



**AUDIT OF
COMPLIANCE WITH STANDARDS
GOVERNING COMBINED DNA INDEX SYSTEM
ACTIVITIES AT THE COUNTY OF SANTA CLARA
DISTRICT ATTORNEY'S CRIME LABORATORY
SAN JOSE, CALIFORNIA**

U.S. Department of Justice
Office of the Inspector General
Audit Division

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September 2012

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EXECUTIVE SUMMARY

The Department of Justice Office of the Inspector General (OIG), Audit Division, has completed an audit of compliance with standards governing Combined DNA Index System (CODIS) activities at the County of Santa Clara District Attorney's Crime Laboratory (Laboratory) in San Jose, California.

Background

The Federal Bureau of Investigation's (FBI) CODIS program combines forensic science and computer technology to provide an investigative tool to federal, state, and local crime laboratories in the United States, as well as those from select international law enforcement agencies. The CODIS program allows these crime laboratories to compare and match DNA profiles electronically to assist law enforcement in solving crimes and identifying missing or unidentified persons.¹ The FBI's CODIS Unit manages CODIS, as well as develops, supports, and provides the program to crime laboratories to foster the exchange and comparison of forensic DNA evidence.

The FBI implemented CODIS as a distributed database with hierarchical levels that enables federal, state, and local crime laboratories to compare DNA profiles electronically. The hierarchy consists of three distinct levels that flow upward from the local level to the state level and then, if allowable, the national level. The National DNA Index System (NDIS), the highest level in the hierarchy, contains DNA profiles uploaded by law enforcement agencies across the United States and is managed by the FBI. NDIS enables the laboratories participating in the CODIS program to electronically compare DNA profiles on a national level. The State DNA Index System is used at the state level to serve as a state's DNA database

¹ DNA, or deoxyribonucleic acid, is genetic material found in almost all living cells that contains encoded information necessary for building and maintaining life. Approximately 99.9 percent of human DNA is the same for all people. The differences found in the remaining 0.1 percent allow scientists to develop a unique set of DNA identification characteristics (a DNA profile) for an individual by analyzing a specimen containing DNA.

and contains DNA profiles from local laboratories and state offenders. The Local DNA Index System is used by local laboratories.

OIG Audit Objectives

Our audit generally covered the period from June 2009 through May 2011. The objectives of our audit were to determine if: (1) the County of Santa Clara District Attorney's Crime Laboratory was in compliance with the NDIS participation requirements; (2) the Laboratory was in compliance with the Quality Assurance Standards (QAS) issued by the FBI; and (3) the Laboratory's forensic DNA profiles in CODIS databases were complete, accurate, and allowable for inclusion in NDIS.

Our review determined the following:

- The Laboratory was in compliance with the NDIS participation requirements regarding up-to-date training for Laboratory personnel; availability and accessibility of NDIS procedures for CODIS users, and adequately securing CODIS equipment located in a controlled laboratory space. However, the Laboratory did not maintain adequate documentation in its case files to prove two matches were confirmed and investigators were notified in a timely manner.
- The Laboratory was in compliance with the QAS we reviewed, including: (1) completion of periodic internal and external QAS reviews; (2) implementation of corrective actions presented by internal and external reviews; and (3) policies regarding retention of evidence. We also observed that the Laboratory was in compliance with QAS that require access to the laboratory to be controlled and limited in a manner to prevent access by unauthorized personnel. Finally, we found the Laboratory does not currently outsource the analysis of its forensic DNA samples to another laboratory.
- We reviewed 100 of the Laboratory's 2,746 forensic profiles that have been uploaded to NDIS as of April 21, 2011. Of the 100 forensic profiles sampled, we found that 68 profiles were complete, accurate, and allowable for inclusion in NDIS, but questioned 32 profiles.² Of those 32 profiles, we identified:

² After our draft audit report was issued, the Laboratory provided additional information not available during our fieldwork, including additional case information for seven of the profiles we questioned. Based on this new information, we revised the final audit report and discuss our analysis in more detail in Appendix V.

(1) 2 profiles uploaded that were not attributable to a putative perpetrator; (2) 10 profiles that were obtained from the suspect's person or residence, (3) 11 profiles that pertained to an item that was not connected to a crime, and (4) 9 profiles related to case files that lacked sufficient information to determine eligibility for NDIS. The Laboratory also removed an additional 17 unallowable profiles that were not in our original sample, but were also uploaded in association with the case files of unallowable profiles in our sample. Before our draft report was issued, the Laboratory removed 42 profiles and we recommended that the FBI work with the Laboratory to determine NDIS eligibility for the remaining 7 profiles.³ In addition, we recommend the FBI work with the Laboratory to strengthen the Laboratory's profile eligibility review process and ensure the Laboratory's forensic DNA profiles uploaded to NDIS from January 2006 through April 2012 are reviewed to determine if they meet the eligibility requirements for NDIS.

We made four recommendations to address the Laboratory's compliance with standards governing CODIS activities, which are discussed in detail in the Findings and Recommendations section of the report. Our audit objectives, scope, and methodology are detailed in Appendix I of the report and the audit criteria are detailed in Appendix II.

We discussed the results of our audit with Laboratory officials and have included their comments in the report as applicable. In addition, we requested a written response to a draft of our audit report from the FBI and the Laboratory. We received those responses and they are found in Appendices III and IV, respectively. Our analysis of those responses and the status of the recommendations are found in Appendix V.

³ In response to our draft audit report, the FBI stated that two of the remaining seven profiles were ineligible for upload to NDIS. Of the two ineligible profiles, the first profile could not be linked to a crime and the second profile's case file lacked enough information to determine eligibility for NDIS. The Laboratory removed the two ineligible profiles and provided additional information not provided to us during our fieldwork regarding its justification for retaining the remaining five profiles in NDIS. In total, the Laboratory removed 44 profiles from NDIS. Appendix V discusses the status of this recommendation in more detail.

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INTRODUCTION

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Background

The Federal Bureau of Investigation's (FBI) CODIS provides an investigative tool to federal, state, and local crime laboratories in the United States using forensic science and computer technology. The CODIS program allows these laboratories to compare and match DNA profiles electronically, thereby assisting law enforcement in solving crimes and identifying missing or unidentified persons.¹ The FBI's CODIS Unit manages CODIS and is responsible for its use in fostering the exchange and comparison of forensic DNA evidence.

OIG Audit Objectives

Our audit covered the period from June 2009 through May 2011. The objectives of our audit were to determine if: (1) the County of Santa Clara District Attorney's Crime Laboratory was in compliance with the National DNA Index System (NDIS) participation requirements; (2) the Laboratory was in compliance with the Quality Assurance Standards (QAS) issued by the FBI; and (3) the Laboratory's forensic DNA profiles in CODIS databases were complete, accurate, and allowable for inclusion in NDIS. Appendix I contains a detailed description of our audit objectives, scope, and methodology; and Appendix II contains the criteria used to conduct the audit.

¹ DNA, or deoxyribonucleic acid, is genetic material found in almost all living cells that contains encoded information necessary for building and maintaining life. Approximately 99.9 percent of human DNA is the same for all people. The differences found in the remaining 0.1 percent allow scientists to develop a unique set of DNA identification characteristics (a DNA profile) for an individual by analyzing a specimen containing DNA.

Legal Foundation for CODIS

The FBI's CODIS program began as a pilot project in 1990. The DNA Identification Act of 1994 (Act) authorized the FBI to establish a national index of DNA profiles for law enforcement purposes. The Act, along with subsequent amendments, has been codified in a federal statute (Statute) providing the legal authority to establish and maintain NDIS.²

Allowable DNA Profiles

The Statute authorizes NDIS to contain the DNA identification records of persons convicted of crimes, persons who have been charged in an indictment or information with a crime, and other persons whose DNA samples are collected under applicable legal authorities. Samples voluntarily submitted solely for elimination purposes are not authorized for inclusion in NDIS. The Statute also authorizes NDIS to include analysis of DNA samples recovered from crime scenes or from unidentified human remains, as well as those voluntarily contributed from relatives of missing persons.

Allowable Disclosure of DNA Profiles

The Statute requires that NDIS only include DNA information that is based on analyses performed by or on behalf of a criminal justice agency – or the U.S. Department of Defense – in accordance with QAS issued by the FBI. The DNA information in the index is authorized to be disclosed only: (1) to criminal justice agencies for law enforcement identification purposes; (2) in judicial proceedings, if otherwise admissible pursuant to applicable statutes or rules; (3) for criminal defense purposes, to a defendant who shall have access to samples and analyses performed in connection with the case in which the defendant is charged; or (4) if personally identifiable information (PII) is removed for a population statistics database, for identification research and protocol development purposes, or for quality control purposes.

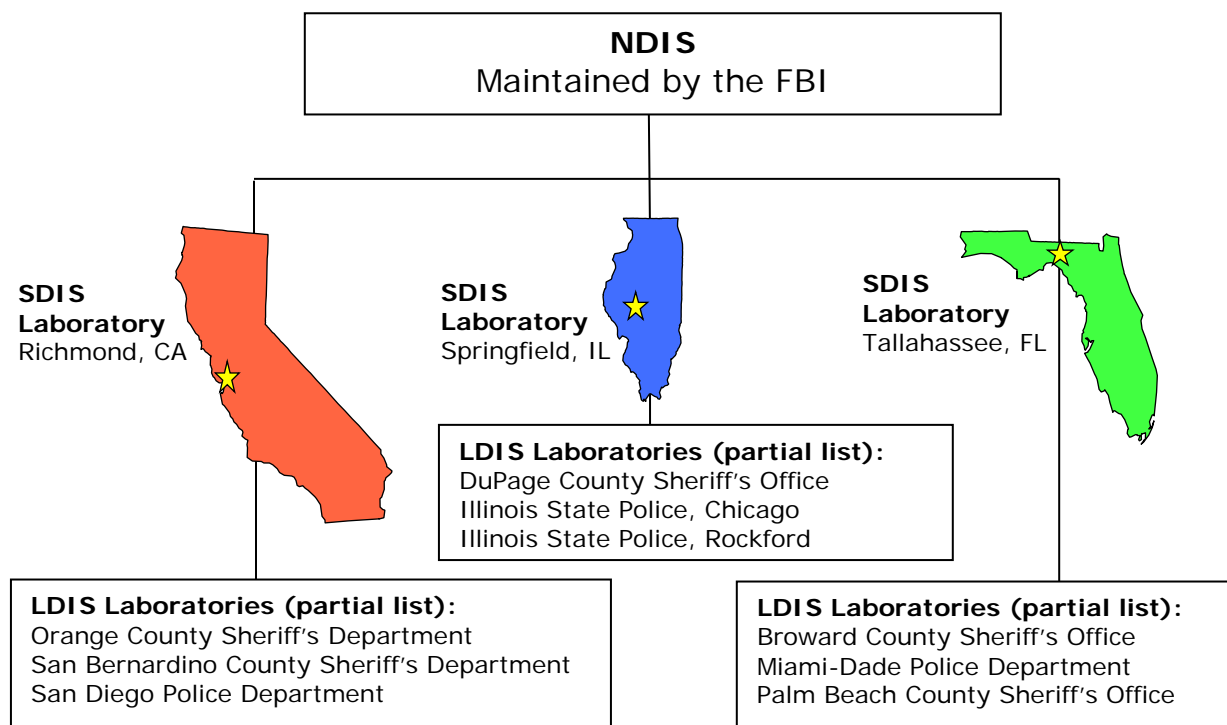
CODIS Structure

The FBI implemented CODIS as a distributed database with hierarchical levels that enables federal, state, and local crime laboratories to compare DNA profiles electronically. CODIS consists of a hierarchy of three distinct levels: (1) NDIS, managed by the FBI as the nation's DNA database containing DNA profiles uploaded by participating states; (2) the State DNA Index System (SDIS) which serves as a state's DNA database containing DNA profiles from local laboratories within the state and state offenders; and

² 42 U.S.C.A. § 14132 (2006).

