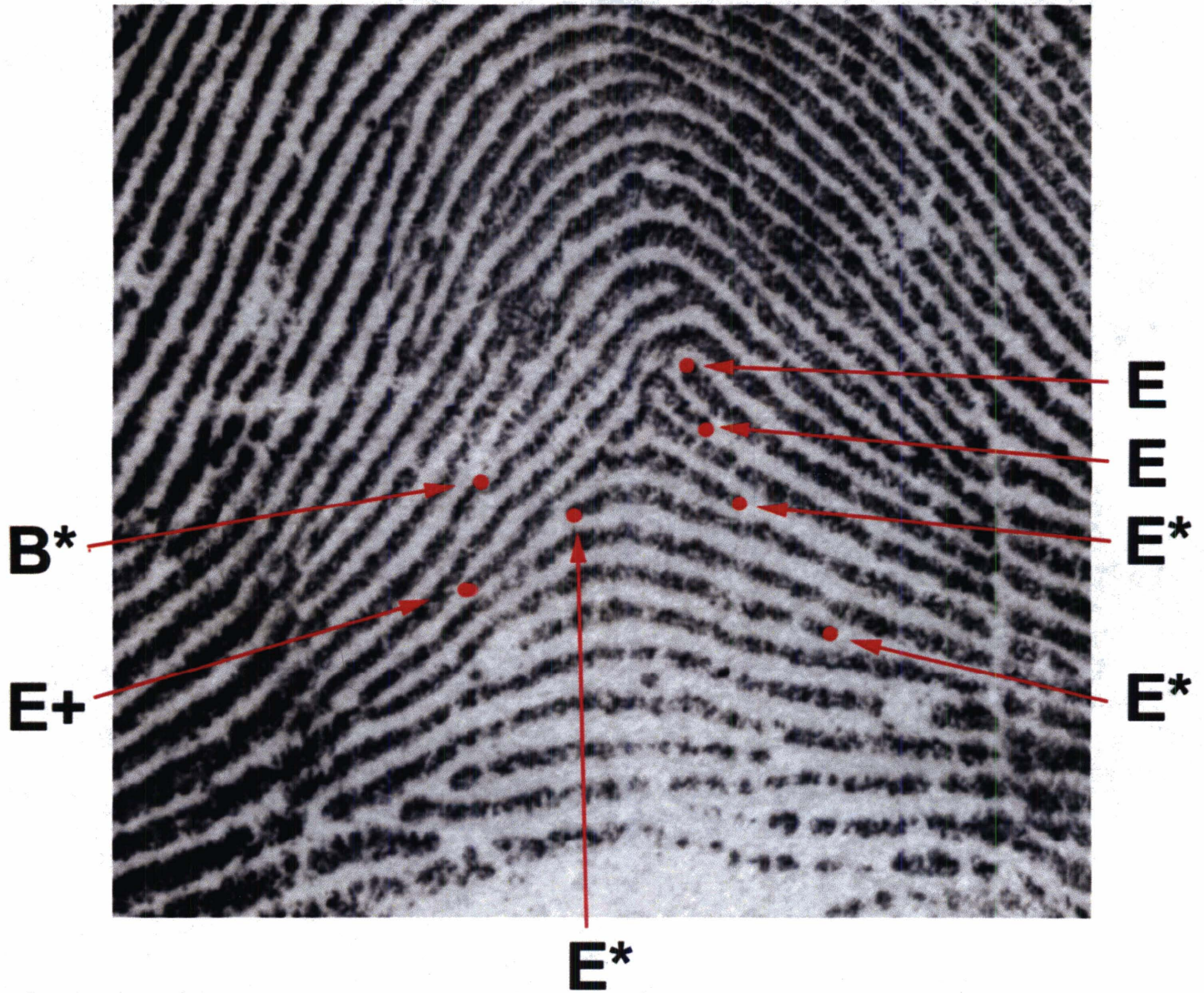
# FIGURE 8A

Original IAFIS Encoding (LFP 17)



# FIGURE 8B

Revised Interpretation of IAFIS Points Following Mayfield Comparison (Mayfield Exemplar)



\* = Change in type (e.g., E to B or B to E)

+ = Moved one ridge down

# FIGURE 8C

Actual Feature Types in Daoud Exemplar



[OPEN]



an incomplete record of the analysis, over time the examiner may lose track of which came first, features he saw in the latent or features suggested by the exemplar.

Of course, Mayfield's print was not the only print selected as a candidate as a result of the IAFIS search. It was only after Mayfield's print became a serious candidate for identification that this process of reverse reasoning began to influence the examiner. The initial interest in the Mayfield print was attributable to close similarities with LFP 17, as described in the preceding section. The OIG concluded that once the similarity was noticed, the process of circular reasoning began to infect the examiner's mental process, particularly in the absence of standards or safeguards to require the examiner to keep distinct which features were seen in the latent during the analysis and which were only suggested during the comparison.

### **3. Faulty reliance on Level 3 Detail**

The OIG found that the purported agreement of Level 3 details (pores, incipient dots, and ridge edge shapes) between LFP 17 and the Mayfield exemplar fingerprint was an important basis for the FBI Laboratory's identification of Mayfield. Supervisor Green and Unit Chief Wieners both described their reliance on Level 3 details in interviews with the OIG. Green marked five areas of Level 3 agreement with yellow ovals in the March 22 Charted Enlargements (Figures 2A and 2B) prepared shortly after the identification was declared. Wieners told the OIG that one of these Level 3 features, interpreted as a pair of incipient dots and marked as the upper rightmost of the five circled features, was a "very persuasive" point within the identification. According to another LPU examiner interviewed by the OIG, Green told him at the time of the identification that it was necessary to consider matching Level 3 details to make the identification.

After the SNP questioned the identification in its April 13 Negative Report, Green prepared new charted enlargements that specifically cited a total of seven different matching Level 3 details in support of the identifications. As noted above, when Wieners made his presentation to the SNP on April 21, he gave great emphasis to the FBI's reliance on Level 3 details. According to AUSA 2's notes regarding a conversation with Wieners after the April 21 meeting, Wieners told her that the SNP's failure to consider Level 3 detail reflected a lower depth of analysis and level of expertise. The FBI's reliance on Level 3 detail was explicitly cited in the Werder Affidavit filed in support of the material witness warrant in connection with explaining the difference of opinion between the FBI and the SNP.

Wieners told the OIG that he now believes that "Level 3 is what betrayed us here." The OIG reviewed the relevant prints with the FBI examiners and the

OIG's consultants, and determined that none of the Level 3 features utilized by the FBI examiners to identify Mayfield has any correspondence to any point in the Daoud exemplar prints. In other words, it appears that the examiners were confused not by any confirmable Level 3 similarity between the fingers of Mayfield and Daoud, but rather by distortions or variations in appearance within the latent print that the examiners found to correlate with features in the Mayfield exemplar. Thus, the error in the Level 3 portion of the examination was fundamentally different from the error that occurred with respect to Level 2. Unlike the case with Level 2 details (in which there were as many as 10 roughly similar minutiae present in *both* the Mayfield print and the Daoud print), none of the Level 3 details cited by the FBI can be attributed to an unusual coincidence of similarity between Mayfield and Daoud.

From a review of the available prints, review of literature regarding Level 3, and consultation with experts, the OIG has determined that there were several indications available to the FBI at the time that the purported Level 3 similarities were not reliable support for the identification. One example is the feature interpreted as a pair of incipient dots in LFP 17 (the upper rightmost yellow-circled feature in Figure 2A), which Wieners described as a very persuasive feature in the comparison. Green and Wieners found a corresponding feature on Mayfield's rolled fingerprint taken in connection with his military service. That exemplar, however, was not the only image of Mayfield's fingerprints available to the FBI. The same set of fingerprints included a "flat" impression of the finger made without rolling. The "incipient dots" do not appear in that version of Mayfield's known prints, made the very same day as the rolled prints. The dots also do not appear in the fingerprints taken from Mayfield in connection with his criminal arrest as a teenager in 1985. Thus, a feature that the FBI Laboratory considered "very persuasive" did not in fact appear in most of the known prints of Mayfield. Moreover, even in the one exemplar print in which the dots do appear, they are significantly further away from the nearest Level 2 feature (Point 5 in Figures 2A and 2B) in the latent print than in the exemplar, calling into question whether the dots are actually in agreement.

Several of the Level 3 details cited by the FBI Laboratory as being in agreement were described as pores or groups of pores. The non-FBI experts that the OIG interviewed, including two members of the International Panel and the OIG's experts, disputed that there was in fact a similarity of appearance in size and shape between these features in the latent print and the relevant exemplars. Moreover, the appearance of a pore along a ridge in a latent print corresponding to another pore in an exemplar has relatively little individualizing power. Every ridge is made up of a sequence of ridge units, each of which contains a pore. Thus, unlike Level 2 minutiae, pores occur on all ridge units throughout the ridge formations in the friction skin. In addition, because of the variability with which pore sizes and shapes are reproduced in

both latent and inked prints, some fingerprint examiners caution against any reliance on the shape or size of pores.<sup>115</sup>

Several of the examiners interviewed by the OIG, including LPU Unit Chief Meagher, the OIG consultants, and Ron Smith (a member of the International Panel), even questioned whether the clarity of LFP 17 was sufficient to support *any* reliance on Level 3 detail in this image. LFP 17 bears little or no resemblance in clarity to the examples shown in Ashbaugh to illustrate Level 3 detail.<sup>116</sup> FBI LPU Unit Chief Meagher, who participated in the May 23-24 reexamination of the print and ultimately identified the print to Daoud in June, told the OIG that the quality of LFP 17 was a 2 or 3 on a scale of 10, and that he did not find usable Level 3 detail in the print.

Another issue raised by the FBI's reliance on selected Level 3 details is the question of "fair reasoning." The INTERPOL "Method for Fingerprint Identification" describes this issue as follows:

As a rule the quality of the difference (e.g. explained by distortion) should not be higher than the quality of the similarities . . . in other words [w]hen a dissimilarity is "explained away," by arguing that the information is too bad and not valid, then similar information with equal quality should also not be regarded as valid. . . .

A good way to practise fair reasoning is to invert the argument or to "play the advocate of the devil"; Or in practise ask: what if it was the other way round? . . .

One finds a similarity in a blurred area and there could be an inclination to mark it; if there appears to be a dissimilarity in the same area would one regard this to be genuine as well?<sup>117</sup>

It does not appear that FBI examiners applied "fair reasoning" in the comparison of Level 3 detail during the Mayfield identification. There are possible pores, ridge edge shapes, and small between-ridge details in many

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<sup>115</sup> See, e.g., Doede Rijpkema, unpublished presentation to the IAI Educational Conference in Las Vegas, 2002 (supplied by Dusty Clark).

<sup>116</sup> See, e.g., Ashbaugh, p. 151, Figures 5.1 A and B (showing 901 pores with much greater clarity than in LFP 17); p. 155, Figure 5.2A and B (distinguishing bifurcations in the same location in different prints by relative pore positioning); p. 159, Figures 5.4-5.6 (illustrating identification of partial palm print from telephone extension wire having clear impression of ridge edges and numerous pores).

<sup>117</sup> INTERPOL Method Part 2 §§ 8.7.1 and 8.8.

locations throughout LFP 17. Some of these shapes arguably correspond with shapes in the Mayfield known prints; they were marked as similarities. Many other shapes in the latent print do *not* correspond to the Mayfield known prints, but there is no evidence that these differences in appearance were treated as important enough to require explanation. They were apparently attributed to the variability in appearance that occurs in any transfer of detail from 3-dimensional friction ridges into a 2-dimensional latent print under uncontrolled conditions. This selective “cherry-picking” of only those Level 3 details that seemed to support the identification, while dismissing all Level 3 differences elsewhere in the print, falls short of “fair reasoning.” Green told the OIG that he did not try to identify usable Level 3 detail in LFP 17 until after he began comparing the print to the Mayfield exemplar. Again, it appears that Green reasoned in a circular manner, using detail in the Mayfield known prints to determine which pores, edge shapes, and incipient dots in the latent print were in fact reliable detail rather than distortion.

In Chapter Three we described the debate within the fingerprint discipline regarding the reliability of Level 3 detail. We believe that the Mayfield error will be an important case study for consideration in that debate. It is beyond the scope of the OIG’s investigation to weigh in on the debate regarding the circumstances under which Level 3 detail should be utilized to effect an identification. The OIG did find, however, that in this case FBI examiners Green and Wieners relied on features in LFP 17 as Level 3 detail that turned out to be details which have no significant correspondence with any features in the known prints of the true source, Daoud.

#### **4. Inadequate explanations for differences in appearance**

Several members of the International Panel found that the FBI examiners had ignored, overlooked, or disregarded a significant number of differences in appearance between LFP 17 and the Mayfield prints.<sup>118</sup> The individual members of the Panel did not explain these findings in more than a summary fashion in their reports. During their interviews with the OIG, Green and Wieners disputed this finding, stating that they did notice several differences in appearance but believed them all to be explainable. In this section, the OIG examines, in detail, the differences in appearance and the explanations that the FBI Laboratory posited for them. The primary Level 1 and Level 2 differences in appearance that the OIG was able to identify with the help of its

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<sup>118</sup> See, e.g., Michaud, p. 3; Ron Smith, p. 3; Kenneth O. Smith, “International Expert Review of the Madrid Bombing Latent Fingerprint Examination by the FBI Latent Print Unit,” (unpublished), 2004, p. 1.

consultants and other examiners who were interviewed are described in Table 1 and illustrated in Figures 9A-9F.<sup>119</sup>

In reviewing the questions of differences of appearance and explanations, the OIG's investigation was hampered by the fact that there was no contemporaneous written record of what differences the examiners perceived and what explanations, if any, were posited for them in March 2004 when the identification was made. As previously noted, no FBI policies or procedures required the documentation of this aspect of the comparison. Consequently, the OIG was required to rely solely on the recollection of the participants, which were by that time informed of the fact that an error had occurred.

In reviewing the adequacy of the explanations posited by the Laboratory examiners, the OIG took into account the degree of certainty which the FBI Laboratory and other forensic laboratories require for their identifications. As previously explained, latent fingerprint identifications are not declared unless the examiner has crossed a threshold of certainty that the latent and known prints originated from the same source, to the exclusion of all others. The SWGFAST Methodology is unequivocal in rejecting "possible" or "probable" identifications as outside the acceptable limits of the discipline. Consistent with this philosophy, Green approved of language in the affidavit supporting the material witness warrant for Mayfield describing his conclusion as a "100% identification."

As previously explained, the FBI and other forensic laboratories utilize a "one discrepancy rule" in which a single difference in appearance that cannot be explained must preclude the examiner from declaring an identification. Although the SWGFAST Standards that governed the FBI's identification in this case are not explicit regarding the degree of certainty that the examiner must have in a proposed explanation, the certainty that the discipline requires for its identifications cannot be provided unless the examiner has achieved equivalent certainty with respect to the validity of the explanations offered for differences in appearance between a latent and a known fingerprint.

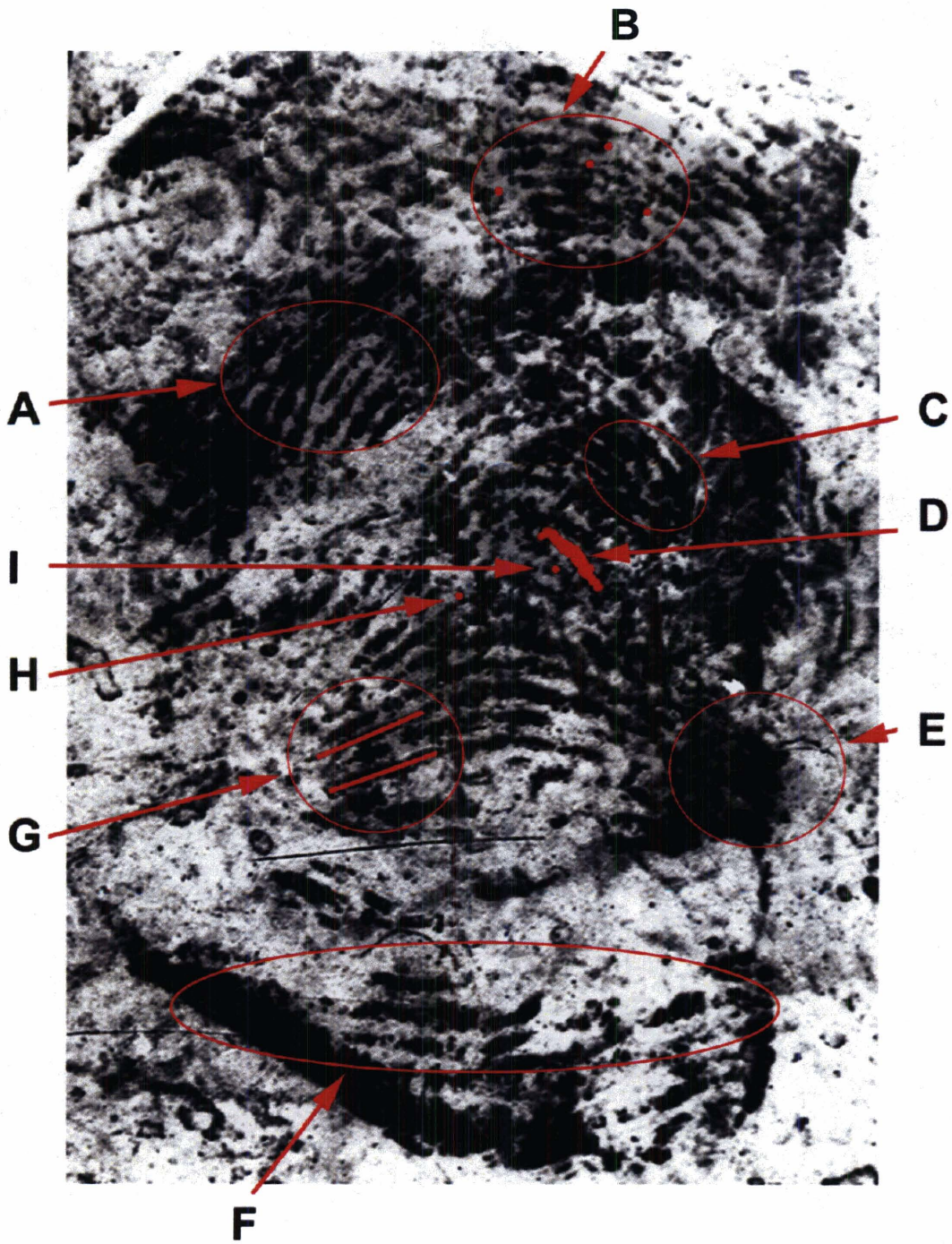
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<sup>119</sup> The discussion in this section does not address dissimilarities in Level 3 detail. As previously noted, there can be substantial variability of appearance in Level 3 detail from one impression to another, even when the prints are made by the same person. Examiners are generally tolerant of many differences in appearance in Level 3 details and are more willing to explicitly or implicitly explain them as distortions. Although it is possible to imagine circumstances under which there would be adequate clarity in both the latent and exemplar prints for an examiner to rely on Level 3 differences to declare an exclusion, this is apparently an extremely unusual situation. In the Mayfield case, there were so many unexplained differences in Level 1 and Level 2 details that a discussion of Level 3 differences would be superfluous.

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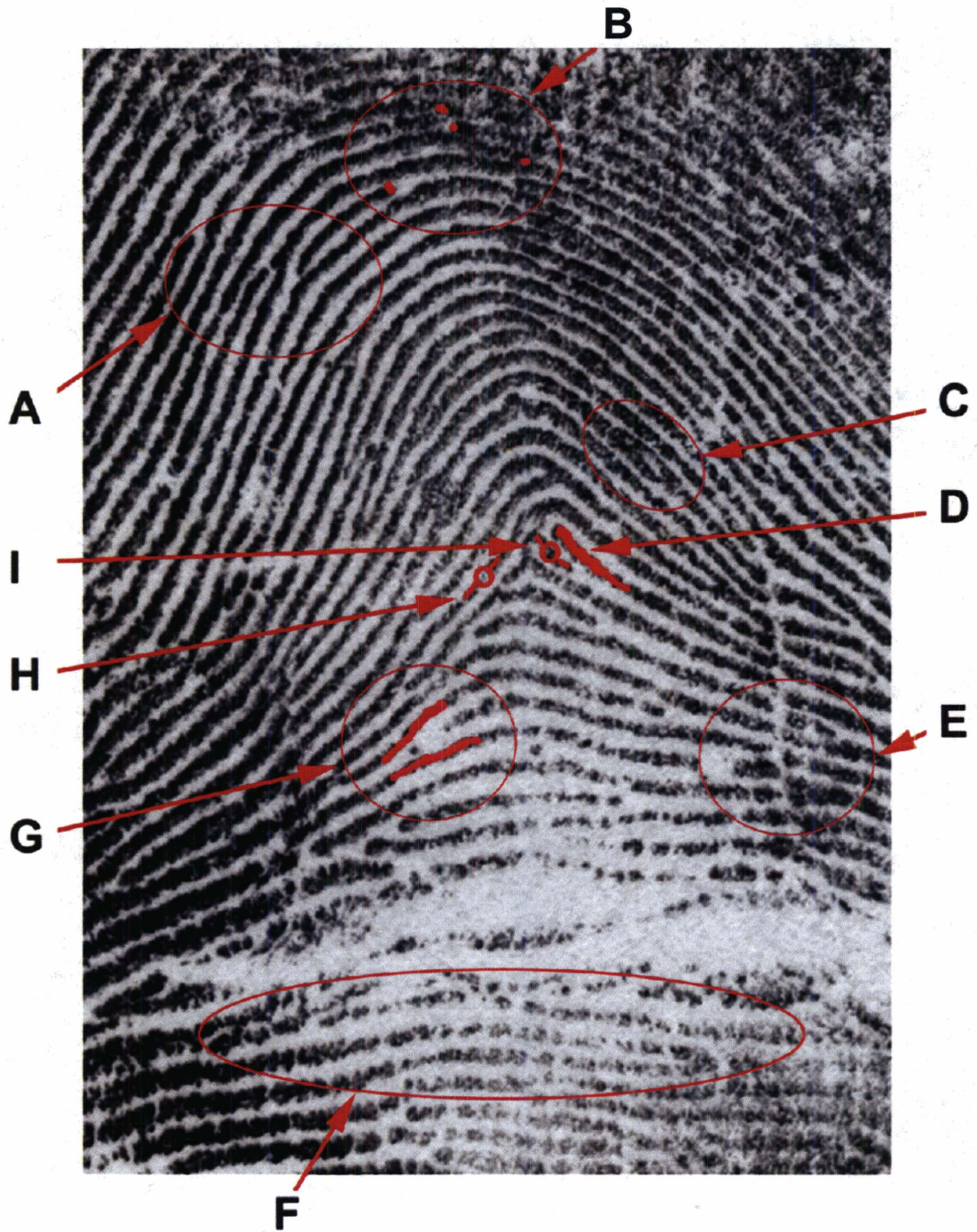
# FIGURE 9A

Differences in Appearance Between LFP 17 and Mayfield Exemplar  
(See Table 1)



# FIGURE 9B

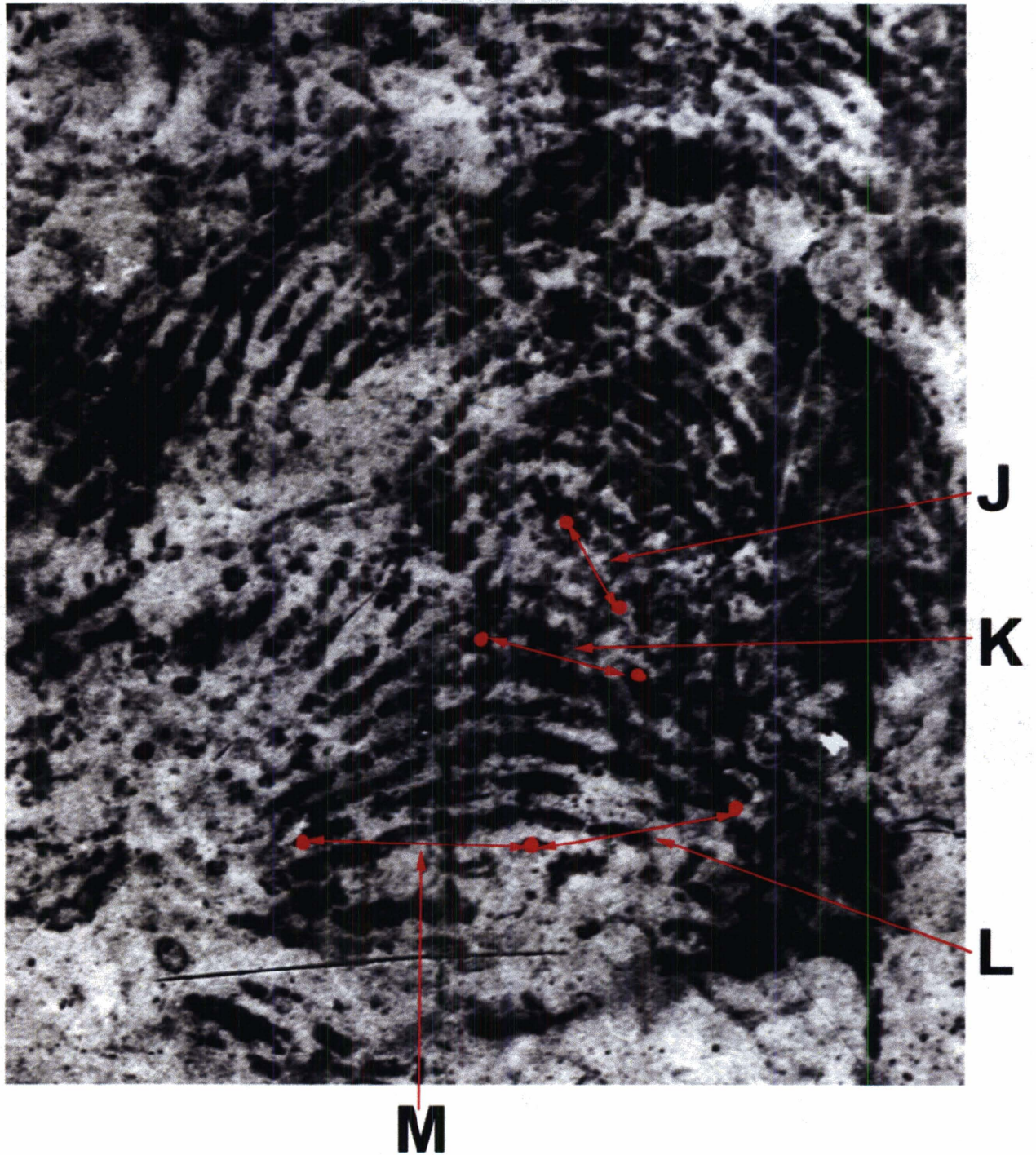
Differences In Appearance Between LFP 17 and Mayfield Exemplar  
(See Table 1)





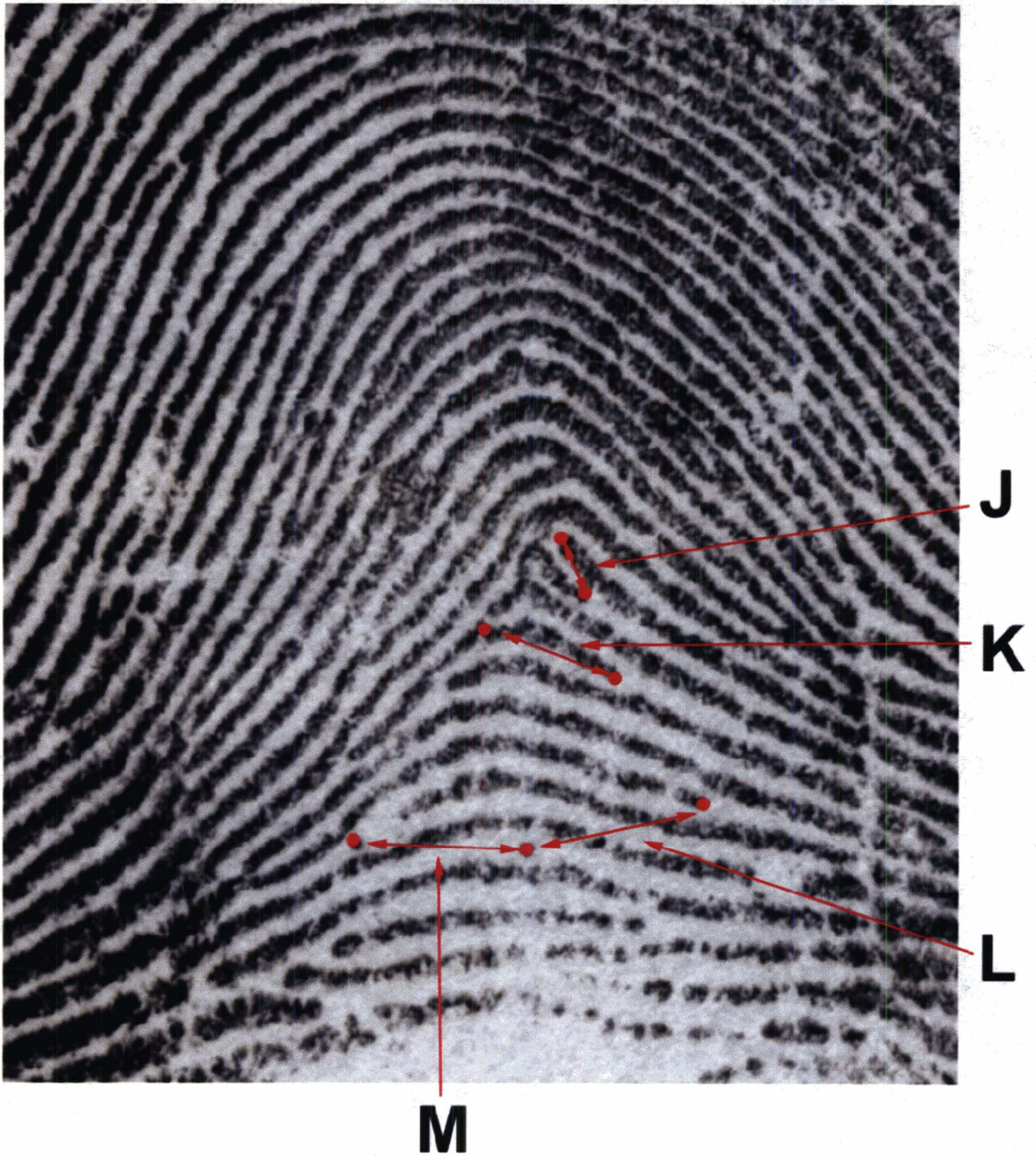
# FIGURE 9C

Differences in Appearance Between LFP 17 and Mayfield Exemplar  
(See Table 1)



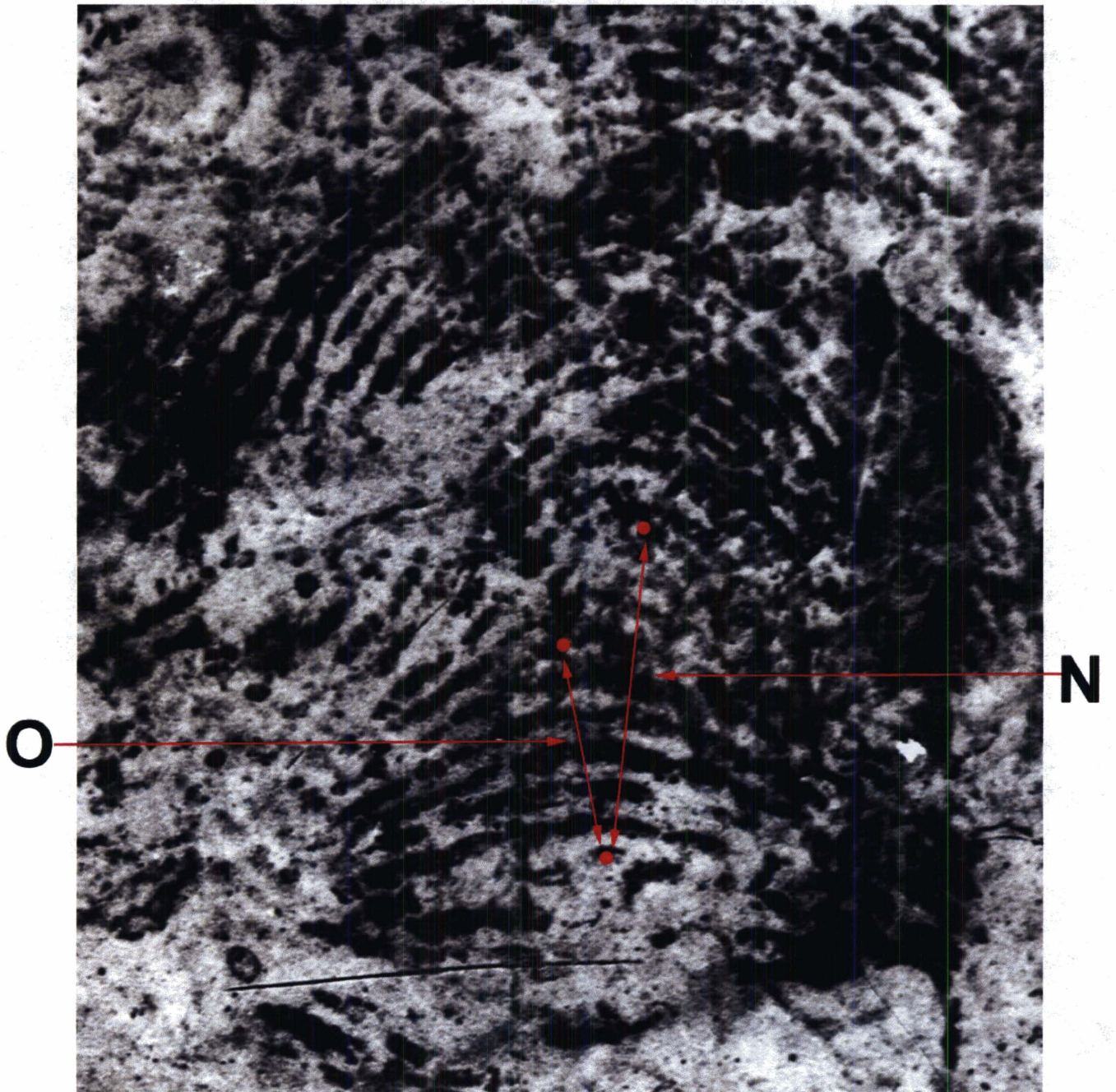
# FIGURE 9D

Differences in Appearance Between LFP 17 and Mayfield Exemplar  
(See Table 1)



# FIGURE 9E

Differences in Appearance Between LFP 17 and Mayfield Exemplar  
(See Table 1)



# FIGURE 9F

Differences in Appearance Between LFP 17 and Mayfield Exemplar  
(See Table 1)

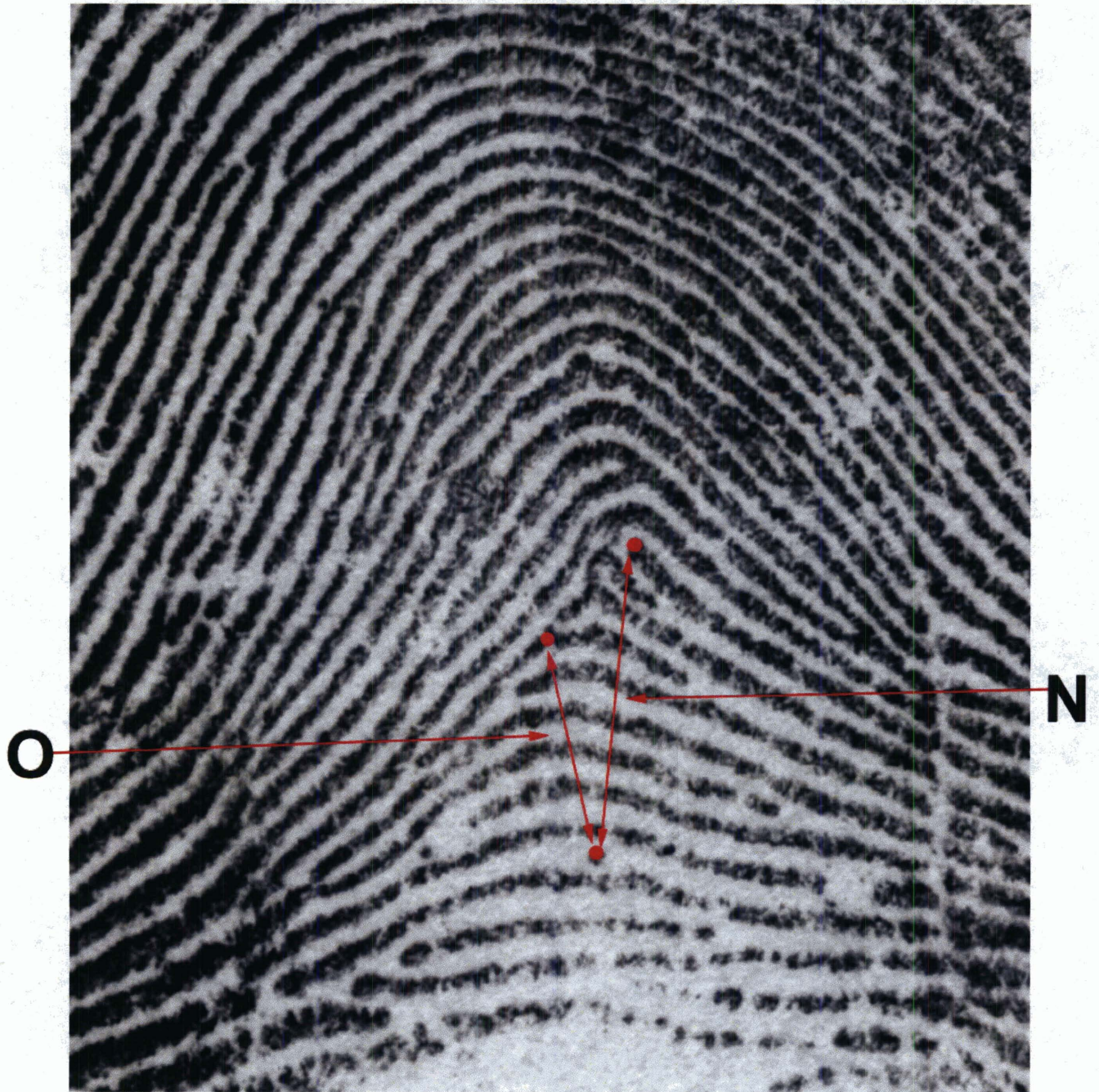


TABLE 1

DIFFERENCES IN APPEARANCE BETWEEN LFP 17 AND THE MAYFIELD PRINT

(SEE FIGURES 9A-9F)

A	Level 2 details in upper left portion of print cannot be correlated to Mayfield exemplars.
B	Level 2 details in upper right/center are not in agreement in alignment and spacing and are off by one ridge count from core.
C	Enclosure in Mayfield exemplar cannot be seen in latent.
D	Ridge ending at point 2 is downward curving in latent, upward in Mayfield exemplar.
E	Ridge flow in SE portion of center of LFP is flatter in Mayfield exemplar than in LFP 17.
F	Ridge flow in lower joint is cupped in LFP 17, mounded in Mayfield exemplar.
G	Ridges around point 8 are parallel in LFP 17, taper together in Mayfield exemplar.
H	Level 2 detail in latent on ridge above Point 14, not present in Mayfield exemplar.
I	Level 2 detail NW of Point 3 in latent, not present in Mayfield exemplar.
J	Distance from Point 2 to Point 3 is much greater on latent (1.52 mm) than on Mayfield exemplar (1.09 mm).
K	Distance from Point 14 to Point 4 is much greater on latent (2.74 mm) than on Mayfield exemplar (2.34 mm).
L	Distance from Point 5 to Point 6 is much greater on latent (3.28 mm) than on Mayfield exemplar (3.02 mm).
M	Distance from Point 8 to Point 6 is much greater in latent (3.56 mm) than in Mayfield exemplar (3.0 mm).

N	Distance from Point 2 to Point 6 (on N-S axis) is <b>larger</b> on LFP 17 (5.28 mm) than on the Mayfield exemplar (5.13 mm). Compare Difference O – opposite distortion along similar axis.
O	Distance from Point 2 to Point 14 (on N-S axis) is <b>smaller</b> on LFP 17 (3.61 mm) than on the Mayfield exemplar (3.78 mm). Compare Difference N – opposite distortion along similar axis.

Numbered point references correspond to points marked in March 22 Charted Enlargements (Figures 2A-2B)

However, the information available to the examiners regarding the validity of their explanation for this difference was contradictory. Although the gap in detail between the main body of the print and the upper left could be consistent with a separate touch, other information suggested that both portions were part of the same print. To begin with, the Level 1 ridge flow was consistent across the gap and over the top of the print, suggesting that the detail in the upper left was part of a single print. Another FBI examiner who looked at LFP 17 informally at the time of the original identification in March 2004 told the OIG that he was surprised to hear the “double touch” explanation because the print looked like a single print, with consistent ridge flow on both sides of the gap. Ken Smith, a U.S. Postal Inspection Service examiner who served as a member of the International Panel, showed the OIG how the upper left area of the print could be connected to the main body of the print by following the sequence of ridges up from the center of the print to the upper right, and then following the flow of the ridges leftward into the problem area. Smith said that this analysis of LFP 17, together with recognition of other dissimilarities, should have led the FBI Laboratory to declare an exclusion of Mayfield within a short time after beginning a side-by-side comparison. OIG consultant Dusty Clark stated that it is also possible to trace the sequence of ridges from the main body of the print into the upper left area along the left edge of the print, giving more basis to suspect that the upper left area was not a separate touch.

Ashbaugh devotes considerable discussion to the problem of double taps:

Double taps are a very common distortion with flexible substrates [such as plastic bags]. A double tap happens when a single print is deposited with two distinct and separate applications of pressure. The time between the applications or touches of pressure can be as little as a split second. The most common result is two areas of friction ridge print separated by a smear or smudge. At times the two separate areas of ridge structure may overlap a few millimeters and, if the ridge ends align, the print will appear normal but will actually be distorted in size and/or shape. The telltale sign for this type of distortion is where the two prints meet. All the ridges in the transition area usually do not join smoothly and thick areas of friction ridge will be evident, possibly with the occasional ridge end protruding from the side of a ridge. Another obvious indicator would be finding the relative position of the major ridge path deviations to be out of spatial sync or even missing when compared to a known exemplar print.

\* \* \*

Crossovers, misaligned ridges, extra thick ridges, and protruding ridge ends are common features in double taps. These types of features are called *red flags*. . . .<sup>120</sup>

[D]eposition pressure becomes important . . . when there is confusion as to whether one or more prints is involved, possibly a double tap, in the overall makeup of the developed print. It is very difficult to deposit two prints with the same deposition pressure. An analysis of deposition pressure along all the friction ridge paths of this type of print may assist an identification specialist in separating the two prints, even when they are from the same donor and were deposited a split second apart.<sup>121</sup>

In light of this discussion, it is clear that the information supporting the FBI's double touch explanation was limited and required the examiners to believe a remarkable set of coincidences. The only "red flag" that any examiner could identify for the OIG indicating that a separate touch had occurred was the "gap" in detail between the upper left portion of the print and the center. The examiners did not describe any crossovers, misaligned ridges, or protruding ridge ends in LFP 17 that would signal a double touch. The FBI examiners also did not identify any difference in deposition pressure between the upper left and the rest of the print to suggest a second touch. An SNP Laboratory Supervisor told the OIG that the consistency in deposition pressure between the upper left portion of the print and the rest of LFP 17 caused one team of SNP examiners to reject the FBI's "double touch" explanation.

We are not suggesting that the "double touch" explanation was impossible, but rather that there was, at best, conflicting evidence for and against it. Acceptance of the double touch explanation required the FBI to believe that Mayfield touched the bag a second time with a portion of his finger (such as the extreme tip) that was not recorded in any inked print but that lined up consistently in ridge flow and deposition pressure with the image left in the other touch. Alternatively, to accept the hypothesis of a touch by a second person, the FBI had to believe that the second donor coincidentally left a fragment of a print having a ridge flow consistent with the main part of the print made by Mayfield, with no detectable difference in deposition pressure, no crossover ridges, no protruding ridge ends, and no extra thick ridges. Either scenario assumes an extraordinary set of coincidences. There was no basis for the examiners to be certain that these coincidences, in fact, occurred in light of the alternate explanation that Mayfield was not the source of LFP 17.

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<sup>120</sup> Ashbaugh, p. 114.

<sup>121</sup> *Id.*, p. 125.



Moreover, the extremely stringent standard of certainty that the FBI Laboratory and others in the latent print identification discipline claim for their identifications must, by implication, apply to any explanation that the examiner relies upon to justify a difference in appearance, particularly a difference as obvious and significant as occurred in the upper left portion of LFP 17. The OIG found that this threshold of certainty was not satisfied in the Mayfield case. In light of the conflicting information regarding whether a double touch occurred, an “inconclusive” determination would have been more appropriate.<sup>122</sup>

**b. Other differences**

There were many other differences in appearance between LFP 17 and the Mayfield exemplars identified to the OIG by its consultants and by other examiners interviewed by the OIG. These differences were generally more subtle than the obvious inconsistency between the upper left portions of the prints as discussed above. The consultants and other examiners attached varying significance to each individual difference in appearance between LFP 17 and the Mayfield exemplars, but they agreed that the cumulative impact of the differences should have been sufficient to preclude the identification of Mayfield. A few of these differences are discussed in detail in this section.

During his interview, the only difference in appearance that Green initially remembered being concerned with at the time he identified LFP 17 to Mayfield was the upper left area discussed in the previous section. When the OIG shared a list of other differences with Green, his recollection was generally vague as to (1) whether he perceived the differences in appearance at the time of the initial identification; (2) if so, what explanation he adopted at the time to justify the difference; and (3) what, if anything, he did at the time to attempt to confirm the validity of any such explanation. Wieners’ recollection of the differences and the explanations adopted for them also was incomplete. As noted above, FBI policies required no documentation of perceived differences and explanations as part of the identification. As a result, we are unable to

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<sup>122</sup> The FBI examiners were not alone in this error. The court-appointed examiner, Kenneth Moses, perceived a break in the ridge flow between the upper left area and the main body of LFP 17 during the analysis phase of his examination, and stated he “could not immediately determine if [these areas] were from the same finger.” Moses, *Anatomy of an Error*, p. 5. Later, during the comparison phase, Moses found “two prominent minutiae [in the upper left of LFP 17] that were nowhere to be found in the known prints [of Mayfield]. I concluded that this patch of ridges might belong to a different finger or another person.” *Id.* at 6. Moses thus appears to have jumped from an admission that he was unsure of whether the upper left was a separate fingerprint to a conclusion that it was, solely on the basis that it was not in agreement with Mayfield’s known prints. Again, absent *certainty* that the upper left was a separate print made by a different finger or person, Moses should have been precluded by the one discrepancy rule from declaring an identification.

determine with certainty whether the potential explanations for differences that were provided during the interviews of Green and Wieners were in fact those utilized at the time of the Mayfield identification, or whether some had been reconstructed in hindsight.

**i. Differences in ridge flow**

The OIG consultants identified several differences in the shape of ridges between LFP 17 and the Mayfield exemplars that they concluded should have alerted the FBI examiners to a problem with the identification.

For example, there is a difference in appearance in the ridges at the very bottom of the print (Difference F in Table 1 and Figures 9A-9B). These ridges appear to be associated with the second joint of the finger, below the crease. In LFP 17, these ridges curve upward forming a “cupped” shape, while in the Mayfield exemplar these ridges are flat or slightly mounded. This difference was a major focus of the SNP in questioning the FBI’s identification of Mayfield. Green and Wieners stated that the large gap between the lower portion and the main body of the latent print made it difficult to be certain whether that area could be matched to any part of Mayfield’s finger and that the quality of detail in this portion of the latent print was poor.

The consultants utilized by the OIG had varying opinions regarding whether this difference should have precluded the FBI from identifying Mayfield. Clark and Grimm found the difference in ridge flow in this area to be an important dissimilarity, although Grimm observed that when the finger is bent, the reproduction of ridges from a joint below the crease will be greatly affected and the examiner may not be sure what part of the finger he is seeing. Vanderkolk did not consider this area of the latent to be an unexplainable dissimilarity due to the lack of clarity in the latent, and pointed out that this portion of LFP 17 also lacked any strong details supporting the identification of Daoud.

Another difference in ridge flow occurs in the southwest portion of the main body of the latent print (Difference G on Table 1 and Figures 9A-9B). This difference relates to the behavior of adjacent ridges on either side of the ending ridge that Green originally marked as Point 8 on his March 22 Charted Enlargements (Figures 2A and 2B). In the latent print, the adjacent ridges continue in paths parallel to the ridge that ends. In the Mayfield exemplar, the adjacent ridges converge sharply together to fill the space vacated by the ending ridge. The consultants considered this to be a significant unexplained

difference. Green told the OIG, however, that he considered the adjacent ridges to be sufficiently similar to support the identification.<sup>123</sup>

## **ii. Differences in distances between points**

The OIG consultants and other examiners interviewed by the OIG pointed out several differences in appearance that related to the distance between Level 2 minutiae originally marked as similarities by Green. These differences are shown graphically as Differences J-O on Figures 9C-9F, and are described in detail on Table 1. For example, Dusty Clark measured distance J on LFP 17 as 1.52 millimeters; he measured the distance between the corresponding points in the Mayfield known prints as 1.09 millimeters, or 28 percent less. Clark reported similar inconsistencies in distance between several other points that Green marked as similarities. (See Figures 9E and 9F and Table 1).

Green told the OIG that he noticed some of these differences in distance at the time of the identification, but that he attributed them to slippage or twisting that occurred when the print was deposited. Green pointed out smudging along the right side of the print that he stated could have been an indication of slippage during deposition.

The examiners who served as consultants to the OIG stated that these differences in distance between points constituted important inconsistencies between the prints that should have alerted the FBI examiners of problems with the identification. The consultants agreed that friction skin does not stretch or flex over the small distances between these points to a degree sufficient to explain these differences in distance. More significantly, the differences in distance were not consistent across the print. For example, the distance was larger in the latent in one set of north-south points (Difference N in Figures 9E and F), and smaller in the latent for another set of points oriented in the same general north-south direction (Difference O in Figures 9E and 9F). The OIG consultants stated that such differences could not be adequately explained by slippage or twisting. In particular, John Vanderkolk stated that he found no “red flags” to indicate significant twisting or slippage during the deposition of the print and that the consistent spacing of furrows throughout the latent print suggested the absence of such twisting or slippage.

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<sup>123</sup> Two other differences in ridge flow are described in Table 1 and shown in Figures 9A-9B (Differences D and E).

### **iii. Cumulative impact of differences**

LPU Unit Chief Meagher told the OIG that when he reviewed the identification, he found more areas of disagreement that required explanation than high-quality characteristics in agreement, and that the examiners' failure to recognize the cumulative impact of these differences was a major cause of the error. In an e-mail written a few months after the error was discovered, Meagher wrote:

Every comparison . . . will have a varying degree of qualitative issues. Each examiner must assess when too much compensation is being given for too many dissimilarities. Most examiners err on the side of caution and will not make the call as soon as three or more dissimilarities exist.

This "rule of thumb" is not formalized in any FBI SOP or SWGFAST standard. Other examiners we interviewed were not familiar with such a rule. Nevertheless, Meagher's e-mail highlights the failure of the examiners in the Mayfield matter to consider the cumulative impact of the differences between the prints.<sup>124</sup>

The OIG concluded that the FBI examiners did not exercise this level of caution with respect to their treatment of the differences between LFP 17 and the Mayfield exemplars. The explanations posited for the differences, while individually plausible, cumulatively required too many rationalizations. These explanations did not have sufficient known support within the print, the substrate, or the crime scene to support the degree of certainty demanded for a latent fingerprint identification.

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<sup>124</sup> Ashbaugh makes the following observation relevant to this point:

[I]f each area of friction ridge detail being compared requires justification for why the formation appears slightly different or why it is not spatially correct, be cautious, one may be talking oneself into agreement that is not really there. Small discrepancies appear in all prints. Most have a rational explanation based on a distortion during deposition, in the substrate, or in the development medium. However, when discrepancies appear at each turn in the ridge path, ensure the explanation for the differences is rational and based in physical fact. One should be able to point to something physical in the print, substrate or crime scene to defend one's position, otherwise the explanation may be that the print is from another donor.

Ashbaugh, pp. 146-147.

## **5. Failure to assess the poor quality of similarities**

All of the latent fingerprint experts consulted by the OIG agreed that the FBI Laboratory examiners failed to assess the poor quality of the similarities that were used to justify the Mayfield identification. As noted above, “quality” is equated with “clarity” in the SWGFAST Methodology that the Laboratory LPU incorporated into its Examination SOPs. Clarity is sometimes equated with the ability to discern and utilize Level 3 detail in declaring a match, but clarity can affect the examiner’s assessment of agreement at all three levels of detail. In this case, the imperfect clarity of LFP 17 limited the ability of the examiners to find strong agreement in both Level 2 and Level 3 details.

As previously explained, agreement among Level 2 ridge deviations is assessed according to several dimensions, including the type, location, orientation of the points, and their relationship to other features. In this case, the examiners were, in many cases, unable to determine the correct type (e.g., bifurcation versus ending ridge) of most Level 2 features accurately. Shortly after making the original identification, Green charted 15 Level 2 minutiae as similarities in the March 22 Charted Enlargements (Figures 2A and 2B). He also described his interpretations of these points in a memorandum he prepared for use by Wieners at the April 21 meeting with the SNP in Madrid (Appendix B). The subsequent identification of Daoud enabled the OIG to check the accuracy of the Laboratory’s initial interpretation of the “type” of these 15 minutiae. Table 2 summarizes the results of this review.

Of the 15 Level 2 minutiae initially used to identify Mayfield, 5 did not, in fact, exist at all, but rather were distortions misinterpreted as ridge deviations (see Section II.A.2 of this chapter). Of the remaining 10 minutiae, comparison with the Daoud exemplars shows that the LPU correctly identified only 3 of them as to type (bifurcation versus ending ridge) when it declared the Mayfield identification. Indeed, as shown in Table 2, Green changed his interpretation of some of these points between the time he encoded the print for IAFIS and the time he compared the print with Mayfield’s exemplar. Green was able to make such a change because the lack of clarity in the latent print permitted either interpretation of these points.

Thus, even assuming the 10 minutiae were in agreement as to location, orientation, and relative positioning (including intervening ridge counts), Green was unable to accurately establish agreement between most of them as to type. The examiners consulted by the OIG stated that agreement of points in which the type of point is unknown has less individualizing power than an agreement of features that are unequivocally of the same type. These consultants also agreed that many of the points utilized by Green to support the identification suffered from this shortcoming (ambiguity as to feature type), and that

TABLE 2 – Point “Types” in Mayfield Misidentification

Feature No.	“Type” encoded for IAFIS	“Type” identified in Mayfield ID(1)	True “type” (Daoud ID)(2)
1	Not encoded	Bifurcation	No ridge deviation at this location
2	Ending Ridge	Ending Ridge	Bifurcation
3	Ending Ridge	Ending Ridge	Bifurcation
4	Bifurcation	Ending Ridge	Bifurcation
5	Bifurcation	Ending Ridge	Ending Ridge
6	Not encoded	Dot	Top part of enclosure
7	Not encoded	Ending Ridge	No ridge deviation at this location
8	Not encoded	Dot or Short Ridge	No ridge deviation at this location
9	Not encoded	Ending Ridge	Bifurcation
10	Not encoded	Ending Ridge	Ending Ridge
11	Not encoded	Ending Ridge	No ridge deviation at this location
12	Bifurcation	Ending Ridge	Bifurcation
13	Ending Ridge	Bifurcation	Ending Ridge
14	Not encoded	Bifurcation	No ridge deviation at this location
15	Not encoded	Bifurcation	Bifurcation

(1) Derived from written descriptions presented by FBI to SNP on April 21 [App.B].

(2) Derived from examination of Daoud exemplars.

accordingly, the "quality" of the agreement was inadequate to support the conclusion of identification.

## **6. Failure to reexamine LFP 17 following the April 13 Negative Report**

The April 13 Negative Report provided an early warning to the FBI Laboratory that it had erred in identifying Mayfield and a corresponding opportunity to take a fresh look at the Mayfield identification. Although the meaning of the term "negativo" in the report was unclear to the FBI Laboratory, it was clear that the SNP Forensic Laboratory had at least preliminarily disagreed with the FBI's conclusions. The OIG found no evidence, however, that the FBI Laboratory adequately explored the possibility that it had erred in identifying Mayfield. Although Green and Wieners stated they took another look at the identification, they did not attempt to find out the basis of the SNP's doubts before reiterating their conclusions. Instead, Laboratory personnel told the Counterterrorism Division (CTD) on April 15 that they were "absolutely confident" in the identification. The demand for the April 21 meeting in Madrid between Wieners and the SNP came not from the Laboratory, but rather from the CTD, the FBI Portland Division, and the United States Attorney's Office (U.S. Attorney's Office). Wieners told the OIG that his purpose in making the trip to Madrid was to explain the FBI's position, and he did not expect the SNP to make its own presentation. If so, it appears that Wieners did not view the meeting as an opportunity to learn more about the SNP's position in order to inform the Laboratory's own reconsideration of the identification.

The OIG believes that the Laboratory's overconfidence in the skill and superiority of its examiners prevented it from taking the April 13 Negative Report as seriously as it should have. A better response to a conflicting determination by another forensic laboratory would have been, first, to determine the complete basis for the other laboratory's disagreement *before* committing anew to the validity of the original determination and, second, to arrange for a fresh examination of the relevant prints by a new examiner who had not previously committed himself to a particular conclusion. The FBI failed to take both these steps.

### **B. OIG Assessment of Other Potential Sources of Error**

In this section, the OIG addresses three additional factors that potentially affected the erroneous identification of LFP 17. The OIG did not find sufficient evidence to conclude with certainty that these factors specifically contributed to the error in this case. We determined, however, that the possibility that these factors could contribute to erroneous identifications in future cases merited specific discussion in this report and recommendations for action by the LPU.

## 1. Ridgeology versus Numerical Standards

In light of the ongoing debate regarding Ridgeology versus Numerical Standards, the OIG addressed two questions. First, was the erroneous identification attributable to the application of the Ridgeology standard, as required under the Examination SOPs and the SWGFAST Methodology and Standards? Second, would the error have been prevented by the application of a more objective Numerical Standard requiring a minimum number of Level 2 details in agreement?

Many advocates of a Numerical Standard consider 12 points in agreement to provide an adequate margin of safety.<sup>125</sup> A 12-point standard has been advocated at least since 1914, when it was proposed by Dr. Edmond Locard.<sup>126</sup> In the Mayfield case, the FBI Laboratory claimed that it found at least 15 Level 2 details in agreement, and charted these points in enlargements for the SNP within a week of the identification. It therefore seems likely that even if the FBI had formally adopted a 12-point standard rather than the Ridgeology qualitative-quantitative approach, the FBI examiners would likely have made the erroneous identification anyway. Indeed, one might conclude that the Laboratory in effect *did* apply a Numerical Standard by citing 15 Level 2 details as the basis for its conclusion in the affidavit submitted in support of the material witness warrant.

The difficulty with this assessment is that there were not, in fact, 15 Level 2 minutiae in agreement. As previously demonstrated, comparison of the latent print with the known print of the true source, Daoud, reveals that only 10 of the features originally plotted by Green were in fact attributable to ridge deviations on the fingers of the true donor. The other five were, at most, distortions or breaks in the reproduction of ridges that the examiner appears to have identified as matching details as a result of a faulty process of circular reasoning. Moreover, of the 10 remaining points, the examiners were unable to accurately identify the type of point (e.g., bifurcation versus ridge ending) in 7 cases. Due to the ambiguity as to the type of minutiae being observed in the latent print, most of these points should only have been counted as being in "partial" agreement with Mayfield's prints. Further, although these 10 points were in general agreement as to relative positioning and intervening ridge count, there were subtle differences in ridge flow and the distance between the points which further undermined the quality of the agreement. Thus, OIG

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<sup>125</sup> See, e.g., Stoney, § 27-2.1.2[5] and note 20.

<sup>126</sup> Christophe Champod, "Edmond Locard – Numerical Standards & "Probable" Identification," *Journal of Forensic Identification*, Vol. 45, No. 2, March/April 1995, p. 136. Locard proposed permitting identification on as few as eight points in special circumstances involving particularly clear prints and other factors. *Id.*



consultant Dusty Clark, who is a well known advocate of the Numerical Standard approach, gave his opinion that, properly applied, a 12-point standard would have prevented the Mayfield error because in reality there were not 12 points in adequate agreement.

The Mayfield error also offers support for the argument that the error was not a failure to apply an objective numerical standard, but rather a failure to apply Ridgeology. The Ridgeology approach, as described by Ashbaugh, stresses consideration not only of Level 2 minutiae but also of the more subtle considerations of ridge paths and measurement *between* ridge deviations.<sup>127</sup> As shown in Section II.A.4 above, there were many subtle differences of this type between LFP 17 and the Mayfield prints that the examiners either overlooked or rationalized. The FBI examiners appear to have been heavily influenced by the similarity in the relative location of Level 2 ridge deviations and the ridge counts between them, to the detriment of giving adequate weight to the more subtle differences occurring in the portions of the prints lying between the ostensibly similar points. An adherent of Ridgeology might well attribute this failure to appreciate subtle differences to an excessive focus on the accumulation of points. OIG consultant John Vanderkolk, who is a prominent advocate of the Ridgeology Standard who consulted with the OIG, agreed with this assessment.

The OIG concluded that the source of this error was not the failure of the examiners to apply one standard or another (Ridgeology versus Numerical). We believe that the errors committed by the examiners would have led to an incorrect result no matter which standard was incorporated into the Examination SOPs. The process of circular reasoning that contributed to the error in this case was not a function of either of these standards. Further, the choice of standard would not affect the “one discrepancy rule,” which should have precluded the identification of Mayfield. Neither standard would permit the examiner to adopt rationalizations for numerous dissimilarities that required the acceptance of extraordinary coincidences. In addition, either approach would permit the consideration of Level 3 detail under circumstances of a high-clarity latent print, but neither approach would have explicitly permitted the examiners to rely on a few selected Level 3 details in a print so lacking in clarity.

That being said, the OIG believes that a more objectively defined criteria for declaring an identification could help prevent future misidentifications. The Ridgeology Standard embodied in the SWGFAST Standards for Conclusions states only that “the standard for individualization is agreement of sufficient friction ridge details in sequence.” The OIG believes that the absence of any

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<sup>127</sup> See, e.g., Ashbaugh 1999 at p. 141.

further objective definition or guidelines for determining sufficiency, in terms of both quantity and quality, heightens the danger that an examiner will be unduly swayed by an initial or “gut” reaction, or will fail to factor in an adequate margin of safety in a close case. The OIG’s recommendation regarding the development of such criteria is discussed in Chapter Five.

## **2. Independence of FBI verification procedures**

Several members of the International Panel suggested that the verifications of Green’s identification by Massey and Wieners were “tainted” by a mindset in which “[t]o disagree was not an expected response.”<sup>128</sup> Several panel members also called into question the “independent nature of the verification employed by the LPU.”<sup>129</sup> This appears to be a reference to the fact that verifiers are made aware that an identification has already been made by a prior FBI examiner at the time they are requested to conduct the verification, contributing to the expectation that the second examiner will concur with his colleague. Several members of the Panel recommended that the FBI Laboratory do more to foster independent verifications in which the second examiner feels free to challenge an identification. At least one expressed concern that a “bench-level” verifier might not feel comfortable disagreeing with a supervisor’s identification.<sup>130</sup>

It was difficult for the OIG to assess whether the FBI’s verification procedures contributed to the Mayfield error, primarily because the verifier, John T. Massey, declined to be interviewed for this investigation, and because he created no documentation reflecting the mental processes that led to his conclusion of individualization. (The International Panel faced the same obstacle.) Information provided by other witnesses, however, does not show that Massey conducted a superficial examination or that he merely “rubber stamped” Green’s identification. To begin with, the OIG found no evidence that Massey’s verification was hasty or based on a superficial examination. Wieners told the OIG that Massey waited to see Mayfield’s original inked prints from the FBI’s Criminal Justice Information Services Division (CJIS) rather than rely on

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<sup>128</sup> Stacey, 2004 at 714; Alan McRoberts, “International Expert Review of the FBI-LPU Madrid Bombing Latent Fingerprint Examination” (unpublished), 2004, p. 2; Ron Smith, pp. 2-3.

<sup>129</sup> Frank Fitzpatrick, untitled report regarding Madrid case (unpublished) (2004) p. 1; C. Lee Fraser, “FBI Erroneous Identification – Committee Assessment” (unpublished), p. 4; Ron Smith, pp. 2-3; Bruce Grant, “International Latent Print Panel Review of the FBI Laboratory Latent Print Unit fingerprint examination in the Madrid Bombing Case” (unpublished), 2004, p. 3.

<sup>130</sup> Fitzpatrick, p. 2.

the digital printouts or screen images available at the Laboratory before making his decision.

Massey was a retired examiner from the FBI Laboratory, but was serving as a contract examiner. Wieners selected Massey to act as the verifier because of Massey's extensive experience and skill. Massey did not depend on Green for assignments, reviews, or promotions. Several examiners interviewed by the OIG said that Massey would not allow his examination of the prints to be influenced by the fact that another FBI examiner had made the identification.

However, LPU Unit Chief Wieners told the OIG that his knowledge of the conclusions reached by Green and Massey *did* bias his own review of the print, because of his high regard for the skills of Green and Massey. At the time of the original identification, Wieners did not perform a complete ACE-V examination of the prints, but rather reviewed the results reported by Green and Massey and concurred with them. Wieners' admission reveals little about the impact of the FBI's verification procedures, however, because he was not required by any policy to perform a verification and was not acting as a formal verifier.

In considering whether the FBI's verification procedures contributed to the error, the OIG found it significant that the court-appointed expert, Kenneth Moses, reached the same conclusion as the FBI examiners regarding the identification. The pressures that might cause an FBI Laboratory examiner to hesitate to dispute an identification by one of his colleagues in the LPU obviously should not have impacted Moses' impartiality. Moses was specifically appointed to conduct an independent review of the identification.

Thus, the OIG did not find sufficient evidence to conclude that the FBI's verification procedures introduced a bias that prevented or discouraged Massey from challenging Green's conclusions with respect to the identification of LFP 17.

Nevertheless, other information made available to the OIG raises the possibility that the existing verification procedures may provide insufficient assurance that complete, independent, and unbiased second examinations are conducted in connection with every identification.

First, all of the FBI examiners interviewed by the OIG indicated that it is an extremely unusual event for a second examiner to decline to verify an identification. The verifier begins his examination with the knowledge that another FBI examiner has already made the identification. We believe that this information could consciously or subconsciously influence the verifier in favor of identification.

In addition, under the LPU Quality Manual, Procedures for Reviewing a Report of Examination, any difference in conclusion between an examiner and a verifier must be referred to a supervisor or Unit Chief for resolution. The resolution of such a dispute could implicitly involve a determination that one of the examiners committed an error. This may create an additional disincentive for a verifier to decline. LPU Unit Chief Wieners told the OIG that since he became Unit Chief in 2001 he has never had to resolve such a dispute, although his unit had completed thousands of identifications in that time. This may reflect the exercise of caution by initial examiners who know their work will always be checked, but it may also reflect that the verification phase of ACE-V is not serving as a significant screen.

As described in Chapter Five, the LPU is making major changes to its verification procedures. The OIG's assessment of these changes, and recommendations for further changes to the LPU verification procedures, are discussed in Chapter Five as well.

### **3. Pressures of a terrorism investigation**

Several members of the International Panel suggested that the pressure of working on a high-profile terrorism case created an atmosphere which contributed to the misidentification.<sup>131</sup> In considering this possibility, the OIG recognized that the FBI Laboratory works on many high-profile matters without committing errors. The pressure to identify LFP 17 was no greater than the pressure to identify the other seven latent prints submitted by the SNP for which Green conducted unsuccessful IAFIS searches. Again, it was the unusual similarity of up to 10 Level 2 details in the prints that initially misled Green and led to the other errors.

Yet, there is one respect in which the OIG believes the nature of the crime could contribute to an error of this type. As noted in Chapter Three, the FBI Laboratory's criteria for reaching an "inconclusive" result apparently precludes such a result in cases such as this one in which both the latent print at issue and the known prints of the subject are deemed to be of sufficient quality for comparison. According to the FBI examiners interviewed by the OIG, when an FBI Laboratory examiner is unable to effect an identification or an exclusion, the usual practice is to declare the latent print to be of "no value." As noted in footnote 85 above, the LPU primarily uses the "inconclusive" result when there is an absence of relevant detail in the exemplar print. The LPU typically does *not* alert the submitting agency or the investigating unit of the FBI that there was a potential suspect who could not

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<sup>131</sup> See, e.g., McRoberts, pp. 1-2; Fraser, p. 2.

be identified due to the insufficiency of unique detail, but who also could not be excluded.

The OIG consultants agreed that, in the case of a particularly heinous crime and a comparison of a single print in which there are ambiguities such that the examiner has insufficient confidence to reach a conclusion of identification, this circumstance could create pressure on the examiner to declare an identification when he should not. Fear of failing to identify a terrorist could push an examiner to make a false identification in a close case.

One possible means of preventing this kind of pressure from pushing an examiner to make a borderline identification would be for the examiner and the Laboratory to recognize the option of utilizing the “inconclusive” category in such cases. This conclusion would alert the relevant investigating authorities that there was a particular subject who could neither be included nor excluded as the donor of the print. It would be different from a “no value” determination, which suggests that the print itself was not suitable for comparison to any subject. The investigating authorities could then make an informed decision regarding whether to take additional investigatory steps with regard to the potential subject. According to the OIG’s consulting examiners, all of whom are members of SWGFAST, the SWGFAST Method and the SWGFAST Standards would permit this use of the “inconclusive” result. The conclusion would not have to be couched as a “probable or possible identification” (which is prohibited under the SWGFAST Method and Standards), but merely as “unable to identify or exclude.” This recommendation is discussed further in Chapter Five.

### **C. The Role of Mayfield’s Religion in the Identification**

The OIG examined the allegation made by some individuals, and in Mayfield’s civil action, that knowledge of Mayfield’s Muslim faith may have influenced the LPU’s examination of LFP 17 and the Mayfield exemplar prints. The OIG determined that Mayfield’s religion was unknown to the FBI Laboratory on March 19, when the Laboratory made the initial identification. The FBI identification records available to Green, Massey, and Wieners at that time only revealed the candidate’s name, arrest record, and the fact that he had been fingerprinted at a military installation. Nothing on the FBI identification record indicated Mayfield’s religion, current employment, or whereabouts, or the fact that he was married to an Egyptian immigrant. The OIG found no evidence that the FBI had knowledge of Mayfield’s religion until the Portland Division learned this fact in the early stages of the field investigation, after the identification had been made and verified in the LPU.

The question of whether Mayfield's religion was a factor in the Laboratory's failure to revisit the identification and discover the error in the weeks following March 19 is more difficult. By the time the SNP issued its April 13 Negative Report, the Laboratory examiners had become aware of information about Mayfield obtained in the course of the Portland Division's investigation, including the fact that Mayfield had acted as an attorney for a convicted terrorist, had associations with other subjects of FBI terrorism investigations, and was himself a Muslim. Wieners candidly admitted that if the person identified had been someone without these circumstances, like the "Maytag Repairman," the Laboratory might have revisited the identification with more skepticism and caught the error.

The OIG concluded that Mayfield's religion was not the sole or primary cause of the FBI's failure to question the original misidentification and catch its error. We concluded that the primary factors in the FBI's failure to revisit the identification before the SNP identified Daoud were the unusual similarity between LFP 17 and Mayfield's prints and the FBI Laboratory's faith in the expertise and infallibility of its examiners and methods. However, we believe that Mayfield's representation of a convicted terrorist and other facts developed during the field investigation, including his Muslim religion, also likely contributed to the examiners' failure to sufficiently reconsider the identification after legitimate questions about it were raised.

#### **D. Explanations Found by the OIG Not To Have Contributed to the Error**

The OIG found that several explanations for the error proposed by various sources were not persuasive. Several of these explanations were offered by the FBI during the time shortly after the misidentification was discovered. Others were suggested by the International Panel or in the press.

##### **1. Lack of access to the original evidence**

At various times beginning shortly after the discovery of the error, FBI officials have stated that the error was caused in part by the fact that the Laboratory did not have access to the original evidence (the plastic bag on which LFP 17 was found). The New York Times reported that, according to a congressional aide, FBI "senior officials" emphasized that the FBI made repeated unsuccessful requests to the SNP for the best possible evidence. This theme was also reflected in several versions of draft talking points prepared for the Director of the Laboratory for use in Congressional briefings.

LPU Unit Chiefs Meagher and Wieners told the OIG that if the FBI examiners had obtained access to the plastic bag on which the fingerprint was

found, they would have determined from the positioning of three latent prints (LFPs 17, 19 and 20) that LFP 17 was deposited simultaneously with two other latent prints in a single grasp of the bag. Wieners and Meagher claimed that from this information the Laboratory would have determined that LFP 17 was in fact made by a right middle finger and therefore would not have been matched to Mayfield's left index finger. Moreover, the Laboratory determined in March that LFP 20 was not made by Mayfield. Seeing the bag, the argument goes, would have enabled the examiners to determine that the same person made both LFP 17 and LFP 20. Since Mayfield did not make LFP 20, he would not have been identified as the source of LFP 17.

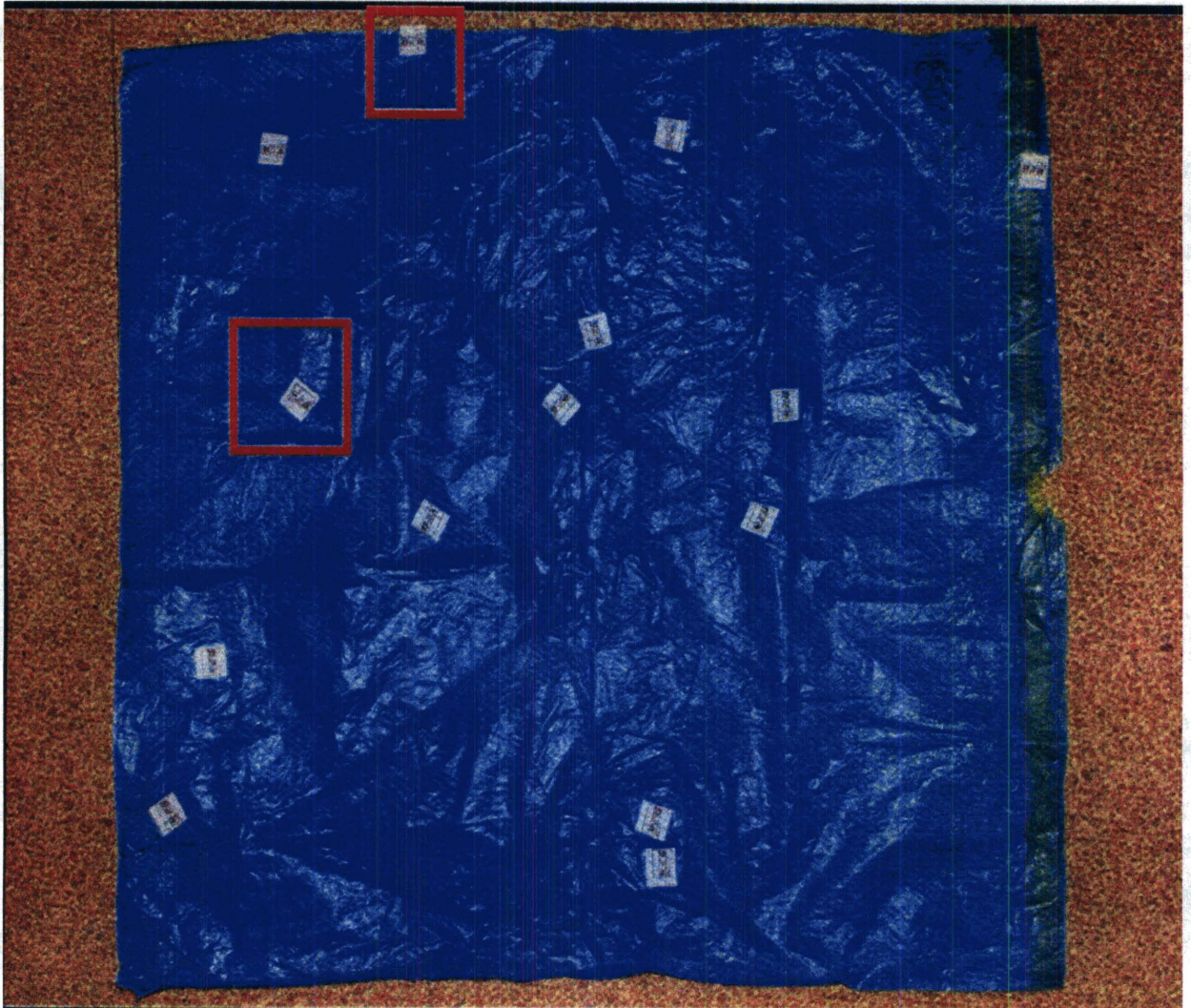
The OIG reviewed the evidence and concluded that, contrary to these claims, having access to the bag would not necessarily have prevented the LPU from identifying Mayfield. Photographs of the bag demonstrate that the three latent prints in question were located spaced apart on the flattened bag, not immediately adjacent to one another. (See Figure 10.) Green told the OIG that in the case of a plastic bag that is laid out for processing, it is difficult to determine with certainty whether prints deposited at different locations on the bag were simultaneous prints of a single individual. SNP representatives acknowledged that there was no way to reconstruct the configuration of the bag as it was found in the van.