(3) the Local DNA Index System (LDIS), used by local laboratories. DNA profiles originate at the local level and then flow upward to the state and, if allowable, national level. For example, the local laboratory in the Palm Beach County, Florida, Sheriff's Office sends its profiles to the state laboratory in Tallahassee, which then uploads the profiles to NDIS. Each state participating in CODIS has one designated SDIS laboratory. The SDIS laboratory maintains its own database and is responsible for overseeing NDIS issues for all CODIS-participating laboratories within the state. The graphic below illustrates how the system hierarchy works.

Example of System Hierarchy within CODIS



National DNA Index System

NDIS, the highest level in the CODIS hierarchy, enables laboratories participating in the CODIS program to electronically compare DNA profiles on a national level. NDIS does not contain names or other PII about the profiles. Therefore, matches are resolved through a system of laboratory-to-laboratory contacts. NDIS contains the following eight searchable indices:

- Convicted Offender Index contains profiles generated from persons convicted of qualifying offenses.³
- Arrestee Index is comprised of profiles developed from persons who have been arrested, indicted, or charged in an information with a crime.
- Legal Index consists of profiles that are produced from DNA samples collected from persons under other applicable legal authorities.⁴
- Detainee Index contains profiles from non-U.S. persons detained under the authority of the U.S. and required by law to provide a DNA sample for analysis and entry into NDIS.
- Forensic Index profiles originate from, and are associated with, evidence found at crime scenes.
- Missing Person Index contains known DNA profiles of missing persons and deduced missing persons.
- Unidentified Human (Remains) Index holds profiles from unidentified living individuals and the remains of unidentified deceased individuals.⁵
- Relatives of Missing Person Index is comprised of DNA profiles generated from the biological relatives of individuals reported missing.

Given these multiple databases, the main functions of CODIS are to:

- (1) generate investigative leads that may help in solving crimes, and
- (2) identify missing and unidentified persons.

The Forensic Index generates investigative leads in CODIS that may help solve crimes. Investigative leads may be generated through matches between the Forensic Index and other indices in the system, including the Convicted Offender, Arrestee, and Legal Indices. These matches may

³ The phrase "qualifying offenses" refers to local, state, or federal crimes that require a person to provide a DNA sample in accordance with applicable laws.

⁴ An example of a Legal Index profile is one from a person found not guilty by reason of insanity who is required by the relevant state law to provide a DNA sample.

⁵ An example of an Unidentified Human (Remains) Index profile from a living person is a profile from a child or other individual, who cannot or refuses to identify themselves.

provide investigators with the identity of suspected perpetrators. CODIS also links crime scenes through matches between Forensic Index profiles, potentially identifying serial offenders.

In addition to generating investigative leads, CODIS furthers the objectives of the FBI's National Missing Person DNA Database program through its ability to identify missing and unidentified individuals. For instance, those persons may be identified through matches between the profiles in the Missing Person Index and the Unidentified Human (Remains) Index. In addition, the profiles within the Missing Person and Unidentified Human (Remains) Indices may be vetted against the Forensic, Convicted Offender, Arrestee, Detainee, and Legal Indices to provide investigators with leads in solving missing and unidentified person cases.

State and Local DNA Index Systems

The FBI provides CODIS software free of charge to any state or local law enforcement laboratory performing DNA analysis. Laboratories are able to use the CODIS software to upload profiles to NDIS. However, before a laboratory is allowed to participate at the national level and upload DNA profiles to NDIS, a Memorandum of Understanding (MOU) must be signed between the FBI and the applicable state's SDIS laboratory. The MOU defines the responsibilities of each party, includes a sublicense for the use of CODIS software, and delineates the standards laboratories must meet in order to utilize NDIS. Although officials from LDIS laboratories do not sign an MOU, LDIS laboratories that upload DNA profiles to an SDIS laboratory are required to adhere to the MOU signed by the SDIS laboratory.

States are authorized to upload DNA profiles to NDIS based on local, state, and federal laws, as well as NDIS regulations. However, states or localities may maintain NDIS-restricted profiles in SDIS or LDIS. For instance, a local law may allow for the collection and maintenance of a victim profile at LDIS but NDIS regulations do not authorize the upload of that profile to the national level.

CODIS becomes more useful as the quantity of DNA profiles in the system increases because the potential for additional leads rises. However, the utility of CODIS relies upon the completeness, accuracy, and quality of profiles that laboratories upload to the system. Incomplete CODIS profiles are those for which the required number of core loci were not tested or do not contain all of the DNA information that resulted from a DNA analysis and may not be searched at NDIS.⁶ The probability of a false match among DNA

⁶ A "locus" is a specific location on a chromosome. The plural form of locus is loci.

profiles is reduced as the completeness of a profile increases. Inaccurate profiles, which contain incorrect DNA information or an incorrect specimen number, may generate false positive leads, false negative comparisons, or lead to the misidentification of a sample. Further, laws and regulations exclude certain types of profiles from being uploaded to CODIS to prevent violations to an individual's privacy and foster the public's confidence in CODIS. Therefore, it is the responsibility of the Laboratory to ensure that it is adhering to the NDIS participation requirements and the profiles uploaded to CODIS are complete, accurate, and allowable for inclusion in NDIS.

Laboratory Information

The Laboratory provides its services to law enforcement and other agencies located within Santa Clara County, which includes 15 cities and a total population of approximately 1.8 million people. In addition, the Laboratory provides, on a fee-for-service basis, its services to law enforcement and other organizations located outside of Santa Clara County. Some examples of other organizations that the Laboratory has served include: Stanford University, Amtrak, the County of Alameda, Marin County Sheriff's Office, the City of San Rafael, and San Jose State University. In total, the Laboratory has processed DNA evidence for more than 50 different law enforcement and other agencies. The Laboratory participates in the CODIS program as a LDIS laboratory. In 1992, the Laboratory began analyzing DNA as a means of processing evidence in criminal cases and in 1998 it began uploading profiles into NDIS. The Laboratory's participation in NDIS is limited to uploading forensic profiles to the Forensic Index.

The Laboratory was first accredited in April 1996 by the American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB). The Laboratory maintained its ASCLD/LAB accreditation through June 2011. A 6 month extension of accreditation followed by another 3 month extension of accreditation was granted under the ASCLD/LAB Legacy program until March 2012. The extensions were granted to provide sufficient time for the Laboratory to transition to the ASCLD/LAB International program for a period of 5 years. The Laboratory received ASCLD/LAB International program accreditation on March 20, 2012.

FINDINGS AND RECOMMENDATIONS

I. Compliance with NDIS Participation Requirements

The Laboratory was in compliance with the NDIS participation requirements regarding updated NDIS eligibility training for its personnel, maintenance of CODIS-related training and proficiency testing records for CODIS users, and backing up the CODIS server in accordance with NDIS requirements. However, we found that the Laboratory did not maintain adequate documentation in its case files to prove that matches were confirmed and that investigators were notified in a timely manner for two matches.

The NDIS participation requirements, which consist of the MOU and the NDIS Procedure Manual, establish the responsibilities and obligations of laboratories that participate in the CODIS program at the national level. The MOU describes the CODIS-related responsibilities of both the Laboratory and the FBI. The NDIS Procedure Manual is comprised of the NDIS Operational Procedures and provides detailed instructions for laboratories to follow when performing certain procedures pertinent to NDIS. The NDIS participation requirements we reviewed are listed in Appendix II of this report.

Results of the OIG Audit

We found that the Laboratory did not comply with all of the NDIS participation requirements we reviewed. Specifically, the Laboratory did not maintain complete documentation for two of the five matches we reviewed in our sample. We describe these findings in more detail below.

Match Disposition

The NDIS Interstate Candidate Match Operational Procedures defines procedures for NDIS participating laboratories to follow when confirming matches that are identified in NDIS. In addition, the NDIS Operational Procedures require that the CODIS Administrator must review and make his or her best effort to disposition matches within 30 business days.

We selected a judgmental sample of five NDIS matches and reviewed available documentation to determine if the Laboratory confirmed the matches in a timely manner. We were able to determine that the Laboratory confirmed two of these matches in a timely manner and a third match was

confirmed in 34 business days because the Laboratory sent the match confirmation request 27 days after it identified the match.

For the remaining two matches, which occurred in 2003 and 2006, there was not enough documentation in the case files for us to determine whether the confirmation process occurred in a timely manner or that the Laboratory notified the respective law enforcement agency of the match. The CODIS Administrator stated that one of the case files did not contain sufficient documentation because it was before the Laboratory tracked matches in the CODIS "Match Manager" module.⁷ The CODIS Administrator did not provide us with a reason for why the other case file lacked sufficient documentation to indicate whether the confirmation process occurred and whether it occurred in a timely manner. After we informed the Laboratory of the lack of documentation in two of its case files, the CODIS Administrator contacted the local law enforcement agencies that provided the DNA to the Laboratory for analysis and inclusion in NDIS. The CODIS Administrator stated that one of the local law enforcement agencies was unable to confirm or deny that it was informed of the match, but confirmed the case had been closed because the offender whose profile matched the forensic profile was deceased. The second local law enforcement agency confirmed that it had been notified of the NDIS match by the Laboratory, but it was unable to provide a date of the notification. The CODIS Administrator showed us a report in the CODIS Match Manager module in which the disposition category was changed to "confirmed" in a timely manner. The CODIS Administrator added the report to the case file.

The Laboratory's match policy requires that the CODIS Administrator complete a CODIS DNA Match Data Request form and submit it to the other laboratory's CODIS Administrator. The CODIS Administrator is then responsible for ensuring that a copy of the match report is maintained in the Laboratory's case file along with a completed national match detail report. Further, the Laboratory is required to notify the Santa Clara County District Attorney's Office of the NDIS match as well as the local law enforcement agency that provided the DNA sample to the Laboratory for analysis and inclusion in NDIS. However, we concluded that the Laboratory did not maintain this information for two of the matches we reviewed. Forensic QAS 5.3.4 states that the casework CODIS Administrator is responsible for

⁷ Match Manager is a module within the CODIS software that identifies matches between profiles and contains information about those matches, such as the date they were identified.

In response to our draft audit report, the Laboratory informed us all matches are identified in Match Manager and tracked in a "CODIS Hits" excel spreadsheet. This spreadsheet was not provided during our audit fieldwork; therefore we could not verify whether it contained these matches in question.

assuring that matches are dispositioned in accordance with NDIS operational procedures. As a result, we believe that the Laboratory should strengthen its policy to help it ensure it will be followed. For example, the Laboratory should consider specifying in its policy the type of documentation that should be retained to provide evidence of key actions, such as match notification involving other laboratories, resulting confirmation, and law enforcement notification.