The OIG did not find convincing evidence that a conclusive finding of simultaneity could be made from the positioning or appearance of the latent prints on the plastic bag. The OIG found that no such conclusion was ever reached by any FBI examiner in this case. LPU Unit Chief Wieners reported that another LPU examiner made a determination that the prints were deposited simultaneously during his May 22 trip to Madrid, when he inspected the bag (which had been marked to show the location of the prints). This examiner told the OIG that he never made his own analysis of the simultaneity issue and merely concluded that the SNP's hypothesis of simultaneity was plausible. The OIG consultants were in agreement that the arrangement of fingerprints on the bag did not compel a conclusion that the prints were deposited by a single person. The hypothesis that they were deposited in a single grasp of a rolled or crumpled plastic bag was certainly plausible, but there were also other plausible ways that three latent prints could have been deposited on a plastic bag in that pattern at different times or by different persons.

The SNP apparently made a determination of simultaneity only in conjunction with the comparison of LFPs 17 and 20 with the known prints of Daoud. An SNP Laboratory Section Chief told the OIG that the positioning of the prints alone, without identification of the prints to Daoud, would not have provided a sufficient basis for a finding of simultaneity. In other words, the

# FIGURE 10

**Photograph of Blue Plastic Bag, Showing Locations of LFP 17 (Near Top Edge) and LFP 20**





hypothesis of simultaneity resulted from the identification of both prints to Daoud rather than the other way around.

Assuming that the examiner had initially adopted the hypothesis that LFP 17 was deposited simultaneously with LFPs 19 and 20, this theoretically could have led an examiner to specify a particular digit (right middle) as part of the initial IAFIS search. Green told the OIG, however, that if he had had any doubt about whether the prints were simultaneous, he would *not* have limited his IAFIS search to a single digit. There is no SOP requiring that the examiner use such a limitation. Because LFP 17 was a relatively rare arch pattern, Green was able to conduct a search of the Criminal Master File without limiting his search parameters to a particular digit.

Even assuming that Green would have initially specified a right middle finger for the IAFIS search, no identification would have been made. At that stage, the examiner would be faced with either abandoning the effort to identify this print or broadening the IAFIS search to include other digits. The latter course was the more likely in light of the gravity of the investigation and the uncertainty of the simultaneity hypothesis. In that event, IAFIS would have retrieved the Mayfield known prints and the same chain of events that ultimately led to Mayfield's identification could have been triggered.<sup>132</sup>

The OIG also found it significant that at the time of the original identification of Mayfield, the FBI examiners did not consider access to the bag to be a necessary prerequisite to making an identification. Although at least one request was transmitted by LPU Unit Chief Wieners to INTERPOL for access to the "original evidence," Wieners told the OIG that he did not expect the SNP to give up custody of a key piece of evidence, and he was not surprised when it did not. Had the Laboratory considered such access to be essential to completing the identification, it could have informed the SNP that it had a potential match but that a final determination required access to the evidence. When Wieners traveled to Madrid in April to meet with the SNP, he did not request to examine the original evidence.<sup>133</sup>

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<sup>132</sup> Wieners told the OIG that LFP 17 and LFP 20 were similar in tone and ridge width, further supporting the hypothesis of simultaneity. The same can be said of the two portions of LFP 17 (the center and the upper left) that the Laboratory concluded were made by separate touches, possibly by different persons, in order to explain a dissimilarity in the upper left part of the same print. Assuming the Laboratory would apply the same logic with regard to the simultaneity question that it applied to the dissimilarity in the upper left portion of LFP 17, the Laboratory would have readily attributed LFP 20 to a separate, non-simultaneous touch by a different person once it found that LFP 20 did not match Mayfield.

<sup>133</sup> According to the Laboratory, the Madrid Legat advised Wieners to make his presentation to the SNP without making any requests. In addition, Wieners told the OIG that he did not wish to irritate the SNP and that he did not consider access to the evidence to be necessary at that time because the Laboratory had already reached its conclusion.

Within a few weeks after the Laboratory's error was discovered, Laboratory spokespersons began emphasizing that the FBI Laboratory was solely responsible for the error and that no blame should be assigned to the SNP. The FBI witnesses interviewed by the OIG did not fault the SNP for declining to provide the plastic bag to the FBI Laboratory. Nevertheless, Unit Chiefs Meagher and Wieners continued to assert in their interviews with the OIG that access to the bag would have prevented the error. For the reasons stated in this section, the OIG did not find this explanation to be persuasive. We recognize that as a general rule it is better for the FBI Laboratory to have access to the evidence on which an original fingerprint is deposited when making a latent fingerprint examination. But we believe that the question of access to the evidence should not distract the Laboratory from the methodological errors that were the ultimate cause of the misidentification.

## **2. Image quality**

In a press release issued on May 24, the FBI attributed the erroneous identification to an "image of substandard quality." Laboratory Director Adams stated in a conference call with U.S. Attorney Immergut and Assistant Attorney General Wray that day that the problem was caused by the FBI's use of a third-generation image. Consistent with this explanation, on May 25 Wieners drafted a Concept Paper for the International Panel that included, among the proposed topics for consideration, "[t]he effects of digital capture and transmission on friction ridge detail." On May 27, Green signed a memorandum to the Acting Section Chief in charge of the LPU attributing his error in part to "the quality of the image," which Green told the OIG was a reference to the potential for distortion resulting from the use of a digital image that had been compressed for transmission.<sup>134</sup>

However, this explanation was not supported by the evidence. The digital image used to identify Mayfield had a resolution in excess of 1,000 pixels per inch. This degree of resolution satisfied the threshold provided in the SWGFAST Friction Ridge Digital Imaging Guidelines. LPU Unit Chief Meagher described 1,000 pixels per inch as the resolution threshold preferred by the LPU.

The question remains whether there was degradation of the image in the process of digitizing it that contributed to the error. The OIG consultants agreed that, although there is a modest difference in clarity between the digital

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<sup>134</sup> One difficulty with the "image quality" explanations is that at the time they were proposed, the FBI did not know whether the digital image was materially different from the original photographic image used by the SNP. As previously noted, the FBI did not see a copy of the print from the original negative until June 9.

image of LFP 17 used to identify Mayfield and the photographic print that was later made available by the SNP, this difference was not decisive because there was ample quantity and quality of detail in the digital version to permit the examiner to avoid the error. All of the members of the International Panel concurred in the finding that “the quality of the images that were used to make the erroneous identification was not a factor.”<sup>135</sup>

The FBI examiners interviewed by the OIG also agreed that the Mayfield error was not attributable to the use of a digital image of LFP 17. Green told the OIG that he did not believe that it would have changed his examination to have had access to the photographic version of LFP 17 that the SNP later provided. LPU Unit Chief Wieners stated that the increased clarity of the photographic image made it easier to track the ridges from the center of the print into the upper left portion, and thus to see that the upper left was not a separate touch.<sup>136</sup> Although Wieners stated that the photographic image was superior, he stated that he did not think that the use of digital media was a major factor in the error.

In light of the virtual unanimity of opinion among examiners inside and outside of the FBI Laboratory, including the International Panel and the OIG consultants, the OIG concluded that the quality of the digital image used by the Laboratory to identify Mayfield was not a cause of the error.

We also concluded that the reason the FBI offered this flawed explanation in the period immediately after the error was discovered was that there was a misunderstanding or miscommunication between the LPU examiners and Laboratory management regarding what the LPU examiners told them early on May 24. Although Unit Chief Meagher expressed concern during the overnight review that the Laboratory had not seen the original fingerprint on the plastic bag, the FBI examiners had not yet determined whether the image available to the SNP was significantly better than the image used to identify Mayfield. Adams also apparently misunderstood what the LPU examiners saw in Madrid on May 22. As noted in Chapter Three, they only saw better quality exemplar prints for Daoud during that trip, not a better quality image of the latent fingerprint.

We found that the LPU examiners who could have corrected this misunderstanding (Meagher, Wieners, Green, and the examiners who traveled to Madrid) were not involved in subsequent briefings of senior FBI management

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<sup>135</sup> Stacey, p. 714.

<sup>136</sup> The OIG consultants and International Panelist Ken Smith demonstrated to the OIG how the ridges could also be tracked continuously from the center of the print to the upper left using the digital image.

or in the preparation of the FBI's press release or Director Adams' statements for Congress regarding the causes of the error. The suggestion that the FBI was using an inferior quality image to that available to the SNP was an easily understandable explanation, and an attractive one for the FBI to disseminate immediately after the error was discovered, but it was not supported by the evidence in this case. By May 26, the matter was clarified and the FBI stopped using the "image quality" explanation for the error. As noted above, after obtaining the best available quality photographic image of LFP 17 from the SNP in June, the FBI did not revive the "image quality" explanation for the error.

However, we believe that the foregoing explanations for how FBI spokespersons misunderstood the "image quality" issue do not apply with respect to Green's May 27 memorandum to the Acting Section Chief, which also referenced "the quality of the image" as a source of the error. Green should have been aware, as a result of the May 23-24 overnight review, that the FBI Laboratory had never seen a better image of LFP 17 than the one used to identify Mayfield and that there was no basis for his speculation that the error was caused by image distortion.

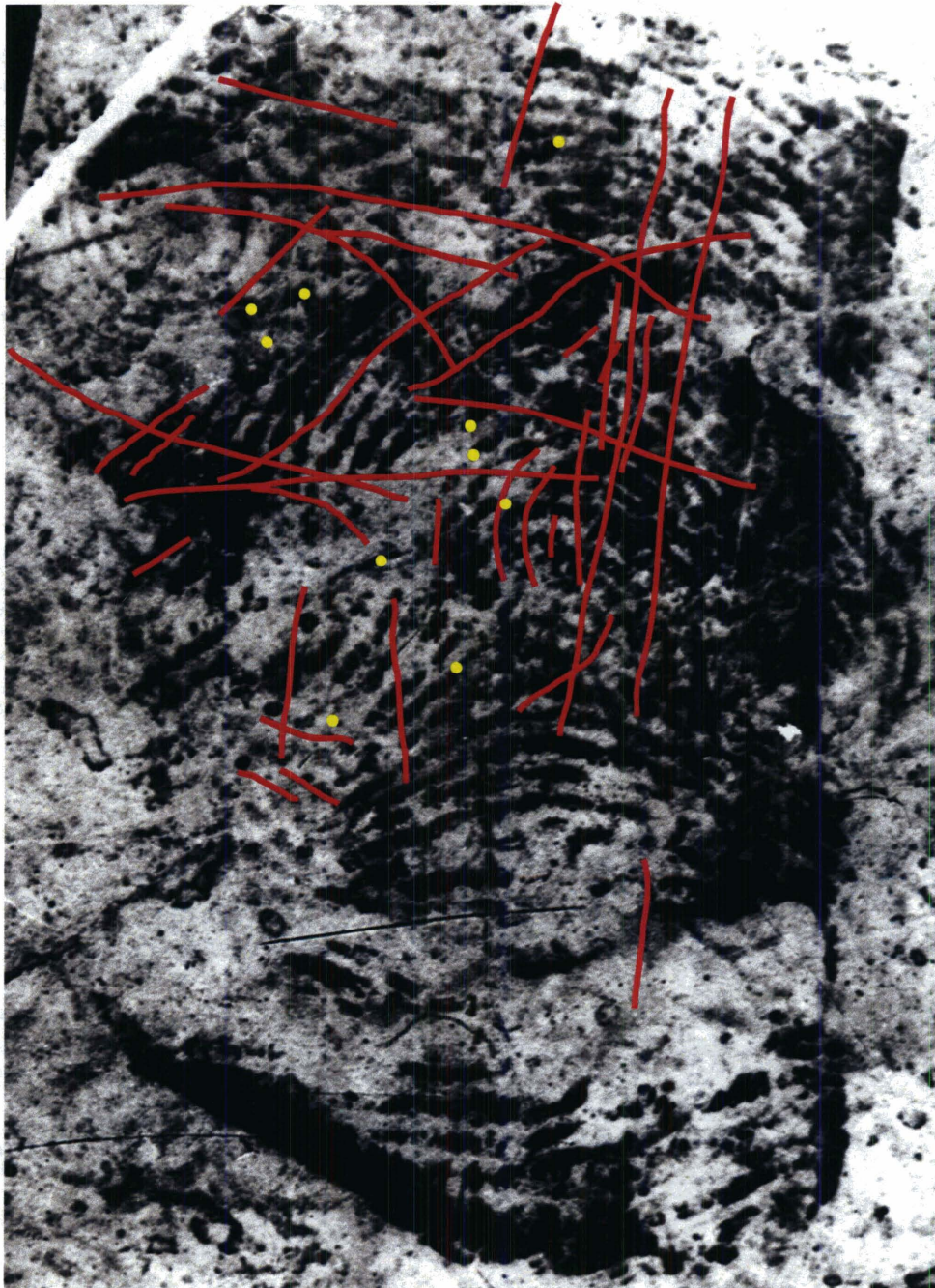
### **3. Failure to detect interruptions in ridge flow**

Another explanation offered by Laboratory officials for the misidentification was that LFP 17 was so divided by creases and separations that the contiguous areas of the print had too few details to support an identification. Following the May 23-24 overnight review of LFP 17, LPU Unit Chiefs Meagher and Wieners prepared an explanation for the Laboratory's "no value" determination stating that "the latent print was divided by many lines of demarcation possibly caused by creases in the plastic bag, multiple touches by one or more fingers, or both. Based on the lack of sufficient quality and/or quantity of ridge detail in any one area of the latent print, a no value determination was made." This explanation was cited in the government's Motion To Dismiss the Material Witness Proceeding filed on May 24.

Laboratory Director Adams elaborated on this explanation in an interview with the OIG. Adams stated that because of these separations and interferences in the print, there were not enough points within any contiguous area within the print to effect an identification. He stated that Green's error was in failing to realize this when he was analyzing the latent print to determine if it was of sufficient quality for further processing. Similar issues were raised in the PowerPoint presentation made to the International Panel. Figure 11 is an illustration used in the PowerPoint presentation. It shows over 30 different lines drawn to indicate interruptions in the ridge flow.

# FIGURE 11

## Interruptions to Ridge Flow



The difficulty with this explanation for the error and with the Laboratory's "no value" determination was that the Laboratory was forced to rescind it a few weeks later when it identified Daoud as the source of the print. This change in conclusions cannot fully be explained by the photographic image used to identify Daoud that the SNP provided to the Laboratory in June. As discussed in the previous section, the difference in clarity between the digital image used to identify Mayfield and the photographic image later provided to the Laboratory was not a cause of the error. The FBI has never claimed that the interruptions to ridge flow that appeared in the digital image were caused by the digital photography or that they disappeared once a photographic image became available. Three different examiners later identified Daoud as the source of LFP 17 and were each able to chart approximately 20 points of similarity in locations throughout the print despite the interruptions to ridge flow.

Wieners and Meagher both suggested that the event that made it possible for the LPU to revise its "no value" determination to an identification of Daoud was information obtained from the SNP during a meeting in Madrid on June 9. But Meagher and Wieners did not identify any specific information that was provided by the SNP at the June 9 meeting that eliminated the problem of interruptions to ridge flow. Indeed, the LPU examiner who verified the identification of Daoud in late June did not attend the meeting in Madrid and told the OIG that the only thing he recalled that Meagher told him as background information was the processing method (superglue and dye) and the possibility that LFP 17 and LFP 20 were deposited simultaneously. The verifying examiner also told us he made his identification decision without assuming simultaneity. It is therefore apparent that he did not need any information about the print that was not already available to the LPU before the June 9 meeting to make the identification of Daoud, and that the separations and interferences in the print were not an obstacle to the identification.

The OIG reviewed Figure 11 and the "no value" determination with its expert consultants. The OIG consultants all stated that the identification of Daoud was possible based on the same digital image that the LPU used to identify Mayfield, notwithstanding the interruptions to ridge flow. John Vanderkolk told the OIG that he was disturbed by Figure 11 and the suggestion that discontinuities within the print contributed to the error by limiting the continuous areas in the print to small areas. In many cases the ridges continue on both sides of the marked discontinuities or interferences. Vanderkolk stated that this latent print did not have an unusual number of these kinds of "red flags," and that he felt that Figure 11 was misleading. If the discontinuities should have precluded the identification of Mayfield, they should also have prevented the identification of Daoud. But the OIG consultants all stated that the Daoud identification was not difficult.

In short, the OIG concluded that the interruptions and separations in the print did not make it “unsuitable for comparison” and the failure to recognize these separations and interruptions was not a significant cause of the error.

#### **4. Whether LFP 17 was of “no value” because it could “work with” two different people**

Another suggestion discussed within the FBI during the immediate aftermath of discovering the mistake was that LFP 17 should have been declared of “no value” because it could be matched to two different candidates, Mayfield or Daoud. Green told the OIG this was the basis of the statement in his May 27 memorandum that he should have declared the print to be of “no value.” Wieners told the OIG that during the May 23-24 overnight review, Meagher stated LFP 17 should be declared to be of “no value” because it could be “made to work” with *either* Mayfield or Daoud. Contemporaneous documents indicate that this reasoning was also provided by the Laboratory during one or more internal government briefings regarding the error.

This explanation, if accurate, would raise difficult a question about latent fingerprint identification. If LFP 17 could be “made to work” with the known prints of two different people using accepted fingerprint identification methods and standards, the question arises: are such methods and standards preventing false identifications in other cases? In the Mayfield case, by good fortune, the known prints of both subjects eventually came to the attention of the FBI. There is no way for the Laboratory to determine from an initial analysis of a latent that it might “work with” more than one person’s fingerprints in this scenario. If the known fingerprint from only one potential subject is available for comparison, the potential for an erroneous identification is apparent.

We identified in the previous sections of this report several causes for the error. One of these causes – the unusual similarity of the prints – was outside the control of the examiners. The other causes involved mental processes, such as circular reasoning and rationalizing differences in appearance, that have been cited as potential causes of error in the literature on latent print identification, and that could have been avoided through the application of a more rigorous approach. The OIG found that LFP 17 could not “work with” both Mayfield and Daoud because, among other things, there were many differences in appearance between LFP 17 and the Mayfield print that could not be adequately explained.

The OIG recognizes that the Laboratory’s “no value” determination was made early in the morning on May 24 under circumstances of extraordinary stress and pressure. The examiners involved in the overnight review had been

instructed to provide a definitive answer first thing in the morning for a Director's briefing but had been unable to reach consensus on the result. The examiners were justifiably concerned with avoiding making another error in haste and compounding the problem that the Mayfield case was likely to cause for the Laboratory and the discipline.

The differences between the Mayfield prints and LFP 17 that seemed apparent to the International Panel and the OIG's consultants in a retrospective review conducted without time pressure were not so obvious to FBI examiners working under very different circumstances. The OIG also believes that at the time of the "no value" determination, the examiners involved in the reexamination had not yet fully accepted that the Laboratory could have identified the wrong person as the donor of a latent fingerprint, and the "no value" determination was in a sense an intermediate point in the process of correcting the error. The "no value" result was a means for the Laboratory to provide a conclusion under the pressure of time consistent with conventional latent fingerprint identification terminology. It was a highly unsatisfactory result, however, in that it left Mayfield under an unfair continuing cloud of suspicion because he had not formally been excluded as the donor of the print. It also left the SNP in the position of having its identification of Daoud undermined by the FBI's public declaration that LFP 17 was of no value for identification.

## **5. Excessive faith in IAFIS technology**

Some members of the International Panel suggested that the FBI's faulty examination of LFP 17 stemmed from the suggestive power of the IAFIS results. For example, panel member Alan McRoberts stated that "the AFIS suggestion of a candidate with some similarities to the evidence print" contributed to a "mind-set" of identification.<sup>137</sup> Panel member Ron Smith likewise suggested that the examiners' "strong belief in the discriminating power of AFIS technology" affected the examiners' subsequent examination.<sup>138</sup>

The OIG found these explanations to be unsatisfactory (or perhaps imperfectly worded) because IAFIS did not "suggest" a single candidate to the FBI examiners. Mayfield's print was the fourth-highest scoring candidate among the 20 candidate prints selected by IAFIS from the Criminal Master File. The examiner (Terry Green) had apparently already declined to declare an identification from among the candidates generated by IAFIS during searches of the Civil File and the Special Latent Cognizant File. Green conducted IAFIS

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<sup>137</sup> McRoberts, p. 2.

<sup>138</sup> Ron Smith, p. 2; see also Stacey, pp. 712-713 ("[t]he power of the IAFIS match, was thought to have influenced the examiner's initial judgment and subsequent examination").



searches of at least seven other latent prints from the SNP without declaring an identification. As all three FBI examiners were well aware, most IAFIS searches do not result in identifications. The OIG concluded that the examiners were initially misled not by a belief in the discriminating power of IAFIS but rather by the unusual similarity of the Mayfield print to LFP 17. This similarity led Green to the other errors in his examination, including the process of circular reasoning and the adoption of inadequately supported explanations for differences.

## **6. The LPU verifier's prior errors**

Within a few weeks after the misidentification of LFP 17 was discovered, media reports began to appear that John T. Massey, the contract examiner who verified the identification of Mayfield, had previously been reprimanded for erroneous fingerprint identifications. Mayfield's attorneys included this information in the complaint filed in Mayfield's civil action, alleging that Massey was selected to verify the identification because this history of discipline for poor performance would motivate Massey to agree and verify the prior identification.

The OIG obtained the following information from the FBI Laboratory regarding this allegation. Prior to becoming a latent print examiner in 1975, Massey worked as a Fingerprint Clerk in the FBI Identification Division. In this capacity, Massey's job involved comparisons of inked 10-print cards from a person, such as might be obtained pursuant to an arrest or job application, in order to determine whether the individual had a prior arrest record, possibly under a different name. This was in the era before computerized IAFIS searches, and Massey's function involved extremely rapid comparisons of the subject 10-print card with a large number of inked cards already on file. The comparison process for this job bears only superficial resemblance to a latent print examination utilizing the ACE-V process. According to the FBI, this function involved making approximately 60 identification decisions per hour. The function did not involve evidence in criminal prosecutions or courtroom testimony. LPU Unit Chief Wieners, who performed the same kind of work in the Identification Division prior to joining the Latent Print Unit, told the OIG that errors performing this function were "very commonplace."

According to the FBI Laboratory, Massey made three erroneous fingerprint identifications while working for the Identification Division in 1969, 1970, and 1974. The FBI Laboratory did not consider errors of this type to disqualify Massey from selection into the latent fingerprint identification program, which was a competitive process.

Massey's personnel file also indicates that after he transferred into the latent fingerprint training program, his promotion from that program to be an

examiner was delayed in 1976 because of two missed identifications during training. According to the Laboratory, there are no records of any other errors made by Massey during the many years he served as a latent print examiner prior to the Mayfield matter. Massey's performance as a latent fingerprint examiner and his reputation for good work within the LPU were reasons that the Laboratory hired him on a contract basis following his retirement as a full-time LPU examiner.

The OIG concluded that the errors made by Massey more than 30 years ago while performing a substantially different function, as well as the 2 identifications that Massey missed during his training as a latent print examiner nearly 30 years ago, do not indicate that Massey was unqualified to serve as a verifier in the identification of LFP 17. At the time of the Mayfield identification, Massey was performing more casework in his capacity as a contract examiner than either Green or Wieners (who were supervisors), and Massey was selected because of his reputation as a skilled latent print examiner. The OIG concluded that the selection of Massey for this function was not inappropriate or based on any improper motive.

#### **E. Summary of Causes**

We determined that the unusual similarity of details on the fingers of Mayfield and the true source of the print, Ouhane Daoud, confused the FBI Laboratory examiners, and was an important factor contributing to the erroneous identification. Ten of the "points" in LFP 17 that the examiners used to identify Mayfield were also later used by different FBI examiners to identify Daoud as the source of the print. These features formed a constellation of points in LFP 17 that was generally consistent with the known fingerprints of *both* Mayfield and Daoud in location, orientation, and intervening ridge counts. This degree of similarity between prints from two different people is an extremely unusual circumstance within the latent fingerprint discipline, and it misled not only the FBI examiners, but also an independent court-appointed latent fingerprint expert.

However, we also found that the FBI examiners committed several methodological errors that compounded the confusion caused by the unusual similarity of the different prints and resulted in the misidentification. First, the initial examiner (Green) applied circular reasoning. Having found as many as 10 points of unusual similarity, he began to reason backward and "find" additional features in LFP 17 that were not really there, but rather were suggested to him by features in the Mayfield exemplar prints. As a result, he erroneously interpreted murky or ambiguous details in LFP 17 as points of similarity with Mayfield's prints. This process of circular reasoning infected the process, particularly in the absence of standards or safeguards requiring the examiner to keep distinct which features were seen in the latent fingerprint

during the analysis and which were only suggested during the comparison. This error likely would have been avoided had the examiner firmly established and documented which features were clearly discernible in the latent fingerprint in the “analysis” phase, before conducting a comprehensive side-by-side comparison. Once Green identified these features as similarities, Wieners accepted them without adequate skepticism.

Second, the examiners relied on Level 3 details under circumstances that did not support the reliability of these features. Although several different examples of Mayfield’s known fingerprints were available to the FBI, some of the details that the FBI examiners considered to be important were only visible on one version of those fingerprints, suggesting the possibility that these details were not reliable characteristics for identification. In addition, the examiners who made the identification appear to have relied on selected Level 3 similarities while dismissing or discounting other apparent pores, ridge edge shapes, and small between-ridge details in LFP 17 that were not in agreement with the known Mayfield fingerprints. We found that the examiners should have had serious doubts whether the clarity of LFP 17 was sufficient to support any reliance on Level 3 detail.

Third, the FBI examiners overlooked or excused a significant number of differences in appearance between LFP 17 and Mayfield’s fingerprints, and they did not apply the “one discrepancy rule” with sufficient stringency to support the degree of certainty required for a conclusion of identification. The upper left portion of LFP 17 was plainly inconsistent with Mayfield’s prints. The examiners accepted a “double touch” explanation for this difference, for which the evidence was mixed at best. This explanation required the examiners to accept an extraordinary set of coincidences. The examiners also had to adopt explanations for numerous other, more subtle differences that may have been individually plausible but that cumulatively required too much rationalization.

Fourth, the FBI examiners failed to assess the poor quality of the similarities that were used to justify the Mayfield identification and give adequate consideration to the incomplete nature of the agreement in points between LFP 17 and Mayfield’s fingerprint. Although there were as many as 10 “points” in LFP 17 that bore an unusual similarity to points in the Mayfield fingerprint in location and ridge count, the limited clarity of LFP 17 prevented the examiners from making an accurate determination of the type of many of these points (whether they were ending ridges or bifurcations). We found that the examiners should have recognized that these 10 similarities had less individualizing power than they would if the type of point had been unambiguously in agreement, and, hence, that they were inadequate to support an identification.

The FBI Laboratory also did not adequately explore the possibility that it had erred when the SNP reported in mid-April that its comparison of the Mayfield prints was “negative.” The FBI examiners did not attempt to find out the basis of the SNP’s doubts before reiterating that they were “absolutely confident” in the identification on April 15, a full week before the FBI Laboratory met with the SNP. We found that the FBI Laboratory’s overconfidence in the skill and superiority of its examiners prevented it from taking the April 13 Negativo Report as seriously as it should have.

We did not find sufficient evidentiary support to conclude that several other potential sources of error were major factors in this case. We found that particular standard utilized by the FBI examiners for identification (the Ridgeology Standard versus a more objective Numerical Standard) was not a root cause of the error; the Laboratory’s methodological errors could occur under either standard. We also found insufficient evidence to conclude that the Laboratory’s verification procedures contributed to the misidentification of LFP 17, or that the particular pressures of a high-profile terrorism investigation led to the erroneous conclusion. Nevertheless, we found that the potential for future errors arising from these factors was sufficient to support recommendations for research and changes in Laboratory procedures, which we discuss in detail in Chapter Five.

We also examined the allegation that the FBI Laboratory’s identification of Mayfield was improperly influenced by knowledge of Mayfield’s religion. We found that the Laboratory had no knowledge of Mayfield’s Muslim faith at the time that it made the initial identification. In the days or weeks following the identification, however, information acquired in the field investigation regarding Mayfield’s religion became known to the examiners. We believe that the primary factors in the FBI’s failure to revisit the identification were the unusual similarity between Mayfield’s fingerprint and LFP 17, and the FBI’s overconfidence in the superiority and infallibility of its examiners and methods. However, we believe that Mayfield’s representation of a convicted terrorist and other facts developed during the field investigation, including his Muslim religion, also likely contributed to the examiners’ failure to sufficiently reconsider the identification after legitimate questions about it were raised.

Finally, we reviewed several other potential causes of the error that have been suggested by the FBI and others following the discovery of the misidentification, and found them to be unpersuasive. We found that the chain of events leading to the error would likely have occurred even if the FBI had been given access to the original evidence on which LFP 17 was found. We found that the quality of the digital image used by the FBI Laboratory to make the original identification was adequate and was not a factor in the error. We found that the separations and interruptions in ridge flow within LFP 17 did not prevent the SNP or the FBI from correctly identifying Daoud and, hence,

did not cause the misidentification of Mayfield. We found no support for the suggestion that LFP 17 was of “no value” because it could “work with” the known fingerprints of two different people. We also found no reason to believe that the FBI Laboratory was misled by an excessive faith in IAFIS technology.

In summary, we believe that the unusual similarity between Mayfield’s fingerprint and LFP 17 was a major factor in the misidentification. However, we believe that the FBI examiners could have prevented the error by a more rigorous application of several principles of latent fingerprint examination methodology.

**CHAPTER FIVE**  
**OFFICE OF THE INSPECTOR GENERAL'S ASSESSMENT OF THE**  
**FBI LABORATORY'S RESPONSES TO THE**  
**FINGERPRINT MISIDENTIFICATION**

Following discovery of the error, the FBI Laboratory initiated several actions, including: (1) a comprehensive internal review of FBI Laboratory Latent Print Units (LPU) policies and procedures, (2) corrective action with respect to the examiners involved in the error, (3) a review of prior Integrated Automated Fingerprint Identification System (IAFIS) identifications from digital prints, and (4) an ongoing review of prisoners scheduled for capital punishment who may have been convicted or sentenced based on an FBI fingerprint identification. The OIG's assessment of these actions is provided below.

**I. The Latent Review Team Recommendations**

In response to the International Panel's reports, the FBI Laboratory implemented a comprehensive review of practices in the LPU. Seven different Latent Review Teams were assembled, composed of forensic experts from other units of the FBI Laboratory and from outside organizations. No LPU employees participated on the teams. Each Latent Review Team addressed one of the following subject areas:

- Policies for examining and reporting cases with "less than original evidence;"
- Documentation and Case Notes;
- Technical and Administrative Review;
- Management and Organizational Structure;
- Training;
- Standard Operating Procedures Review; and
- Science of Latent Fingerprint Identification.

The Latent Review Teams generated reports addressing 41 separate issues. Each report contained specific recommendations for action by the LPU. The recommendations were reviewed by the LPU Unit Chiefs prior to being finalized. According to Melissa Smrz, the Section Chief in the FBI Laboratory in charge of the LPU, all recommendations set forth in the Latent Review Team reports will be implemented by the LPU.

The OIG has reviewed these reports and recommendations in light of the OIG's findings regarding the causes of the misidentification of Latent Fingerprint 17 (LFP 17), and has discussed these recommendations with its expert consultants. If implemented, many of these recommendations will result in significant changes to the procedures, organization, and workload management of the LPU. In the subsections below, the OIG addresses the most significant recommendations made by the Latent Review Teams. Generally, the OIG found that many of the Latent Review Team recommendations were relevant to the sources of the Mayfield error and are likely to help prevent future errors of this sort. In some cases, the OIG suggests refinements to the recommendations, or identifies ambiguities in the recommendations or tension between recommendations of different teams. We also present additional recommendations for action in this chapter.

### **A. Research Projects**

The Latent Review Teams issued recommendations for major research projects relevant to the latent fingerprint discipline. The FBI Laboratory has already begun funding some of this research. The projects recommended by the Latent Review Teams include:

- Research aimed at developing and testing the validity of a minimum quantitative threshold for effecting an identification that takes into account all levels of detail and the clarity of the print;
- Research to test the hypothesis that Level 2 and Level 3 details occur on the friction ridges as independent, random events;
- Testing examiner performance in a rigorous, controlled manner to determine accuracy of performance;
- Comparison of the performance of examiners using a subjective approach (i.e., the "Ridgeology" approach described in Chapter Three) to those using a minimum threshold of points; and
- Research to determine the permanence of Level 3 details and features on the lower joints, soles, and palms.

Recommendation 1 The OIG suggests one modification of this list of research projects. It appears to the OIG that the debate regarding the utility of Level 3 detail in latent fingerprint examination relates at least as much to the *reproducibility* of tiny Level 3 details under the myriad conditions of latent fingerprint deposition as it does to the *permanence* of such features in the friction skin. By reproducibility, we refer to the issue of whether Level 3 details are reproduced in latent prints with sufficient consistency and reliability of

appearance to provide valid individualizing power. As shown above, the Mayfield identification is an important case study for this debate. Therefore, the OIG suggests that the FBI Laboratory consider shifting at least some of the emphasis on research of Level 3 detail from the issue of permanence to the issue of reproducibility and defining the circumstances under which Level 3 detail should be utilized.

Recommendation 2 The OIG agrees with the recommendations of the Latent Review Team directed at developing more objective criteria for declaring identifications and at providing scientific validation for the FBI Laboratory's methods of latent fingerprint examination. If successful, these projects will address some of the issues repeatedly raised by critics of both the discipline in general, and the Ridgeology Standard in particular.

The OIG believes that the utilization of more objective criteria for identifications, if such criteria can be developed, may provide a greater margin of safety in latent fingerprint identifications than is provided by a wholly subjective approach in which an examiner's initial or "gut" reaction to a comparison might lead him to overlook important ambiguities or differences in the prints.

#### **B. Revision of the Standard Operating Procedures (SOPs)**

One of the Latent Review Teams conducted a detailed review of the LPU's SOPs and made several recommendations for major revisions of the SOPs, including:

- Defining each phase of the ACE-V (analysis, comparison, evaluation, and verification) process in greater detail and listing and defining the step-by-step procedures involved in the examination process in greater detail;
- Adopting more specific definitions of each of the three levels of detail;
- Defining the "quality" and "quantity" aspects of examination;
- Establishing criteria to determine a latent fingerprint to be a print "of value," including minimum latent print quality considerations;
- Developing a consistent policy for determining and documenting "cluster prints" (simultaneous prints), including a requirement that at least one area of the cluster meets the identification threshold on its own; and



- Elimination of the “12-point rule” that required supervisory review of identifications made on the basis of fewer than 12 Level 2 ridge deviations.

Recommendation 3 Based on its review of the facts of the Mayfield misidentification and discussions with our expert consultants, the OIG concluded that many of these Latent Review Team recommendations are appropriate and some could help to prevent future errors of the type that occurred here. We agree that an effort should be made to add detail to the existing protocols/SOPs regarding the definitions and processes in each component of ACE-V. We found that although the LPU examiners committed methodological errors as described above in Chapter Four, the steps taken by the examiners in this case did not specifically contravene any criterion, recommendation, method, or prohibition set forth in the applicable LPU or SWGFAST standards.

As previously noted, the primary documents governing the examination of LFP 17 were the Examination SOPs (Appendix F), the SWGFAST Friction Ridge Examination Methodology for Latent Print Examiners (Appendix G), and the SWGFAST Standards for Conclusions (Appendix H). These documents comprise a total of 11 pages. Much of the contents are repetitive and all of them are stated in vague and general terms. Nothing in the existing standards governing the LPU prohibited, discouraged, or even addressed the process of circular reasoning by which Green apparently allowed the Mayfield exemplar to bias his interpretation of LFP 17. Nothing in these documents prohibited an examiner from “cherry-picking” helpful Level 3 details to support an identification while discarding those which did not, or described the circumstances under which Level 3 detail is sufficiently reliable to use. Nothing in the standards required the examiners to justify their explanations for differences in appearance between the latent and known prints on the basis of objective information from the print or the crime scene to demonstrate any degree of certainty with respect to such explanations, or even to document the differences or explanations at all. Likewise, although all of the OIG consultants agreed that lesser individualizing weight should be assigned to a Level 2 ridge deviation found in agreement when the examiner cannot determine whether the point is a bifurcation or an ending ridge until he sees the exemplar print, nothing in the existing standards gives any such instruction to LPU examiners. In short, the examiners were able to make all of the decisions described above that contributed to the erroneous identification without violating any specific provision of the applicable LPU or SWGFAST standards.

The OIG believes that the absence of policies or standards sufficiently specific to have addressed the errors committed in this case led the Laboratory to provide the ultimately unenlightening explanation in some internal briefings that the identification was the result of “human error.” Given the fact that four

different examiners made the same error, we believe that the more systemic causes described in Chapter Four were in play. The fact that the examiners' conduct contravened no existing standards suggests that more detailed and explicit standards are needed.

A useful example of a document containing more specific standards for conducting latent fingerprint examinations can be found in INTERPOL's "Method for Fingerprint Identification" (Parts 1 and 2), which was designed to accommodate both the Ridgeology Standard and the Numerical Standard for declaring identifications.<sup>139</sup> We recommend that in carrying out the revision of the SOPs, the Laboratory consult the INTERPOL Method as an example of a standard for examinations that provides a much higher level of detail in the description of examination steps and the application of principles of identification than is available in the existing SOPs and the SWGFAST Methodology and Standard.

Recommendation 4 The SOPs should be revised to explicitly require that the examiner must achieve a degree of certainty with respect to each "explanation for differences" that is consistent with, and equivalent to, the standard of certainty required for the conclusion of identification. Accepting explanations that are merely plausible or reasonable, but for which the available evidence is mixed, is not consistent with the absolute certainty claimed for latent fingerprint identifications. Where the requisite certainty for explanations is not achieved, the appropriate conclusion is "inconclusive" or "exclusion."

Recommendation 5 The SOPs should be revised to define the circumstances under which the clarity of a latent fingerprint is sufficient to support the utilization of Level 3 details to support an identification. The SOPs should also require that the examiner consult all versions of the available known prints of the subject to determine whether any Level 3 details utilized to support the identification are reliably and repeatably reproduced. The SOPs should require that the examiner apply "fair reasoning" in utilizing Level 3 details that support the identification so as to avoid the selective use of supporting Level 3 details.

Recommendation 6 The SOPs or other Laboratory policies should be revised to address the circumstances under which a different forensic laboratory disagrees with an identification decision by the FBI Laboratory to ensure that the reasons for the disagreement are fully understood before the FBI

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<sup>139</sup> Available at <http://www.interpol.int/Public/Forensic/fingerprints/>. We refer to this document without endorsement of all of the substantive standards set forth in it, but rather as an example of written standards containing a higher level of detail than is contained in existing SOPs and policies.

Laboratory ratifies its initial conclusion. In such cases, the Laboratory should assign new examiners to conduct a complete ACE-V examination of the disputed print.

Recommendation 7 The OIG agrees with the Latent Review Team recommendation that criteria be developed for the use of “cluster prints.” The OIG agrees on the need for such criteria, particularly in light of the inconsistent statements made to the OIG regarding whether anyone at the Spanish National Police (SNP) or the FBI Laboratory ever determined that LFP 17 and LFP 20 were simultaneously deposited on the basis of the relative positioning of the prints on the blue plastic bag. We found that there are no clear or consistent standards in the LPU for declaring multiple fingerprints to have been deposited simultaneously.

There is one aspect of the Latent Review Team recommendation that is confusing, however. The requirement that one area of the cluster (i.e., friction ridge detail from a single finger) meet the identification threshold standing on its own appears to be inconsistent with a major purpose of identifying cluster prints, which is to permit identification based on detail from two fingerprints where the detail in a single print is insufficient. If the recommendation is adopted, a major reason for making a determination of cluster prints would be eliminated and there would be much less value to developing criteria for making such a determination.

Recommendation 8 The OIG recommends that the LPU SOPs be revised to clarify that the “inconclusive” conclusion is available to examiners in cases where the latent fingerprint is deemed “suitable for comparison,” but the examiner is unable to achieve adequate certainty either as to the quantity and quality of detail in agreement or as to the sufficiency of his explanations for differences. The LPU examiners we interviewed stated that the usual practice when an examiner is unable to reach a decision of identification or exclusion is to revise the analysis and declare the latent print to be of “no value” for identification, except in a limited category of cases.<sup>140</sup> The “no value” declaration results in the latent print being discarded with no information being shared with investigators regarding the existence of a subject who could not be excluded as the source of the print. This practice is not fully consistent with the SWGFAST Standards, which acknowledge that a print can be “suitable for comparison” but an examiner can nonetheless reach an “inconclusive” result after comparison. For example, the examiner may find a latent print to

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<sup>140</sup> The example given by several examiners for use of the use the “inconclusive” result is when the known prints are of poorer quality than the latent. This practice is consistent with the Laboratory’s stated criteria for reaching the “inconclusive” result, which focuses on cases in which relevant detail is absent from the exemplar print.

be clear enough for comparison, but determine during the comparison phase that he lacks sufficient certainty as to the validity of possible explanations for dissimilarities. The OIG consultants agreed that LPU should have greater flexibility to make use of the “inconclusive” result where there is inadequate certainty to declare a match. Use of the “inconclusive” result could be consistent with alerting investigators that there is a specific suspect who could not be excluded as the source of a latent print.<sup>141</sup>

Recommendation 9 The OIG concurs with the Latent Review Team recommendation that the “12-point rule” be eliminated. This rule is inconsistent with the Ridgeology standard as currently utilized by the LPU. As noted above, the Latent Review Teams have recommended research aimed at developing and testing the validity of a minimum quantitative threshold for effecting an identification which takes into account all levels of detail and the clarity of the print. If such research results in the articulation of a new objective threshold for identification, such a threshold would logically render the 12-point rule redundant.

### **C. Documentation**

As noted above, the LPU standards in place at the time of the Mayfield identification did not require any documentation of the different phases of the ACE-V process other than the statement of a conclusion. The Latent Review Team that examined the LPU documentation requirements recommended a dramatic expansion of the case documentation requirements for latent print examinations. The most important of these was the recommendation that the LPU adopt an SOP or policy regarding the documentation of (1) characteristics that contribute to an inclusion/exclusion during the comparison process, (2) discrepancies/dissimilarities observed and explained during the comparison process, and (3) Level 1, 2, and 3 details utilized during the comparison process. The same report also recommends that: “If during the comparison process, an ‘Ident’ is made, the case notes should reflect the process by which the ‘Ident’ was made and the comparison details that were used. This can be done by enlarging a photograph and annotating it with arrows, lines or other methods to show details used.”

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<sup>141</sup> The OIG concurs with the Latent Review Team recommendation for the establishment of criteria to determine a latent fingerprint to be a print “of value,” including minimum latent print quality considerations, to the extent that this recommendation is *not* construed as an endorsement of the existing practice of using the “no value” category as a substitute for an “inconclusive” conclusion. In other words, it will be useful to develop more specific criteria for declaring a print to be “suitable for comparison,” but once having made that determination as to a particular print, the LPU should not continue the practice of revising that determination in cases when the examiner can neither identify nor exclude a particular subject as the source of the print.

The Latent Review Team with responsibility for review of the LPU's SOPs made similar recommendations, to the effect that the "[f]ull and complete detail of all consistencies, explainable dissimilarities and discrepancies [should be] documented and retained in the case file."

Recommendation 10 The OIG agrees with the Latent Review Team recommendations for more extensive documentation requirements. The absence of substantive documentation requirements is a conspicuous shortcoming of the current SOPs. We believe that there is a strong possibility that if the examiner and verifier had been required to document the analysis and comparison phases of their examinations, they might have noticed more dissimilarities and appreciated the cumulative impact of them before reaching their flawed conclusions. They might also have had greater appreciation for the low quality of the admitted similarities between the latent and the Mayfield known prints. We believe that documentation would have facilitated a more objective comparison and evaluation, regardless of the particular standard utilized to declare an identification.

The absence of any substantive documentation requirement under existing guidelines significantly impacted the OIG's ability to determine the cause of the Mayfield error. The mental processes and criteria utilized in making the identification are only partially reflected in the documentation in this case (because of the creation of charted enlargements), and in other cases are not documented at all. No contemporaneous record exists of the explanations accepted by the examiner for numerous dissimilarities in the prints. We therefore had to rely primarily on the imperfect recollection of witnesses for this critical information and were unable to obtain the recollection of the verifier, Massey. Although there was a good contemporaneous record of the similarities utilized in this case, the existence of such records was a fortunate anomaly and not the result of any policy.

The OIG believes that more rigorous documentation of the phases of the examination process will help enhance accuracy and avoid errors like the Mayfield misidentification by:

- Promoting completion of all steps in the examination process, including the pre-comparison analysis phase;
- Promoting reproducible application of whatever revised criteria for identification or exclusion are ultimately adopted by the LPU, making the identification process more transparent and controllable;
- Promoting full and explicit identification of differences in appearance between the latent print and the exemplar, as well as greater appreciation of the cumulative impact of multiple differences; and

- Facilitating review of the causes of errors.

Adoption of the Latent Review Team recommendations regarding documentation will result in dramatic changes in the way the LPU handles cases. The FBI Laboratory deserves credit for undertaking such a significant reform. The documentation requirements will obviously have a major impact on the speed with which the LPU can process cases. Thus, it is important that the Laboratory and others appreciate that this reform cannot be achieved without a significant increase in the LPU's manpower or reduction of the LPU's case load, and that after this reform is adopted, the productivity of individual examiners in the LPU cannot fairly be compared with pre-reform numbers. It appears that additional reforms suggested by the Latent Review Teams will address this matter at least in part by reducing the number of cases accepted from state and local law enforcement agencies.

Recommendation 11 The OIG recommends that the FBI Laboratory consider a refinement of the proposed changes to the documentation requirements in the SOPs. Although the proposals regarding documentation would require identification of the Level 1, 2, and 3 features that contributed to the examiner's conclusion, they do not appear to require any documentation of the analysis phase. Documentation of the features and "red flags" observed during the analysis phase will help prevent circular reasoning in which features in the known prints can influence an examiner to find such features in the latent print, even though they may not be there. Where feasible, a record should be made of the analysis phase of the examination, including recording the location and type (if known) of the features perceived at that phase. Ashbaugh specifically recommends such documentation of the analysis phase, at least for certain complex latent prints.<sup>142</sup> Creation of such a record will help assure that the examiner assigns lesser individualizing weight to any features in the latent print that are not discovered until after the exemplar prints are compared, and lesser individualizing weight to a Level 2 detail found in agreement when the examiner cannot determine whether it is a bifurcation or an ending ridge until after he sees the exemplar print.

However, we recognize that creation of a record of the analysis phase could be burdensome and potentially wasteful in the case of IAFIS searches that do not result in identifications, which is a common occurrence. We recommend the following potential solution for this problem. In the case of IAFIS searches, the requirement to fully document the analysis could be postponed until the examiner determines, based on a preliminary non-exhaustive initial comparison, that one of the candidate's exemplars is sufficiently similar to the latent print to warrant a more rigorous,

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<sup>142</sup> Ashbaugh, pp. 112-113.

comprehensive comparison. At that point, the SOP would require the examiner to put the exemplar aside and complete the documentation of his analysis of the latent print before proceeding to the comparison and evaluation phases of the examination.

#### **D. Verification Procedures**

The Latent Review Team found that the existing verification procedures are informal and may contribute to “confirmation bias” due to the verifier’s knowledge that another examiner in the Laboratory had already made an identification. In response, the Latent Review Teams recommended that the verification procedures in the SOPs be modified to require one “blind” verification per Laboratory report, in which the initial examiner would provide the verifier with a decoy latent print and decoy exemplar in the verification along with the latent print and exemplar that had been matched by the initial examiner. All other identifications in the case would be verified in the normal manner after the blind verification is completed. Up to 10 percent of the blind verification packages would involve “challenging” non-identifications, so that the verifier would know there was a chance that none of the prints in his package had previously been matched by another examiner. In addition, the current practice that verifications are documented solely by the verifier’s signature would be modified; all verifications would be required to be documented using the same procedures used by an examiner during an “identification” annotation. Further, the Latent Review Team recommends that a conflict resolution process be formalized and implemented in the LPU. The circumstances under which this process would be invoked include cases in which a verifier reaches a different conclusion than an examiner and resolution cannot be accomplished by consultation between them.

Recommendation 12 The OIG concurs with the Latent Review Team recommendations regarding verification procedures. As previously noted, the OIG did not find sufficient evidence to conclude that the FBI’s verification procedures introduced a bias that prevented or discouraged the verifier from challenging the initial examiner’s conclusions in this case. The OIG believes, however, that the new verification procedures recommended by the Latent Review Team will promote more diligent and thorough examinations by verifiers in all cases. In particular, the requirement that each verification include full documentation of the ACE phases of the verifier’s examination, and that the similarities and explanations for differences utilized by the verifier be recorded, will enhance thorough verifications.

Recommendation 13 The OIG also believes that the use of blind verifications with decoy prints and up to 10 percent non-identifications may also promote thorough and independent verifications.<sup>143</sup>

We question the efficacy of the particular model of blind verification selected by some of the Latent Review Team, however. The point of introducing decoy prints and occasional non-identifications into the blind verification process is to assure that the verifier is doing a careful examination and not merely “rubber stamping” the initial identification. Under the proposal adopted by the Latent Review Team, this benefit may be lost in a case involving multiple identifications because the verifier will be able to tell which verification potentially involves decoy prints and non-identifications. (These would apparently be the first verification in each case, since the proposal states that other verifications in the case would take place after the blind verification). Moreover, the blind verification would be the only verification involving two unmarked photographs of latent prints. While the verifier would clearly be motivated to conduct a meticulous examination in the course of a blind verification, the incentive to do so would potentially be lost in subsequent verifications in the same case because the verifier would know they are not “blind.”

We believe that a better solution would be to submit decoy non-identifications (latent fingerprints that do not match the exemplar) in a small percentage of *all* verifications. As a result, for any comparison the verifier would be aware of the possibility that no identification has previously been made. We also believe that to assure independence and objectivity in the verification process, the examiner who made the initial identification should not be involved in selecting the decoy prints or challenging non-identifications for use in the blind verification package.

Recommendation 14 The OIG recommends that the LPU consider requiring a second independent verification for those cases in which there is only one latent print identified to a subject and the subject was identified as the result of an IAFIS search. This circumstance, which involves an extremely narrow category of cases but one that would have included the Mayfield case, addresses the circumstances under which the potential for initial examiner error may be the greatest and the consequences of the error may be especially significant.

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<sup>143</sup> The success of this reform will depend on whether the decoy prints require sufficiently challenging examinations to prevent the examiner from finding the previously matched prints with a superficial comparison. One of the OIG’s consultants expressed concern that close non-matches that are challenging to exclude are rarely encountered, so that finding such prints for use as challenging decoys in the blind verifications may be difficult.



Recommendation 15 The OIG recommends that the LPU give consideration to alternatives to the use of “dispute resolution” in cases of refused verifications. The OIG perceives a potential tension between the concept of the verification stage as a significant screen or hurdle in the identification process and the requirement that any disagreement by a verifier be treated as a “conflict” requiring “resolution.” SWGFAST has stated that it is possible for two competent examiners with differing levels of training, experience, and ability to reach different conclusions about a comparison, such as when one examiner finds enough detail in agreement to declare an “identification,” but another finds insufficient agreement and reaches an “inconclusive” conclusion. According to SWGFAST, such a disagreement may not imply an error by one expert, but rather differences in their training, experience, or ability.

The point of the verification phase is to add a layer of certainty to an identification by requiring that two independent qualified examiners reach the same conclusion. Invoking conflict resolution to achieve agreement between the examiner and the verifier potentially dilutes the stringency of the verification requirement. The LPU witnesses told the OIG that disagreements by verifiers are already extremely unusual, which suggests to the OIG that the verification phase may not be a significant screen in the identification process. Requiring conflict resolution in those rare situations may undercut the independence of the verification step by allowing the verifier in some cases to be “talked into” agreement with the examiner through conflict resolution, particularly if the alternative is for the verifier to be formally adjudged “wrong” at the conclusion of the process.<sup>144</sup>

The OIG recommends that the LPU consider alternatives to treating refused verifications as potential errors requiring resolution. For example, the LPU could respond to such rare cases by requiring a full examination and verification by different examiners not previously involved with that identification. In other words, refused verifications would require a new examiner to start over with the examination.

## **E. Training**

One of the Latent Review Teams assessed training requirements in the LPU and found that the existing LPU training program is deficient in conveying the theoretical underpinnings of friction ridge uniqueness. The team made several recommendations to the Laboratory for action, including:

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<sup>144</sup> This tension is already present under existing procedures, which require that refused verifications be resolved by a supervisor or Unit Chief.

- Contracting with an external source to provide comprehensive friction ridge theory and ACE-V training to the LPU, with testing of all attendees in each element of the training;
- Preparing a friction ridge theory and ACE-V training module for future training;
- Incorporating Ashbaugh as required reading in the training module; and
- Increasing attendance of FBI examiners at International Association for Identification (IAI) conferences.

The OIG agrees that enhanced training could help the LPU avoid erroneous identifications in the future. We believe that the misidentification of LFP 17 provides a useful case study in support of several specific principles of latent print identification that should be emphasized in the training including: (1) the need to complete the analysis prior to the comparison phase in order to avoid circular reasoning; (2) the need to assess similarity in terms that go beyond directions and ridge counts, taking into consideration the distances between points and along ridges; (3) the circumstances under which Level 3 detail should be deemed reliable; and (4) the need to apply the same degree of certainty with respect to explanations for each difference in appearance between prints that is required for declaring an identification. The OIG notes that a second updated training may have to be implemented if the LPU's stated plans for future research for modification of the SOPs results in significant changes to the standards for identification, such as by utilizing more objective standards for identification.

## **II. Review of Prior IAFIS Identifications from Digital Prints**

In response to the misidentification of LFP 17, the LPU undertook a review of all cases resulting in a latent print identification from an IAFIS search in which the latent print was a digital image (e.g., submitted to the LPU on compact disks or diskettes or submitted via e-mail or facsimile), where no original evidence was received by the laboratory. According to a Summary Report prepared by the FBI Laboratory, 16 latent fingerprints meeting these criteria have been identified from IAFIS searches, or slightly more than 1 percent of all prior identifications from IAFIS searches. According to a memorandum prepared by LPU Unit Chief Meagher describing this review, each such identification was reexamined by a different examiner with no knowledge of the original examiner's conclusions.

The Laboratory reported that upon reexamination, all 16 latent fingerprints were again identified with the same finger of the same person as originally reported. In other words, no false positives were detected. In addition, as a result of this reexamination, three additional latent fingerprints included in the same Laboratory submissions were identified by means of an IAFIS search.

The Laboratory's decision to conduct a reexamination of this small category of IAFIS identifications was made shortly after the Mayfield error was detected. As noted earlier, for a short period of time the Laboratory publicly stated that the error was attributable at least in part to the allegedly degraded quality of the digital images made available to the FBI by the SNP. As previously explained in Chapter Four, the OIG determined that these factors were not major contributing causes of the erroneous identification. None of the Laboratory personnel interviewed by the OIG attributed the error to the quality of the digital images of LFP 17 utilized by the Laboratory to identify Mayfield, and neither did any of the members of the International Panel or any of the OIG consultants.

It therefore appears that the Laboratory's reexamination project, while commendable in purpose and intent, was so limited in scope as to not be responsive to any significant cause of the Mayfield misidentification. If the use of digital images did not cause the error, then the reexamination of a handful of cases that were based on identifications of digitally submitted prints will not address the root cause of the misidentification.

Recommendation 16 The Laboratory should consider a broader category of IAFIS identifications for reexamination. The factors that the International Panel and the OIG found to be causes of the misidentification could have affected identifications in a larger category of cases than those involving digital images. The OIG is not necessarily recommending reexamination of every FBI Laboratory identification that resulted from an IAFIS search, which would involve approximately 1,200 latent print identifications. One useful narrowing criterion for the Laboratory to consider would be cases in which the identification of a criminal suspect was made on the basis of only one latent fingerprint searched through IAFIS. We recognize that when a suspect has been identified from two or more latent prints, the likelihood of error arising from a confusingly similar non-match would appear to be much smaller. The criterion we are suggesting for reexamination would therefore focus on a category of cases, like the Mayfield case, in which the existing safeguards against an erroneous identification based on a confusingly similar non-match are not as great.

### **III. Capital Case Review**

The Laboratory and the Criminal Division of the Department of Justice began a monthly “Capital Case Review” of prisoners awaiting execution to determine whether the LPU conducted a fingerprint identification in the case for which the individual was sentenced to be executed, or in an earlier case which may have been an aggravating factor in the death penalty phase. If such a case is identified, the relevant latent print identification will be reviewed for accuracy. To date, no such case has been identified.

Recommendation 17 The OIG recommends that the FBI consider continuing the monthly Capital Case Review or adopting another procedure sufficient to accomplish the same objective. LPU Unit Chief Wieners told the OIG that the administrative burden of determining whether an upcoming execution is related to an LPU identification is small. The apparent purpose for the review is the possibility, however remote, that other misidentifications might have occurred in prior capital cases. The only basis that the OIG can identify for suspending this effort would be if its investigation of the Mayfield case revealed that the causes of the Mayfield error could not have resulted in any other misidentifications. The OIG believes that the circumstances in the Mayfield case – especially the close (but not perfect) agreement in the relative location of as many as 10 Level 2 ridge deviations and the ridge counts between them – are probably extremely unusual, but we cannot say with certainty that such circumstances were never present in any other case. The methodological errors that the OIG identified, such as circular reasoning and rationalizing differences in appearance, could occur in other cases. Therefore, the OIG recommends that the Capital Case Review procedure continue or that another procedure sufficient to accomplish the same objectives to be adopted.

### **IV. Corrective Action**

Section 7.1 of the FBI’s LPU Quality Assurance Manual, Technical/Casework Review (Revision 2, issued June 2, 2003) (Manual), describes three types of errors requiring corrective action:

- Administrative errors (those errors resulting from clerical operations, sample or specimen confusion, or documentation deficiencies that did not result in an analytical error);
- Systematic errors (those errors determined to be due to equipment, material, techniques, or environmental influences); and
- Analytical/interpretive errors (those errors resulting in a significant discrepancy, such as an erroneous identification or a missed

identification, determined to be the result of an analytical or interpretive deficiency).

The FBI Laboratory categorized the Mayfield fingerprint misidentification as an analytical/interpretive error, the most serious category of error. For this type of error, the Manual requires that the error be “discussed and/or documented with the Examiner to determine how and why the wrong conclusion was reached.” The Manual further states that four actions may be taken with respect to the responsible examiner: (1) immediate removal from conducting casework, (2) complete technical review of the examiner’s past cases, (3) proficiency testing, and (4) training. The Manual further requires that the Unit Chief review the examiner’s future casework until satisfied that the discrepancy does not reoccur. According to the FBI Laboratory, corrective action is intended to remediate or rehabilitate the examiner and to improve a deficiency, and should not be considered punitive. The LPU Quality Assurance Manual states that disciplinary action can be taken in addition to the actions listed above if deemed necessary.

The corrective measures taken by the FBI Laboratory with respect to the three examiners involved in the misidentification of LFP 17 (Green, Massey, and Wieners) are described and evaluated below.

Providing Written Explanation for the Error. On May 27, 2004, all three examiners provided a written acknowledgement of the error and an explanation of why the error occurred. Green’s written explanation stated:

On May 19, 2004, I became aware of the Spanish National Police report. After reviewing my original analysis of Latent 17, I determined that I was in error in concluding that it was of value for comparison. I should have made an initial decision that Latent 17 is not of value for comparison purposes, not only because of the quality of the image, but that there was no background information about the image to aide [sic] in my findings of explainable dissimilarities.

Wieners’ written explanation stated: “After careful analysis, I determined that latent fingerprint #17 should have been declared of no value for identification purposes. I believe the cause of my error was an insufficient analysis of latent fingerprint #17.”

Massey’s written explanation stated:

My original decision was based on the poor quality of the latent print and the appearance of it having several lines of separations. This could have been caused by the item that the latent print was

on or the possibility of several touches of a finger or fingers. Based on the lack of quantity and quality of the characteristics in any of the areas in the latent print I determined that this latent print was of no value for identification.

The OIG found these written explanations to be insufficiently specific or detailed to provide any useful information regarding how or why the error occurred, and in some cases they were misleading. Green's reference to the "quality of the image" was inappropriate because as of May 27, the day he made the statement, neither he nor anyone else in the FBI Laboratory had ever seen a better image than the one that had been used to identify Mayfield. As discussed in Chapter Four, Section II.D.2, the digital image used to identify Mayfield satisfied all applicable FBI Laboratory standards for resolution and was of sufficient quality for comparison. Moreover, Green's reference to the "absence of background information" did not explain what information was missing and how it would have made a difference. As previously noted, we found that the FBI's lack of access to the evidence on which the fingerprint was found did not cause the error.

Wieners' statement that the error was caused by "insufficient analysis" was not misleading, but it provided too little information regarding the causes of the error to be helpful in preventing future errors of the same type. As detailed in Chapter Four, Section II.A.2, the OIG found that the misidentification was caused in part by bias from the examiner's review of Mayfield's known fingerprint, which might have been prevented had the examiner been required to complete his analysis of the latent fingerprint and identify all clearly discernible features before conducting a detailed comparison. However, Wieners did not provide even that degree of elaboration to his explanation, merely stating that the analysis was "insufficient," without detailing where it was deficient and how this led to an erroneous conclusion.

Massey's memorandum was unsigned and could have merely been a draft. As written in the version provided to the OIG, the statement made no sense. The memorandum stated Massey based his original decision (which was to verify the identification) on the "poor quality of the latent print" and that he determined that the latent print was of no value for identification. Massey obviously considered the print to be "of value," because he verified the identification. Moreover, as noted above, we found that the quality of the latent print was not a cause of the misidentification.

Further, the statement by all three examiners that they erred in declaring the latent print to be "of value for identification" is unsatisfactory for all of the reasons set forth in detail in Chapter Four, Sections II.D.3 and 4.

These statements cannot be meaningfully reconciled with the LPU's subsequent identification of LFP 17 as the fingerprint of Daoud.

The OIG believes that the deficiency in the examiners' written statements may have been related to the haste in which they were prepared. All of them were dated May 27, just days after the error was discovered and the original identification had been withdrawn. However, this does not excuse the misleading, inaccurate, and incomplete explanations that were provided.

Recommendation 18 We recommend that the Laboratory require more detailed written explanations in the future for any analytical/interpretive errors, triggering the documentation requirement in the LPU Quality Assurance Manual. Further, the OIG questions the FBI's practice of assigning primary responsibility for documenting the causes of the error to the examiners who committed the error, because these examiners are likely to lack objectivity. As it was implemented in this case, the documentation requirement in the FBI LPU Quality Assurance Manual was an empty exercise. The Quality Assurance Manual requires that the error be "discussed and/or documented *with* the examiner," not necessarily *by* the examiner. We believe that examiners other than those who committed the error should be responsible for determining the causes and that their findings should be presented orally or in writing to the examiners who committed the error.

Removal from Casework. All three examiners were suspended from performing casework on May 28, 2004, shortly after the error was discovered. Green and Wieners were cleared to return to casework on August 13, 2004, after completion of the other aspects of the corrective action plan. Both are in supervisory positions. Wieners is a Unit Chief and Green is the supervisor of the LPU's Technology Development and Support Group. According to the Chief of the FBI Laboratory's Quality Assurance and Training Unit, although Green and Wieners have been cleared to return to performing casework, neither has performed any casework since being suspended.

Massey is no longer on contract with the FBI. He worked for the FBI Laboratory as a contractor from June 23, 2003, through June 10, 2004. According to the Contracting Agent's Technical Representative for the contract, Massey's contract was not renewed because of budgetary reasons, not because of his role in the Mayfield fingerprint error. A modification to his contract dated February 3, 2004, specified that at the conclusion of the contract period services would no longer be required for the remaining contract years.

Technical Review of the Examiners' Past Cases. The LPU's Standards and Practices Group conducted technical reviews of 10 of Green's prior cases,

10 of Wieners' prior cases, and 29 of Massey's prior cases.<sup>145</sup> The purpose of the review was to determine whether, in those prior cases, the fingerprint examinations were properly conducted, examination notes and results were properly reviewed, and proper conclusions were rendered. Specifically, the reviewers performed an ACE-V check of the fingerprint comparisons done by the examiner and reviewed all of the associated documentation.

They completed their technical review on July 16, 2004. The LPU reviewers found no errors in Wieners' and Massey's selected cases. However, the reviewers found 1 error in 1 of Green's 10 selected cases. The LPU's technical review found that in a bank fraud case Green handled in July 2000, Green had correctly identified prints on financial records connected with two different aliases of the subject of the investigation. However, he had failed to correctly identify fingerprints on financial records connected with one of the subject's other six aliases. The technical review determined that Green's processing and analysis of the latent fingerprint was satisfactory, but found errors in Green's comparison and evaluation of the latent and known fingerprints. The impact of the error was determined to be minor because the subject was connected to the crime by the other fingerprints. This error differed from the Mayfield error in that it was a false negative (missed identification), not a false positive (misidentification).

Proficiency Testing. A proficiency test obtained from an independent testing service, Collaborative Testing Services, was administered to the three examiners in June and July 2004. According to the chief of the FBI Laboratory's Quality Assurance and Training Unit, all three examiners passed the proficiency test with no errors.

Training Exercise. The 3 examiners were provided with a training exercise developed internally, which consisted of a simulated case requiring 1,068 fingerprint comparisons. The examiners completed the training exercises in June 2004. All three examiners successfully performed the exercise.

Disciplinary Action. According to the FBI Laboratory Section Chief in charge of the LPU, FBI laboratory management has concluded that no disciplinary action beyond the corrective action described above is required

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<sup>145</sup> For Green and Wieners, the prior cases selected for review included all of the cases in which these examiners had made identifications in the past 5 years, plus a random sampling of cases involving non-identifications, to assure that at least 10 cases were reviewed for each examiner. Because, as supervisors, Green and Wieners performed a limited amount of casework, the reviewers had to go back five years to find a sufficient number of identifications to review. For Massey, the prior cases selected for review included all of the 29 cases that Massey worked on since his hire as a contractor in June 2003.



against Green or Wieners. According to LPU management, the corrective action process and the quality assurance process, both of which are part of the accreditation process, constituted sufficient action against Green and Wieners with respect to the error. Management's review of the error determined that the misidentification was a mistake and not intentional or due to negligence, and therefore disciplinary action was not required. Massey was a contractor and therefore disciplinary action was not possible.

Reaccreditation of the FBI Laboratory by ASCLD/LAB. American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB) requires its accredited laboratories to have written procedures in place for reviewing instances where there are indications of a significant technical problem or where there are concerns regarding the work of an examiner. The LPU corrective action procedures described are intended to comply with this requirement. At the time of the Mayfield fingerprint misidentification, the FBI Laboratory's accreditation was in the process of being renewed. When the fingerprint misidentification was identified, ASCLD/LAB initiated an interim inspection focusing exclusively on the Mayfield fingerprint misidentification and on the corrective actions taken by the FBI in response to the error. On November 23, 2004, the ASCLD/LAB Board of Directors informed the FBI Laboratory that "the Board is satisfied that appropriate corrective actions have been taken with the individuals involved in this matter and that appropriate actions have been taken with regard to the prior work of these individuals." ASCLD/LAB subsequently renewed the FBI Laboratory's accreditation.

The OIG's Evaluation/Analysis of the FBI's Corrective Action. Upon discovery of the error, the FBI quickly moved to implement its corrective action procedures. In some respects, the OIG found that the FBI's corrective action was both comprehensive and timely. For example, the Laboratory quickly implemented a timely review of the examiners' past cases and conducted retraining and proficiency testing.

However, as noted above, the OIG found that the written explanations for the error prepared by the examiners were conclusory and unenlightening as to the causes of the error. We believe that the FBI should have required a more comprehensive explanation of the causes of the error and should have considered using examiners other than those involved in the misidentification to determine and document the causes of the error.

The OIG also reviewed the Laboratory's determination that no discipline of the examiners was required beyond the corrective actions described in this chapter. An assessment of the FBI Laboratory's decision not to impose disciplinary action on Green or Wieners requires a specific review of the performance of these individuals with respect to the examination of LFP 17. As detailed above, we determined that the misidentification of LFP 17 resulted

initially from the unusual similarity between some friction ridge details on Mayfield's finger and some details on Daoud's finger that were imperfectly reproduced in the latent fingerprint, but the examiners made several significant mistakes and failed to apply principles of latent fingerprint identification that could have prevented the error. However, we did not find evidence that any examiner in the Laboratory committed intentional misconduct.

Moreover, although the methodological errors described in Chapter Four represent, in part, performance deficiencies attributable to Green, Massey and Wieners, we did not find any conduct by these examiners that specifically violated explicit FBI Laboratory SOPs or policies. As noted above, some important principles of latent fingerprint examination that are described in the relevant literature are not spelled out with any specificity in the SOPs or related SWGFAST Standards. We cannot state with certainty that other examiners in the FBI Laboratory, acting in compliance with existing Laboratory policies and procedures, would not have made the same error. Imposing discipline on Green and Wieners would, to some extent, unfairly single them out for actions that we believe were consistent with the Laboratory's prevailing practices at the time.

However, as discussed above, we believe that the examiners made significant errors that were partly the cause of the identification. The FBI Laboratory told the OIG that it assessed the performance of Green and Wieners in late August and early September 2004 and issued a rating of "Does Not Meet Expectations" for both employees based on the misidentification of LFP 17. We address the individual performances of the three FBI examiners involved in the misidentification of LFP 17 in turn below.

Green. As the original examiner, Green was responsible for conducting the IAFIS search and the ACE-V examination of LFP 17. We found that Green's IAFIS search of LFP 17 was competent. Indeed, as noted above, Green's initial interpretation of ambiguous features in the fingerprint for the purpose of encoding the print for an IAFIS search later proved to be highly accurate when the known prints of Daoud were discovered. Green's encoding was designed to induce IAFIS to locate the closest possible matches to LFP 17 from over 470 million prints within the FBI's databases. The fact that IAFIS found a confusing similar non-match (Mayfield) actually reflected a successful effort at encoding the print.

Green was responsible, however, for conducting the detailed comparison of LFP 17 to Mayfield's prints, and he was the examiner who initially committed the methodological errors described in Chapter Four, such as applying circular reasoning, accepting explanations for differences in appearance with insufficient support, and relying on ambiguous Level 3 details. These errors did not specifically violate FBI procedures and did not represent intentional

misconduct. The FBI conducted a performance assessment of Green, as described above, and we agree that no further discipline of Green is warranted in this case.

We were troubled by the fact that Green not only misidentified Mayfield's fingerprint, but also was subsequently found to have made an error on a previous case. Although the error relating to the prior case was not significant on its own, its occurrence in combination with the Mayfield misidentification should raise a red flag for Laboratory management. As noted above, the technical review covered all of Green's casework over the past five years. Green made identifications in seven cases during that period. This means that, including the Mayfield case, Green made errors in two of eight cases in which he made identifications. Accordingly, we believe that the FBI should consider whether Green should perform any future casework. We note that under Green's current assignment within the LPU's reorganized structure he is no longer responsible for casework. He now serves in the Technology Development and Support Group, which is responsible for managing the IAFIS program, including conducting research of IAFIS technology and other automated programs, providing training of IAFIS and other programs, and providing operational support to the LPU. Given Green's expertise in using IAFIS, which was demonstrated in this case, we believe that his current assignment is not inappropriate.

Massey. As verifying examiner in this case, Massey was required to conduct a complete and independent ACE-V examination. Because there was no requirement that the steps of the examination be documented, and Massey declined to be interviewed, we could not specifically determine whether Massey fulfilled this requirement. The available evidence, consisting of the statements of other examiners in the FBI Laboratory, indicates that Massey was a meticulous examiner and there is no evidence that he "rubber stamped" Green's conclusion identifying Mayfield as the source of LFP 17. We therefore believe that it is likely that Massey committed similar methodological errors to those committed by Green and have no reason to believe the error resulted from intentional misconduct. In any event, Massey retired as an FBI employee and his status as a contract examiner was not renewed, so the issue of disciplining Massey is moot.

Wieners. There was no FBI Laboratory SOP or other policy that required Wieners, as Unit Chief, to verify the identification of LFP 17. However, Wieners told the OIG that he reviewed the identification at the time it was made and discussed it with Green and Massey. In addition, Wieners reviewed the identification again in preparation for the April 22 meeting with the SNP. He was emphatic in accepting responsibility for the misidentification.

We found that Wieners did not, and was not required to, conduct a complete and independent ACE-V examination of LFP 17. Therefore, his role in the methodological errors that contributed to the misidentification of LFP 17 was lesser than those of Green and Massey. Nevertheless, in reviewing the identification with Green and Massey, Wieners had an opportunity to determine, among other things, whether there was adequate support for the explanations that Green and Massey adopted for the differences in appearance between LFP 17 and the Mayfield print. Indeed, Wieners told us that one of those differences gave him “heartburn from the get-go.” We found that, like Green and probably Massey, Wieners did not apply a sufficiently stringent standard of certainty for these explanations. Wieners was also aware of the use of Level 3 detail in making the identification (having used those details to explain the identification to the SNP), and therefore made the same errors that Green did in relying on such details in a print of dubious clarity. Wieners’ errors, like Green’s, did not specifically violate FBI procedures and did not represent intentional misconduct. The FBI conducted a performance assessment of Wieners, as described above, and we agree that no further discipline of Wieners is warranted in this case. We also note that Wieners played a commendable role in recognizing the error after the SNP identified Daoud and in alerting the United States Attorney’s Office of his concerns with the original identification quickly thereafter.

## **V. Conclusions Regarding the FBI Laboratory’s Responses**

The OIG found that the FBI Laboratory has taken many significant steps in response to the discovery of the misidentification of LFP 17. We concur with many of the reforms that the Laboratory intends to implement, particularly with respect to the development of more objective criteria for declaring identifications, revision of the SOPs to provide greater detail and more specific procedures, and establishment of meaningful minimum documentation requirements for identifications. In addition, we recommend that the FBI Laboratory consider the following additional steps.

1. Research The FBI Laboratory should consider shifting at least some of the emphasis on planned research of Level 3 detail from the issue of permanence to the issue of reproducibility, and defining the circumstances under which Level 3 detail should be utilized.

2. Explanations for Differences The Laboratory’s SOPs should be revised to explicitly require that the examiner must achieve a degree of certainty with respect to each “explanation for differences” that is consistent with, and equivalent to, the stringent standard of certainty required for the conclusion of identification.

3. Use of Level 3 Detail The SOPs should be revised to define the circumstances under which the clarity of a latent fingerprint is sufficient to support the utilization of Level 3 details to effect the individualization. The SOPs should also require that the examiner consult all versions of the available known prints of the subject to determine whether any Level 3 details utilized to support the identification are reliably and repeatably reproduced. The SOPs should require that the examiner apply “fair reasoning” in utilizing Level 3 details that support the identification but explaining those which do not as mere distortions, so as to avoid “cherry-picking” of selected supporting Level 3 details.

4. Disagreements by other Laboratories The SOPs or other Laboratory policies should be revised to address the circumstances under which a different forensic laboratory disagrees with an identification decision by the FBI Laboratory to ensure that the reasons for the disagreement are fully understood before the FBI Laboratory ratifies its initial conclusion. In such cases the Laboratory should assign new examiners to conduct a complete ACE-V examination.

5. Use of “Inconclusive” Conclusion The Laboratory should revise the LPU SOPs to clarify that an “inconclusive” conclusion is available to examiners in cases in which the latent fingerprint is deemed “suitable for comparison” but the examiner is unable to achieve adequate certainty, either as to the quantity and quality of detail in agreement or as to the sufficiency of his explanations for differences.

6. Documentation of Analysis Phase The Laboratory should require documentation of the features and “red flags” observed during the analysis phase of the ACE-V process, including recording the location and type (if known) of the features perceived at that phase. Documentation of the analysis phase will help prevent “circular reasoning” of the type that contributed to the misidentification of LFP 17.

7. Blind Verifications The Laboratory should consider an alternative process for blind verifications to the one recommended by the Latent Review Teams. We believe that a better solution would be to submit decoy non-identifications (latent fingerprints that do not match the exemplar) in a small percentage of all verifications, so that for any comparison the verifier is aware of the possibility that no identification has previously been made.

8. Blind Verifications To assure independence and objectivity in the verification process, the examiner who made the initial identification should not be involved in selecting the decoy prints or challenging non-identifications for use in the blind verification package.

9. Second Verifications The Laboratory should consider requiring a second independent verification for those cases in which there is only one latent print identified to a subject and the subject was identified as the result of an IAFIS search.

10. Refused Verifications The Laboratory should consider an alternative to treating refused verifications as potential errors requiring dispute resolution. Instead, the LPU could respond to such rare cases by requiring a full examination and verification by different examiners not previously involved with that identification.