Other NDIS Requirements

Besides the issue stated above, we had no other significant concerns related to the Laboratory's compliance with the other NDIS participation requirements we reviewed. The results of our audit regarding compliance with NDIS participation requirements are described in more detail below:

- The NDIS General Responsibilities Operational Procedures manual requires that participating laboratories ensure that CODIS users are notified of and provided access to revised NDIS Operational Procedures and other documentation necessary to properly participate in NDIS. In addition to its availability on the FBI's Criminal Justice Information System—Wide Area Network, the Laboratory's CODIS Administrator stated that the Laboratory provides its personnel with copies of the NDIS procedure manual. The CODIS Administrator stated that she also has an enlarged FBI decision tree diagram located on the wall by the CODIS terminal, so that each CODIS user can refer to it when needed. Finally, we judgmentally selected 2 of the 18 CODIS users to interview and determined that both users were aware of the NDIS procedures and could access the procedures if needed.
- The NDIS Security Requirements state that the NDIS participating Laboratory shall be responsible for providing adequate physical security for the CODIS servers and terminals against any unauthorized personnel gaining access to the computer equipment or to any of the stored data. We found that only CODIS users within the Laboratory have access to CODIS and the Criminal Justice Information System—Wide Area Network located in the CODIS server room. Access to this room is limited by key card reader and biometric fingerprint identification. Within the CODIS server room, access is further limited to one computer workstation. Furthermore, we learned that all CODIS users have their own CODIS accounts, unique passwords, and must undergo annual CODIS training.

- CODIS users are required to complete annual DNA Records Acceptance training. The FBI provided a list to us of Laboratory personnel who had received this mandatory annual training, which we compared to a list provided by the Laboratory. We found that all authorized personnel have successfully completed the annual training.
- For each CODIS user, the FBI requires that a participating laboratory submit fingerprint cards, background information, CODIS user information, and other appropriate documentation to the FBI. We verified that all necessary documents were provided to the FBI for all 18 CODIS users at the Laboratory.
- At the time of our audit, the NDIS General Responsibilities Operational Procedures manual required participating laboratories to maintain records of CODIS users, including reports concerning proficiency testing, and any other reports or audits required by the FBI, for a period of 10 years. We determined that the Laboratory maintained hard copies of personnel files for its CODIS users for at least 5 years, though before any records are sent to storage or purged, the Laboratory scans them into electronic files and the digital copy is maintained indefinitely, which is in accordance with its in-house policy and it is in compliance with the NDIS Operational Procedures' 10-year retention requirement.

Conclusion

We found that the Laboratory was in compliance with the NDIS participation requirements that we reviewed, with one exception. The Laboratory failed to follow its NDIS match policy and did not maintain documentation to show that it confirmed matches and notified the respective law enforcement agency in a timely manner.

Recommendation

We recommend that the FBI:

1. Ensure the Laboratory abides by its NDIS match policy, including maintaining appropriate documentation in its case files.

II. Compliance with Quality Assurance Standards

We found that the Laboratory complied with the Quality Assurance Standards (QAS) we tested. Specifically, we found that the Laboratory: (1) followed protocols with regard to amplified samples being maintained in separate rooms from the evidence examination, DNA extraction, and polymerase chain reaction (PCR) setup areas; (2) underwent Quality Assurance Standard reviews within designated timeframes; and (3) had policies in place to help ensure that access to the laboratory was controlled.

During our audit, we considered the QAS issued by the FBI.⁸ These standards describe the quality assurance requirements that the Laboratory must follow to ensure the quality and integrity of the data it produces. We also assessed the two most recent QAS reviews that the laboratory underwent.⁹ The QAS we reviewed are listed in Appendix II.

Results of the OIG Audit

We found that the Laboratory complied with the QAS issued by the FBI. Specifically, we found that the Laboratory: (1) followed protocols with regard to amplified samples being maintained in separate rooms from the evidence examination, DNA extraction, and PCR setup areas; (2) underwent QAS reviews within designated timeframes; and (3) had policies in place to help ensure access to the laboratory was controlled. These results are described in more detail below.

The QAS requires laboratories to undergo an annual review, including an external review every 2 years. During our fieldwork in May 2011, we found that the Laboratory had an external QAS review performed in

⁸ Forensic Quality Assurance Standards refer to the Quality Assurance Standards for Forensic DNA Testing Laboratories, effective July 1, 2009.

⁹ The QAS require that laboratories undergo annual audits. Every other year, the QAS requires that the audit be performed by an external agency that performs DNA identification analysis and is independent of the laboratory being reviewed. These audits are not required by the QAS to be performed in accordance with the *Government Auditing Standards* (GAS) and are not performed by the Department of Justice Office of the Inspector General. Therefore, we will refer to the QAS audits as reviews (either an internal laboratory review or an external laboratory review, as applicable) to avoid confusion with our audits that are conducted in accordance with GAS.

December 2010 and an internal QAS review performed in June 2009. The frequency of these reviews met the QAS requirements.

We reviewed the Laboratory's prior 2 years of QAS review reports. Both the internal and external reviews were conducted using the FBI's QAS Review Document. The FBI confirmed that at least one of the QAS reviewers for both reviews had successfully completed the FBI QAS Review training course. In addition, we reviewed responses and subsequent actions with regard to the report findings and determined they had been addressed.

- We asked each of the QAS reviewers who conducted the most recent external QAS reviews to certify that they had no impairments to independence. All five QAS reviewers provided us with this certification.
- We reviewed the Laboratory's policies on physical security of the facility, as well as the access key card assignments to Laboratory personnel for access to the secured areas of the Laboratory. We also toured the Laboratory and observed that the facility remains locked and closed to the public at all times. Authorized Laboratory personnel enter using a key card and must wear identification badges at all times while in the building. All other visitors must push the call button and speak to a receptionist in order to gain entry through the front doors of the building. Once inside, they must be escorted by a staff member and sign a visitor log in order to obtain a badge and to enter the locked Laboratory wings. The main elevators leading up to the Laboratory floors require a badge activation to function. We found that overall external security at the Laboratory is adequate and in compliance with the QAS requirements we tested.
- The QAS requires amplified DNA to be generated, processed, and maintained in a room separate from the evidence examination, DNA extraction, and PCR setup areas. We observed that the Laboratory has separate rooms for DNA examination and extraction, PCR setup, and DNA amplification. The PCR setup room has dedicated white laboratory coats for DNA Analysts to wear when working in that space in order to prevent contamination. The PCR post-amplification room has dedicated blue laboratory coats for DNA Analysts to wear. Known and unknown samples are separated by space and time during the PCR setup and all evidence flows forward only through a specimen window to the amplification room. Based upon our observations, we did not identify any material deficiencies with regard to the Laboratory performing various DNA analysis processes in separate times and separate spaces.

- We reviewed the policies and procedures for the Laboratory's separation of known and unknown DNA samples. According to the Laboratory's Forensic Biology Procedures Manual, reference samples are extracted separately in time or space from evidence samples, victim-derived samples are analyzed separately from suspect-derived samples, and evidence samples predicted to contain high levels of DNA are extracted separately from evidence samples predicted to contain relatively low levels of DNA. We did not identify any material deficiencies with regard to the Laboratory's separation of known and unknown DNA samples.
- We reviewed the Laboratory's policy for evidence sample control, which states that "a clear and well-documented chain of custody must be maintained from the time the evidence is first received until it is released" and will include signature or initials of each individual receiving or transferring the evidence, the corresponding date for each transfer, and the evidentiary item transferred. The chain of custody is documented in the Laboratory Information Management System through a bar code placed on each item of evidence. Each time an evidence item is removed from the Property Control Unit, the bar code is scanned and the Property Control Unit records which DNA Analyst is taking the evidence. DNA Analysts are assigned locked refrigerators to secure the evidence while it is not in the Analyst's custody. Upon completion of DNA analysis, the Laboratory returns the evidence to the police department or agency where the item came from. If an agency does not pick up the evidence, the laboratory maintains the evidence indefinitely, except blood alcohol samples, which are disposed of after 1 year. The Laboratory's policies regarding integrity of physical evidence were in accordance with the QAS requirements that we tested.
- We learned that the Laboratory does not currently outsource the analysis of its forensic DNA samples to another laboratory and has not done so in the past 2 years.
- The NDIS Quality Assurance Standards operational procedure entitled Quality Assurance Standards External Audit Review Procedures requires that an external quality assurance review be forwarded to the FBI's NDIS Custodian within 30 days of the participating laboratory's receipt of the report. We reviewed the submission of the most recent external review and found that the report was submitted to the FBI's NDIS Custodian in a timely manner.

Conclusion

We found that the Laboratory complied with the FBI's Forensic QAS that we tested. Specifically, we found that the Laboratory: (1) followed protocols with regard to amplified samples being maintained in separate rooms from the evidence examination, DNA extraction, and PCR setup areas; (2) underwent Quality Assurance Standard reviews within designated timeframes; and (3) had policies in place to help ensure access to the laboratory was controlled. We made no recommendations concerning our review of Quality Assurance Standards.

III. Suitability of Forensic DNA Profiles in CODIS Databases

We questioned 32 of the 100-profile sample that we reviewed.¹⁰ Specifically, we found: (1) 2 profiles that were not attributable to a putative perpetrator; (2) 10 profiles that were obtained from the suspect's person or residence; (3) 11 profiles that pertained to an item that was not connected to a crime; and (4) 9 profiles related to case files that lacked sufficient information to determine eligibility for NDIS. The Laboratory also agreed to remove an additional 17 unallowable profiles that were not included in our original sample, but were also uploaded in association with the case files of the unallowable profiles in our sample. Before our draft report was issued, the Laboratory removed 42 profiles and we recommended that the FBI work with the Laboratory to determine NDIS eligibility for the remaining 7 profiles.¹¹ In addition, we recommended that the FBI ensure the Laboratory strengthens its profile eligibility review process and reviews the NDIS eligibility of its forensic DNA profiles that were uploaded to NDIS between January 2006 and April 2012.

We reviewed a sample of the Laboratory's Forensic DNA profiles to determine whether each profile was complete, accurate, and allowable for inclusion in NDIS.¹² To test the completeness and accuracy of each profile, we established standards that require a profile include all the loci for which

¹⁰ After our draft audit report was issued, the Laboratory provided additional information not available during our fieldwork, including additional case information for seven of the profiles we questioned. Based on this new information, we revised the final audit report and discuss our analysis in more detail in Appendix V.

¹¹ In response to our draft audit report, the FBI stated that two of the seven remaining profiles were ineligible for upload to NDIS. Of the two ineligible profiles, the first profile could not be linked to a crime and the second profile's case file lacked enough information to determine eligibility for NDIS. The Laboratory removed the two ineligible profiles and provided additional information not provided to us during our fieldwork regarding its justification for retaining the remaining five profiles in NDIS. In total, the Laboratory removed 44 profiles from NDIS. Appendix V discusses the status of this recommendation in more detail.

¹² When a laboratory's universe of DNA profiles in NDIS exceeds 1,500, our sample is taken from SDIS rather than directly from NDIS. See Appendix I for further description of the sample selection.

the analyst obtained results, and that the values at each locus match those identified during analysis. Our standards are described in more detail in Appendix II of this report.

The FBI's NDIS Operational Procedures establish the DNA data acceptance standards by which laboratories must abide. The FBI also developed a flowchart as guidance for the laboratories to determine what is allowable in the forensic index at NDIS. Laboratories are prohibited from uploading forensic profiles to NDIS that clearly match the DNA profile of the victim or another known person that is not a suspect. A profile in NDIS that matches a suspect may be allowable if the contributor is unknown at the time of collection, however, NDIS guidelines prohibit profiles that match a suspect if that profile could reasonably have been expected to be on an item at the crime scene or part of the crime scene independent of the crime. For instance, a profile from an item seized from the suspect's person, such as a shirt, or that was in the possession of the suspect when collected is generally not a forensic unknown and would not be allowable for upload to NDIS. The NDIS procedures we reviewed are listed in Appendix II of this report.