11. Reexamination of Prior Identifications The Laboratory should consider a broader category of prior IAFIS identifications for reexamination. Specifically, we recommend that the Laboratory consider a review of prior cases in which the identification of a criminal suspect was made on the basis of only one latent fingerprint searched through IAFIS.

12. Corrective Action Procedures The Laboratory should revise its corrective action procedures to require more comprehensive analysis and meaningful documentation of the causes of any errors. The Laboratory should consider using examiners other than those involved in the misidentification to determine and document the causes of the error.

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**CHAPTER SIX**  
**OFFICE OF THE INSPECTOR GENERAL'S ANALYSIS OF THE**  
**INVESTIGATION, ARREST, AND CONFINEMENT OF MAYFIELD**

This chapter of the report analyzes the FBI's investigation and subsequent arrest of Mayfield after the FBI Laboratory concluded that Mayfield's fingerprint was on the evidence linked to the Madrid train bombings. As described in Chapter Two, the FBI conducted electronic surveillance and physical searches during the Mayfield investigation pursuant to the Foreign Intelligence Surveillance Act of 1978 (FISA), 50 U.S.C. § 1801 et seq., and, along with the Portland United States Attorney's Office (U.S. Attorney's Office), obtained a material witness arrest warrant for Mayfield. In this chapter, we examine the FBI's use of FISA to conduct electronic surveillance and physical searches. We specifically assess the impact of the Patriot Act on the FBI's use of FISA in the Mayfield case and on other aspects of the investigation of Mayfield. We also examine the role of Mayfield's religion in the investigation and the representations made by the FBI in seeking a material witness and criminal search warrants. In addition, we discuss the problems the FBI encountered in conducting the surveillance and searches. We also examine the affect of the media leaks in Mayfield's arrest. Finally, we address the conditions under which Mayfield was confined as a material witness.

**I. Analysis of the FBI's Use of FISA and the Patriot Act**

An issue that has received much public discussion in connection with the Mayfield investigation is whether the FBI used any provisions of the Patriot Act in conducting the FISA surveillance and searches.<sup>146</sup> To address this issue, in this section we summarize the pertinent Patriot Act provisions and our analysis of whether, and how, these provisions affected the surveillance and searches conducted by the FBI in the Mayfield investigation. We also discuss the impact of the Patriot Act on the FBI's use of National Security Letters (NSLs) to gather information about Mayfield. Finally, we discuss how the Patriot Act amendments affected the sharing of information gathered about Mayfield between government criminal and intelligence personnel.

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<sup>146</sup> After the terrorist attacks of September 11, 2001, Congress passed the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (the Patriot Act), which significantly amended some of FISA's provisions.



## **A. The Impact of the Patriot Act Amendments on the FISA Surveillance and Searches of Mayfield**

In this section, we discuss Sections 218 and 504 of the Patriot Act, the amendments to FISA that removed barriers separating criminal and intelligence investigations. We examine whether those amendments affected the government's decision to seek FISA authority to conduct covert searches and surveillance of Mayfield. We then evaluate whether, in conducting the covert surveillance and searches, the government made use of other Patriot Act provisions. Those include provisions affecting the time limits for electronic searches and surveillance, the standards for obtaining pen register and trap and trace information, authorization for "roving wiretaps" under FISA, and provisions authorizing delayed notification of the execution of criminal search warrants (sometimes referred to as "sneak and peek" searches).

### **1. Sections 218 and 504 of the Patriot Act**

#### **a. The "Primary Purpose" test and the "Wall"**

When originally enacted in 1978, FISA required a certification that "the purpose" of the requested surveillance was to gather foreign intelligence information. Although Congress anticipated that evidence of criminal conduct uncovered during FISA surveillance would be provided to criminal investigators, the statute did not specify the circumstances under which such information would be made available to them for use in a criminal investigation. As a result, in interpreting FISA, the Department of Justice (DOJ) and courts applied the "primary purpose" test. This allowed the use of FISA information in a criminal case, but only if the primary purpose of the FISA surveillance or search was to collect foreign intelligence information, rather than to conduct a criminal investigation. See *United States v. Troung Dinh Hung*, 629 F.2d 908 (4<sup>th</sup> Cir. 1980); *United States v. Johnson*, 952 F.2d 565 (1<sup>st</sup> Cir. 1991), cert. denied, 506 U.S. 816 (1992). In addition, the FISA Court could reject an application for a FISA warrant because of concerns that the government's purpose for seeking the warrant was for use in a criminal case rather than collecting foreign intelligence.<sup>147</sup>

The underlying rationale for the "primary purpose" test related to the standards of proof the government must meet in order to obtain permission to conduct surveillance. These standards are different in a FISA case than in a

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<sup>147</sup> For a description of the requirements of FISA and how they were interpreted by the Department of Justice and the courts prior to the Patriot Act, see the OIG's report entitled "Review of the FBI's Handling of Intelligence Information Related to the September 11 Attacks," (OIG's 9/11 Report) at pages 44-53.

criminal case. For example, to obtain authority for FISA surveillance of a particular telephone line, the government must show probable cause to believe that the target is an agent of a foreign power and that the target uses that telephone line to communicate. 50 U.S.C. § 1805(a)(3). In contrast, in a criminal case the government must show that there is probable cause to believe that an individual is committing, has committed, or is about to commit a particular criminal offense specified by statute and that particular communications about that offense will be obtained through the interception. 18 U.S.C. § 2511.

The interpretation and implementation by the courts and the Department of Justice of the “primary purpose” test had the effect of limiting coordination and information sharing between foreign intelligence and criminal law enforcement personnel. Because the courts evaluated the government’s purpose for using FISA partly by examining the nature and extent of coordination between intelligence and law enforcement officials, the more coordination that occurred, the more likely that courts would find that law enforcement, rather than foreign intelligence, was the primary purpose of the requested surveillance or search. Beginning in the 1980s, the Department of Justice developed procedures that limited the circumstances under which information from intelligence investigations could be shared with criminal prosecutors and criminal law enforcement personnel. As a result, a “wall” developed between Department intelligence personnel and criminal personnel that limited information sharing. In addition, while pre-Patriot Act FISA-derived information could be shared freely with foreign intelligence agencies such as the Central Intelligence Agency (CIA) and the National Security Agency (NSA), that same information could not be shared with criminal law enforcement officials without consultation and approval from senior officials in the Department of Justice. As described below, Sections 218 and 504 of the Patriot Act now allow the sharing of that information without prior approval.<sup>148</sup>

**b. How Sections 218 and 504 of the Patriot Act facilitated the removal of the “wall”**

Section 218 of the Patriot Act amended FISA to replace the phrase “the purpose” with the phrase “a significant purpose.” Accordingly, the government can now obtain a FISA warrant by showing that the collection of foreign intelligence information is a “significant purpose” of the investigation rather than the “primary purpose” as under the previous standard. In addition, Section 504 of the Patriot Act amended FISA to specify that intelligence

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<sup>148</sup> For a more extensive discussion of the development and effect of “the wall” on pre-Patriot Act information sharing, see pages 21-44 of the OIG’s 9/11 Report.

investigators conducting FISA surveillance or searches may consult with criminal investigators to coordinate efforts to investigate or protect against international terrorism.

These amendments to FISA eliminated the need for courts to compare the relative weight of foreign intelligence versus criminal law enforcement purposes, which has allowed for more coordination and sharing of information between intelligence officials and law enforcement officials and an increase in the use of FISA warrants. Before the passage of the Patriot Act, law enforcement officials had to determine whether to seek FISA authority to gather intelligence (which could make it difficult to later pursue a criminal case), or forgo the use of FISA in order to best preserve the potential for a criminal prosecution. Sections 218 and 504 eliminated the need for law enforcement officials to make a choice at the outset of a case which presents both intelligence and criminal aspects.

**c. Effects of Sections 218 and 504 on the decision to seek FISA searches and surveillance in the Mayfield case**

We attempted to determine whether these Patriot Act amendments affected the Mayfield investigation. In particular, we sought to determine whether, prior to the enactment of the Patriot Act, the government likely would have used FISA to conduct covert searches and surveillance of Mayfield. In addition, we evaluated whether the government could have obtained identical FISA authority under the more rigorous pre-Patriot Act primary purpose standard. Because of Section 218 of the Patriot Act, the government did not have to certify that intelligence gathering was “the purpose” of the investigation. Instead, the FISA application submitted in the Mayfield investigation contained a certification that a “significant purpose” of the requested surveillance and searches was to obtain foreign intelligence information.

In reviewing these issues, we interviewed witnesses from the FBI and Office of Intelligence Policy and Review (OIPR) who worked on the Mayfield matter and had both pre-Patriot Act and post-Patriot Act experience. All these witnesses stated that even in a pre-Patriot Act environment in which “the wall” was still in place, the government would have treated the Mayfield matter at the outset primarily as an intelligence case rather than a criminal case.

For example, the OIPR Attorney, who assisted in the preparation of the emergency FISA application and the subsequent written FISA application in the Mayfield case, told us that the Mayfield fingerprint match and its nexus to the Madrid bombings was an extremely “disconcerting piece of information and you would want to gather intelligence to find out what [Mayfield] was doing in the

United States, who he was talking to and what he was saying, who his contacts were.” The OIPR Attorney said that the Mayfield matter was a classic intelligence-gathering case and that a FISA warrant was the best tool for obtaining intelligence both before and after the Patriot Act.

FBI officials held the same view. Arthur Cummings, the FBI Section Chief of International Terrorism Operations Section I (ITOS I), stated that the principal objective of the Mayfield investigation initially was to gather as much information as possible to determine if Mayfield was a threat to the United States. He said that the FBI would have proceeded with a FISA application even if the Patriot Act had not been enacted. Similarly, Gary Bald, Assistant Director for the Counterterrorism Division (CTD) and now the Executive Assistant Director, said that the FBI was trying to determine who Mayfield was, whether he had any associates, and whether there would be any subsequent terrorist attacks in the United States. The Portland SSA who headed the Portland investigation stated that she believed the government would have proceeded with the FISA application and would have initiated a parallel criminal investigation separated from the intelligence investigation by “the wall.” All of the witnesses stated that the primary purpose at the outset of the Mayfield investigation was to collect foreign intelligence information and that the prospect of criminal prosecution of Mayfield was incidental.

In addition, some of the witnesses expressed doubts that the government could have obtained the electronic surveillance information they sought had it attempted to use traditional criminal investigative tools. Cummings told the OIG that he did not believe the FBI could have obtained criminal wiretap authority at the time the Mayfield FISA application was submitted, because he did not think the government “could show a criminal violation” by Mayfield. The Continental United States 4 (CONUS 4) SSA also told the OIG that he did not believe that the government had sufficient probable cause to obtain a criminal wiretap on Mayfield’s telephones because he did not think the FBI had probable cause to prove that Mayfield was using a particular telephone line in facilitation of a crime. However, the OIPR Attorney disagreed, stating that given the gravity of the Madrid bombings and the fingerprint identification of Mayfield, he believed the government could have obtained a criminal wiretap.

In addition, these witnesses pointed out that the information obtained through FISA warrants remains classified, while information obtained pursuant to a criminal wiretap must eventually be disclosed to the defendant. They stated that as a result, they believed FISA was the best tool for the government to identify and disrupt any future planned terrorist acts in the United States.

Based on our interviews and review of the evidence known to the FBI when it made the decision to seek emergency FISA authority, we believe that the government likely would have proceeded with a FISA application even before Sections 218 and 504 of the Patriot Act facilitated the removal of “the wall.” [REDACTED]

[REDACTED] Given the devastating impact of the Madrid train bombings and the uncertainty whether Mayfield might be part of a plan to conduct similar terrorist acts within the United States, the FBI’s need for intelligence information to help identify and disrupt any potential plot would have led the FBI to seek a FISA warrant rather than a criminal warrant. In our view, therefore, Sections 218 and 504 did not affect the government’s decision to pursue FISA search and surveillance authority in this matter. Further, we believe that the government could have met the primary purpose standard that existed before the Patriot Act.

In sum, we concluded that, while the wording of the FISA application was affected by Sections 218 and 504, those sections did not affect the government’s decision or ability to seek a FISA warrant in the Mayfield case.

However, both Section 218 and 504 of the Patriot Act drastically altered the way in which FISA-derived information was used and shared once it was obtained. We discuss the Patriot Act’s effect on information sharing in this case in Section C, below.

## **2. Section 207 of the Patriot Act**

Section 207 of the Patriot Act caused a change in the language of the FISA order but, in our view did not affect the manner in which the Mayfield investigation was conducted.

Prior to passage of the Patriot Act, the FISA Court could issue an order authorizing law enforcement agents to conduct electronic surveillance of United States persons for an initial period of 90 days, with extensions for additional 90-day periods based on renewal applications by the government. The FISA Court could also authorize physical searches of any agent of a foreign power for initial periods of 45 days, with extensions for additional 45-day periods. According to the OIPR Attorney, due to the difference in time limits, OIPR often had to seek renewal of FISA physical search authority before the expiration of electronic surveillance authority in the same case, and then file a separate application for renewal of the electronic surveillance authority.



#### 4. Section 213 of the Patriot Act

Section 213 of the Patriot Act authorized delayed notification of the execution of criminal search warrants, which are sometimes referred to colloquially as “sneak and peek” searches. There has been much public discussion concerning whether Mayfield was the subject of such searches.

Criminal search warrants typically require law enforcement officials to immediately notify an individual whose home or office has been searched. However, federal courts can permit delayed notification of the execution of a criminal search warrant if immediate notification would cause the suspect to flee, destroy evidence, or otherwise compromise an ongoing investigation. *Katz v. United States*, 389 U.S. 347 (1967); *United States v. Pangburn*, 983 F.2d 449 (2d Cir.1993).

Section 213 of the Patriot Act authorized delayed notification of the execution of criminal search warrants in cases where the government can show that notice of the search would create an “adverse result.”<sup>150</sup> By doing so, Section 213 essentially extended the availability of delayed notice criminal search warrants in any federal court in all types of cases, including terrorism investigations.

However, we found that there were no delayed-notice criminal searches conducted in the Mayfield investigation. As described in Chapter Two, the government conducted covert physical searches of Mayfield’s home and office, but the covert searches were conducted pursuant to a FISA warrant, not pursuant to criminal search warrants.

The searches conducted by the FBI of Mayfield’s office, home, and vehicles on May 6, after his arrest, were conducted pursuant to traditional criminal search warrants. Mayfield or Mayfield’s wife received immediate notification of those searches. The government did not seek or obtain authority under Section 213 of the Patriot Act to delay notification of those searches. In sum, Section 213 of the Patriot Act, which allows for delayed notification searches, had no bearing on the searches conducted in this case.<sup>151</sup>

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<sup>150</sup> According to 18 U.S.C. § 2705(a)(2), an adverse result includes, among other things, flight from prosecution, the destruction of or tampering with evidence, or the intimidation of a witness.

<sup>151</sup> On March 24, 2005, the DOJ Civil Division notified Mayfield’s counsel by letter that Mayfield’s residence had been subject to FISA-authorized physical searches. The letter also stated that Mayfield was the target of other FISA-authorized surveillance and searches, but did not offer any details regarding the additional FISA surveillance and searches.





[REDACTED]  
[REDACTED]  
[REDACTED] Therefore, Section 214 of the Patriot Act had no bearing on the Mayfield investigation.

**B. The Impact of the Patriot Act Amendments on the Use of National Security Letters in the Mayfield Investigation**

The FBI issued [REDACTED] National Security Letters (NSLs) in the Mayfield case requesting [REDACTED]. Pursuant to 18 U.S.C. § 2709, 12 U.S.C. § 3414, and 15 U.S.C. § 1681, the FBI can issue NSLs in intelligence cases to obtain telephone toll and transactional records and certain financial information.

Section 505 of the Patriot Act amended the certification requirements for issuing NSLs. Prior to the Patriot Act, the FBI could issue NSLs only upon the certification of high-level officials at FBI Headquarters. The certification had to specify that there were specific and articulable facts giving reason to believe that the information sought pertained to a foreign power or agent of a foreign power. Section 505 of the Patriot Act amended these provisions in two ways. First, Special Agents in Charge (SAC) of FBI field divisions may now certify NSLs. In addition, the certification requirement has been relaxed. The SAC need only specify that the information sought is "relevant" to an authorized investigation to protect against international terrorism. Thus, there is no longer any requirement that the FBI certify that the information sought pertains to a particular target of an investigation.

The FBI issued [REDACTED] NSLs in the Mayfield investigation to obtain [REDACTED]. All of the NSLs were certified by the Portland Division SAC, who used the lower certification standard under the Patriot Act amendment.

The Portland SSA said that even though the Patriot Act made it easier to obtain NSLs, she thought the FBI would have issued most of the NSLs in this case under the pre-Patriot Act standard because: [REDACTED]



information between criminal and intelligence officers in the investigation. For example, the Portland SSA told us that the Patriot Act allowed “a free flow of information” between the FBI and the U.S. Attorney’s Office. She said that members of the Portland-based Joint Terrorism Task Force (JTTF) were so “embedded” in the investigation that they were privy to most of the information being discovered through the use of FISA in the Mayfield investigation.<sup>153</sup> The Portland SSA said that FBI agents freely discussed with the U.S. Attorney’s Office and JTTF members pertinent information contained in Mayfield [REDACTED] [REDACTED] monitored pursuant to the FISA order.<sup>154</sup> The CONUS 4 analyst and others who worked on this matter confirmed that the Patriot Act made it much easier to share FISA information in the Mayfield investigation with law enforcement agents.

We inquired whether, before the Patriot Act, the FBI would have disclosed all of the FISA-derived information that it provided in this case to criminal prosecutors and investigators. The Portland SSA told us that she believed the FBI would have opened concurrent criminal and intelligence investigations separated by “the wall” prior to the Patriot Act. She said that although she would have sought to pass some information over “the wall” in that circumstance, the extent of information sharing would not have been as great as occurred in this case. The Portland SSA said, for example, that if the FBI had obtained information from the FISA that was significant to the criminal investigation, she would have sought permission to pass that information over “the wall” but she could not say whether permission would have been granted.

The Portland SSA also said that the daily discussions of information with the prosecutors and the JTTF members that occurred in this case would not have occurred before the Patriot Act dismantled “the wall.” She said the prosecutors and criminal investigators would not have been embedded in the investigation and would not have been privy to all of the pertinent FISA information as they were in this case.

We concluded that the Patriot Act amendments had the effect of greatly increasing the amount of intelligence information in the Mayfield matter that was shared with criminal prosecutors and investigators.

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<sup>153</sup> The JTTF is composed of representatives from approximately 20 federal, state, and local law enforcement agencies, such as the U.S. Secret Service, the U.S. Coast Guard, and the Oregon State Police.

<sup>154</sup> The Portland SSA said, however, that due to concern over leaks, the JTTF members were instructed not to share the information with their respective agencies.

In addition to expanding the amount of information that could be shared by intelligence officials with criminal investigators, the Patriot Act also made it easier for the FBI to share certain criminal grand jury information in the Mayfield investigation with other intelligence agencies. Section 203 of the Patriot Act amended Federal Rule of Criminal Procedure 6(e) to permit the disclosure of federal grand jury information involving intelligence information to any federal law enforcement, intelligence, protective, immigration, national defense, or national security official in order to assist that official in the performance of their duties. Prior to this amendment, the sharing of grand jury information was more strictly limited. Rule 6(e) was generally interpreted to prohibit federal prosecutors from disclosing grand jury information to intelligence and national defense officials unless those officials were themselves assisting the criminal investigation. Fed. R. Crim. P. 6(e)(3)(B); *United States v. Sells Engineering*, 463 U.S. 418 (1983).

In the Mayfield investigation, the government used numerous grand jury subpoenas to obtain relevant information about Mayfield. According to court documents filed by the Portland U.S. Attorney's Office, grand jury information relating to Mayfield was disclosed or could have been disclosed to the CIA, the National Security Council, the Department of Defense, the Department of Homeland Security, the Department of the Treasury, and the NSA. Prior to the Patriot Act, such grand jury information could not have been shared with officials in those agencies unless they were participating in the criminal investigation.

Thus, Section 203 affected the amount of information the FBI was able to share with intelligence agencies in this case. For example, we reviewed the summary case reports that the FBI shared with ██████ in this matter. Although most of the information the FBI included in those reports was FISA-derived, the FBI also included some information obtained through grand jury subpoenas.

However, both before and after the Patriot Act, the FBI could share with the intelligence community information obtained through FISA and other intelligence tools such as NSLs and *ex parte* court orders for business records.<sup>155</sup> The Portland SSA stated that, with limited exceptions, she believed that most of the grand jury information in this case could have been obtained

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<sup>155</sup> Prior to the Patriot Act, pursuant to 50 U.S.C. § 1862, the FBI could apply to the FISA Court in foreign intelligence cases for an order requiring production of business records such as common carrier travel records and hotel records. In order to obtain such an order, the FBI had to show that the records were sought for a foreign intelligence investigation and that the records pertained to an agent of a foreign power. Section 215 of the Patriot Act amended this provision, but the amendments are not relevant here because the FBI did not seek *ex parte* court orders for business records in this case.



[REDACTED]

Lead Case Agent 2 was responsible for ensuring that the minimization procedures were followed. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

156 [REDACTED]

157 [REDACTED]

[REDACTED]

[REDACTED]

**E.    OIG Conclusions Regarding Impact of Patriot Act Amendments on the Mayfield Investigation**

In sum, we concluded that the Patriot Act amendments discussed above did not affect the government’s decision to seek FISA authority in this case, and did not affect the scope of information the government collected pursuant to FISA surveillance and searches. However, the Patriot Act had a significant effect on the dissemination of intelligence information about Mayfield throughout the law enforcement community. The Patriot Act allowed the government to freely share with prosecutors and JTTF members intelligence information about Mayfield gathered in the FISA surveillance and searches. The Patriot Act also allowed the government to share grand jury information with the intelligence community, some of which could not have been obtained or shared prior to the Patriot Act through intelligence tools. Thus, a significant amount of information about Mayfield was shared with a wide variety of law enforcement agents and intelligence agents that could not have been shared prior to the Patriot Act.

This increased sharing of information that took place between intelligence and criminal law enforcement personnel in this case was exactly what was intended by the amendments to the Patriot Act. The Patriot Act was designed to remove barriers to the coordination of intelligence and criminal investigations. The FBI used these new tools to aggressively pursue leads

when it believed that Mayfield was linked to a terrorist attack through a fingerprint. While such actions seem appropriate given the fingerprint identification, this case also demonstrates that, as a result of the increased information sharing now allowed by Patriot Act, the consequences of a mistake like the one made in the Mayfield case have increased.

Finally, we did not find any evidence that the FBI misused any provisions of the Patriot Act in conducting the investigation of Mayfield. [REDACTED]

[REDACTED], such as Section 206 (roving wiretaps), Section 213 (delayed notification searches), Section 214 (pen registers), and Section 215 (ex parte court orders for tangible things). While in this case the FBI relied on the Patriot Act amendments that affected the standard for obtaining a FISA warrant (Section 218), the certification requirement for obtaining NSLs (Section 505), and the amendments that allowed for increased sharing of intelligence information (Sections 203, 218, and 504), given its belief that Mayfield's fingerprints were on the plastic bag containing detonators found in Madrid, we did not find evidence to conclude that the FBI abused those provisions.

## **II. Analysis of the Role of Mayfield's Religion in the Investigation**

Another important issue raised in the wake of the Mayfield investigation is whether Mayfield was "targeted" because of his religion. To examine this issue, the OIG evaluated whether Mayfield's religion improperly influenced the FBI's actions in the investigation and arrest of Mayfield.

We concluded that the FBI did not initiate its investigation of Mayfield because of his religion. As described in Chapter Four, the FBI Laboratory examiners did not know Mayfield's religion when they made the initial fingerprint identification. Similarly, when the fingerprint identification was communicated to the FBI CTD and the Portland Division, neither entity was given information about Mayfield's religion. The evidence indicates that the FBI first learned of Mayfield's religion only after the FBI had opened a field investigation of Mayfield and had initiated a "full court press" to gather all intelligence available on him. Thus, we concluded that Mayfield's religion played no role in the FBI's decision to initiate a full field investigation of him.

In addition, every witness we interviewed concerning the FBI's investigation of Mayfield told us that the fingerprint identification was the primary factor driving the course of the investigation. For example, the Portland SSA said the fingerprint was the "crucial piece of evidence." The CONUS 4 SSA concurred, stating that "everything else was secondary." The



ITOS I Assistant Section Chief said the fingerprint identification was the primary impetus for the investigation of Mayfield.

Several witnesses acknowledged, however, that Mayfield's religion was a factor in the investigation. The FBI had been informed that the SNP believed the Madrid bombings had been carried out by radical Muslims. Thus, several witnesses stated that they expected to discover in investigating the case that the suspects would be Muslim. A Portland Assistant United States Attorney called Mayfield's religion a "mildly corroborating factor." The CONUS 4 analyst said that Mayfield's religion "bolstered" the fingerprint identification, and added that it would have been "puzzling" if the FBI Laboratory Latent Print Units (LPU) had identified someone who was not Muslim. Karin Immergut, the U.S. Attorney for the District of Oregon, likewise stated in her interview that, "I think the fact that he was a Muslim convert couldn't be ignored."

However, witnesses also said that although Mayfield's religion was considered a factor, it was not an "overriding" factor and it did not affect the course of the investigation. For example, the Portland SSA told us that the goal of her squad was to find out how Mayfield's fingerprint got on the bag of detonators, and that her squad would have "followed [Mayfield] just as hard if he had been a Christian." She said the Portland Division would not have done anything differently if Mayfield was not a Muslim. Similarly, the ITOS I Assistant Section Chief told us that if the fingerprint had been matched to a "librarian in Iowa," the FBI would have conducted an investigation to see where the librarian "fit in." The CONUS 4 analyst said that if the FBI LPU had identified someone who was not Muslim, they still would have had to "run it down."

Several witnesses said Mayfield's religion was not a factor in the investigation, but that his association with suspected terrorists was. The Portland SSA said Mayfield's associations with people the FBI viewed as potential terrorists were more important than his religion. ITOS I Section Chief Cummings said that what concerned the FBI about Mayfield were his associations with other Muslims who were considered to be extremists by the FBI. Similarly, the CONUS 4 SSA told us that Mayfield's telephone contact with suspected terrorists was a factor in the investigation and that "Mayfield being a Muslim was not."<sup>158</sup>

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<sup>158</sup> The CONUS 4 SSA served as the FBI declarant on the declaration submitted in support of the [REDACTED] FISA application. [REDACTED]

For his part, Mayfield's attorneys have alleged in the civil suit that the government submitted an inflammatory, demonizing, and prejudicial affidavit in support of Mayfield's arrest that made reference to his religion or his contacts with other Muslims. Paragraphs 13 and 14 of the affidavit detail Jeffrey Leon Battle's conviction on federal terrorism charges and Mayfield's legal representation of Battle in an unrelated matter. Paragraphs 15-18 of the affidavit detail Mayfield's telephone contacts with Pete Seda, also known as Perouz Sedaghaty, then Director of the U.S. offices of the Al-Haramain Islamic Foundation (AHIF). According to the affidavit, six other AHIF offices had been designated as terrorist organizations by the U.S. Department of the Treasury. Paragraph 19 of the affidavit states that Mayfield was observed "[driving] to the Bilal mosque ... on several occasions." Paragraph 20 states that Mayfield had placed an advertisement for his law office in a publication called "Business Link Directory" and that the registered agent of the company that administered the directory had past business dealings with an individual alleged to be the personal secretary to Usama Bin Laden and had been convicted in connection with the 1998 U.S. Embassy bombings in Kenya and Tanzania.

These paragraphs were included in the affidavit not because they refer to Mayfield's religion but rather because they outline Mayfield's connections with others who were either known or suspected terrorists. As described above, the affidavit outlines Mayfield's connection with Battle, a convicted terrorist; Mayfield's telephone contacts with Sedaghaty, the director of a organization with offices designated by the U.S. government as terrorist organizations; and an advertisement placed by Mayfield in a directory administered by an individual linked in past business dealings to another individual convicted of bombing a U.S. Embassy (and a known associate of Usama Bin Laden).

With respect to paragraph 19, Immergut told us that the fact that Mayfield attended the mosque, standing alone, was not meaningful in the investigation. She said that what was important to the government was the fact that members of the Portland Seven who had pled guilty to terrorism charges had attended the Bilal mosque. She said the government wondered whether there were others in the mosque who were planning "a jihad." When asked why paragraph 19 of the affidavit did not explain the significance of Mayfield's attendance at the Bilal mosque, Immergut acknowledged that "we could have clarified why this was a more significant point." We agree that the government should have explained what it believed to be the significance of Mayfield's attendance at the mosque, rather than simply stating that he attended the mosque.

Based on all the evidence, we concluded that the FBI's field investigation of Mayfield was initiated because of and largely driven by the identification of his fingerprint on evidence associated with the train bombings, not by his

religion. We also believe that the affidavit provided information that the government believed was relevant to the investigation.

We believe the FBI would have sought covert search and surveillance authority irrespective of Mayfield's religion. Moreover, we did not find evidence suggesting that the investigation was prolonged because Mayfield is a Muslim. After the decision to seek covert surveillance and search authority, the FBI's investigation between March 20 and May 6 largely consisted of carrying out the FISA searches and seizures, conducting logical follow-up investigation, and examining the information obtained. By April 19, the government had decided that it would finish reviewing and analyzing the large volume of evidence gathered by the end of May and "if no additional evidence was found" to link Mayfield to the bombings, it would end the covert investigation and seek to interview Mayfield.

In our view, the FBI's field investigation appropriately sought information about a subject who had been positively identified by the FBI Laboratory as having left a fingerprint on a bag of detonators found in Madrid. When the FBI Laboratory continued to declare that the fingerprint was Mayfield's, we do not believe it was unreasonable for the Portland FBI agents to aggressively pursue their investigation.

### **III. The FBI's Participation in the Preparation of the Material Witness and Criminal Search Warrants**

In this section, we evaluate the accuracy of certain representations made by the FBI in the affidavits submitted in support of the material witness warrant and the criminal search warrants. Lead Case Agent 1, the original FBI affiant, Werder, and Supervisory Fingerprint Specialist Green all participated in the preparation of the affidavit submitted to the Court in support of the material witness warrant.

In conducting this assessment, the OIG recognized that the U.S. Attorney's Office and DOJ Criminal Division were involved in the review and approval of the final version of the affidavits and were ultimately responsible for determining how to satisfy the government's ongoing duty of candor.

The OIG is not analyzing whether government attorneys satisfied their duty of candor. Nor is the OIG evaluating the merits of the decision to seek a material witness warrant. The decision to seek a material witness warrant, while clearly supported by Portland Division SAC Robert Jordan, was ultimately made by Chris Wray and David Nahmias, both of the DOJ Criminal Division, with input from U.S. Attorney Karin Immergut. As mentioned earlier,

DOJ Office of Professional Responsibility (OPR) evaluated the attorneys' conduct in this case.

The FBI is responsible, however, for assuring that statements in sworn affidavits regarding information known to its agents and fingerprint examiners are factually accurate, logically supportable, and not misleading. The OIG therefore investigated the FBI's conduct with respect to this responsibility, and we address this issue in this section.

#### **A. Representations Relating to the FBI's Fingerprint Identification**

The FBI described the Laboratory's identification of Latent Fingerprint 17 (LFP 17) in paragraph seven of the affidavit signed by SA Werder and submitted in support of the material witness warrant. This language was initially drafted by the original FBI affiant and AUSA 2 in March 2004. As described in Chapter Two, there were no significant differences between the first draft of this paragraph circulated by AUSA 2 on March 26 and the final version filed with the Court on May 6. The final version states:

On March 17, 2004, the SNP provided the FBI with photographic images of latent fingerprints that were recovered from the plastic bag containing the detonators that was found in the Kangoo van, including Latent Finger Print # 17 (hereinafter LFP#17). All the fingerprints were provided to the Latent Print Unit at the FBI Laboratory in Quantico, Virginia. Senior Fingerprint Examiner Terry Green, submitted LFP#17 into the Automated Fingerprint Identification System (AFIS) for possible matches. BRANDON BIERI MAYFIELD was identified as a potential match to the unknown print. Senior Fingerprint Examiner Green then requested and received two known fingerprint cards of MAYFIELD. The first card contained the known prints of MAYFIELD's obtained in connection with a criminal arrest for burglary in Wichita, Kansas on December 22, 1984. The second fingerprint card contained the known prints of MAYFIELD obtained during his service in the United States Army. Both cards containing the known fingerprints of MAYFIELD were compared to LFP#17 received from Madrid. Senior Fingerprint Examiner Green identified in excess of 15 points of identification during his comparison and has advised the affiant that he considers the match to be a 100% identification of BRANDON BIERI MAYFIELD. The 100% identification was verified by Supervisory Fingerprint Specialist Michael Wieners, Unit Chief, Latent Print Unit, and Fingerprint Examiner John T. Massey, who is a retired FBI fingerprint examiner with over 30 years of experience on contract

with the Latent Fingerprint Section of the FBI Laboratory.  
(Emphasis added.)

The OIG found that the underlined information set forth in this paragraph was inaccurate in several respects. First, although the images of latent prints originated with the SNP, they were provided to the FBI by INTERPOL, not the SNP. Moreover, they were provided on March 13 and 14, not March 17. Also, Green and Wieners told the OIG that Green made the identification on March 16, before he requested the original fingerprint cards from the FBI's Criminal Justice Information Services Division (CJIS), based on a digital image of Mayfield's criminal print available to him at his computer.

In addition, contrary to the affidavits, Wieners did not "verify" the identification, as that term is used in the FBI Laboratory's Standard Operating Procedures (SOPs) and the SWGFAST Methodology. As detailed in Chapter Three, these documents define a verification as an "independent examination by another examiner resulting in the same conclusion." Although Wieners told the OIG that he had "no problem" with the statement that he had verified the identification, Wieners acknowledged that he did not perform a complete and independent examination at the time of the identification. He was not required to do so under the Laboratory's SOPs. The Laboratory's procedures only required verification by a single examiner, who in this case was John T. Massey.

Wieners told the OIG that he studied the print very carefully in the course of preparing for the April 21 meeting in Madrid, at which time he became as familiar with the print as he would have been had he done a complete examination in the time of the identification. However, it does not appear that the statement in the affidavits that Wieners verified the print was made with reference to this activity, since the statement first appeared in a draft of the affidavit circulated on March 26, well before Wieners had seen the April 13 Negativo Report and begun preparing for his trip to Madrid. We concluded that the statement in the affidavits that Wieners "verified" the identification was not accurate.<sup>159</sup>

The OIG concluded that these errors in the affidavits reflect a regrettable inattention to accuracy. AUSA 2 and Lead Case Agent 1 told the OIG that they read the draft language to Green at various stages in the process. Green

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<sup>159</sup> The affidavits also stated incorrectly that Green "advised the affiant" (Werder) that he considered the match to be a 100 percent identification. However, Werder told the OIG that he had not spoken to the Laboratory. This error was likely the result of the late substitution of Werder as the affiant instead of Lead Case Agent 1. Nonetheless, Werder did not catch this error.

confirmed that the original FBI affiant and possibly others read the language to him. Under this circumstance, the OIG concluded that the FBI – probably Green – should have caught and corrected these errors.<sup>160</sup>

## **B. Representations Relating to the SNP**

The FBI described its communications with the SNP regarding the Mayfield identification in paragraph eight of the Werder affidavit. This paragraph states:

In mid-April it became apparent that the preliminary findings of the Forensic Science Division of the SNP concerning the fingerprint were not consistent with those of the FBI Laboratory. As a result, a meeting was held between a representative of the FBI's Latent Fingerprint Unit and approximately ten members of the Forensic Science Division of the SNP, including representatives from both the automatic fingerprint identification section and the latent fingerprint section on April 21, 2004. Before the meeting SNP personnel indicated that their report of the examination of LP#17 was preliminary and that a final determination had not been rendered. The SNP also indicated that they had not gone into the level three characteristics (ridge edges, ridge breaks, pores, and incipient ridge events) utilized by the FBI when making their initial comparison. [REDACTED]

[REDACTED] and indicated that the Forensic Science Division intended to continue its analysis of the latent print comparison. I have been advised that the FBI lab stands by their conclusion of a 100% positive identification that [sic] LFP#17 as the fingerprint of BRANDON BIERI MAYFIELD. (Emphasis added.)

There are several issues with this paragraph, which we discuss below.

Description of the April 13 Negativo Report. The first issue is whether the FBI failed to disclose the fact that on April 13 the SNP issued a report in which it stated that it did not agree with the FBI's identification of Mayfield. As described in Chapter Two, in late April, Lead Case Agent 1 drafted a more detailed version of this paragraph that specifically identified the April 13 Negativo Report and described the FBI's uncertainty regarding whether the

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<sup>160</sup> We concluded that Green's failure to correct the errors in this paragraph of the affidavits did not constitute intentional misconduct. However, we believe that the FBI Laboratory should reiterate to its examiners the importance of ensuring the accuracy of information attributed to them in FBI affidavits. As noted in Chapter Five, Green's current position in the FBI Laboratory does not involve casework.

SNP's finding was equivalent to an "inconclusive" or an "exclusion" determination, and whether the finding was a preliminary or final determination. At the time, the Madrid Legat insisted that this information be removed from the affidavit because it had been provided to the FBI in confidence. The government then substituted the more general language that the SNP's "preliminary findings" were "not consistent" with the FBI's identification. According to contemporaneous e-mail communications between Lead Case Agent 1 and the Madrid Legat, this language was meant to address the Madrid Legat's concern while satisfying the government's obligation to be candid with the Court.

We believe that the change in the language of the affidavit describing the April 13 Negativo Report was not an intentional effort to mislead the judge about the contents of the report, but rather the product of an effort to accommodate the Madrid Legat's concerns about protecting the confidence of his sources in Spain. The OIG notes that the April 13 Negativo Report itself provides at most slightly more detail than the "not consistent" language in the affidavits. The April 13 Negativo Report states that the results of the comparison were "negativo" (negative) without further explanation, and indicates that the SNP would continue its analysis. The final affidavit's characterization of the report as "preliminary" was consistent with the statement in the report that the SNP's examination was continuing and with characterizations of the report provided orally to the FBI by the SNP. The statements in the affidavit that the SNP's findings were "not consistent" with the FBI's identification of Mayfield was an accurate characterization of the "negativo" result contained in the April 13 Negativo Report, even if it did not specifically identify the written report. The OIG concluded that the final affidavit adequately conveyed the relevant information.

Description of the April 21 Meeting. The second issue is whether the FBI accurately described the April 21 meeting in Madrid. Of particular concern is the statement that "[a]t the conclusion of the meeting it was believed that the SNP felt satisfied with the FBI Laboratory's identification of LFP#17." Lead Case Agent 1 told the OIG that he composed this language based on a memorandum the Madrid Legat drafted the day after the meeting, which stated that "at the conclusion of the meeting all of the SNP personnel seemed satisfied with the FBI's identification." This apparently led the judge to erroneously conclude that the SNP had agreed with the FBI's identification. During a hearing on May 17, Judge Jones took issue with Mayfield's attorneys for relying on reports in the newspapers that the SNP disagreed with the FBI, stating, "I have no affidavit from any Spanish authorities as to questioning the

fingerprint. The only information I have is that after consulting with the FBI, that they agreed with the 100 percent identification.”<sup>161</sup>

The OIG interviewed six witnesses who were present at the April 21 meeting in Madrid, including all three FBI representatives (Wieners, the Madrid Legat, and an ETIU SSA) and three SNP participants. The witnesses differed in their specific recollections of the SNP’s reaction to Wieners’ presentation, but all agreed on one key fact: the SNP had not determined or communicated on April 21 that it was in agreement with the FBI that Mayfield was the source of the print. Rather, the SNP agreed to conduct a reexamination of the print in light of the FBI’s presentation.

The Madrid Legat, who served as the translator at the meeting, told the OIG that the SNP only agreed to reexamine the print. He stated that he thought that Wieners’ presentation was very persuasive, and that most of the SNP personnel seemed impressed by it, but that the SNP examiners had not yet agreed with the FBI’s identification. The Madrid Legat further stated that he did not come away from the meeting with any particular confidence that the SNP would ultimately agree with the FBI’s conclusions. An ETIU SSA (who spoke Spanish) and Wieners (who was relying on the Madrid Legat for a translation) both told the OIG that they came away from the meeting with the expectation that the SNP would eventually agree with the FBI, but both acknowledged that the SNP had not specifically done so at the April 21 meeting. Contemporaneous documents appear to confirm that the FBI participants came away from the April 21 meeting under the impression that Wieners’ presentation had been persuasive, but they do not support the conclusion that the SNP had communicated that it was “satisfied” that the FBI’s identification of Mayfield was correct.<sup>162</sup>

The SNP witnesses we interviewed denied that the SNP expressed agreement with the FBI’s identification at the April 21 meeting. The SNP Section Chief who signed the April 13 Negativo Report stated that although the

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<sup>161</sup> In citing this statement, we are not suggesting that Judge Jones’ belief about the SNP’s position was a decisive factor in his decision to detain Mayfield. Even after learning that the SNP had identified Daoud, Judge Jones initially declined to release Mayfield. We disagree, however, with comments made by the U.S. Attorney’s Office that the judge’s statement was merely an “offhand” comment. The judge’s statement was made in response to a specific argument made in support of a motion for Mayfield’s release.

<sup>162</sup> Later, at a June 9 meeting in Madrid, the SNP representatives told the FBI what their reaction had been to Wieners’ presentation of April 21. The Portland SSA, AUSA 2, Meagher, and Wieners all made notes or memoranda of the June 9 meeting indicating that at least some of the SNP examiners confirmed that they were initially persuaded by Wieners’ April 21 presentation that Mayfield was the source of LFP 17 and that it was only later, upon further analysis, that these SNP examiners concluded it was not Mayfield’s print.



SNP participants expressed satisfaction with the detail and meticulousness of the FBI's presentation, they did not express agreement with the FBI's conclusions. He told the OIG that there was an exchange of views and that all of the participants were sticking to their own positions. He stated that the SNP told the FBI during the meeting that the identification of Mayfield was incorrect. A supervisor in the SNP Laboratory also told the OIG that the SNP told the FBI that the identification was negative from their point of view. He told the OIG that he did not recall that anyone from the SNP agreed with the FBI's identification.<sup>163</sup>

Although the recollections of the FBI witnesses varied from those of the SNP witnesses on the degree of satisfaction expressed by the SNP representatives at the meeting, all of the FBI witnesses acknowledged that the SNP had only committed to reexamine the prints and had not expressed agreement with the FBI's identification. The FBI witnesses may have been optimistic about what the SNP might ultimately decide, but they knew that decision had not been made yet.<sup>164</sup> In light of these facts, the OIG believes that

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<sup>163</sup> The recollection of the SNP witnesses was generally consistent with statements attributed to the SNP in a June 5 article in The New York Times. The article quoted a supervisor in the SNP Laboratory as stating, "The Spanish law enforcement officials kept pointing out discrepancies between their analysis and that of the F.B.I., but this did not sink in with the Americans." During our interview, the supervisor suggested that this quote was taken out of context, and did not reflect the gratitude that the SNP felt toward the FBI for its assistance. He stated that it was not that the FBI did not want to understand, it was just that it did not seem that the FBI representative was going to change his mind on the basis of what the SNP said. The article also quoted the supervisor as stating that the SNP "refused to validate' the F.B.I.'s conclusions and maintained the match was negative." The supervisor told the OIG that this quote was accurate. He reported that he understood that the FBI was requesting that the SNP validate or corroborate the FBI's identification, but that the SNP was adamant that it was not Mayfield's print. The SNP Section Chief said he did not recall any request from the FBI that the SNP state whether it agreed with the identification, but he did recall that the SNP told the FBI it did not agree with the identification.

The FBI participants, Wieners, the Madrid Legat, and an ETIU SSA, all disputed the descriptions of the April 21 meeting in The New York Times article. They said that the FBI was receptive to the issues that the SNP raised, but that Wieners had explanations for each apparent dissimilarity between LFP 17 and the Mayfield prints. They denied that the FBI ever requested that the SNP validate its findings during the April 21 meeting, and all three told the OIG that they came away from the meeting believing that the SNP would reconsider its examination.

<sup>164</sup> The U.S. Attorney's Office told the OIG that AUSA 2 had a conversation with Wieners shortly after he returned from Spain in which Wieners gave a description of the April 21 meeting that was consistent with the language used in the affidavit, that the SNP "felt satisfied" with the FBI's identification of Mayfield. However, AUSA 2's handwritten notes of her conversation with Wieners do not state that the SNP "seemed to agree" or "felt satisfied" with the FBI's conclusions, but rather that the "Spanish reserve [the] right to further examine [the print]." The April 26 telephone log notes of the Acting Unit Chief from the Laboratory describe a three-way call between Wieners, the Acting Unit Chief, and AUSA 2. According to these notes, Wieners "stated he was optimistic that they [the SNP] were going to review the evidence (continued)

the FBI should not have made the statement in the affidavits that “[a]t the conclusion of the meeting it was believed that the SNP felt satisfied with the FBI Laboratory’s identification of LFP#17.” That statement suggested to the judge that the SNP had expressed more agreement with the FBI than in fact was the case. Taken together with the statement later in the same sentence that the SNP “intended to continue its analysis,” the language was ambiguous and subject to misinterpretation by the judge.

Within days after the affidavits were filed and Mayfield was arrested, the FBI and the U.S. Attorney’s Office learned facts that were inconsistent with the statement in the affidavit that the SNP “felt satisfied” with the FBI’s identification of Mayfield. On May 7 (the day after the affidavit was filed and Mayfield was arrested), the Madrid Legat reported in an email to an ETIU SSA and the ITOS I Assistant Section Chief that an SNP official told him that there was still “disagreement” within the SNP regarding the fingerprint identification. This disagreement was also described in the CTS Attorney’s May 7 e-mail to the U.S. Attorney’s Office. On May 12, the SNP asked the FBI to provide additional inked fingerprints for Mayfield, stating that such prints were “essential” to completing its analysis, and the U.S. Attorney’s Office was made aware of this communication. In our view, the May 7 e-mails and the May 12 letter made it clear that the SNP had not yet completed its review or reached agreement with the FBI, and these communications underscore the ambiguous nature of the affidavit language assessing the SNP’s position.<sup>165</sup>

We attempted to assess responsibility for the inclusion of this ambiguous language in the affidavits. As noted above, the description of the April 21 meeting in the affidavits was drafted by Lead Case Agent 1, who relied on the Madrid Legat’s April 22 memorandum stating that “all of the SNP personnel seemed satisfied with the FBI’s identification.” Further, Lead Case Agent 1 circulated the draft affidavit to the Madrid Legat for his review before it was presented to the judge.

During his OIG interview, the Madrid Legat revised his April 22 assessment that the SNP “seemed satisfied” with the identification. He

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again, and they might publish a follow-up report.” Again, this description falls short of stating that the SNP agreed or felt satisfied with the FBI’s conclusions. Wieners told the OIG that he would not have made the statement in the affidavit that the SNP “felt satisfied,” because he thought some SNP examiners agreed and some did not.

<sup>165</sup> On May 14, 2004, the CTS Attorney sent an e-mail to three AUSAs in Portland stating, among other things, “Re the never ending saga on the fingerprint report – [The Madrid Legat] said still no movement. He agreed with your assessment that the Spanish have probably determined that their initial report is wrong and they have requested an additional copy of the prints in order to save face.” We do not believe that this speculative interpretation of the May 12 request from the SNP provided sufficient basis for the government to maintain, in light of other information, that the SNP “felt satisfied” with the FBI’s identification of Mayfield.

emphasized that while Wieners had been persuasive, and the SNP responded positively to his presentation, they did not explicitly agree with the FBI's conclusion and committed only to conducting a reexamination of the prints. Given the Madrid Legat's characterization of the meeting in his OIG interview, we believe that he should have told Lead Case Agent 1 not to state that the SNP "felt satisfied" with the identification when the Madrid Legat saw the draft language on April 29, before the affidavit was filed. The Madrid Legat told us that he would have preferred that the affidavit were phrased differently on this point. We found no evidence, however, that he conveyed that concern to anyone else at the time. Having participated in the April 21 meeting and served as translator for it, the Madrid Legat was in the best position to correct the characterization at the time, but we found no evidence that he made any effort to clarify or correct the affidavit on this point. Instead, at that time the Madrid Legat was focusing his attention on a different issue: whether the FBI should disclose the April 13 Negativo Report in the affidavit.<sup>166</sup>

We also believe that the participants involved in drafting the affidavits should have recognized the ambiguous nature of this language and should have consulted directly with the Madrid Legat to seek less ambiguous language. Failing that, we believe it would have been better practice to omit this ambiguous language from the affidavit.<sup>167</sup>

We also note that the U.S. Attorney's Office was involved in preparation of the affidavit language and was responsible for decisions regarding what

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<sup>166</sup> The Madrid Legat is retired from the FBI, so the issue of whether the FBI should take any action with respect to his conduct is moot.

<sup>167</sup> We concluded that the failure of Lead Case Agent 1 and Werder to recognize the ambiguous nature of this language did not constitute intentional misconduct. However, we believe that the FBI should remind its agents about the importance of ensuring that information provided in FBI affidavits is accurate and unambiguous.

Furthermore, in a letter to the OIG dated December 13 (Appendix L), U.S. Attorney Immergut stated: "[T]here should be no dispute but that Portland personnel did 'consult directly' with the Legat. We employed best practices by quoting the official report of the primary witness and then circulating the description of the meeting to that witness in order to ensure accuracy." As noted above, we do not dispute that the Portland personnel based their draft affidavit on the Legat's April 22 memorandum, quoted from that draft, and also sent the draft affidavit to the Madrid Legat on April 29 for his review. Our point is that even without prompting from the Legat, a better practice for the persons involved in drafting the language of the affidavit would have been to recognize that the statement that "it was believed that the SNP felt satisfied with the FBI Laboratory's identification" was potentially ambiguous. Alternatives included asking the Legat more specifically what the SNP said or leaving the characterizations of the SNP's "feelings" out of the affidavit altogether.

information was disclosed to the Court. DOJ OPR assessed the conduct of the U.S. Attorney's Office attorneys with respect to these matters.<sup>168</sup>

The OIG concluded that the statement about the agreement of the SNP should not have been included in the affidavits. It predictably had the effect of persuading the judge that more had taken place at the April 21 meeting than was in fact the case. In the affidavits, the FBI should have stated objective facts that were known by the participants: that the SNP's initial comparison yielded a "negative" result, that the SNP representatives agreed on April 22 to take another look at the prints, and that the FBI Laboratory stood by its identification of Mayfield.<sup>169</sup>

#### Disclosures to the FISA Court.

[REDACTED]

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<sup>168</sup> U.S. Attorney Immergut emphasized to the OIG the fact that the "Portland investigators did not have direct access to the evidence and were not able to communicate directly with the Spanish." We believe that Portland's lack of contact with the SNP counseled particular caution in stating a belief in the affidavit that the SNP "felt satisfied" with the identification of Mayfield. A better practice would have been to seek clarification from the Madrid Legat regarding the basis for his April 22 assessment of the SNP's satisfaction. The Madrid Legat might have provided the same clarification that he later provided to the OIG, to the effect that the SNP did *not* explicitly agree with the FBI's conclusion and committed only to conducting a reexamination of the prints. However, we recognize and agree with U.S. Attorney Immergut that the Madrid Legat did not offer such a clarification when he was asked to review the draft affidavit.

<sup>169</sup> U.S. Attorney Immergut's letter of December 13 (Appendix L) stated that our report "fails to account for the fact that on May 4, Portland FBI SAC Jordan and I (along with several members of our respective staffs) spoke directly with the Madrid Legat by teleconference. The Legat told us that *the SNP were about to issue a final report concurring with the FBI fingerprint identification*. This teleconference was specifically convened to consider whether Portland should recommend that a warrant be sought to detain Mr. Mayfield as a material witness." (Emphasis in original.) In interviews with the OIG, however, the Madrid Legat and SAC Jordan both said they had no recollection of the Legat making such a prediction. When the OIG asked the Madrid Legat whether at that time he had any idea of whether the SNP was going to agree with the FBI, the Madrid Legat said "absolutely not."

[REDACTED]

[REDACTED]

170

[REDACTED]

Whether the FBI failed to disclose that the SNP disagreed with the identification. The fourth issue is whether the FBI knew prior to May 19 that the SNP had completed its reexamination of LFP 17 and had again reached the conclusion that it disagreed with the identification of Mayfield. If so, the FBI failed to convey that information (which would have contradicted the description in the affidavit of the SNP's perceived position) to the U.S. Attorney's Office for disclosure to the judge. As noted in Chapter Three, the former Director of the SNP Laboratory told the OIG that the SNP had completed its reexamination of the prints and reached its determination that Mayfield was

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<sup>170</sup> DOJ OPR examined the actions of the OIPR attorney on this issue as part of OPR's investigation of the conduct of DOJ attorneys in the Mayfield case.

not the source of LFP 17 before May 12. He told the OIG that he recalled that he communicated that result to the Madrid Legat at the time.

We reviewed all contemporaneous written communications provided by the FBI regarding the identification of LFP 17 during the period between April 22 (the date of the first meeting in Madrid) and May 19 (the date the SNP informed the FBI of the identification of Daoud). We found no contemporaneous written record suggesting that the SNP had informed the Madrid Legat or anyone else at the FBI before May 19 that the SNP Laboratory had excluded Mayfield as the source of LFP 17. On several occasions between April 22 and May 19, the Madrid Legat made reports to the FBI CTD and the Portland Division describing his conversations with officials of the SNP. Some of these reports set forth the results of repeated inquiries the Madrid Legat made to the SNP regarding the status of their reexamination of LFP 17. In none of these communications did the Madrid Legat ever indicate that the SNP had told him it had excluded Mayfield. For example, on May 7 the Madrid Legat wrote, "Regarding the fingerprint report, it is still undecided as of today. Some of their people agree with our finding, there is still a few who don't, according to [the Deputy Director], they hope to resolve this tomorrow morning when the Director General returns." On May 12, the Madrid Legat wrote, "As of yesterday afternoon, the SNP Laboratory still had not finalized their report . . . ." A major purpose of the Madrid Legat's reports was to let the FBI and the U.S. Attorney's Office know about the status of the SNP Laboratory's reexamination, and we would have expected the Madrid Legat to tell them immediately if he learned anything as dramatic as that the SNP had excluded Mayfield. We found no compelling reason for the Madrid Legat to conceal this important fact from his superiors or from the U.S. Attorney's Office, had he known about it.

As noted above, on May 12, the SNP sent an official letter to the FBI requesting new inked prints for Mayfield that the SNP said it considered "essential" to completing its analysis, and requesting a DNA sample for Mayfield. The Madrid Legat told us that he inferred from this letter that the SNP still considered Mayfield as a potential source of the print. As previously noted, this letter indicated that the SNP had not yet completed its reexamination or reached a conclusion about LFP 17. We agree, however, that it was reasonable for the FBI to infer from the May 12 letter that the SNP had not yet excluded Mayfield. In particular, the May 12 letter's emphasis on the insufficiency of detail in the "upper portion" of the known prints, and their request for rolled prints that included the upper area, strongly suggested that the SNP wanted to determine whether the details in the upper portion of LFP 17 could be matched to a part of Mayfield's known prints that had not previously been recorded. The SNP was likely investigating the FBI's explanation that the dissimilarity in the upper left was attributable to a double touch by Mayfield.

Taking all of the evidence into account, we found that although there was sufficient evidence to conclude that the FBI knew by May 7 that there were *disagreements* within the SNP regarding the identification of LFP 17, there was insufficient evidence to conclude that the FBI learned prior to May 19 that the SNP Laboratory had definitively determined that Mayfield was not the source of LFP 17.

### **C. Representations Relating to Mayfield's Travel and Risk of Flight**

Another issue raised by the affidavit filed in support of the material witness warrant relates to the existence of false travel documents concerning Mayfield. Paragraphs 21 and 23 of the affidavit indicate that, at the time the affidavit was filed, no documents for travel outside the United States had been found in Mayfield's name. Paragraph 23 states that "it is believed that MAYFIELD may have traveled under a false or fictitious name, with false or fictitious documents. It is also believed that if MAYFIELD did not travel to Spain utilizing false identification documents that he associated with someone that played a role in the [Madrid bombings]." Paragraph 23 also states that "law enforcement has been unable to substantiate any other reasonable explanation for MAYFIELD'S fingerprint to be located on a bag of detonators in a van in Madrid Spain."

However, paragraph 24 of the affidavit states "that based upon the **likelihood** of false travel documents in existence, and the serious nature of the potential charges, Mayfield may attempt to flee the country if served with a subpoena to appear before the federal grand jury." (Emphasis added) Thus, paragraph 24 goes beyond the representation of paragraph 23 that Mayfield may have traveled to Spain under false pretenses to represent that there was "likelihood of false travel documents in existence." We believe the latter amounts to an unfounded inference regarding the "likely" existence of false travel documents. The only factual underpinning for this inference was the existence of a fingerprint believed to be Mayfield's on the plastic bag. There were other possible explanations for this fact other than Mayfield using false travel documents to go to Madrid. Indeed, one of the theories the government was exploring to explain how Mayfield's fingerprint got on the bag of detonators was that Mayfield had touched the bag in the United States (which meant that he did not travel to Spain with false travel documents) and that someone else took the bag to Spain.

When questioned about this language, the Portland SSA said she interpreted it to mean that there was a likelihood of false travel documents

because they had not been able to review all of the documents in the residence during the FISA search.<sup>171</sup> We were not persuaded by this explanation because the language referring to “the likelihood of false travel documents in existence” was drafted in late March, weeks before the FISA searches of the Mayfield residence were conducted. [REDACTED]

[REDACTED] Given the other potential ways that Mayfield’s fingerprint could be on a bag found in Madrid, we found that there was no logical support for the FBI’s assertion that false travel documents were “likely” in existence. Indeed, David Nahmias told us that the representation concerning the “likelihood of false travel documents in existence” may have been a “bit stronger” than the evidence of which he was aware.

In light of the above, we concluded that it would have been preferable for the FBI agents who participated in the drafting and review of paragraph 24 to use the term “possibility” regarding the existence of false travel documents.<sup>172</sup> The DOJ OPR reviewed the actions of DOJ attorneys in the drafting and review of paragraph 24 of the affidavit

#### **IV. The FBI’s Effort To Obtain a Final Fingerprint Report from the SNP Laboratory**

As noted in Chapter Two, on May 4 the FBI CTD transmitted a formal Letterhead Memorandum (LHM) to the Legat in Madrid for dissemination to the Spanish government. The LHM described the media inquiry from the Los Angeles Times that changed the FBI’s investigative plan for Mayfield. The LHM stated:

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<sup>171</sup> We did not interview the original FBI affiant in connection with this issue because he was detailed to Iraq when we conducted our interviews of the FBI agents in Portland, Oregon. Lead Case Agent 1 said that he did not recall who drafted paragraph 24, and that he did not recall having any discussions concerning this paragraph. He agreed that the content of paragraph 24 is accurate.

<sup>172</sup> U.S. Attorney Immergut’s letter of December 13 (Appendix L) and the FBI’s response to this report (Appendix K) noted that the affidavit stated that the government believed that Mayfield may have traveled under a false name with false or fictitious documents, or if he did not travel to Spain using false identification documents, he associated with someone that played a role in the bombing. While these statements may be true, the next paragraph of the affidavit explicitly states that there is a “likelihood of false travel documents in existence.” We believe that this claim of the *likelihood* of false travel documents was an unsupported inference. As set forth above, we believe the term “possibility” more accurately reflected the evidence of which the government was aware concerning the potential existence of false travel documents at the time the affidavit was filed.



[B]ecause Mayfield's name and/or FBI investigation of Mayfield appears likely to become public in the very near future, our plans to investigate Mayfield have been significantly advanced. To effectively interview Mayfield, we need the authority to detain him; currently, we cannot obtain such authority from our courts without an official Spanish report identifying Latent Print # 17 . . . as Mayfield's. We would greatly appreciate a final forensic report from your service as soon as possible, in an unclassified format for use in U.S. judicial proceedings.

The LHM was drafted by the CONUS 4 analyst. She stated that the LHM was reviewed by one of her supervisors, but she could not recall whom. She transmitted the LHM to the Madrid Legat. He said he did not recall the memorandum specifically but told the OIG he had no reason to believe that he did not receive it or deliver it to the Spanish government as requested.

The CONUS 4 analyst told us that she wrote the LHM based on her understanding that the issuance of a final report by the SNP would solve several problems facing the U.S. Attorney's Office and the FBI in preparing affidavits in support of the material witness warrant and search warrants. She stated that she understood that the Madrid Legat was concerned that detailed information about the April 13 Negativo Report could not be provided in the affidavit because the report was not official and had been provided in confidence. Moreover, the CONUS 4 analyst said that she believed a new report would help resolve the fact that the SNP's initial report disagreed with the FBI's identification of Mayfield. She said that it was the expectation of the FBI, based on the April 21 meeting, that the final SNP Report would agree with the identification of Mayfield. She said the FBI wanted to get an unclassified revised SNP report agreeing with the FBI Laboratory in time to include it in the affidavit because it would resolve the issues arising from the April 13 Negativo Report.

However, the language in the LHM was potentially misleading. There was no requirement under the material witness statute or any other authority that the SNP issue a report identifying Mayfield before he could be detained. Indeed, no such report was ever issued and Mayfield was detained without it.

The CONUS 4 analyst stated that nobody told her that obtaining a final report from the SNP identifying Mayfield as the source of LFP 17 was a prerequisite to detaining Mayfield. She described the language in the LHM as sloppy and stated that it reflected her expectation, based on descriptions of the April 21 meeting provided to her from others in the FBI, that the SNP was going to agree with the FBI. She stated that the language she used was intended to encourage the SNP to accelerate the process of finalizing and releasing the

report, not to pressure the SNP Laboratory to agree with the FBI's identification of Mayfield.

We found that the CONUS 4 analyst's explanation of her expectations regarding what conclusions the SNP Laboratory was likely to reach to be supported by the documents we reviewed. Several contemporaneous documents show that the favorable descriptions of the April 21 meeting provided by the Madrid Legat and Wieners gave the impression to others in the FBI that the SNP was likely to eventually agree with the FBI Laboratory regarding the identification of LFP 17. In particular, the Madrid Legat's April 22 memorandum describing the meeting contributed to this perception.

Although the CONUS 4 analyst understandably formed her expectations regarding the likely outcome of the SNP fingerprint examination on information that was provided by others, this does not excuse the inclusion of a potentially misleading assessment of the requirements of an American court in an LHM intended for dissemination to the SNP. Regardless of her understanding of whether the SNP was likely to agree with the FBI Laboratory, she had no basis for stating that Mayfield could not be detained without a final report from the SNP Laboratory. Moreover, a misstatement of this nature could create the unintended perception that the FBI was pressuring the SNP to issue a favorable report by suggesting that otherwise a potential terrorist could not be detained.

## **V. Problems in the Execution of the Surveillance and Searches**

The OIG's investigation also reviewed several problems in connection with the FBI's execution of the surveillance and searches in this investigation. In this section of the report, we discuss those problems and analyze what impact they had upon the Mayfield investigation.

### **A. Problems in the Execution of FISA Surveillance**

The Portland SSA said that the FBI inadvertently began monitoring [REDACTED] pursuant to the FISA warrant 30 minutes before the FISA emergency authorization was officially obtained. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

In addition, FBI documents indicate that the FBI inadvertently recorded [REDACTED] on Mayfield [REDACTED] shortly after FISA coverage was initiated.

[REDACTED]

In our judgment, both of these errors were inadvertent and did not materially affect the case.

[REDACTED]

**B. Problems with the FBI's Searches of the Residence**

We also reviewed [REDACTED] during the searches which led the Mayfields to become suspicious that someone had searched their home. [REDACTED]

[REDACTED]

[REDACTED]  
[REDACTED] This dissuaded the FBI from conducting additional covert searches of the residence.

We interviewed the two Computer Analysis Response Team examiners who participated in the [REDACTED] FISA search of the residence.<sup>173</sup> They told us that during the search, they found [REDACTED] computers in the home. [REDACTED]

[REDACTED]

[REDACTED] We believe that this was not an unreasonable decision under the circumstances.

A second problem with the search was avoidable, however. As discussed in more detail in Chapter Two, the Mayfields became suspicious [REDACTED]

[REDACTED] As a result, although the FBI wanted to conduct another covert search of the home, it could not do so because of the Mayfields' suspicions that they were under surveillance.

[REDACTED]

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<sup>173</sup> These were the same Computer Analysis Response Team examiners who participated in the [REDACTED] FISA search of Mayfield's office.

[REDACTED]

The actions of the technical agents [REDACTED]

had a negative impact on the Mayfield investigation. Had Mayfield been a terrorist, the FBI's failure [REDACTED] could have had serious national security implications.

We also examined how the FBI conducted the May 6 search of the residence. In press accounts regarding that search, Mona Mayfield was quoted as claiming that the house looked like it had been "robbed" because every room had been "ransacked," closets emptied, and drawers overturned. In examining this issue, we interviewed agents who were present at the search of the residence and reviewed photographs that were taken by the FBI both before and after the search. The agents who were present during the search denied Mona Mayfield's allegations and said the house was left in "good condition" at the conclusion of the search.

In examining the FBI's photographs of the house, we found that some items, such as papers, were displaced from cabinets and cabinet drawers as a result of the search, and that other items, such as boxes in what appears be the attic of the Mayfield home, were left in disarray. However, the photographs do not support Mona Mayfield's allegations that the FBI left the Mayfield residence looking like it had been robbed, or ransacked or that the closets had been emptied and the drawers overturned.

**VI. The Role of Media Leaks in the Arrest of Mayfield**

As described in Chapter Two, the investigative plan that the FBI adopted in mid-April called for the FBI to finish the intelligence gathering and analytical work concerning Mayfield near the end of May. The FBI then planned to approach Mayfield in early June and attempt to interview but not necessarily arrest him.

The FBI first became aware on May 4 that its fingerprint identification of Mayfield may have been leaked to the media when a reporter from the Paris bureau of the Los Angeles Times called the Madrid Legat to ask about an American whose fingerprint was linked to the Madrid bombings. On May 5, the FBI learned that the Spanish magazine, El Tiempo, had called the U.S. Embassy in Spain to ask about an American suspect in the bombings. This



perception of the conditions of his confinement, but Mayfield declined to be interviewed.

In this section of the report, the OIG examines whether Mayfield's detention at the MCDC was consistent with the requirements of the material witness statute. We also address other allegations made by Mayfield regarding his conditions of confinement, as well as the disclosure of Mayfield's alias to the media by the MCDC.

#### **A. Whether Mayfield's Detention was in Compliance with the Material Witness Statute**

The material witness statute provides that "if it is shown that it may become impracticable to secure the presence of the [material witness] by subpoena, a judicial officer may order the arrest of the person and treat the person in accordance with the provisions of Section 3142 of this title." 18 U.S.C. § 3144. Thus, under the material witness statute, if the judicial officer orders an arrest, the witness must be treated in accordance with Section 3142, which generally addresses the release or detention of a defendant pending trial. In other words, Congress did not create a separate set of detention procedures or requirements uniquely applicable to material witnesses. Instead, Congress permitted judges to apply the detention procedures and requirements that are generally applicable to criminal defendants to material witnesses, even though material witnesses have not been charged with any crime.

One of the detention procedures that is applicable to a criminal defendant awaiting trial – and thus is also applicable to a material witness under detention – is the segregation requirement of Section 3142(i)(2). This section states that if detention is ordered, the judicial officer "shall" direct that the criminal defendant (or material witness) be confined in a corrections facility, and kept "separate, to the extent practicable, from persons awaiting or serving sentences or being held in custody pending appeal." 18 U.S.C. § 3142(i)(2). Thus, if detention is ordered, the statute requires that the material witness (like a criminal defendant) be placed in a corrections facility, segregated from convicted criminals "to the extent practicable."

In this case, the judge declined a request by Mayfield's attorneys that he be released on special conditions, stating that because of the "gravity of the matter, there is no way I can ensure the appearance . . . of this material witness at this time." Once the judge ordered Mayfield's detention pursuant to the material witness statute, the United States Marshals Service (USMS) treated Mayfield like a criminal defendant and confined him in a corrections facility. The material witness statute did not require the USMS or the MCDC to treat Mayfield differently from criminal defendants.

According to the Chief Deputy U.S. Marshal for Portland, Mayfield was assigned to the MCDC because this was the contract facility normally used by the USMS to house all federal prisoners awaiting court appearances. The Deputy Chief U.S. Marshal stated that there was no discussion about housing Mayfield at any other facility.

As noted above, Section 3142(i)(2) requires that criminal defendants awaiting trial be segregated from criminals serving sentences and awaiting appeals "to the extent practicable." This requirement is applicable to many federal prisoners confined in the MCDC, which is the contract facility normally used by the USMS to house federal prisoners awaiting trial. According to the Chief Deputy U.S. Marshal and the Chief Deputy for the Multnomah County Sheriff's Office Corrections Division, the segregation requirement is normally satisfied by the general practice of housing inmates serving sentences or awaiting appeal at a different facility. However, some prisoners serving sentences are housed at MCDC, including federal prisoners who are housed temporarily at MCDC in order to be available for upcoming court dates, and state and county prisoners serving sentences of less than 12 months. The Chief Deputy U.S. Marshal and the Chief Deputy for the Multnomah County Sheriff's Office Corrections Division both stated that generally it is not considered "practicable" to keep pre-trial criminal defendants and material witnesses segregated from those state and federal prisoners housed in the MCDC who are serving sentences or awaiting appeals, and such prisoners are housed together in the general prison population.

In this case, however, the USMS attempted to take additional steps to keep Mayfield separate from other prisoners. On the date of Mayfield's arrest, a Portland AUSA sent a memorandum to the USMS stating that Mayfield was being detained as a material witness, not a criminal defendant. The USMS Operations Supervisor noted on AUSA 2's memorandum that the "subject should be kept separate from all individuals for his own safety" and faxed the memorandum to the MCDC's classification unit. However, the MCDC deputy on duty at the classification station when Mayfield was booked told the OIG that he did not receive any instructions regarding keeping Mayfield separate from other inmates for his safety. He told the OIG that he initially assigned Mayfield to a cell in the general prison population.

Before Mayfield was sent to the cell in the general population, however, the deputy recognized him from internet news reports and became concerned that other prisoners would also recognize him. The deputy told us he then assigned Mayfield to the administrative segregation unit. This unit, which housed a small number of prisoners considered to be high-profile or dangerous, was the most restrictive area of the MCDC. Mayfield, like other prisoners in this unit, was kept in a 22-hour lockdown status, with a 2-hour recreation period during which he was allowed to go to a small day room, either



by himself or accompanied by one other inmate. This recreation period was voluntary and inmates could instead opt to remain in their cells.

According to the MCDC Captain, the MCDC performs weekly assessments of prisoners held in the administrative segregation unit to determine whether inmates held there can be reassigned to a less restrictive unit. The Captain told us that as the result of this assessment, on May 12 the MCDC determined that Mayfield was not dangerous and could be transferred. The Captain told us that Mayfield was quiet, well-behaved and cooperative. Therefore, six days after entering the MCDC, Mayfield was moved to the less restrictive protective custody unit. In that unit, Mayfield had a separate cell and was permitted (but not required) to commingle with as many as seven other prisoners in a common area for several hours per guard shift.

We concluded that the treatment of Mayfield, including his segregation from the general population, did not violate any provisions of the material witness statute. Indeed, because Mayfield was assigned to the administrative protection unit and later the protective custody unit, Mayfield was kept separate from prisoners serving sentences to a greater degree than is usually provided to pre-trial defendants who are also subject to the segregation requirements of 18 U.S.C. § 3142.

However, we also found that the MCDC did not ensure that instructions from the USMS regarding the treatment of the prisoner were followed. As a result, Mayfield was initially going to be placed in the general prison population. He was only placed in a separate cell as a result of the deputy's recognition of Mayfield from a photograph on the internet. We believe that the MCDC should review its procedures to ensure that a more reliable system for communicating instructions regarding special handling of particular prisoners exists and that such instructions reach the appropriate personnel in the MCDC.

#### **B.    OIG Review of Other Allegations Regarding Mayfield's Confinement**

Because of Mayfield's decision not to speak to the OIG, we did not receive directly from him allegations regarding his treatment while confined. However, we reviewed statements that Mayfield or his friends or relatives made to the media regarding his confinement. The statements relating to conditions of his confinement, and our analysis of them, follow.

Mayfield stated that a prison guard told him that he should watch his back.<sup>176</sup> The MCDC Captain told us it was likely that several deputies would have said this to Mayfield. He said that this is commonly said by the deputy at the classification desk and by other deputies to first-time inmates and that it is meant as a helpful warning. He added that he could understand how Mayfield could perceive this as threatening, but that it was not meant to be.

Mayfield stated that he was kept in the jail's mental ward. He worried for his safety, especially after seeing an inmate in a nearby cell injure his own ear by jabbing it with a pencil.<sup>177</sup> As described earlier, Mayfield was housed in the administrative segregation and protective custody units in the MCDC, not in the MCDC's mental ward. Mayfield may have made this statement because inmates who have less acute mental problems are also housed in the protective custody unit where Mayfield was housed. According to the MCDC Captain, the MCDC has a large population of such inmates. The MCDC houses inmates with acute mental problems separately from the general prison population in a special housing unit, while those with lesser mental problems are housed in the protective custody unit where Mayfield was located.

Mayfield stated that he feared for his safety when inmates began to recognize him on the nightly news.<sup>178</sup> As noted above, the MCDC took steps to protect Mayfield from retaliation by other inmates. Mayfield was housed alone in a cell in restricted parts of the detention center the entire time he was in the MCDC. During his first week of confinement, like all prisoners housed in the administrative segregation unit, Mayfield was allowed out of his cell for two hours a day, and that was under escort by a guard. During his second week of confinement, he was allowed to commingle with others in the protective custody unit in a small common area, with a guard present, but was not required to do so.

Mayfield stated that he was handcuffed, forced to wear leg irons, and routinely strip searched.<sup>179</sup> According to USMS officials, Mayfield was handcuffed and shackled when he was transported by the USMS to and from court. He was also handcuffed when he was transferred between cells. Mayfield was strip searched for contraband after "contact" visits with his attorneys. Mayfield was also strip searched when he was first booked by the MCDC and each time he returned from court. USMS and MCDC witnesses told the OIG that these procedures are standard for all prisoners. For example, the

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<sup>176</sup> CBSNews.com, May 25, 2004.

<sup>177</sup> CBSNews.com, May 25, 2004; The Oregonian, June 26, 2004.

<sup>178</sup> Associated Press, May 25, 2004.

<sup>179</sup> Los Angeles Times, May 29, 2004.

USMS Policies and Procedures Manual states, “[p]risoners will be fully restrained when transported by the USMS. Full restraints consist of handcuffs, waist chains, and leg irons.”

Mayfield made a televised statement on the steps of the courthouse immediately after he was released in which he described his detention as a “harrowing ordeal,” but he thanked jail officials for providing him with a copy of the Koran and a prayer rug. On May 27, 2004, he stated in an MSNBC interview, “Hey, there’s a lot of people I need to thank. And the professionals and the guards at the Multnomah County Detention center, which I thought, for the most part were professional.” In addition, we note that while Mayfield has filed a lawsuit against the FBI, in the lawsuit he did not allege that he was mistreated by either the USMS or the MCDC.

In summary, we did not find evidence that Mayfield was mistreated either while in the custody of the USMS or at the MCDC, or that the conditions of confinement violated the material witness statute. The treatment of Mayfield also was consistent with the normal practices of the USMS and the MCDC.

### **C. Problems with Mayfield’s Alias**

As detailed in Chapter Two, at the time of Mayfield’s arrest the U.S. Attorney’s Office sent a memorandum to the USMS explaining that Mayfield was a material witness. Consequently, his arrest was governed by the Federal Rule of Criminal Procedure 6(e) and could not be publicly disclosed. The memorandum further instructed the USMS and the jail not to release any information regarding Mayfield’s custody status, including his photographs.

The USMS Operations Supervisor discussed these conditions with the Captain of the MCDC. As a result, the USMS and the MCDC agreed that Mayfield would be booked under the alias “Randy Taylor” in order to protect the secrecy of his detention pursuant to the Federal Rules of Criminal Procedure. However, we found two problems in the implementation of the decision to assign an alias to Mayfield, both of which resulted from the failure of the MCDC to communicate this decision to all appropriate personnel.

First, the failure to communicate the decision led to inappropriate confrontations between an MCDC deputy and Mayfield. As described in Chapter Two, the decision regarding assigning an alias to Mayfield was not communicated to the MCDC deputy who was staffing the classification station. The deputy stated that when he did a database search for prior arrest records for “Randy Taylor,” he found several from Florida under this alias. He then interrogated Mayfield and confronted Mayfield about his alleged failure to disclose these arrests. According to the deputy, Mayfield denied the arrests

but did not reveal his true identity. The deputy later recognized Mayfield from an internet news report, and chastised Mayfield for lying to him. According to the deputy, Mayfield responded that he had been instructed not to reveal his identity. We found that these confrontations were unnecessary and avoidable. Had the deputy been given accurate information and instructions about Mayfield he would have not interrogated him, or confronted him for his use of the alias.