Results of the OIG Audit

As part of our review, we examined each of the 100 forensic profiles in our sample to determine its allowability based on NDIS guidelines such as: (1) whether a crime was committed; (2) whether the profile was obtained from the crime scene; and (3) whether the profile was attributable to a putative perpetrator. We selected a random sample of 100 profiles out of the 2,746 forensic profiles that the Laboratory had uploaded into NDIS as of April 21, 2011. Of the 100 forensic profiles sampled, we found that 68 were complete, accurate, and allowable for inclusion in NDIS. We questioned the suitability of 32 profiles.¹³ In addition, we identified 17 unallowable profiles that were not included in our sample of 100 profiles, but were also uploaded in association with the case files of unallowable profiles in our sample. These specific exceptions are explained in more detail below.

Laboratory's Profile Review Procedures

According to the FBI's Quality Assurance Standards for Forensic DNA testing Laboratories and the Laboratory's Forensic Biology Quality Assurance

¹³ After our draft audit report was issued, the Laboratory provided additional information not available during our fieldwork, including additional case information for seven of the profiles we questioned. Based on this new information, we revised the final audit report and discuss our analysis in more detail in Appendix V.

and Quality Control Manual, all cases are required to be technically reviewed by a qualified DNA Analyst for clerical and technical accuracy. The Laboratory's policy states the Technical Reviewer is responsible for verifying eligibility of all profiles to be entered into NDIS. The verification of NDIS eligibility by the Technical Reviewer is recorded on the CODIS document called a "Green Sheet," which is attached to the final technical review report and is required to be completed before the profile is uploaded into NDIS.

According to the Laboratory's CODIS Administrator, from 2000 until 2007 the Laboratory did not require its Technical Reviewers to verify the NDIS eligibility of profiles before the profiles were uploaded to NDIS. As a result, during this period the Laboratory uploaded all of the profiles that were analyzed by its Analysts, including ineligible profiles. The CODIS Administrator stated that during this time the Technical Reviewers were not reviewing the DNA profiles listed on the Green Sheet to determine their eligibility for inclusion in NDIS. The determination as to which profiles to upload was made by the former "CODIS Technician," who did not possess a DNA analysis background and stated that she was tasked with determining which profiles on the Green Sheet to enter and upload into NDIS. The former CODIS Technician also stated that the former CODIS Administrator instructed her to upload profiles even when the Technician deemed the profiles to be ineligible. In 2005, the Laboratory ended its practice of indiscriminately entering profiles, including ineligible profiles, to NDIS when it appointed a new CODIS Administrator. The new CODIS Administrator began reviewing all profiles for eligibility before they were uploaded to NDIS. Further, in 2007, the Laboratory modified its Green Sheet to include a signature line for its Technical Reviewer to certify that the profiles were reviewed for NDIS eligibility. While CODIS Technical Reviewers were required to have a DNA background, only since 2010, has the Laboratory required its CODIS Technicians to have a DNA analysis background. It also now requires the DNA Analyst and the Technical Reviewer to determine and verify profile eligibility.

During our file review, we found many of the cases did not contain enough information about the crime, the crime scene, or how the evidence related to the crime. This was prevalent in the case files that were established before 2005 when the laboratory stated it strengthened its review of profile eligibility. However, we came across profiles that had been uploaded after 2005 that still did not meet the standards for NDIS eligibility. When we questioned the Laboratory Director and the CODIS Administrator about these issues, they surmised that unallowable profiles continued to be uploaded after 2005 due to its DNA Analysts' general lack of understanding of the NDIS eligibility requirements. Further, although the CODIS eligibility flowchart was introduced by the FBI in 2006, the Laboratory continued to upload unallowable profiles into NDIS after 2006. Specifically, half of the

unallowable profiles we identified in our review were uploaded into CODIS after 2006.

Based on our discussions with the Laboratory Director and the CODIS Administrator, as well as our review of the information that was available in the case files, we believe that some DNA Analysts may not have a clear understanding of the CODIS eligibility requirements, even though they take and pass the Annual Review of DNA Accepted at NDIS test annually. We also found several instances of Laboratory personnel not basing DNA profile-eligibility conclusions on documented information from within its case files. For example, a police report may provide critical information to help the DNA Analysts make a decision on whether a profile is allowable or unallowable for inclusion in CODIS. However, there are some circumstances where additional information may be necessary. We found that case files for 28 percent of the unallowable profiles we identified in our review did not contain sufficient information to determine eligibility. Therefore, we recommend that the FBI ensure that the Laboratory obtains sufficient information to determine a profile's eligibility prior to uploading it to NDIS.

Questioned Profiles the Laboratory Retained at NDIS

In our draft report, we questioned the eligibility of 49 profiles we reviewed, but the Laboratory disagreed with our questioning of seven of those. In response to our draft, the Laboratory provided additional information about the eligibility of five of those profiles, which we added to this final report. Also in response to our draft report, the FBI concluded that two of the seven questioned profiles were ineligible for NDIS and should be deleted. As a result, the Laboratory removed a total of 44 profiles. Below we discuss the details of those seven profiles.

OIG Sample CA-02

Sample CA-02 was taken from a cigarette butt found in the ashtray of the vehicle that the victim was sitting in at the time he was murdered. The DNA profile from the cigarette butt was from 1 of 28 cigarette butts found in the victim's vehicle and tested for DNA. At the time our draft audit report was issued, we deemed this profile to be unallowable because there was insufficient evidence in the case file to connect this item, and other related cigarette butts, to the perpetrator or the murder. The case file did not contain any information that placed the putative perpetrator inside the car where the cigarette butt was found, but rather indicated that the perpetrator was outside the car when he or she committed the crime. Specifically, broken glass was found inside the vehicle indicating that the victim was shot from outside the vehicle rather than inside where the cigarette butt

was found. Therefore, it does not appear that the perpetrator left the cigarette butt in the ashtray when he or she committed the crime.

After the draft audit report was issued, the Laboratory provided additional information about the crime indicating that the perpetrator may have been inside the car before the murder. As a result of that additional information not provided to us during our audit site work, we do not question the eligibility of this profile.

OIG Sample CA-05

Sample CA-05 was taken from saliva on a postage stamp that was affixed to an envelope. According to the undocumented recollections of the Laboratory Director and CODIS Administrator, the offense was a parole violation during which the parolee sent a letter to an individual that he was not allowed to contact. However, there was no documentation in the case file to support that any crime had been committed. Therefore, we deemed this profile to be unallowable. Before our draft audit report was issued, the CODIS Administrator and the Laboratory Director disagreed with our assessment and they stated that the profile should remain in NDIS. The CODIS Administrator stated there was not enough information to remove the profile from NDIS based on the assumption that eligibility was correctly determined when the profile was first uploaded. However, the Laboratory could not provide any evidence to prove that a crime was committed, nor was there documentation in the case file to support the profile's eligibility. General Principal Number 1 of the FBI's NDIS allowability flowchart states that "If the documentation does not indicate that a crime was committed, the profile is not allowable." Therefore, we disagreed with the Laboratory's assessment that this profile was allowable and we recommended that the FBI work with the Laboratory to determine the profile's eligibility for inclusion in CODIS. After the draft audit report was issued, the Laboratory removed this profile from NDIS.

OIG Sample CA-27 and Sample CA-89

Samples CA-27 and CA-89 were taken from blood found on the floor at the scene of a gang fight that occurred inside a night club. The scene inside the night club contained blood evidence from several individuals involved in the fight. However, according to the case file, the crime that was being investigated was a homicide that had occurred outside of the night club that same evening. According to information we were provided in the case file, the murder victim was not involved in the gang fight that occurred inside the night club. After our draft report was issued, the Laboratory provided additional information about the crime. As a result of that additional

information not provided to us during our audit site work, we no longer question the eligibility of this profile.

OIG Sample CA-67

Sample CA-67 was a swab taken from a firearm that was allegedly used by the suspect in a drive-by shooting. According to the CODIS Administrator, the firearm was taken from the trunk of a vehicle stopped by the California Highway Patrol for speeding shortly after the drive-by shooting was reported. The case file lacked any supporting documentation, such as a police report, but the information that it did contain indicated that the item was collected directly from the suspect's vehicle instead of the crime scene. There was no additional information in the case file to connect the gun or the car to the drive-by shooting. Based on the limited information in the case file, we questioned the eligibility of this profile in our draft audit report.

However, after our draft report was issued, the Laboratory provided additional information related to the driver of the car from which the gun was seized, as well as the gun's link to the crime. As a result of that additional information, we no longer question the eligibility of this profile.

OIG Sample CA-83

Sample CA-83 was taken from a cigarette butt found next to a bench in a park across the street from where the victim was shot in a vehicle. We deemed this profile to be unallowable because the item was not connected to a crime. We presented this to the CODIS Administrator and the Laboratory Director, who disagreed that this profile was unallowable and stated that the profile should remain in NDIS. The CODIS Administrator stated the police officer's theory was that the suspect sat in the park smoking before crossing the street to commit the homicide. The CODIS Administrator felt this theory was reasonable enough to upload the cigarette butt as part of the investigation to examine all possible leads in order to develop a suspect profile from the crime scene. However, we found no evidence in the case file to support the officer's theory and we were not provided any additional evidence to support this theory. As a result, we reported in the draft audit report that the profile was inappropriate for NDIS and recommended that the FBI work with the Laboratory to determine the profile's eligibility for inclusion in NDIS. After the draft audit report was issued, the Laboratory removed this profile from NDIS.

OIG Sample CA-88

Sample CA-88 was a swab taken from a beer bottle collected by undercover police officers during an undercover operation to negotiate the

purchase of an illegal destructive device. The crime was conspiracy to commit a crime. Before our draft audit report was issued, we deemed this profile unallowable because it appeared to have been a deduced suspect profile and not a forensic unknown. Specifically, question V from the NDIS allowability flowchart asks “was the item seized by law enforcement from the suspect’s person, or was the item in the possession of the suspect when collected by law enforcement?” The flow chart indicates that if Yes, “the profile is not allowable at NDIS.” However, after the draft audit report was issued the Laboratory provided additional information concerning the collection of the bottle. As a result of that additional information not provided to us during our audit site work, we no longer question the eligibility of this profile.

Questioned Profiles the Laboratory Removed from NDIS

Below we discuss the remaining profiles that the Laboratory removed from NDIS.

OIG Sample CA-03

Sample CA-03 was taken from a cigarette butt found in a car that was set on fire. There were multiple cigarette butts taken from the crime scene during the arson investigation, and the profile uploaded to NDIS was female even though the police’s suspect that was killed in the fire was male. We deemed this profile to be unallowable because the profile was not attributable to a putative perpetrator. We presented this to the CODIS Administrator and Laboratory Director, who both agreed that this profile was unallowable and removed it from NDIS. Similarly, the Laboratory removed an additional four profiles from NDIS that had been taken from cigarette butts found at the crime scene.

OIG Sample CA-04

Sample CA-04 was taken from a swab of a trigger on a gun that an investigator brought to the Laboratory for comparison to shell casings found at the crime scene. The gun was retrieved from a different location and was submitted for comparison to the shell casings at the crime scene. The profile uploaded to NDIS was not taken from the crime scene. We deemed this profile to be unallowable because the profile was not retrieved from the crime scene and was not attributable to a putative perpetrator. We presented this to the CODIS Administrator and the Laboratory Director who agreed that this profile was unallowable and removed it from NDIS.

OIG Sample CA-14

Sample CA-14 was taken from a pair of shoes that the suspect was wearing while in police custody after being arrested. We deemed this profile to be unallowable because it is not a forensic unknown and it was not retrieved from the crime scene. We presented this to the CODIS Administrator and Laboratory Director, who both agreed that this profile was unallowable and subsequently the Laboratory removed it from NDIS.

OIG Sample CA-15

Sample CA-15 was taken from a stain on bedding in the suspect's room where a rape had occurred. We deemed this profile to be unallowable because the profile was taken from the suspect's bed and is considered a deduced suspect profile rather than a forensic unknown profile. The Laboratory or the law enforcement agency investigating the crime could not provide evidence that the stain was attributed to the crime. We presented this to the CODIS Administrator and the Laboratory Director, who both agreed that this profile was unallowable and subsequently removed it from NDIS.

OIG Sample CA-19

Sample CA-19 was taken from clothing collected in the suspect's residence and not from the convenience store where the armed robbery had taken place. We deemed this profile to be unallowable because the profile was taken from the suspect's home and is considered a deduced suspect profile rather than a forensic unknown profile. We presented this to the CODIS Administrator and the Laboratory Director, who both agreed that this profile was unallowable and subsequently removed it from NDIS.

OIG Sample CA-25

Sample CA-25 was taken from a stain on a couch collected in the suspect's residence. We deemed this profile to be unallowable because the profile was not taken from the crime scene but rather the suspect's home, which was not the location of the crime scene. This is considered a deduced suspect profile rather than a forensic unknown profile. We presented this to the CODIS Administrator and the Laboratory Director, who both agreed that this profile was unallowable and subsequently removed it from NDIS.

OIG Sample CA-29

Sample CA-29 was taken from a sock collected in the suspect's residence and not at the crime scene. We deemed this profile to be

unallowable because the profile was taken from the suspect's home and is considered a deduced suspect profile rather than a forensic unknown profile. We presented this to the CODIS Administrator and the Laboratory Director, who both agreed that this profile was unallowable and they subsequently removed it from NDIS.

OIG Sample CA-40

Sample CA-40 was taken from blood found on a knife collected from the suspect's residence. According to the CODIS Administrator's recollection and interpretation of the evidence in the case file, she stated that when police officers arrived at the suspect's home, the suspect had already injured himself with a knife and he threatened to kill himself. When police attempted to take the knife away from the suspect, he charged the police officers and the police officers shot and killed him. We deemed this profile to be unallowable because the case file lacked sufficient evidence to indicate that this profile was a forensic unknown. This case was also part of a routine and required investigation into the officers' shooting incident. We presented this to the CODIS Administrator and the Laboratory Director, who both agreed that this profile was unallowable and subsequently removed it from NDIS.

OIG Sample CA-41

Sample CA-41 was taken from the suspect's sweat pants seized from his house. We deemed this profile to be unallowable because the profile was taken from the suspect's home and it is reasonable to conclude the suspect's DNA would be found on his clothing located inside of his home. We presented this to the CODIS Administrator and the Laboratory Director, who both agreed that this profile was unallowable and they subsequently removed it from NDIS.

OIG Sample CA-43

Sample CA-43 was taken from a cigarette butt collected outside the front of a business where a robbery had occurred. We deemed this profile to be unallowable because there was no evidence in the case file linking the item to the crime. We presented this to the CODIS Administrator and the Laboratory Director, who both agreed that this profile was unallowable and subsequently removed it from NDIS. The laboratory removed an additional two profiles from NDIS that had been taken from cigarette butts found in the same vicinity.

OIG Sample CA-50

Sample CA-50 was taken from a swab of a bullet collected from the suspect's vehicle. The suspect was shot by police officers while sitting in his vehicle. We deemed this profile to be unallowable because the profile was taken from inside the suspect's vehicle from one of the rounds which hit the suspect, on which the suspect's DNA is expected to be found. In addition, this case was a routine and required investigation into the officers' action and not an investigation of a crime committed by an unknown perpetrator. As a result, this profile was not a forensic unknown. We presented this to the CODIS Administrator and the Laboratory Director, who both agreed that this profile was unallowable and subsequently removed it from NDIS.

OIG Sample CA-57

Sample CA-57 was taken from a flashlight found at the suspect's residence. The victim's family reported that the victim was sodomized with a flashlight. However, no victim DNA was found on the flashlight. Only the suspect's DNA was found to be on the flashlight. There was not enough information in the case file to ascertain whether the item was considered evidence taken from the crime scene. Also, the profile was generated from an item that was taken from the suspect's home rather than the crime scene. Therefore, this was considered a deduced suspect profile. We presented this to the CODIS Administrator and the Laboratory Director, who both agreed that this profile was unallowable and they subsequently removed it from NDIS.

OIG Sample CA-62

Sample CA-62 was a swab taken from tissue paper found inside the suspect's residence, which was near a street where a homicide had taken place. There was no evidence in the case file to indicate that the tissue paper was connected to the crime. Also, the profile was taken from the suspect's home and therefore was considered a deduced suspect profile. We presented this to the CODIS Administrator and Laboratory Director, who both agreed that this profile was unallowable and subsequently removed it from NDIS. The CODIS Administrator also removed two additional profiles from NDIS: (1) one of the profiles was taken from the suspect's residence and it matched the suspect's brother and (2) the other profile was taken off of a third individual's shirt.

OIG Sample CA-69

Sample CA-69 was taken from a cigarette butt found outside the store entrance where an armed robbery took place. The police report shows the

suspect as male and the DNA profile uploaded was a female. We deemed this profile to be unallowable because the item was not connected to the crime. We presented this to the CODIS Administrator and the Laboratory Director, who both agreed that this profile was unallowable and they subsequently removed it from NDIS. Further, the Laboratory removed an additional five profiles from NDIS that had been taken from cigarette butts found outside the store.

OIG Sample CA-71

Sample CA-71 was a swab taken from the arm rest of the driver's door of a vehicle. The DNA profile collected was from a car that matched the description of a car leaving the scene of the crime. After the profile was uploaded to CODIS, the Laboratory received a hit on the profile's record. The police officer on this case was not able to connect the person identified by the CODIS hit to the crime. Additionally, the victim was unable to identify a suspect. We deemed this profile to be unallowable because the item did not appear to have been connected to a crime. We presented this to the CODIS Administrator and the Laboratory Director, who agreed that this profile was unallowable and they subsequently removed it from NDIS.

OIG Sample CA-73

We could not determine where Sample CA-73 was taken from or the nature of the crime because the case file lacked this information. As a result, we asked the CODIS Administrator for more information and she contacted the law enforcement agency that had collected the evidence on a swab from which the DNA profile was developed. Following this contact, the CODIS Administrator stated that the item that was swabbed was taken from the right rear outside door of a stolen vehicle. However, the CODIS Administrator also informed us the law enforcement agency was investigating a homicide that occurred at a restaurant when it came across the stolen vehicle. We discussed this information with the CODIS Administrator and the Laboratory Director, who agreed that this profile was unallowable and subsequently removed it from NDIS.

OIG Sample CA-75

We were unable to determine the source of Sample CA-75 or the nature of the crime because the case file lacked this information. As a result, we requested additional information from Laboratory officials. The CODIS Administrator contacted the law enforcement agency that collected the item and found out the sample was taken from tissue paper. The tissue paper was found at a bank that had been robbed. The police stated the suspects in the case were male and the DNA profile taken from the tissue

paper and uploaded was female. We deemed this profile to be unallowable because the item was not connected to a crime. We presented this to the CODIS Administrator and the Laboratory Director, who agreed that this profile was unallowable and removed it from NDIS.

OIG Sample CA-78

Sample CA-78 was a swab taken from the exterior of a condom found at the scene of a homicide. However, the case file did not indicate that a sexual offense had occurred, nor did it link the condom to the crime. The uploaded DNA profile matched the victim's boyfriend, a suspect in the case. Later, another DNA profile in the case, the origins of which we could not identify because the case file lacked sufficient information, resulted in a CODIS hit. The hit led to the identification of the perpetrator, who was not the boyfriend. The perpetrator was ultimately convicted of the crime. We deemed this profile to be unallowable because there was no information in the case file to connect the DNA profile from the condom to the homicide. We presented this to the CODIS Administrator and the Laboratory Director, who both agreed that this profile was unallowable and removed it from NDIS.

OIG Sample CA-79

Sample CA-79 was a swab taken from the shoes that the suspect was wearing. We deemed this profile to be unallowable because the profile was taken off of the suspect's person and is considered to be a deduced suspect profile rather than a forensic unknown. We presented this to the CODIS Administrator and the Laboratory Director, who both agreed that this profile was unallowable and removed it from NDIS.

OIG Sample CA-84

Sample CA-84 was a swab taken from a sunflower seed. The case file lacked information regarding the sunflower seed's relation to the crime, therefore, the CODIS Administrator contacted the law enforcement agency that collected the item and found out that the sample was taken from a sunflower seed found in a rental car that the suspect used while fleeing a crime scene. The crime committed by the suspect was identity theft and use of stolen credit cards. However, the car had been returned to the rental car agency and it was unclear whether the car had been rented again to someone else after the commission of the crime by the suspect. The DNA profile taken did not match the suspect convicted of the crime. We deemed this profile to be unallowable because there was insufficient evidence in the case file to indicate that the profile was attributable to the putative perpetrator. We presented this to the CODIS Administrator and the

Laboratory Director, who both agreed that this profile was unallowable and removed it from NDIS.

OIG Sample CA-86

Sample CA-86 was a cutting from a black wig. The case file lacked information regarding the wig's relation to the crime, therefore, the CODIS Administrator contacted the law enforcement agency that collected the item and found out the sample was taken from the crime scene of a robbery. The DNA profile obtained from the wig was a female profile while other evidence collected from the crime scene and tested contained a male DNA profile. The CODIS Administrator informed us that the wig was handled by a courtroom jury before DNA testing was performed. Therefore, the resulting profile might be attributable to one of the jurors and not to the perpetrator of the crime. We deemed this profile to be unallowable because the DNA profile uploaded was not attributable to a putative perpetrator, and the item was handled by innocent persons after it had been retrieved. We presented this to the CODIS Administrator and the Laboratory Director, who both agreed that this profile was unallowable and removed it from NDIS.

OIG Sample CA-90

Sample CA-90 was taken from the inside of a latex glove found at the suspect's residence and not from the crime scene. We deemed this profile to be unallowable because the profile was taken from the suspect's home and is considered a deduced suspect profile rather than a forensic unknown profile. We presented this to the CODIS Administrator and the Laboratory Director, who agreed that this profile was unallowable and subsequently removed it from NDIS.

OIG Sample CA-96

Sample CA-96 was taken from a bloodstain on a rock. The case file lacked information regarding the connection between the rock and the crime. Therefore the CODIS Administrator contacted the law enforcement agency that collected the item and found out the sample was taken from an area where an assault with a baseball bat occurred. The crime involved multiple victims at a street intersection, but the information in the case file did not indicate how the blood on the rock may have been attributable to the perpetrator, or how it related to the crime. The Laboratory sought victim elimination samples, but was not successful in obtaining those. The profile uploaded into CODIS did not match the suspect who pled guilty to the crime. We presented this to the CODIS Administrator and Laboratory Director, who determined this profile was inappropriate for NDIS and subsequently removed it.

OIG Sample CA-98

Sample CA-98 was a swab taken from the steering wheel of the suspect's vehicle. The crime was a home invasion and attempted homicide within a residence. We did not find any evidence in the case file tying the vehicle to the crime scene. We deemed this profile to be unallowable because the profile was not retrieved from the crime scene. We presented this to the CODIS Administrator and Laboratory Director, who agreed that this profile was unallowable and subsequently removed it from NDIS.