Second, and more significantly, the failure of the MCDC to communicate the alias to appropriate staff led to the disclosure of Mayfield's alias to the media. On May 7, 2004, one day after Mayfield was booked into the MCDC, an article appeared in The Oregonian newspaper stating "It was unclear why Mayfield was booked into the Justice Center jail under the false name of Randy Taylor on Thursday evening." The OIG determined that the disclosure of Mayfield's alias to the press occurred because of MCDC management's failure to inform its Public Information Officer (PIO) of the circumstances of Mayfield's arrest and to direct the PIO to refer requests for information to the USMS.

According to the PIO, he began receiving calls from the media at around noon on May 6, the day that Mayfield was arrested. These callers did not specifically ask about Mayfield, but made general inquiries as to whether the MCDC had taken any high-profile prisoners into custody. The PIO responded "no." The PIO stated that throughout the afternoon he continued to receive calls from the media specifically asking whether Mayfield was in custody. The PIO stated that he was surprised at how much information the media seemed to have about Mayfield. The PIO then checked with the booking desk about Mayfield and was told that no one was booked under Mayfield's name.

The PIO told us that around 5 p.m., after continuing to be barraged with calls, he contacted the MCDC control center and asked whether the U.S. Marshals had transported any prisoners to the MCDC. He was told that the U.S. Marshals had brought over a Randy Taylor. The PIO stated that he therefore told subsequent callers that the only person the U.S. Marshals had transported was Randy Taylor and advised them to contact the USMS to find out if this was "the guy they were looking for."<sup>180</sup> We could not determine whether anyone in the USMS confirmed to the reporters whether Taylor was Mayfield or whether Mayfield had been booked at the MCDC. The Captain of the MCDC told us that he believed that the information about Randy Taylor provided by the PIO was the basis of the report in The Oregonian revealing the alias under which Mayfield was booked.

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<sup>180</sup> According to the USMS, other persons were transported and booked with Mayfield.

The PIO told the OIG that when he later informed the MCDC Captain of the calls, he was told that Randy Taylor was Mayfield's alias and that the MCDC was not supposed to disclose anything about "Randy Taylor" to the press. During our interview with the Captain, he confirmed the PIO's description of events and took responsibility for "dropping the ball" by not informing the PIO who Randy Taylor was or instructing the PIO not to disclose anything about him.

The PIO told us that despite the public disclosure of Mayfield's alias, he believes that the media could have discerned that Mayfield had been booked at the MCDC on its own. He explained that booking records are considered to be public information and that the MCDC routinely provides the media with a daily register of bookings. He stated that there were limited bookings that day and the media could have used the process of elimination to figure out which name was Mayfield's alias. If so, use of an alias is an inadequate means of complying with Rule 6(e), and the USMS and MCDC should work together to devise a more effective mechanism to preserve grand jury secrecy.

The Chief Deputy U.S. Marshal also told us that he was upset about the disclosure and, after determining that it did not originate from within the USMS, convened a meeting with Multnomah County Sheriff's Office (MCSO) officials to discuss how to contain the information and the need to prevent future occurrences of inappropriate disclosures of confidential information in similar cases. As a result of this meeting, the MCSO provided written guidance to the PIOs in their facilities requiring them not to respond to public and media inquiries regarding federal prisoners, but instead to direct these callers to the USMS. Furthermore, the USMS agreed that, in addition to its current practice of providing written notification to detention facility management regarding a federal prisoner being detained as a material witness, it would concurrently provide written notification to the MCDC Chief Deputy for Corrections and to MCDC Counsel.

In short, we found a communications problem in the MCDC that resulted in two inappropriate and readily avoidable incidents: the confrontations between a deputy and Mayfield about his alias and the disclosure of Mayfield's alias to the media. The USMS and the MCDC must assure that appropriate personnel in the correction facility are made aware of the special status of a material witness, both to protect grand jury secrecy and to prevent unnecessary intimidation of material witnesses.

## **VIII. Summary**

The OIG concluded that the government's decision to seek FISA authorization in the Mayfield case was not influenced by the Patriot Act

amendments to the FISA statute. In addition, the Patriot Act amendments did not affect the scope of information the government collected about Mayfield pursuant to the FISA surveillance and searches. We also found that contrary to public speculation, the FBI did not use certain provisions of the Patriot Act in the Mayfield case, such as those relating to delayed notification searches [REDACTED]. Moreover, the evidence indicated that even prior to the Patriot Act, the FBI likely would have sought and been able to obtain FISA authorization for the searches and surveillance of Mayfield that it conducted.

The Patriot Act did permit sharing of a significant amount of information about Mayfield with a wider variety of law enforcement agents and intelligence agents than prior to the Patriot Act. By dismantling the wall between intelligence and criminal investigations, the Patriot Act allowed the government to freely share intelligence information about Mayfield gathered in the FISA surveillance and searches with prosecutors and other criminal law enforcement officials. The Patriot Act also allowed the government to share grand jury information with the intelligence community that could not previously have been shared. In addition, the Patriot Act affected the amount of information the government collected through use of NSLs in the Mayfield investigation by relaxing the certification requirements for issuing NSLs.

In sum, we did not find any evidence that the FBI misused any provisions of the Patriot Act in conducting its investigation of Mayfield. However, the increased information sharing allowed by the Patriot Act amplified the consequences of the FBI's fingerprint misidentification in the Mayfield case.

We also examined whether Mayfield's religion improperly influenced the FBI's actions in the investigation and arrest of Mayfield. We concluded that the FBI's field investigation of Mayfield was initiated on the basis of the fingerprint identification of Mayfield, and that initially FBI examiners were unaware of his religion. Several witnesses acknowledged, however, that at a later point Mayfield's religion was a factor in the investigation, although they said it was not an overriding factor and did not affect the course of the investigation.

In our view, the FBI's field investigation appropriately sought information about a subject who had been positively – although erroneously – identified by the FBI Laboratory as having left his fingerprint on the bag of detonators found in Madrid. We did not find that the FBI employees who supervised and conducted the field investigation of Mayfield used his religion to improperly influence the course of the investigation.

In addition, we analyzed the accuracy of affidavits submitted by the FBI in support of the material witness and criminal search warrants. We found

several inaccuracies in these affidavits relating to the FBI Laboratory's identification of LFP 17, which we concluded reflected a regrettable inattention to detail. We also found that the affidavits contained an ambiguous description of the April 21 meeting between the FBI and the SNP in Madrid. This description apparently led to the judge to believe that the SNP had agreed with the FBI's identification, when in fact the SNP had only agreed to conduct a new examination of LFP 17. In addition, the material witness warrant affidavit contained an unfounded inference concerning the likelihood of false travel documents regarding Mayfield.

We also determined that the FBI sent a LHM to the SNP that inaccurately stated that Mayfield could not be detained unless the SNP Laboratory issued an unclassified report identifying him as the source of LFP 17.

With regard to the media leaks concerning the FBI's investigation of Mayfield, the FBI learned in early May 2004 that the Los Angeles Times and other media outlets had inquired about an American suspect in the Madrid bombings. This information caused the FBI, in conjunction with DOJ Criminal Division and the Portland U.S. Attorney's Office, to seek a material witness warrant and criminal search warrants. This media leak altered the FBI's investigative plan, which had called for approaching Mayfield in June for a voluntary interview after completing additional investigation. Through our investigation, we found insufficient evidence to conclude that anyone in either the FBI or DOJ caused or contributed to the leaks in order to facilitate Mayfield's arrest. We did not find sufficient evidence to determine who leaked this information about Mayfield to the media.

Finally, with regard to Mayfield's conditions of confinement, we found that Mayfield's treatment did not violate the material witness statute. We also did not find evidence to conclude that he was mistreated during his detention. His treatment was consistent with the normal practices of the USMS and the MCDC. However, we did find that the MCDC failed to convey important information about Mayfield to appropriate prison personnel, including the instruction to keep him separated from other prisoners for his own safety and the fact that he had been booked under an alias to protect grand jury secrecy. This resulted in an inadvertent disclosure to the press of Mayfield's alias and an unnecessary confrontation of Mayfield by the MCDC's classification deputy.

## **CHAPTER SEVEN CONCLUSION**

The FBI Laboratory's misidentification of Brandon Mayfield as the source of Latent Fingerprint 17 (LFP 17) found on a bag with detonators connected to the Madrid training bombings triggered an intensive investigation that ultimately led to Mayfield's arrest and incarceration for two weeks on a material witness warrant. The investigation included covert electronic surveillance and searches of his home and office pursuant to FISA, and searches of his home and office pursuant to criminal search warrants after his arrest. The FBI withdrew its identification after the Spanish National Police (SNP) identified the fingerprint on the Madrid bag as belonging to an Algerian national.

The misidentification of LFP 17 was a watershed event for the FBI Laboratory, which has described latent fingerprint identification as the "gold standard for forensic science." Many latent fingerprint examiners have previously claimed absolute certainty for their identifications and a zero error rate for their discipline.

Because of the significance of the FBI's misidentification and the consequences to Mayfield, the OIG conducted an extensive investigation, assisted by fingerprint experts, which examined the causes of the Laboratory's error, assessed the actions taken by the Laboratory to respond to the misidentification and improve its fingerprint examinations, and recommended additional changes to Laboratory procedures. We also closely examined the conduct of the FBI's field investigation of Mayfield.

Based on our investigation, we concluded that the three FBI examiners who misidentified Mayfield's print were confused by the fact that the fingerprint on the Madrid bag (LFP 17) contained as many as 10 points that corresponded to details in Mayfield's known fingerprints in relative location, orientation, and intervening ridge count. This degree of similarity is extraordinarily rare and confused three FBI fingerprint examiners as well as a fourth outside, court-appointed examiner.

However, we also found that the FBI examiners committed errors in the examination procedure, and that they could have prevented the misidentification through a more rigorous application of several accepted principles of latent fingerprint identification. Among other things, the examiners applied circular reasoning, allowing details visible in Mayfield's known prints to suggest features in the murky or ambiguous details of LFP 17 that were not really there. The examiners also relied on selected Level 3 details to support the identification under circumstances that should have called into question the validity of these purported similarities. They also accepted a



“double touch” explanation for an obvious difference in appearance between LFP 17 and Mayfield’s known print that had insufficient evidentiary support and assumed a remarkable set of coincidences in order to make the identification.

In addition, the Laboratory missed an opportunity to correct its error when it learned in mid-April 2004, that the SNP Laboratory had declared that its comparison of Mayfield’s prints to LFP 17 was “negative.” Instead, the FBI examiners declared that they were “absolutely confident” in their identification even before determining the basis of the SNP’s disagreement. We concluded that the FBI Laboratory’s overconfidence in its examiners prevented it from taking the SNP’s results as seriously as it should have.

We also assessed whether Mayfield’s religion improperly influenced the FBI Laboratory’s actions. We determined that Mayfield’s religion and background were unknown to the examiners when they made the initial fingerprint identification of Mayfield. After the initial identification, information about Mayfield’s representation of a convicted terrorist, his contacts with other suspected Muslim extremists, and his religion became known to the examiners. The OIG concluded that Mayfield’s religion was not the sole or primary cause of the FBI’s failure to question the original misidentification and catch its error. The primary factors were the similarity of the prints and the Laboratory’s overconfidence in the superiority of its examiners. However, we believe that Mayfield’s representation of a convicted terrorist and other facts developed during the field investigation, including his Muslim religion, also likely contributed to the examiners’ failure to sufficiently reconsider the identification after legitimate questions about it were raised.

We also found that some of the explanations offered by the FBI Laboratory after the misidentification was discovered were not supported by the evidence. For example, contrary to the FBI’s initial claims, the error was not caused by the use of a digital image of LFP 17, and we do not believe that the FBI Laboratory necessarily would have avoided the error had it obtained access to the original evidence.

In response to the misidentification, the FBI Laboratory has taken various actions to determine if other similar errors had occurred in other cases, and to develop new criteria and procedures for latent fingerprint identification. Among other things, the FBI Laboratory has undertaken an ambitious research project to develop more objective and accurate criteria for declaring fingerprint identifications. The Laboratory has also announced that it will: (1) develop new and more detailed Standard Operating Procedures specifying in detail each step of the examination process, (2) adopt extensive documentation requirements to ensure thorough and meticulous comparisons with reproducible results, and (3) implement blind verification procedures with

decoy non-matches to promote complete and independent verifications. These reforms will require dramatic changes in the way latent fingerprint identifications are performed in the FBI Laboratory and likely in other forensic laboratories as well. We believe that these actions will improve the quality of latent fingerprint examinations and help prevent future misidentifications.

However, we found that some of the changes adopted by the Laboratory were not fully responsive to the issues raised by the Mayfield misidentification, and that additional or more specific modifications to Laboratory practices should be adopted. In this report, we offer a series of recommendations for procedural changes to help address the problems we found in this case. They include recommendations for: (1) developing criteria for the use of Level 3 details to support identifications, (2) clarifying the “one discrepancy rule” to assure that it is applied in a manner consistent with the level of certainty claimed for latent fingerprint identifications, (3) requiring documentation of features observed in the latent fingerprint *before* the comparison phase to help prevent circular reasoning, (4) adopting alternate procedures for blind verifications, (5) reviewing prior cases in which the identification of a criminal suspect was made on the basis of only one latent fingerprint searched through the FBI’s Integrated Automated Fingerprint Identification System (IAFIS), and (6) requiring more meaningful and independent documentation of the causes of errors as part of the Laboratory’s corrective action procedures.

The OIG also reviewed the conduct of the FBI in the investigation and arrest of Mayfield, after the FBI Laboratory had declared that his fingerprint was on the Madrid evidence. Among other things, we considered the impact of the Patriot Act on the Mayfield investigation. We found that the Patriot Act amendments to FISA did not affect either the government’s decision to seek FISA search and surveillance authority in the Mayfield case, or the scope of information the government collected about Mayfield pursuant to FISA. We also found that, contrary to public speculation after Mayfield’s arrest, the FBI did not make use of the provisions of the Patriot Act relating to delayed notification searches ██████████ in the Mayfield case. Moreover, the evidence indicated that, even prior to the Patriot Act, the FBI likely would have sought and been able to obtain FISA authorization for the searches and surveillance of Mayfield that it conducted.

We did not find any evidence that the FBI misused any of the provisions of the Patriot Act in conducting its investigation of Mayfield. The Patriot Act did permit a wider variety of law enforcement agents and intelligence agents to share information about Mayfield than would have been permitted prior to the Patriot Act. This difference amplified the consequences of the FBI’s fingerprint misidentification by permitting information obtained in the investigation of Mayfield to be disseminated more broadly than would have been permitted prior to the Patriot Act amendments.

We also investigated whether the FBI's field investigation and arrest of Mayfield were improperly influenced by knowledge of his religion. Some government witnesses acknowledged that Mayfield's religion was a factor in the investigation. However, we concluded that investigation and arrest were driven primarily by the erroneous fingerprint identification, and that the same investigatory tools would have been employed regardless of Mayfield's religion.

In our investigation, we reviewed the affidavits submitted by the FBI in support of the application for a material witness warrant and criminal search warrants and found problems with them. The affidavits contained several inaccuracies that reflected regrettable lack of attention to detail. In addition, we found the wording of the affidavits to be troubling in several respects. In particular, the affidavits provided an ambiguous description of the April 21 meeting between the FBI and the SNP, which apparently led the judge to erroneously conclude that the SNP had agreed with the FBI's identification. In fact, the SNP had only agreed to conduct a reexamination of LFP 17. In addition, the material witness warrant affidavit contained an unfounded inference concerning the likelihood of false travel documents regard Mayfield.

Finally, we examined the conditions under which Mayfield was confined at the Multnomah County Detention Center (MCDC). The material witness statute provides that the same detention procedures applicable to criminal defendants are also applicable to material witnesses under arrest. Mayfield's detention did not violate these procedures. We also found no evidence that Mayfield was mistreated during his detention. He was treated in accordance with the normal practices in this facility and was segregated from other prisoners for his own protection to a greater degree than an ordinary criminal defendant might have been. However, we found that the MCDC failed to communicate important information about Mayfield to appropriate personnel, resulting in unnecessary confrontations with Mayfield by a corrections officer and the inadvertent public disclosure of the alias assigned to him to protect grand jury secrecy.

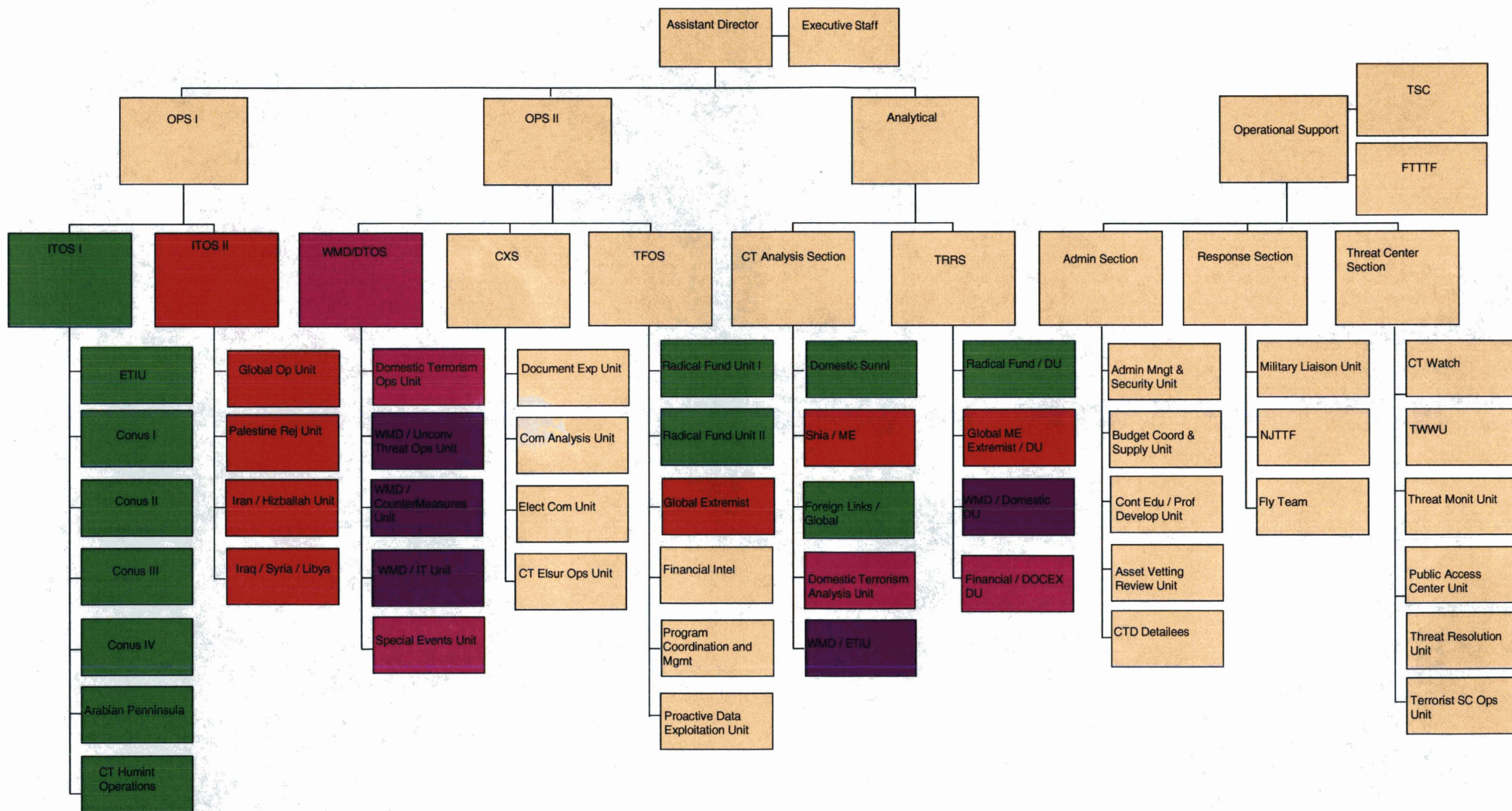
As a result of our investigation, we provided a series of recommendations to the FBI to address problems we found in the Mayfield case. While we did not find any intentional misconduct by FBI employees, either in the Laboratory or by those conducting the FBI field investigation, we did find performance issues by various FBI employees and we recommended that the FBI assess these deficiencies. More significantly, we found a series of systemic issues, particularly in the FBI Laboratory, which helped cause the errors in the Mayfield case. While the FBI Laboratory has taken significant steps to address these issues, we made a series of recommendations to the FBI to address additional issues raised by the Mayfield misidentification. We believe our

recommendations, if fully adopted, can help prevent similar errors in the future.

# APPENDICIES

A

# COUNTERTERRORISM DIVISION

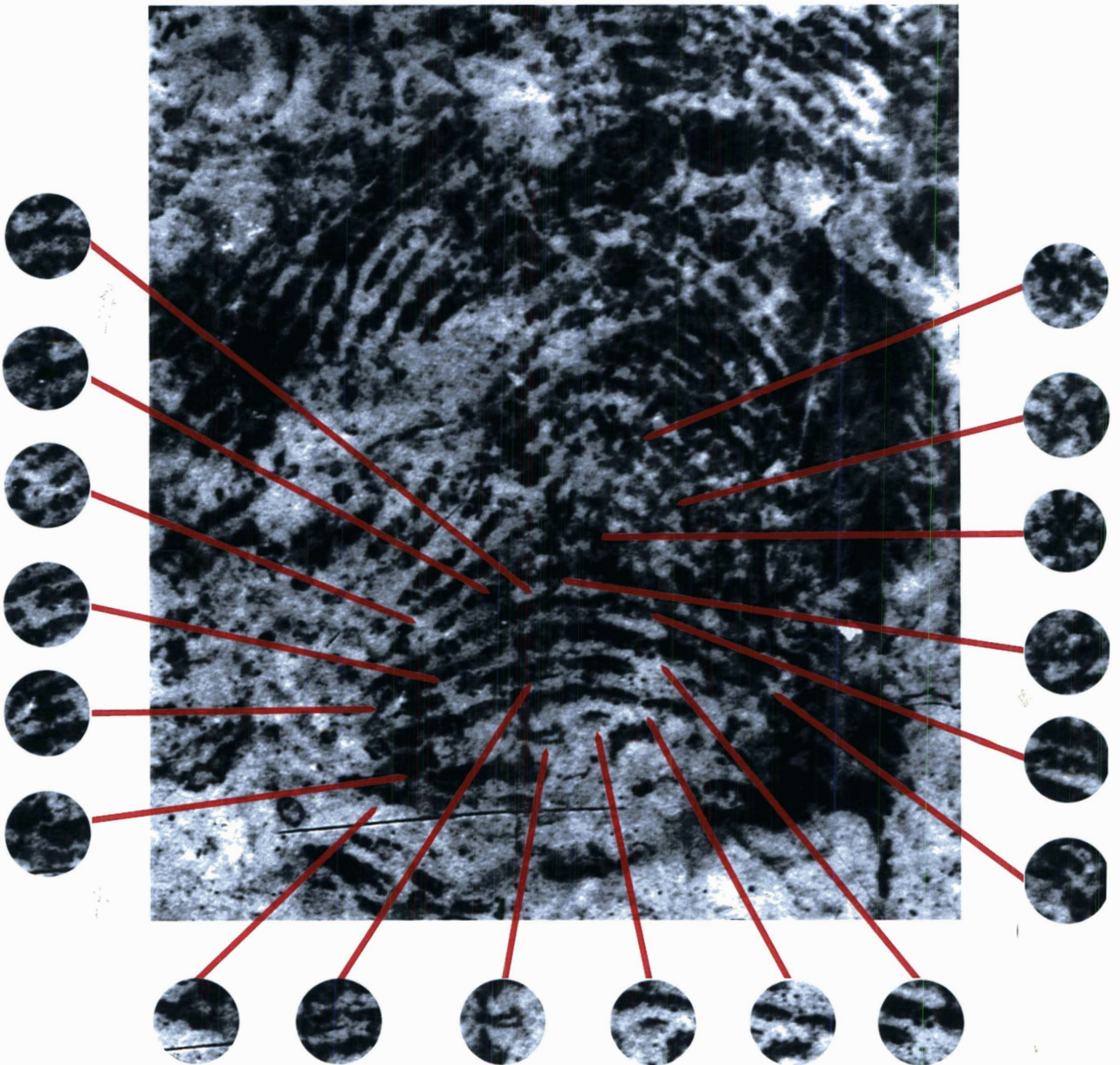


Stand Alone
  RFU Team
  Domestic Team
  Global Extremist
  WMD

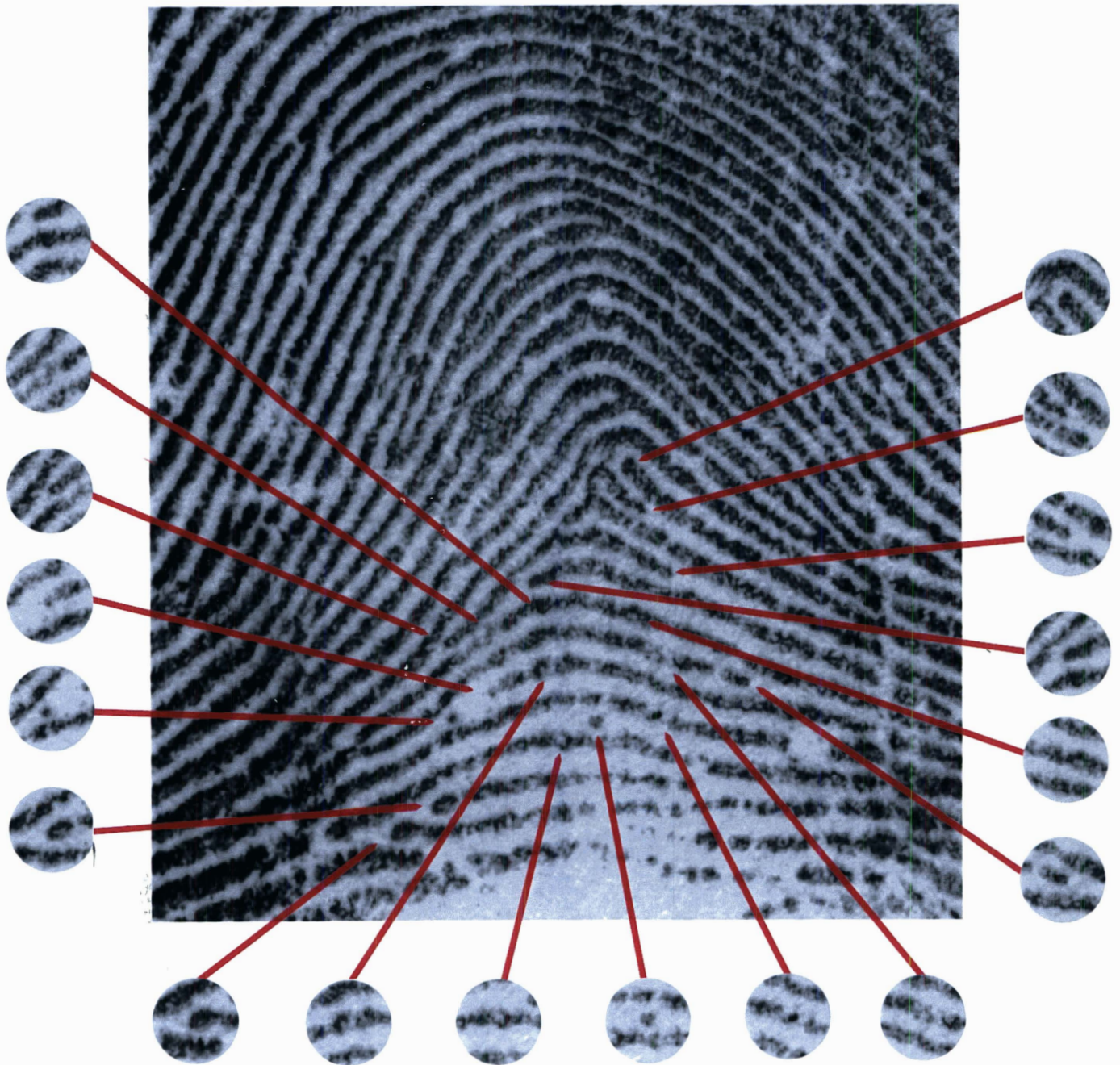
B



# LATENT PRINT



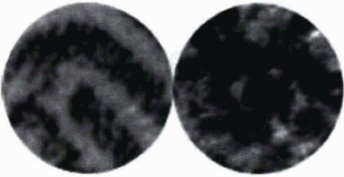
# KNOWN PRINT



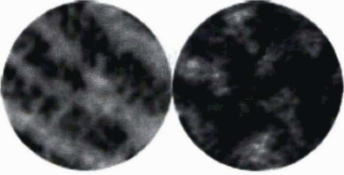
## IDENTIFICATION OF LATENT 17

The identification of Mayfield was effected through an Automated Fingerprint Identification System (AFIS) search of the Federal Bureau of Investigation (FBI) criminal files. The following describes the characteristics used to effect the identification, this includes levels 1 (ridge flow), 2 (dots, ending ridges, and dividing ridges), and 3 (ridge edges, ridge breaks, pores, and incipient ridge events):

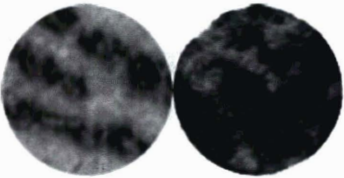
Known      Latent



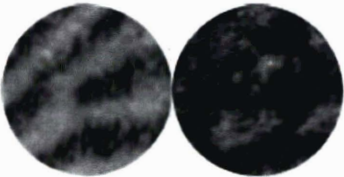
- A. In the middle of the latent image is the inner-most recurving ridge. Inside the recurving ridge is a spike or ending ridge. On the recurving ridge are two appendages, a dividing ridge at the top of the recurve and a dividing ridge on the left shoulder of the recurve.



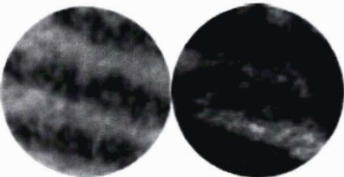
- B. From pullout A, following the inner dividing ridge from the left shoulder, there is an ending ridge.



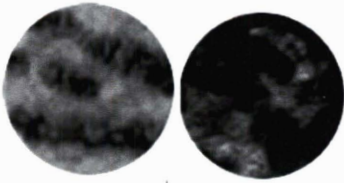
- C. From the ending ridge in pullout B, the second ridge down, when followed to the right, comes to an end.



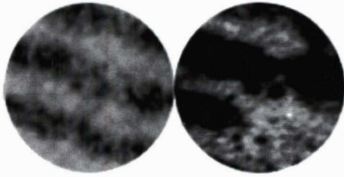
- D. The ridge directly below the ending ridge in pullout C, when followed to the left, comes to an end.



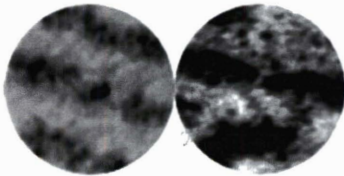
- E. The ridge directly below the ending ridge in pullout D, when followed to the right, bears three level 3 details. These are pores present in both the latent and known images.



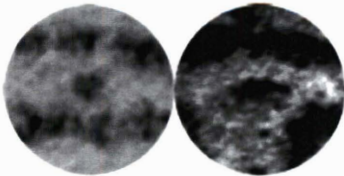
F. The ridge directly below the pores in pullout E, when followed to the right, comes to an end.



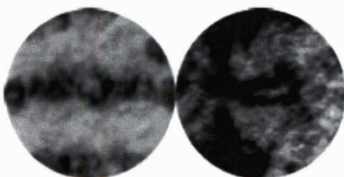
G. From the ending ridge in pullout F, following that same ridge back to the left, there are two level 3 details. These two incipient dots are present in both the latent and known images



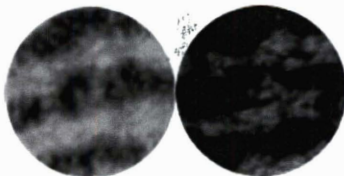
H. The second ridge directly below the incipient dots in pullout G has level 3 detail. A small break and angling of the ridge that are present in both the latent and known images.



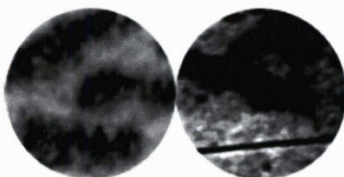
I. Directly left of the small break and angling of the ridge in pullout H, is a dot.



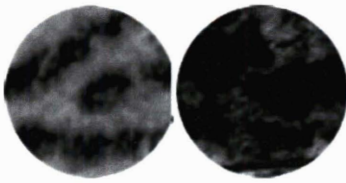
J. On the ridge below the dot in pullout I, when followed to the left is a single level 3 detail. This pore is present in both the latent and known images.



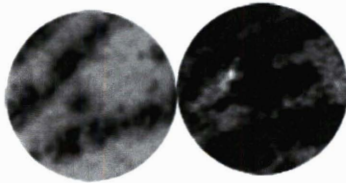
K. Two ridges above the pore in pullout J and slightly to the left, is a single level 3 detail. This elongated pore is present in both the latent and known images.



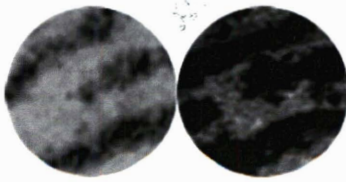
L. On the fourth ridge down from pullout K, following its path to the left, there is an ending ridge that ends pointing to the left. Note: the ending ridge's distinctive shape.



- M. From pullout L, the ridge to the right and above the ending ridge in pullout M also ends pointing to the left.

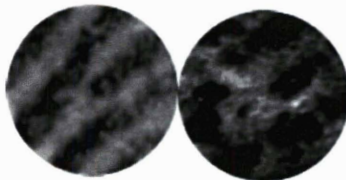


- N. Directly above the ending ridge in pullout M, with two ridges in between, there is a dot/short ridge.

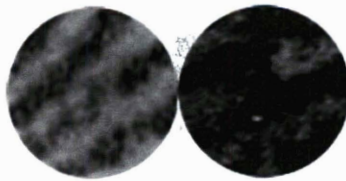


- O. Directly right of the dot/short ridge in pullout N, there is an ending ridge.

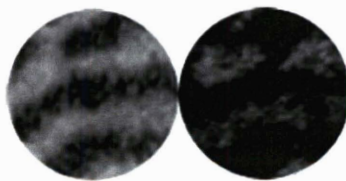
Note: when reviewing the points in pullouts N and O they appear in the charted known print as a dot and an ending ridge. However, in the other impression of the known print, the ridge appears to be a continuing ridge with small breaks. This is consistent with the appearance of these characteristics in the latent image.



- P. From pullout O, the third ridge above and slightly left ends pointing downward and to the left.



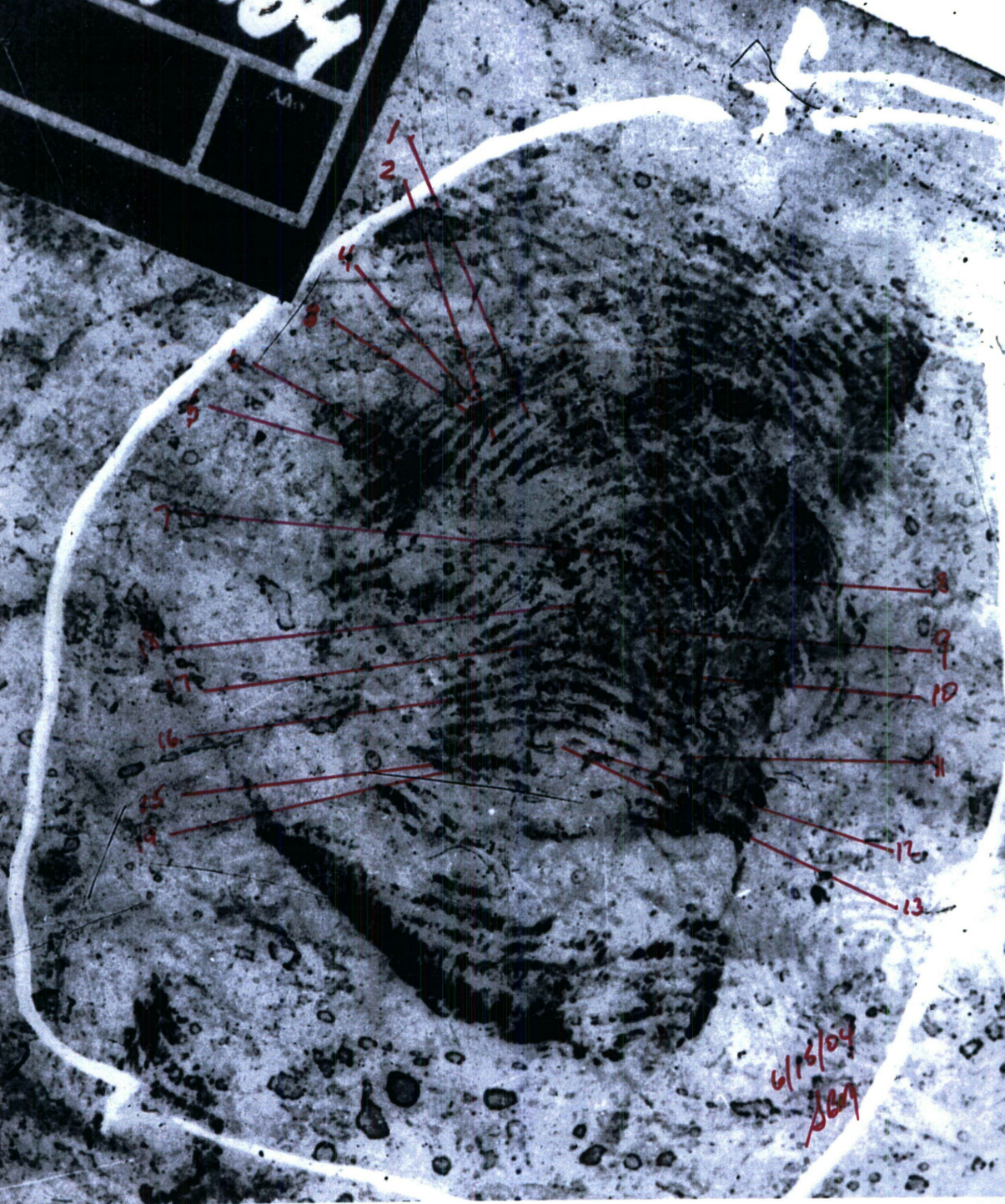
- Q. When the ridge below the ending ridge in pullout P is followed to the right, there is a single level 3 detail. This eruption on the upper edge of the ridge is present in both the latent and known images.



- R. Flowing to the right on the same ridge in pullout Q, there is a single level 3 detail. This eruption on the under side of the ridge is present in both the latent and known images.

C

1  
17  
52-17-04  
M...



6/16/04  
JBT

FIGURE



6/15/00  
AM



D



17  
52-17-04

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7 8

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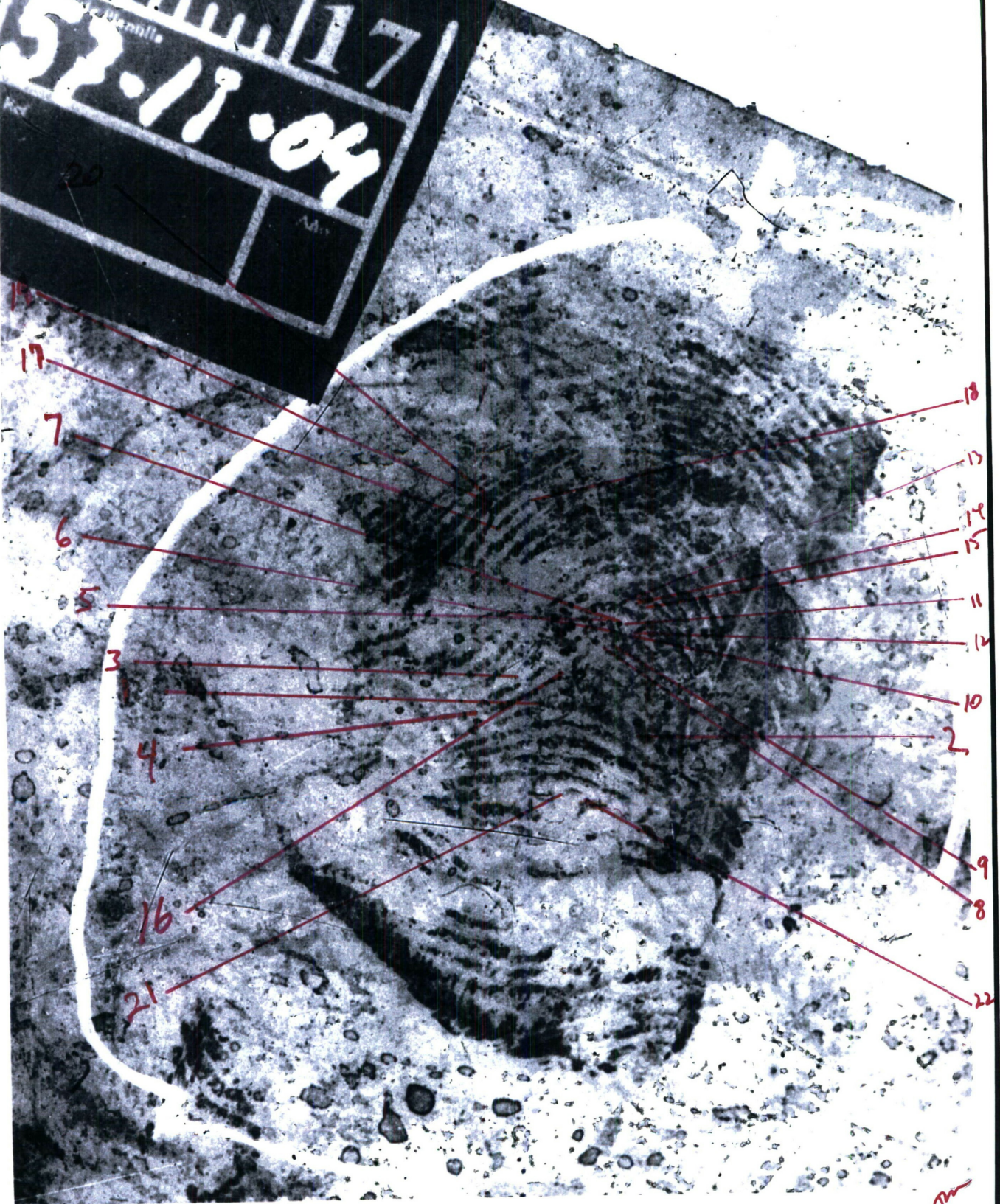
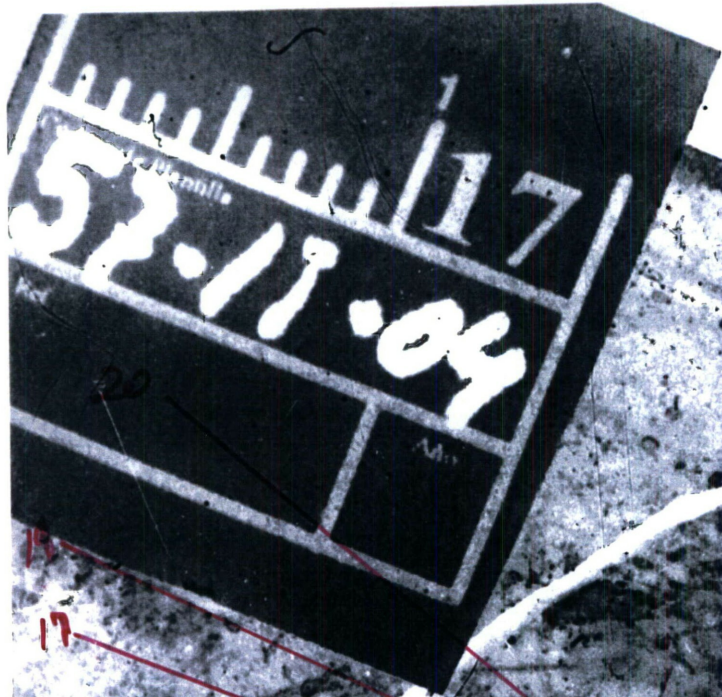
1  
P

# 3 - Medio

6 5 4 3 1 2      7 8



E



*pm*

3 - Medio



F

# Standard Operating Procedures for Examining Friction Ridge Impressions

## 1 Scope

To perform the Analysis, Comparison, Evaluation, and Verification (ACE-V) of friction ridge impressions utilizing a qualitative and quantitative assessment of level one, level two, and level three detail.

## 2 Equipment/Materials

- 2.1 Unknown friction ridge impression(s) (latent, patent, etched)
  - 2.1.1 Photograph(s)
  - 2.1.2 Negative(s)
  - 2.1.3 Lift(s)
  - 2.1.4 Processed item(s)
  
- 2.2 Known friction ridge impression exemplar(s) (fingerprints, palm prints, major case prints, footprints)
  - 2.2.1 Ink
  - 2.2.2 Live Scan
  - 2.2.3 Chemical
  
- 2.3 Magnifier(s)
  - 2.3.1 Fingerprint magnifiers
  
- 2.4 Microscopes/macrosopes
  
- 2.5 Latent Print Digital Imaging System (LPDIS)
  
- 2.6 Integrated Automated Fingerprint Identification System (IAFIS) Latent Print Workstation (LPW)
  
- 2.7 Repository of known exemplars/records
  - 2.7.1 Manual File(s)
  - 2.7.2 Automated File(s)

This is an uncontrolled copy



### **3 Calibration**

- 3.1 Microscopes/macrosopes. The Microscopes/macrosopes undergo external calibration and maintenance checks yearly.
- 3.2 IAFIS LPW scanner. The calibration, maintenance and/or updating of the scanner is performed by CJIS Division.

### **4 Purpose**

The purpose of the examination is to reach a conclusion of individualization, exclusion, or inconclusive.

### **5 Procedure**

Friction ridge impression examinations are conducted using the ACE-V methodology which includes both qualitative and quantitative analysis. The Scientific Working Group on Friction Ridge Analysis, Study, and Technology (SWGFAST) Friction Ridge Examination Methodology for Latent Print Examiners and the Standards for

Conclusions are followed for an individualization, exclusion, or inconclusive decision.

No minimum number of friction ridge detail is required to establish an identification. However, when less than twelve points of level two detail are utilized in making an identification, it must receive Supervisor approval before being reported as an identification. The Supervisor will approve by indicating "OK," date, and initials in the case notes next to the identification statement.

All identifications must be verified. Exceptions may occur when a second qualified examiner is not available and/or time constraints do not permit waiting for a second examiner (e.g., an identification effected as a result of a mandate from a judge during a trial). The ACE-V methodology is applied regardless of the combination of impression types (i.e., unknown v. known, known v. known, or unknown v. unknown).

### 5.1 Simultaneous impressions

When the friction ridge impressions of two or more fingers of one hand, each in a natural relationship with the other, are found then the information from all impressions is used to reach a conclusion.

## 6 Errors

### 6.1 Erroneous identifications

An erroneous identification is the incorrect determination that two areas of friction ridge impressions originated from the same person. An erroneous identification is the most serious error an examiner can make in technical casework.

### 6.2 Erroneous verifications

Verification of an erroneous identification is equal to having effected the original erroneous identification.

### 6.3 Missed identifications

A missed identification is the failure to make an identification when in fact both friction ridge impressions are from the same origin. This is not an erroneous identification.

### 6.4 Clerical and administrative errors

Clerical and administrative errors are not erroneous identifications. Examples include, but are not limited to, writing the wrong finger number or name.

## 7 Limitations

The following factors affect the qualitative aspects of unknown and known friction ridge impressions.

### 7.1 Anatomical aspects

#### 7.1.1 Condition of friction skin

### 7.2 Transfer conditions

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- 7.2.1 Pressure applied during transfer
- 7.2.2 Slippage or twisting
- 7.2.3 Sequence of deposition
  
- 7.3 Transfer medium
  - 7.3.1 Eccrine
  - 7.3.2 Sebaceous
  - 7.3.3 Blood
  - 7.3.4 Wet
  - 7.3.5 Paint
  - 7.3.6 Dirt
  - 7.3.7 Corrosive
  - 7.3.8 Oil/grease
  - 7.3.9 Other
  
- 7.4 Development method
  - 7.4.1 Forensic light source
  - 7.4.2 Chemical
  - 7.4.3 Powder
  
- 7.5 Substrate
  - 7.5.1 Porous
  - 7.5.2 Non-porous
  - 7.5.3 Semi-porous
  - 7.5.4 Smooth
  - 7.5.5 Rough or corrugated
  
- 7.6 Environmental
  - 7.6.1 Protected
  - 7.6.2 Unprotected
  - 7.6.3 Wet (excessive)
  - 7.6.4 Hot (excessive)
  - 7.6.5 Dry (excessive)
  
- 7.7 Preservation
  - 7.7.1 Lifting
  - 7.7.2 Photography
  - 7.7.3 Digitally captured
  - 7.7.4 Electronically captured

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8     **Safety** (not applicable)

9     **References**

- 9.1     SWGFAST, Friction Ridge Examination Methodology for Latent Print Examiners.
- 9.2     Ashbaugh, David R. "*Quantitative-Qualitative Friction Ridge Analysis, An Introduction to Basic and Advanced Ridgeology.*" CRC Press LLC, Boca Raton, Florida, 1999.
- 9.3     SWGFAST, Standards for Conclusions.

Rev.#	Issue Date:	History
1	4/9/98	Original Issue of Latent Fingerprint Section Friction Ridge Identification Protocol
2	9/15/2003	SOP for Friction Ridge Analysis in the Latent Print Units; Complete rewrite of document to emphasize ACE-V methodology.

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# SWGFAST

## Friction Ridge Examination Methodology for Latent Print Examiners

### Goal

Describe a method for friction ridge examinations and the bases for conclusion.

### Objectives

- \* Establish principles by which examinations are conducted.
  - \* Establish a method for friction ridge examination.
  - \* Establish the conclusions that may result from an examination.
1. Fundamental principles for friction ridge examinations by a latent print examiner, trained to competency<sup>1</sup>
    - 1.1 The morphology of friction ridge skin is unique.
    - 1.2 The arrangement of friction ridges is permanent barring trauma to the basal layer of the epidermis.
    - 1.3 An impression of the unique details of friction ridge skin can be transferred during contact with a surface.
    - 1.4 An impression that contains sufficient quality and quantity of friction ridge detail can be individualized to, or excluded from, a source.
    - 1.5 Sufficiency is the examiner's determination that adequate unique details of the friction skin source area are revealed in the impression.
  2. Levels and uses of friction ridge skin detail for examinations
    - 2.1 Level one detail
      - 2.1.1 Overall ridge flow
      - 2.1.2 General morphology (e.g., presence of incipient ridges, overall size)
      - 2.1.3 Can be used for pattern interpretation
      - 2.1.4 Can be used to determine anatomical source (i.e., finger, palm, foot, toe) and orientation

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<sup>1</sup> - SWGFAST Training to Competency for Latent Print Examiners

- 2.1.5 Cannot be used alone to individualize
- 2.1.6 Can be used to exclude under certain circumstances
- 2.2 Level two detail
  - 2.2.1 Individual ridge path
    - 2.2.1.1 Presence of ridge path deviation (e.g., ridge ending, bifurcation and dot)
    - 2.2.1.2 Absence of ridge path deviation (e.g., continuous ridge)
    - 2.2.1.3 Ridge path morphology (e.g., size and shape)
  - 2.2.2 Used in conjunction with level one detail to individualize
  - 2.2.3 Used in conjunction with level one detail to exclude
- 2.3 Level three detail
  - 2.3.1 Structure of individual ridges
    - 2.3.1.1 Shape of the ridge
    - 2.3.1.2 Relative pore position
  - 2.3.2 Other specific friction skin morphology (i.e., secondary creases, ridge breaks, etc.)
  - 2.3.3 Used in conjunction with level one and level two detail to individualize
  - 2.3.4 Used in conjunction with level one and level two detail to exclude
- 2.4 Other features associated with friction ridge skin (e.g., creases, scars, warts, paper cuts, blisters)
  - 2.4.1 May be permanent or temporary
  - 2.4.2 May exist as level one, two and three detail
  - 2.4.3 May be used in conjunction with friction ridge detail to individualize or exclude

3. Method of friction ridge examinations.

A recurring application of Analysis, Comparison, Evaluation and Verification (ACE-V) in each of the following:

3.1 Analysis

Analysis is the assessment of a friction ridge impression to determine suitability for comparison. Factors considered include the following:

3.1.1 Quality (clarity) and Quantity of detail

- 3.1.1.1 Level one detail
- 3.1.1.2 Level two detail
- 3.1.1.3 Level three detail
- 3.1.2 Anatomical source (finger, palm, foot, toe)
- 3.1.3 Factors influencing quality include:
  - 3.1.3.1 Residue/matrix
  - 3.1.3.2 Deposition
  - 3.1.3.3 Surface/substrate
  - 3.1.3.4 Environment
  - 3.1.3.5 Development medium
  - 3.1.3.6 Preservation method
  - 3.1.3.7 Condition of the friction skin

## 3.2 Comparison

Comparison is the direct or side-by-side observation of friction ridge detail to determine whether the detail in two impressions is in agreement based upon similarity, sequence and spatial relationship.

## 3.3 Evaluation

Evaluation is the formulation of a conclusion based upon analysis and comparison of friction ridge impressions. Conclusions which can be reached are:

### 3.3.1 Individualization (Identification)

Individualization is the result of the comparison of two friction ridge impressions containing sufficient quality (clarity) and quantity of friction ridge detail in agreement.

Individualization occurs when a latent print examiner, trained to competency<sup>1</sup>, determines that two friction ridge impressions originated from the same source, to the exclusion of all others.

### 3.3.2 Exclusion

Exclusion is the result of the comparison of two friction ridge impressions containing sufficient quality (clarity) and quantity of friction ridge detail

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which is not in agreement.

Exclusion occurs when a latent print examiner, trained to competency<sup>1</sup>, determines that two friction ridge impressions originated from different sources.

### 3.3.3 Inconclusive

Inconclusive evaluation results when a latent print examiner, trained to competency<sup>1</sup>, is unable to individualize or exclude the source of an impression.

Inconclusive evaluation results must not be construed as a statement of probability. Probable, possible or likely individualization (identification) conclusions are outside the acceptable limits of the friction ridge identification science.

## 3.4 Verification

Verification is the independent examination by another qualified examiner<sup>1</sup> resulting in the same conclusion.

3.4.1 All individualizations (identifications) must be verified.

3.4.2 Exclusion or inconclusive results may be verified.

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## Standards for Conclusions

### 1. Individualization (Identification):

The standard for individualization is agreement of sufficient friction ridge details in sequence.

#### 1.1 Conditions that shall be satisfied:

- 1.1.1 Determined by a competent<sup>1</sup> examiner, and
- 1.1.2 Applied to a common area in both impressions, and
- 1.1.3 Based on quantity and quality of the friction ridge details, and
- 1.1.4 Absent any discrepancy, and
- 1.1.5 Reproducible conclusion.

#### 1.2 Basic principles:

- 1.2.1 There is no scientific basis for requiring that a predetermined number of corresponding friction ridge details be present in two impressions in order to effect individualization.<sup>2</sup>
- 1.2.2 Individualization is supported by the theories of biological uniqueness and permanence, probability modeling, and empirical data gained through more than one hundred years of operational experience.

### 2. Exclusion:

The standard for exclusion is disagreement of friction ridge details.

#### 2.1 Conditions that must be satisfied:

- 
- <sup>1</sup> See SWGFAST Guideline for "Training to Competency".
  - <sup>2</sup> See SWGFAST Guideline for "Quality Assurance Guidelines for Latent Print Examiners".

- 2.1.1 Determined by a competent<sup>1</sup> examiner, and
  - 2.1.2 Applied to all comparable anatomical areas, and
  - 2.1.3 Presence of a discrepancy<sup>2</sup>, and
  - 2.1.4 Based on sufficient quantity and quality of the friction ridge details, and
  - 2.1.5 Reproducible conclusion.
- 2.2 Basic principles:
- 2.2.1 The presence of one discrepancy is sufficient to exclude.
  - 2.2.2 Distortion<sup>3</sup> is not a discrepancy and is not a basis for exclusion.
  - 2.2.3 Exclusion is supported by the theories of biological uniqueness and permanence, probability modeling, and empirical data gained through more than one hundred years of operational experience.

3. Inconclusive:

The standard for an inconclusive finding is the absence of sufficient friction ridge details to effect a conclusion of individualization or exclusion.

- 3.1 Conditions that must be satisfied:
- 3.1.1 Determined by a competent<sup>1</sup> examiner, and
  - 3.1.2 Based on quantity and quality of the friction ridge details, and
  - 3.1.3 Insufficient agreement or disagreement in the friction ridge details, and
  - 3.1.4 Reproducible conclusion.

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<sup>1</sup> See SWGFAST Guideline for "Training to Competency".

<sup>2</sup> See SWGFAST Glossary for "discrepancy".

<sup>3</sup> See SWGFAST Glossary for "distortion".

I

## Appendix I

### Level Two Details Used to Identify both Mayfield and Daoud (See Figures 6A-6C)

Mayfield ID(1)	Daoud ID(2)	Comment
2 *	SM (8) V2 (10) V1 (8)	Interpreted as an ending ridge pointing northwest in Mayfield, 9 ridges up from the dot (Mayfield point 6); actually a bifurcation in Daoud, forming the right half of a distinctive "x" formation.
3 *	SM (9) V1 (18)	Interpreted as an ending ridge pointing southeast in Mayfield, 8 ridges up from dot; actually a bifurcation in Daoud. Location in the latent appears to be more to the right than in the Mayfield exemplar.
4 *	SM (10) V2 (2) V1 (12)	Initially interpreted as a bifurcation for the IAFIS search; re-interpreted as an ending ridge pointing southeast in Mayfield; actually a bifurcation in Daoud (initial interpretation was correct).
5 *	SM (11) V1 (19)	Initially interpreted as a bifurcation for the IAFIS search; reinterpreted as an ending ridge pointing east in Mayfield, 3 ridges up from dot; actually an ending ridge in Daoud. Location in the latent appears to be more to the right than in the Mayfield exemplar.
6	SM (12-13) V2 (21-22) V1 (13-14)	Interpreted as a dot in the Mayfield; reinterpreted as the upper half of an incompletely reproduced small enclosure in Daoud.
9	SM (14) V1 (15)	Interpreted as an ending ridge pointing west in Mayfield, two ridges below dot; actually a bifurcation in Daoud.
10	SM (15) V1 (16)	Interpreted as an ending ridge pointing west in Mayfield; actually an ending ridge in Daoud.
12 *	SM (17) V2 (1) V1 (11)	Initially interpreted as a bifurcation for the IAFIS search; re-interpreted as an ending ridge pointing west in Mayfield, 5 ridges up from dot; actually a bifurcation in Daoud (initial interpretation was correct).
13 *	V2 (3) V1 (9)	Initially interpreted as an ending ridge eight ridges up from the dot, pointing southwest for the IAFIS search; re-interpreted as a bifurcation in Mayfield, 7 ridges up from dot; actually an ending ridge in Daoud (initial interpretation was correct). Note also the distinctive "zig" shape of the ridge which occurs in the latent print and both the Mayfield and Daoud exemplars.
15	SM (7) V2 (6) V1 (7)	Interpreted as a bifurcation on the left shoulder of the recurve in the Mayfield print; actually a bifurcation in Daoud, forming the left part of a distinctive "x" formation.

- (1) Number references correspond to points marked in 3/22 Charted Enlargements (Figures 2A-2B); asterisk indicates point was coded for IAFIS search.
- (2) References are to numbered points in charted enlargements prepared by Stephen Meagher (SM), first verifier (V1) and second verifier (V2) in connection with LPU identification of Daoud. See Appendices C-E.

J

## Appendix J

### Level Two Details Utilized in Mayfield Identification but Lacking Correspondence in Daoud Exemplars (See Figures 7A-7C)

Mayfield ID(1) Comment

1	Marked by LPU as a bifurcation forking to the west above the core of the print. This point was not included in the charted enlargements prepared for the 4/21/04 meeting with the SNP. Consultants did not find a basis for finding a bifurcation at that location. There is no bifurcation on the corresponding ridge in the Daoud exemplar.
7	Interpreted by LPU as an ending ridge 2 ridges up and to the left of the dot (6). The LPU noted that the ridge was incompletely reproduced in the Mayfield's civil exemplar and that the feature appears as a "continuing ridge with small breaks" in the criminal exemplar. This contributes to uncertainty over the location of the ridge ending. There is no tapering of the surrounding ridges on the latent such as might suggest an ending ridge in this location. There are no apparent breaks on the corresponding ridge on the Daoud exemplars; the gap in the latent therefore appears to be an incompletely reproduced ridge rather than an actual Level Two detail.
8	Interpreted by the LPU as a dot or short ridge two ridges up and to the left of the dot (6). On the latent, the point is near the edge of the impression and there is no clear tapering of the surrounding ridges to suggest a Level Two detail; such tapering is very clear in the Mayfield exemplars. The corresponding ridge on the Daoud exemplars does not end or break anywhere near this location, but rather continues to the southwest.
11	Interpreted by the LPU as an ending ridge five ridges above and to the left of the dot (6). Green originally plotted an ending ridge one ridge higher for the AFIS search and apparently moved the point down a ridge after seeing the Mayfield exemplars. Kenneth Moses also relied on this feature. On the latent, the point is near the edge of the impression. The corresponding ridge on the Daoud exemplars does not end or break AT this location, but rather continues to the southwest. There is, however, a bifurcation or ending ridge one ridge up.
14	Interpreted by the LPU as a bifurcation six ridges above the dot (6) and slightly to the left. Two consultants reported seeing nothing in LFP 17 to support finding a bifurcation in this location, although bifurcations are apparent on the ridges above and below this point. No Level Two ridge deviations appear at the corresponding location in the Daoud exemplars.

- (1) Number references correspond to points marked in 3/22 Charted Enlargements (Figures 2A-2B).



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# Memorandum



To : Glenn A. Fine  
Inspector General

Date 12/14/2005

From : Charlene B. Thornton  
Assistant Director  
Inspection Division

Subject : Draft OIG Report on the FBI's  
Handling of the Brandon Mayfield Case

We appreciate the work of the Office of the Inspector General (OIG) in providing additional insights and perspective into how the Federal Bureau of Investigation (FBI) can strengthen the process of fingerprint identification. We also appreciate the work of the OIG that puts to rest unfounded speculation by some as to whether there was misconduct by the FBI or misuse of the Patriot Act. The FBI is confident that the Inspector General's findings and recommendations, combined with the substantial modifications already implemented, will significantly enhance our ability to perform our duties to the public. (U)

## A. Overview

In May 2004, Brandon Mayfield was arrested based on, as confirmed by the OIG report, an extraordinary confluence of events including principally an unusual similarity between Mr. Mayfield's known fingerprint and a copy of an extant fingerprint recovered from the scene of recent lethal terrorist bombings in Madrid. The fingerprint identification was made by the FBI as well as by Mr. Mayfield's own fingerprint expert. Other evidence that appeared to corroborate the fingerprint match included Mr. Mayfield's connections to known and suspected terrorists which were documented and outlined to the Court. (U)

As was learned later in May of 2004, the fingerprint identification made by the FBI and defense experts was wrong. Upon learning of the mistake, at the request of the government Mr. Mayfield was immediately released from prison and the charges dismissed. The FBI also immediately convened a panel of international experts to examine what went wrong and to propose reforms to minimize the risk or reoccurrence. Those reforms have been undertaken by the FBI. (U)

The FBI also cooperated completely and exhaustively for months with the additional investigation undertaken by the OIG to assess what happened and again propose any further measures to promote the effectiveness of the agency. As did the international panel of experts convened by the FBI, the OIG identifies as the primary factor for the mistake made by the FBI and the defense experts the extraordinarily "unusual similarity" between the two prints (the known fingerprint of Mr. Mayfield and the extant fingerprint recovered from the Spanish crime scene), which led all the experts to reach the same conclusion. Such a degree of similarity of fingerprints from two persons is "extremely rare," the OIG report notes. (U)

The OIG report identifies several ways in which the methodology of the FBI can be enhanced to minimize the risk of reoccurrence. Several of these helpful ideas were identified and evaluated by the international expert panel immediately after the discovery of the mistaken

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Memorandum from Charlene B. Thornton to Glenn A. Fine  
Re: Draft OIG Report on the FBI's, 12/14/2005

identification. Following that review, the FBI implemented a series of procedural reforms designed to prevent future errors. The OIG has now finished its evaluation of these measures and concludes in its report that these were "significant steps" undertaken by the FBI. The OIG also has recommended additional measures that the FBI can implement to strengthen further the FBI's assessment of fingerprints. You have our assurance that to the extent they have not yet been acted upon they will all be considered and discussed with leading experts to make sure that the FBI is employing the most effective means to ensure the integrity of its expert examinations. (U)

The OIG report also finds no merit to several spurious claims and/or rumors. First, the OIG report concludes that there was no evidence of misuse of the Patriot Act. The report finds, "contrary to public speculation," that the FBI did not use certain provisions of the Patriot Act and that the Act did not affect the scope of the FBI's use of FISA surveillance or searches. Indeed, the OIG finds that the effect of the Patriot Act on this investigation was to enable the FBI lawfully to share information with other members of the law enforcement and intelligence communities. Second, though the question was raised as to whether religion played any role in the FBI's identification or investigation of Mr. Mayfield, the OIG report concludes that religion played no part in either. Third, the OIG found no evidence of misconduct on the part of any FBI employees involved in this investigation. (U)

B. Comments on the Draft OIG Report

As noted previously to you, we believe the following aspects of the OIG report are incomplete or inaccurate. (U)

(A) The OIG report suggests that the affidavit in support of the arrest of Mr. Mayfield provided an "ambiguous" description of the April 21 meeting between the FBI and the Spanish National Police (SNP), which "apparently" led the judge to believe that the SNP had agreed with the FBI's identification. The facts show that the language was appropriate given the information available at the time and more than met the Government's Brady obligations. A fair reading of the affidavit, as articulated in the submissions by the United States Attorney's Office for the District of Oregon (USAO Submissions), could not have led to any confusion. In fact, as specifically noted in the USAO Submissions, there is no reason to believe that the language caused the Court to labor under a misimpression; all evidence is that the Court was well aware of the pertinent facts then known to us. (U)

(B) The OIG report criticizes certain aspects of the affidavit submitted to the Court. Although we disagree with these criticisms for the reasons set forth below and in our prior submission, we note that it is clear that they are immaterial to any substantive decision made by the Court, an assessment with which the OIG report does not disagree. For instance, the report states that the images of the latent prints were provided to the FBI by Interpol and not by the SNP. But the report fails to explain that the latent prints were provided to Interpol by the SNP. There is no question that the SNP was the source of the latent print – Interpol was merely a conduit. Indeed, Interpol is an international organization that facilitates cross-border police cooperation and assists agencies whose mission is to prevent or combat international crime. Accordingly, the affidavit submitted by law

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enforcement to the Court stating the provenance of the fingerprints as being the SNP was accurate. Criticizing the affiant for not including the irrelevant detail that Interpol was the conduit is unwarranted. (U)

The OIG report also takes issue with the use of the word "likelihood" in one sentence of the affidavit, suggesting that its usage suggested an unwarranted factual inference that Mr. Mayfield used false travel documents. The affidavit, however, explicitly and clearly states that it was unknown whether Mr. Mayfield even traveled to Spain, thus clearly negating a conclusion that it was likely that Mr. Mayfield used false travel documents to go to Spain. Finally, we note that there is no reason to believe, and the OIG report does not contend, that the Court was misled by what the report characterizes as at most a "lack of attention to detail." (U)

(C) The report on page 122, Section A.1., states that the "unusual similarity of Level 2 features on the fingerprints [prints added for clarification] of Mayfield and Daoud . . . was an important factor contributing to the erroneous identification." We would disagree with this statement factually if it were read to mean that the known fingerprints of Mr. Mayfield and the known fingerprints of Mr. Daoud are unusually similar. However, we assume that the draft report means to say that if a qualified fingerprint examiner were to compare LFP #17 (the latent fingerprint found at the crime scene in Spain) to Mr. Mayfield's known fingerprints, he or she might well find unusual similarities. This is not because of an unusual similarity between Messrs. Mayfield's and Daoud's known fingerprints, but rather due to the unusual similarity between Mr. Mayfield's fingerprint and LFP #17. (U)

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**U.S. Department of Justice**

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December 13, 2005

Glenn A. Fine  
Inspector General  
U.S. Department of Justice  
Office of the Inspector General  
950 Pennsylvania Ave., NW  
Suite 4712  
Washington, DC 20530

Dear Mr. Fine:

I am writing in response to your request for comment about the proposed report of the Office of Inspector General concerning the Brandon Mayfield case (hereafter the "draft report") which my office received on December 9, 2005. I appreciate the opportunity to provide you with input. The proposed report fails to account for and appreciate several critically important matters regarding the actions of employees of the Portland Division of the FBI and my office. To the extent that the ultimate conclusions contained in the report are based upon these omissions, they are erroneous. I respectfully request that you reconsider some of your conclusions and include the additional information detailed below. Although there are many areas in which we view the facts differently than your report, we will limit our response here to the three most significant. (U)

As you are aware, the Office of Professional Responsibility has now issued its report exonerating the attorneys in my office and concluding that they exercised good judgment. Throughout the draft report, the existence of an ongoing OPR investigation is noted. In fairness, we believe each of those references should be changed to state that OPR has reviewed the conduct of the attorneys involved and concluded that they committed no misconduct and exercised good judgment. To do otherwise permits the inference that there is some unresolved issue regarding the attorneys in my office when there is not. (U)

**A. Description of the April 21 Spanish National Police Meeting**

First, the draft report criticizes the description in the affidavits prepared in Portland of the April 21, 2004 meeting between the FBI and the Spanish National Police which indicated that at the conclusion of the meeting "it was believed that the SNP felt satisfied with the FBI Laboratory's identification . . ." of the latent fingerprint. The draft report's characterization of this language as "ambiguous" is not supported by the facts as known to Portland personnel at the time the affidavits were submitted to the Court. Indeed, the draft report notes that the three FBI employees who attended the April 21 meeting told your own investigators "that most or nearly all of the SNP

examiners seemed to be impressed” by the FBI’s presentation. Draft Report, p. 52. That was precisely the message received in Portland and set forth in the affidavit. Moreover, the report fails to note that the SNP examiner who finally identified the latent print as belonging to the Algerian suspect spoke to representatives of my office and the FBI during a June 9, 2004 meeting. He acknowledged that at the conclusion of the April 21 meeting he thought “*for sure*” that the latent print belonged to Mayfield. This statement corroborates the affidavit and should be included in the report. (U)

The report also errs by suggesting that the alleged ambiguity concerning the meeting should be blamed on Department personnel located in Portland. The report should note that no Portland personnel were allowed to go to Madrid during the investigation, despite my and FBI SAC Jordan’s separate requests. The report does correctly note that:

[h]aving participated in the April 21 meeting and served as translator for it, the Madrid Legat was in the best position to correct the [alleged ambiguity] . . .

Draft Report, p. 216. However, the report incorrectly criticizes those who drafted the affidavits for failing to “consult[] directly with the Madrid Legat to seek less ambiguous language.” Draft Report, p. 216. It is our position that we did precisely that. (U)

As recognized in the report, the affidavits’ description of the SNP position following the April 21 meeting was a virtual direct quote from the official memorandum prepared by the Madrid Legat the day after the meeting:

Unit Chief Weiners provided satisfactory explanations for each of their questions and at the conclusion of the meeting **all of the SNP personnel seemed satisfied with the FBI’s identification.**

Draft Report, p. 53 (emphasis added). The report accurately states that Portland personnel sent the draft language describing the April 21 meeting to the Madrid Legat on April 29, a week before its presentation to the Court. We reasonably expected that, if there were a problem with the language employed, the Madrid Legat would have corrected it. Thus, contrary to the draft report’s suggestion, there should be no dispute but that Portland personnel did “consult directly” with the Legat. We employed best practices by quoting the official report of the primary witness and then circulating the description of the meeting to that witness in order to ensure accuracy. The affidavit correctly informed the Court that the Spanish intended to continue their analysis of the print. It did not state that they had formally concurred with the FBI’s identification. (U)

Moreover, the report fails to account for the fact that on May 4, Portland FBI SAC Jordan and I (along with several members of our respective staffs) spoke directly with the Madrid Legat by teleconference. The Legat told us that *the SNP were about to issue a final report concurring with the FBI fingerprint identification*. This teleconference was specifically convened to consider whether Portland should recommend that a warrant be sought to detain Mr. Mayfield as a material witness. Your office has been informed about this teleconference, and a description of it should be included in your report. Certainly, it directly rebuts the criticism that we should have consulted directly with the Legat. (U)

In summary, Portland personnel took several eminently responsible steps to verify the accuracy of the affidavit. In light of all of those steps, I respectfully request that you reconsider the conclusion that the affidavit language was ambiguous and the suggestion that Portland personnel should have done more in summarizing the results of the April 21 meeting with the Spanish National Police. (U)

**B. False Travel Documents Allegation**

The report also contends that the affidavit should have stated that there was a “possibility” that Mayfield possessed false documents rather than that there was a “likelihood” such documents existed. We contend this criticism ignores both the role of an affidavit in criminal procedure and the value of a trained law enforcement agent’s experience in analyzing known facts and making deductions and inferences from those facts. (U)

The purpose of an affidavit is to set forth those facts upon which the government relies in requesting that a judge draw a particular legal conclusion, while at the same time complying with our duty to reveal any known facts which detract from our request. Here, the Court was asked to conclude, and Judge Jones ultimately did conclude, that it was impracticable to assure Mayfield’s appearance before the grand jury by subpoena. The report does not suggest a single known fact which detracted from that conclusion which was not contained in the affidavit. (U)

There were only two common sense ways to explain how Mayfield’s fingerprint could be on a bag of detonators in Spain – either Mayfield had traveled to Spain and handled the bag or he had touched the bag in the United States before someone else transported it to Spain. Both possibilities were explicitly proposed in the affidavit. Both possibilities suggested that Mayfield had material testimony to provide concerning the Madrid bombings – either as an observer or as a participant if he had been in Spain or as an associate of someone else who may have transported the bag to Spain. (U)

The affidavit disclosed that Mayfield had not recently traveled overseas, at least under his true name. The FBI agent who signed the affidavit was entitled to rely upon his over twenty



years experience as a federal law enforcement officer, and upon both the classified and the unclassified information of which you are aware, to infer from those facts that *if* Mayfield traveled to Spain he *may* have used another identity and false papers. If Mayfield had traveled to Spain, it was indeed *likely* that he did so using false papers since no record of travel under his real name could be found. The context in which the affidavit asserted there was a “likelihood” of false papers does not create any misimpression. Quite the contrary, it candidly discloses that the affiant did not know whether Mayfield had traveled; thus, the “likelihood” referred to is clearly an inference based on a possibility. To describe this as “an unfounded inference” simply ignores the context. To claim that instead the affiant should have said that there was “a possibility” of false papers also ignores that the affidavit clearly described Mayfield’s travel as only one of the *possible* scenarios which could have gotten his print on the bag. We respectfully contend this criticism addresses what are, at best, semantic distinctions. Any fair reading of the affidavit would conclude that it asserted no more than a *possibility* that Mayfield used false travel documents. (U)

In any event, the affidavit’s assertion that it was “likely” that Mayfield used false travel documents was clearly an inference. It did not purport to be a factual representation. The district judge was free to accept or reject the inferences set forth in the affidavit. Ultimately, a neutral federal district judge came to the same conclusion as did the affiant and found as a matter of law that “it appears impracticable to secure the attendance of [Mayfield] at grand jury by subpoena unless he is arrested and detained . . .” Order for Arrest Warrant and Detention, filed May 6, 2004. The Portland personnel who drafted the affidavit should not be criticized for making the same inferences and reaching the same conclusion as did the district court. (U)

### C. Attention to Detail

Finally, the Executive Summary, as well as the body of the draft report, characterizes minor factual inaccuracies contained in the affidavits as reflecting a “regrettable lack of attention to detail.” Draft Report at 19. In all fairness, the final report should note that each of those minor factual discrepancies were *immaterial as a matter of law* to the issue of whether Brandon Mayfield should be held as a material witness or his premises searched. For example, the report criticizes the affidavit for stating that the FBI obtained the latent print from the SNP, when in fact Interpol had transmitted the print from the SNP to the FBI. We do not regard this as an inaccuracy at all, because there is no question that the SNP was the source of the print. This is rather like criticizing someone for saying they got a bill from the phone company instead of saying they got it from the mailman. The materially important fact is the source of the print, not who transmitted it. Such trivial inaccuracies could not have influenced the decision to issue the warrants, and do not, even when taken together, show a lack of attention to detail. Furthermore, the Executive Summary, which I understand you intend to release publicly, should also note your conclusion set out at page 211 of the Draft Report that the fault for these minor factual

Glenn A. Fine  
December 13, 2005  
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inaccuracies belongs with the person at the FBI Laboratory who approved the affidavit's language when it was read to him by personnel from Portland. (U)

Again, I thank you for the opportunity to provide comments on behalf of my office.

Sincerely,

A handwritten signature in black ink, appearing to read "Karin J. Immergut". The signature is fluid and cursive, with a large initial "K" and a long, sweeping tail.

KARIN J. IMMERGUT  
United States Attorney