OIG Sample CA-100

Sample CA-100 was taken from a cigarette butt picked up outside the front door of an apartment building where a robbery had occurred. We deemed this profile to be unallowable because the item was not connected to the crime. We presented this to the CODIS Administrator and the Laboratory Director, who agreed that this profile was unallowable and subsequently removed it from NDIS. The laboratory removed an additional three profiles from NDIS that had been taken from cigarette butts found outside the front door of the apartment.

Conclusion

In our draft report we identified a total of 49 profiles that we believe were inappropriate for NDIS. The Laboratory removed 42 of these profiles from NDIS, but disagreed with our questioning of seven profiles. In response to our draft, the Laboratory provided additional information about the eligibility of five of those profiles, which we added to this final report. Also, as a result of our draft report, the FBI concluded that two of the profiles were deleted. As a result, the Laboratory removed a total of 44 profiles from NDIS.

We consider 44 to be a large number of inappropriate profiles resulting from an OIG CODIS audit. We understand that in 2005 the Laboratory enhanced its profile eligibility review procedures, and in 2006 the FBI promulgated additional guidance for determining profile eligibility for NDIS. However, half of the inappropriate profiles in our sample of 100 were uploaded after 2006. As a result, it does not appear that the Laboratory's enhanced procedures were effective in preventing ineligible profiles from being uploaded to NDIS. In our opinion, the cause of these deficiencies is related to the lack of sufficient and necessary case file evidence to determine profile eligibility. In addition, we believe DNA Analysts at the Laboratory may not have a clear understanding of CODIS eligibility guidelines.

As a result of these deficiencies, we recommend that the FBI work with the Laboratory to strengthen its NDIS eligibility review process to ensure it properly reviews its DNA profiles for eligibility prior to NDIS upload. This review process should be based on sufficient case file and evidence documentation, which is necessary to determine NDIS eligibility. We also recommend that the FBI work with the Laboratory to ensure that the appropriate forensic DNA profiles currently in NDIS are reviewed for eligibility using a strengthened eligibility review process and the NDIS eligibility flowchart. Specifically, this review should focus on those profiles that the Laboratory assessed after it revised its procedures and the FBI promulgated clarifying NDIS eligibility guidance. This would include those profiles reviewed by the Laboratory from January 2006 through April 2012.

Recommendations

We recommend that the FBI:

2. Work with the Laboratory to determine NDIS eligibility for the remaining seven questioned profiles which the Laboratory believed to be allowable.
3. Ensure the Laboratory strengthens its profile eligibility review process to include: (1) proper reviews of each forensic profile for NDIS eligibility prior to upload, (2) basing its eligibility review process on sufficient case file and evidence documentation, and (3) only uploading eligible profiles to NDIS. Sufficient documented information is necessary to determine a profile's eligibility prior to NDIS upload.
4. Ensure the Laboratory re-reviews its forensic DNA profiles that were originally uploaded to NDIS between January 2006 and April 2012 by applying a strengthened profile review process and the NDIS eligibility flowchart. The Laboratory may exclude those 100 profiles that were reviewed as part of this audit and should remove from NDIS any additional ineligible profiles found.

OBJECTIVES, SCOPE, AND METHODOLOGY

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Our audit generally covered, but was not limited to, the period from June 2009 through May 2011. The objectives of the audit were to determine if the: (1) Laboratory was in compliance with the NDIS participation requirements; (2) Laboratory was in compliance with the Quality Assurance Standards (QAS) issued by the FBI; and (3) Laboratory's forensic DNA profiles in CODIS databases were complete, accurate, and allowable for inclusion in NDIS. To accomplish the objectives of the audit, we:

- Examined internal and external Laboratory QAS review reports and supporting documentation for corrective action taken, if any, to determine whether: (a) the Laboratory complied with the QAS, (b) repeat findings were identified, and (c) recommendations were adequately resolved.¹⁴

In accordance with the QAS, the internal and external laboratory review procedures are to address, at a minimum, a laboratory's quality assurance program, organization and management, personnel qualifications, facilities, evidence control, validation of methods and procedures, analytical procedures, calibration and maintenance of instruments and equipment, proficiency testing of analysts, corrective action for discrepancies and errors, review of case files, reports, safety, and previous audits. The QAS require that internal and external reviews be performed by personnel who have successfully completed the FBI's training course for conducting such reviews.

¹⁴ The QAS require that laboratories undergo annual audits, which every other year, must be performed by an external agency that performs DNA identification analysis and is independent of the laboratory being reviewed. The QAS does not require these audits to be performed in accordance with the *Government Auditing Standards* (GAS) and they are not performed by the Department of Justice Office of the Inspector General. Therefore, we refer to the QAS audits as either internal or external laboratory reviews, as applicable, to avoid confusion with our audits that are conducted in accordance with GAS.

As permitted by GAS 7.42 (2007 revision), we generally relied on the results of the Laboratory's external laboratory review to determine if the Laboratory complied with the QAS.¹⁵ In order to rely on the work of non-auditors, GAS requires that we perform procedures to obtain sufficient evidence that the work can be relied upon. Therefore, we: (1) obtained evidence concerning the qualifications and independence of the individuals who conducted the review and (2) determined that the scope, quality, and timing of the audit work performed was adequate for reliance in the context of the current audit objectives by reviewing the evaluation procedure guide and resultant findings to understand the methods and significant assumptions used by the individuals conducting the reviews. Based on this work, we determined that we could rely on the results of the Laboratory's external laboratory review.

- Interviewed Laboratory officials to identify management controls, Laboratory operational policies and procedures, Laboratory certifications or accreditations, and analytical information related to DNA profiles.
- Toured the Laboratory to observe facility security measures as well as the procedures and controls related to the receipt, processing, analyzing, and storage of forensic evidence and convicted offender DNA samples.
- Reviewed the Laboratory's written policies and procedures related to conducting internal reviews, resolving review findings, expunging DNA profiles from NDIS, and resolving matches among DNA profiles in NDIS.
- Reviewed supporting documentation for 5 of 32 NDIS matches to determine whether they were resolved in a timely manner. The Laboratory provided the universe of NDIS matches as of May 31, 2011. The sample was judgmentally selected to include both case-to-case and case-to-offender matches. This non-statistical sample does not allow projection of the test results to all matches.
- Reviewed the case files for selected forensic DNA profiles to determine if the profiles were developed in accordance with the

¹⁵ We also considered the results of the Laboratory's internal laboratory review, but could not rely on it because it was not performed by personnel independent of the Laboratory. Further, as noted in Appendix II, we performed audit testing to verify Laboratory compliance with specific Quality Assurance Standards that have a substantial effect on the integrity of the DNA profiles uploaded to NDIS.

Forensic QAS and were complete, accurate, and allowable for inclusion in NDIS.

Working in conjunction with the contractor used by the FBI to maintain NDIS and the CODIS software, we obtained an electronic file identifying the 2,746 Short Tandem Repeat (STR) forensic profiles the Laboratory had uploaded to NDIS as of April 21, 2011. We limited our review to a sample of 100 profiles. This sample size was determined judgmentally because preliminary audit work determined that risk was not unacceptably high.

- Using the judgmentally-determined sample size, we randomly selected a representative sample of labels associated with specific profiles in our universe to reduce the effect of any patterns in the list of profiles provided to us. However, since the sample size was judgmentally determined, the results obtained from testing this limited sample of profiles may not be projected to the universe of profiles from which the sample was selected.

The objectives of our audit concerned the Laboratory's compliance with required standards and the related internal controls. Accordingly, we did not attach a separate statement on compliance with laws and regulations or a statement on internal controls to this report. See Appendix II for detailed information on our audit criteria.

AUDIT CRITERIA

In conducting our audit, we considered the NDIS participation requirements and the Quality Assurance Standards (QAS). However, we did not test for compliance with elements that were not applicable to the Laboratory. In addition, we established standards to test the completeness and accuracy of DNA profiles as well as the timely notification of DNA profile matches to law enforcement.

NDIS Participation Requirements

The NDIS participation requirements, which consist of the Memorandum of Understanding (MOU) and the NDIS operational procedures, establish the responsibilities and obligations of laboratories that participate in NDIS. The MOU requires that NDIS participants comply with federal legislation and the QAS, as well as NDIS-specific requirements accompanying the MOU in the form of appendices. We focused our audit on specific sections of the following NDIS requirements.

- DNA Data Acceptance Standards
- DNA Data Accepted at NDIS
- Quality Assurance Standards Reviews
- NDIS DNA Autosearches
- Confirm an Interstate Candidate Match
- General Responsibilities
- Initiate and Maintain a Laboratory's Participation in NDIS
- Security Requirements
- CODIS Users
- CODIS Administrator Responsibilities
- Access to, and Disclosure of, DNA Records and Samples
- Upload of DNA Records

Quality Assurance Standards

The FBI issued two sets of Quality Assurance Standards: (1) QAS for Forensic DNA Testing Laboratories, effective July 1, 2009, (Forensic QAS); and (2) QAS for DNA Databasing Laboratories, effective July 1, 2009, (Offender QAS). The Forensic QAS and the Offender QAS describe the quality assurance requirements that the Laboratory should follow to ensure the quality and integrity of the data it produces.

For our audit, we generally relied on the reported results of the Laboratory's most recent annual external review to determine if the Laboratory was in compliance with the QAS. Additionally, we performed audit work to verify that the Laboratory was in compliance with the QAS listed below because they have a substantial effect on the integrity of the DNA profiles uploaded to NDIS.

- Facilities (Forensic QAS and Offender QAS 6.1): The laboratory shall have a facility that is designed to ensure the integrity of the analyses and the evidence.
- Evidence Control (Forensic QAS 7.1): The laboratory shall have and follow a documented evidence control system to ensure the integrity of physical evidence. Where possible, the laboratory shall retain or return a portion of the evidence sample or extract.
- Sample Control (Offender QAS 7.1): The laboratory shall have and follow a documented sample inventory control system to ensure the integrity of database and known samples.
- Analytical Procedures (Forensic QAS and Offender QAS 9.5): The laboratory shall monitor the analytical procedures using [appropriate] controls and standards.
- Review (Forensic QAS 12.1): The laboratory shall conduct administrative and technical reviews of all case files and reports to ensure conclusions and supporting data are reasonable and within the constraints of scientific knowledge.

(Offender QAS Standard 12.1): The laboratory shall have and follow written procedures for reviewing DNA records and DNA database information, including the resolution of database matches.

- [Reviews] (Forensic QAS and Offender QAS 15.1 and 15.2): The laboratory shall be audited annually in accordance with [the QAS]. The annual audits shall occur every calendar year and shall be at least 6 months and no more than 18 months apart.

At least once every 2 years, an external audit shall be conducted by an audit team comprised of qualified auditors from a second agency(ies) and having at least one team member who is or has been previously qualified in the laboratory's current DNA technologies and platform.

- Outsourcing (Forensic QAS and Offender QAS Standard 17.1): A vendor laboratory performing forensic and database DNA analysis shall comply with these Standards and the accreditation requirements of federal law.
- (Forensic QAS 17.4): An NDIS participating laboratory shall have and follow a procedure to verify the integrity of the DNA data received through the performance of the technical review of DNA data from a vendor laboratory.
- (Offender QAS Standard 17.4): An NDIS participating laboratory shall have, follow and document appropriate quality assurance procedures to verify the integrity of the data received from the vendor laboratory including, but not limited to, the following: Random reanalysis of database, known or casework reference samples; Inclusion of QC samples; Performance of an on-site visit by an NDIS participating laboratory or multi-laboratory system outsourcing DNA sample(s) to a vendor laboratory or accepting ownership of DNA data from a vendor laboratory.

Office of the Inspector General Standards

We established standards to test the completeness and accuracy of DNA profiles as well as the timely notification of law enforcement when DNA profile matches occur in NDIS. Our standards are listed below.

- **Completeness of DNA Profiles:** A profile must include each value returned at each locus for which the analyst obtained results. Our rationale for this standard is that the probability of a false match among DNA profiles is reduced as the number of loci included in a profile increases. A false match would require the unnecessary use of laboratory resources to refute the match.
- **Accuracy of DNA Profiles:** The values at each locus of a profile must match those identified during analysis. Our rationale for this standard is that inaccurate profiles may: (1) preclude DNA profiles from being matched and, therefore, the potential to link convicted offenders to a crime or to link previously unrelated crimes to each other may be lost; or (2) result in a false match that would require the unnecessary use of laboratory resources to refute the match.
- **Timely Notification of Law Enforcement When DNA Profile Matches Occur in NDIS:** Laboratories should notify law enforcement personnel of NDIS matches within 2 weeks of the match confirmation date, unless there are extenuating circumstances.

Our rationale for this standard is that untimely notification of law enforcement personnel may result in the suspected perpetrator committing additional, and possibly more egregious, crimes if the individual is not deceased or already incarcerated for the commission of other crimes.

AUDITEE RESPONSE

County of Santa Clara

Crime Laboratory
Office of the District Attorney
250 West Hedding Street
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(408) 808-5900



Jeffrey F. Rosen
District Attorney

Ian Fitch
Laboratory Director

David J. Gaschke
Regional Audit Manager
San Francisco Regional Audit Office
Office of the Inspector General
U.S. Department of Justice
1200 Bayhill Drive, Suite 201
San Bruno, California 94066

May 3, 2012

Dear Mr. Gaschke:

Here is our official response to the draft audit report on the Audit of Compliance with Standards Governing Combined DNA Index System (CODIS) Activities at the County of Santa Clara District Attorney's Crime Laboratory, dated April 12, 2012:

We question the accuracy of a few statements in the draft audit report, and request clarification on several other statements:

Page ii – "Our audit generally covered the period from June 2009 through May 2011."

Page 1 – "Our audit covered the period from June 2009 through May 2011."

Response: Our understanding is that the audit covered CODIS entries and procedures dating back to 1998.

Page 6 – "In 1998, the Laboratory began analyzing DNA as a means of processing evidence in criminal cases..."

Response: In 1998, the Laboratory began performing STR DNA analysis with the Profiler Plus amplification kit. The Laboratory actually began analyzing DNA as a means of processing evidence in criminal cases in 1992 using DQ α , and added D1S80 in 1996.

Page 8 – "For the remaining two matches...not enough documentation in case files..." and page 8 to page 9 – "Forensic QAS 5.3.4 states that the casework CODIS Administrator is responsible for assuring that matches are dispositioned in accordance with NDIS

operational procedures. As a result, we believe that the Laboratory should strengthen its policy to help it ensure it will be followed.”

Response: We feel that a date should be added for these two matches, since they occurred prior to updates in Laboratory and QAS procedures. In addition, all QAS audits of our Laboratory, to date, have resulted in no findings pertaining to QAS 5.3.4. Note that on page 14, the conclusion states, “We found that the Laboratory complied with the FBI’s Forensic QAS that we tested.” Thus, it is unclear to us why the OIG feels that the Laboratory should further strengthen its policy in regards to QAS 5.3.4.

Page 8 – “The CODIS Administrator stated that one of the case files did not contain sufficient documentation because it was before the Laboratory tracked matches in the CODIS “Match Manager.”

Response: All matches from LDIS, SDIS, and NDIS are recorded in Match Manager, and tracked in our in-house CODIS Hits Excel spreadsheet. We are unclear how documentation in the case file relates to tracking matches in Match Manager. We would appreciate clarification on this statement.

Page 12 – “The PCR setup room has dedicated blue lab coats for DNA Analysts to wear when working in that space in order to prevent contamination.”

Response: For clarification, the PCR post-amplification room has dedicated blue lab coats for DNA Analysts to wear. The PCR setup room is pre-amplification, so white lab coats are worn in there.

Page 17 – “Since 2010, the Laboratory now requires its Technical Reviewer to have a DNA analysis background.”

Response: Since the inception of the DNA program in 1992, DNA casework technical reviewers have always had a DNA analysis background. For clarification, the review process was strengthened in 2007 by adding the requirement that the DNA technical reviewer sign the CODIS entry sheet, verifying CODIS eligibility of the profile(s).

Page 17 – “Based on our discussions with Laboratory officials and our review of the information that was available in the case files, we believe that some Laboratory officials may not have a clear understanding of the CODIS eligibility requirements.”

Response: We are unclear what OIG means by “Laboratory officials.” The CODIS Administrator and CODIS users do have a clear understanding of CODIS eligibility requirements. They take and pass the Annual Review of DNA Data Accepted at NDIS test each year.

Action Items

Page iii –

- work with FBI to determine NDIS eligibility for the remaining 7 profiles (see disputed profiles section for details on these cases)
- work with FBI to strengthen procedures
- review profiles uploaded from January 2006 to April 2012

Response: Profiles entered into CODIS from 2006 to 2010 have already been reviewed. We have found significantly more documentation in 2010 than 2006 with increasing documentation from year to year. The 2010 review is not finding many issues. The Laboratory does not feel that profiles entered in 2011 and 2012 need to be reviewed, as these newer CODIS entries have been performed under updated Laboratory procedures and with observations from the OIG audit in mind.

Page 10 –

Recommendation - “We recommend that the FBI: 1. Ensure the Laboratory abides by its NDIS match policy, including maintaining appropriate documentation its case files.”

Response: We updated our Laboratory CODIS procedures in 2010 after we began using CHOP (California’s CODIS Hit Outcome Project) and in 2011 prior to our ASCLD/LAB ISO inspection.

Response to Disputed Profiles

The Laboratory consulted with the FBI regarding seven disputed profiles. As a result, one additional profile was removed from CODIS, and the remaining six were left in. Our justifications follow:

- CA-02 This is a murder case. The victim was a known homosexual who often picked up men and took them to a parking garage. It was a known place for homosexual males to "hangout". The victim was shot dead while in the driver seat of his vehicle. This case is cold and there are no leads. Cigarette butts from the victim's car and from the parking garage around the car were tested and the profiles uploaded to CODIS.

The OIG auditors state, "We acknowledge that the cigarette butt may have been at the crime scene, but, at the same time it is unknown how long it had been in the victim's car and it does not appear it was connected to the crime." We based our CODIS entry, in part, on information and theories provided to us by the crime scene investigators. While some of the cigarette butts may not be attributable to the perpetrator, one may be. Unfortunately, in this case, there is no way of collecting elimination samples from people who potentially left cigarette butts in the car or garage. The Laboratory's position is that the cigarette butts were collected from the crime scene, and it is reasonable to infer that one of the cigarette butts may be attributable to the perpetrator. (1995 case, 2007 report).

- CA-05 A threatening letter was sent to a female. A male she knew was suspected of the crime. Sending her a letter was a violation of his probation. A DNA profile was obtained from the stamps/envelope of the threatening letter and uploaded to CODIS. The Laboratory did not have a reference from the listed suspect. The evidence profile hit to the listed suspect in CODIS (hit to unconfirmed suspect). The agency never submitted a reference sample for confirmation. In 2011, during the OIG audit, we attempted to obtain a police report, but the police department stated they purge these records every ten years. There is no way to obtain the police report to see what the listed crime type is. (1999 case, 1999 report)

RESOLVED: Because the original police report has been purged and the case was not submitted to the Laboratory with a crime type, we have removed this profile from CODIS.

- CA-27/ CA-89 - Both are from the same case. The victim was riding in a car that was at a night club, left the club, and entered the freeway. A victim was shot and killed while in a car on the freeway. The car was being pursued by another car that also originated at the night club. The police think the shooter was in a fight

at the club earlier that night. Blood swabs were collected from the club and parking lot/sidewalk where police thought the suspect may have fled. Three profiles were entered into CODIS (CA-27, CA-89, and a third). A third profile (not chosen for the audit) hit to an offender and was subsequently removed because police thought that particular person was not related to the homicide. The other two remain as unknowns in CODIS. (2009 case, 2010 report)
The Laboratory's position is that, based on facts provided by police, it is reasonable to infer that one of the bloodstains may be attributable to the perpetrator of the shooting.

- CA-67 A shooting into an inhabited dwelling (246 PC) occurred and was being investigated by the police department (PD). A car in the driveway of the dwelling was also shot, according to the police report. On the same day, the California Highway Patrol (CHP) in the same jurisdiction pulled over a vehicle for traveling 90 mph. The CHP realized the individuals they pulled over may be suspects in the PD case. CHP confiscated a loaded handgun from the trunk of the vehicle. There were two people in the vehicle (driver and passenger). The gun (from the CHP traffic stop) was linked to the PD case by firearms analysis. The firearms report was in the case file for the auditors to look at. The firearms examiner swabbed the gun for DNA. The DNA examiner obtained a profile from the gun swab and entered it into CODIS. (2007 case, 2009 report)

We obtained a copy of the CHP report during the OIG audit. They charged the driver of the vehicle from the traffic stop with a series of vehicle code violations. The driver gave the CHP false information, and said he was a gang member. Officers from the PD stated that they believed that the shooting at the dwelling was gang-related. The Laboratory's position is that, based on facts provided by police, it is reasonable to infer that the DNA on the gun may be attributable to the perpetrator in the PD case.

- CA-83 The PD suspect the shooter in this homicide was waiting for the victim to return home and believe he may have smoked some cigarettes near a park bench across the street from the victim's house. DNA was obtained from the cigarette butts and uploaded to CODIS. Auditors feel that cigarette butts near a park bench could belong to anyone and should not be uploaded to CODIS, even if police believe they could belong to the perpetrator. (2006 case, 2011 report)

During the OIG audit, the CODIS Administrator spoke to a police officer, who stated her theory and reasoning for submitting the cigarette butts. The Laboratory has requested more documentation from the police department. At the current time, the Laboratory's position is that, based on known circumstances about the case at this time, it is reasonable to infer that the DNA from one of the cigarette butts may be attributed to the perpetrator of the shooting.

CA-88 The following is a quote from a DDA at the Santa Clara County District Attorney's Office. "This beer bottle was given to a guy who was negotiating with undercover PD Officers to sell them a destructive device (See PC 12301 et seq.). There is no victim if you will in the case so no victim sample. In looking at the CODIS match report, this profile goes to the co-defendant. The beer bottle was submitted before he was ID'd and arrested to figure out who the suspect was. Since he was later found and pled guilty, we never did have to submit a follow up sample for ID purposes. I believe that sample is in CODIS as a suspect profile properly." (2007 case, 2007 report) The e-mail from the DDA was sent during the OIG audit and shown to the auditors.

The crime scene was the location of the negotiation for the sale of a destructive device. The perpetrator, while attempting to sell an explosive device, left the beer bottle at the crime scene, as witnessed by the undercover police officer. The Laboratory's position is that the DNA from the beer bottle was uploaded to CODIS to try to determine the identity of the perpetrator.

If you have any questions, please don't hesitate to contact us.

Sincerely,



Ian Fitch
Laboratory Director



Brooke Barloewen
CODIS Manager

DEPARTMENT OF JUSTICE RESPONSE



U.S. Department of Justice
Federal Bureau of Investigation

Washington, D.C. 20535-0001

May 11, 2012

David J. Gaschke
Regional Audit Manager
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1200 Bayhill Drive, Suite 201
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Dear Mr. Gaschke:

Your memorandum to Director Mueller forwarding the draft audit report for the County of Santa Clara District Attorney's Crime Laboratory, San Jose, California ("Laboratory"), has been referred to me for response.

Your draft audit report contained four recommendations relating to the Laboratory's compliance with the FBI's Memorandum of Understanding and *Quality Assurance Standards for Forensic DNA Testing Laboratories*.

With respect to recommendation one relating to the adherence of the Laboratory to its NDIS match policy, the FBI CODIS Unit is working with the Laboratory to reach a mutually acceptable plan for the maintenance of appropriate case file documentation.

With respect to recommendation two relating to NDIS eligibility of seven questioned profiles, it has been determined by the Laboratory and the FBI CODIS Unit that profiles CA-02, CA-27, CA-89, CA-67 are allowable and profiles CA-05 and CA-83 have been deleted.

With respect to recommendation three relating to profile eligibility review processes, the FBI CODIS Unit believes that detailed discussions with the OIG and CODIS Unit personnel has allowed the Laboratory to have a clearer understanding of NDIS eligibility requirements and the importance of making eligibility decisions based upon complete and appropriate case file documentation. Henceforth, the Laboratory will endeavor to only upload truly allowable profiles to NDIS.

With respect to recommendation four relating to the re-review of forensic profiles to ensure the allowability of those profiles uploaded to NDIS between January 2006 and April 2012, the Laboratory has completed its review of all of the profiles from 2006 to 2010. It is anticipated that the Laboratory will be able to submit documentation supporting its review of the forensic profiles soon. The FBI CODIS Unit is in contact with the Laboratory and continues to work with its staff on a mutually acceptable plan regarding the re-review of the remaining profiles. The CODIS Unit continues to monitor the Laboratory's progress in completing this task.

David J. Gaschke, Regional Audit Manager
Page 2

Thank you for sharing the draft audit report with us. If you have any questions, please feel free to contact Jennifer Wendel, Chief of the CODIS Unit, at (703) 632-8315.

Sincerely,



Alice R. Isenberg
Section Chief
Biometrics Analysis Section
FBI Laboratory

**OFFICE OF THE INSPECTOR GENERAL, AUDIT DIVISION
ANALYSIS AND SUMMARY OF ACTIONS
NECESSARY TO CLOSE THE REPORT**

The OIG provided a draft copy of this audit report to the Laboratory and the FBI. Individual responses from the Laboratory and the FBI are incorporated in Appendices III and IV, respectively. The following provides the OIG analysis of the responses and summary of actions necessary to close the report.

Analysis of Auditee's Response

In response to our report, the FBI and the Laboratory did not explicitly state whether they agreed with each recommendation. In addition, the Laboratory provided additional information in its response to the draft audit report, as discussed below and in the discussion of each recommendation. As a result of this new information, we made some clarifications to the report.

Before addressing the responses to each of our recommendations and the actions necessary to close those recommendations, we address some clarifications the Laboratory requested in its response that do not pertain to individual recommendations. Specifically, the Laboratory questioned the identification of our audit scope, which generally covered the period from June 2009 through May 2011. We determined that our scope was correctly presented, but based on Santa Clara's response it appears it may have misunderstood the application of our audit scope. Our audit scope does not restrict our analysis of issues that occurred prior to the start of our audit scope as they relate to our audit objectives. In addition, based on information the Laboratory provided to us during our audit entrance conference, we reported in our draft audit report that the Laboratory began analyzing DNA as a means of processing criminal evidence in 1998. In its response, the Laboratory clarified that it began analyzing DNA as a means of processing criminal evidence in 1992 using DQa technology. We clarified the background section of this final report based on the new information the Laboratory provided in its response.

Recommendation Number:

- 1. Resolved.** The FBI and the Laboratory responded to our recommendation that the FBI ensure the Laboratory abides by its NDIS match policy, including maintaining appropriate documentation

in its case files. The FBI stated in its response that its CODIS Unit is working with the Laboratory to reach a mutually acceptable plan for the maintenance of appropriate case file documentation.

The Laboratory stated in its response that it had updated its match policy in 2010 and again in 2011, prior to the Laboratory's ASCLD/LAB ISO inspection. However, the Laboratory did not state how it planned to ensure it maintains appropriate documentation in its case files as evidence that the Laboratory is adhering to the NDIS match policy. As we state in our report, we concluded during our audit that the Laboratory did not maintain information in the case file to determine whether or not the disposition occurred in a timely manner for two of the five matches we reviewed.

The Laboratory also requested that we add dates of the matches because they occurred prior to updates to Laboratory and QAS procedures. We added time frames for the matches, but further note that the NDIS Operational Procedures in effect at that time (2003 and 2006) also required confirmation of matches and notification of law enforcement. As explained in our draft report, we were unable to verify whether the law enforcement agency was notified of one match and were not able to confirm the date of law enforcement notification for the other match. In addition, there was insufficient documentation in the case files to verify the time frames of the confirmation process for the matches. As a result, we could not verify whether the Laboratory adhered to NDIS requirements.

The Laboratory also stated in its response that it is unclear why the OIG feels it should further strengthen its policy with regard to QAS 5.3.4. in view of our conclusion that the Laboratory complied with all of the Forensic QAS that we tested. However, the audit report does not state that the Laboratory should further strengthen its policy with regard to QAS 5.3.4. Instead, we cite the requirement QAS 5.3.4, which discusses laboratories' match policies, as it is relevant for the finding that the Laboratory should strengthen its practices regarding matches. Our audit report does not conclude that the Laboratory is in violation of QAS 5.3.4.

The Laboratory also stated in its response that all matches from LDIS, SDIS, and NDIS are recorded in CODIS Match Manager, and tracked in its in-house CODIS Hits Excel spreadsheet. The Laboratory stated that it was unclear how documentation in the case file relates to tracking matches in CODIS Match Manager. However, this is new information which was not provided to us during our audit site work. Specifically, the Laboratory did not disclose to us that it tracked all matches with

its in-house CODIS Hits Excel spreadsheet until after our draft report was issued. As we state in our report, in response to our inquiries regarding this match the Laboratory's CODIS Administrator stated that the match occurred before it was tracked within the CODIS Match Manager. Because the Laboratory did not provide documentation that this match was tracked in Match Manager, we did not revise this information in our report.

To help ensure the integrity of the Laboratory's match confirmation and law enforcement notification processes, we recommended that the Laboratory adhere to its NDIS match policy to include maintaining documentation that should be retained as evidence of key actions, such as match notification involving other laboratories, resulting confirmation, and law enforcement notification.

This recommendation can be considered for closure when we receive the FBI's and the Laboratory's plan for how the Laboratory will adhere to its NDIS match policy and maintain appropriate case file documentation. Based on these plans, we may request additional evidence that corrective actions have been implemented.

2. **Resolved.** The FBI and the Laboratory responded to our recommendation that the FBI work with the Laboratory to determine NDIS eligibility for the remaining seven questioned profiles, which the Laboratory believed to be allowable. The FBI stated in its response and in our subsequent follow-up communications that the Laboratory and the FBI CODIS Unit determined that five profiles (CA-02, CA-27, CA-88, CA-89, and CA-67) are allowable and should remain in CODIS, while two profiles have been deleted (CA-05 and CA-83).

In the Laboratory's response, the Laboratory provided significant additional case information that was not provided to us when we reviewed the Laboratory's case files before we issued the draft audit report for comment. The additional information for the five profiles ultimately determined by the FBI to be allowable is discussed below, and we made appropriate revisions to this final report due to this new information.

- CA-02 – The Laboratory disclosed in its response to our draft report additional information indicating the perpetrator may have been in the victim's vehicle prior to the murder.
- CA-27/CA-89 – The Laboratory disclosed in its response to our draft report additional information regarding the profile's link to the crime and attribution to the perpetrator.

- CA-67 – The Laboratory disclosed in its response to our draft report additional information related to the driver of the car from which the gun was seized, as well as the gun’s link to the crime.
- CA-88 – The Laboratory disclosed in its response to our draft report additional information concerning the collection of the bottle.

This recommendation can be closed when we receive evidence documenting that CA-05 and CA-83 have been removed from NDIS, as well as evidence supporting the additional information the Laboratory described, which served as the basis for the FBI’s and the Laboratory’s decision to retain the five profiles in NDIS.

- 3. Resolved.** The FBI and the Laboratory responded to our recommendation that the FBI ensure the Laboratory strengthens its profile eligibility review process to include: (1) proper reviews of each forensic profile for NDIS eligibility prior to upload, (2) basing its eligibility review process on sufficient case file and evidence documentation, and (3) only uploading eligible profiles to NDIS. Sufficient documented information is necessary to determine a profile’s eligibility prior to NDIS upload. The FBI stated that its CODIS Unit believes that detailed discussions with the OIG and CODIS Unit personnel has allowed the Laboratory to have a clearer understanding of NDIS eligibility requirements and the importance of making eligibility decisions based upon complete and appropriate case file documentation. In addition, the FBI stated that the Laboratory will endeavor to only upload truly allowable profiles to NDIS.

In its response to our draft audit report, the Laboratory stated it will work with the FBI to strengthen its profile eligibility review process. However, beyond that statement, there was no additional information on how the Laboratory planned to strengthen its profile eligibility review process.

In addition, the Laboratory stated in its response that it was unclear about our use of the term “Laboratory officials” in our discussion regarding individuals having a clear understanding of the CODIS eligibility requirements. For clarification, we added to the body of the report a reference to the individuals to whom we spoke, specifically the CODIS Administrator and the Laboratory Director. The Laboratory Director, in his response to our draft report, stated he felt that individuals at the Laboratory did have a clear understanding and to support his position stated that all CODIS users at the Laboratory undergo and have passed the Annual Review of DNA Accepted at NDIS

training required by the FBI. However, based on the results of our audit, it appears that the DNA Analysts at the Laboratory may not have a clear understanding of the CODIS eligibility requirements even in consideration of the required training they complete. Specifically, we identified a large number of ineligible profiles that the Laboratory removed from NDIS, 44 in total, of which a third were uploaded to NDIS after 2006 when the guidelines were clarified. Further, the majority of the profiles we reviewed were only determined to be eligible after the Laboratory obtained, upon our request, additional information from the submitting agency. The majority of pivotal information determining eligibility was not documented in the case file until we requested it during our audit, which indicates that the analysts did not document in the case file a justifiable basis on which to upload more than half of the profiles in our sample. In our opinion and in consideration of NDIS guidelines, this is a concern.

Also in its response, the Laboratory clarified the qualifications of its Technical Reviewer and we have revised the final report accordingly.

This recommendation can be closed when we receive evidence that the Laboratory has strengthened its profile eligibility review process. This should include: (1) proper reviews of each forensic profile for NDIS eligibility prior to upload, (2) basing the eligibility review process on sufficient case file and evidence documentation, and (3) only uploading eligible profiles to NDIS.

4. **Resolved.** The FBI and the Laboratory responded to our recommendation that the FBI ensure the Laboratory re-reviews its forensic DNA profiles that were originally uploaded to NDIS between January 2006 and April 2012 by applying a strengthened profile review process and the NDIS eligibility flowchart. The FBI stated in its response that the Laboratory has completed its review of all profiles from 2006 to 2010 and anticipates that the Laboratory will be able to submit documentation supporting its review of the forensic profiles soon. The FBI's CODIS Unit also stated that it is in contact with the Laboratory and continues to work with Laboratory staff on a mutually acceptable plan regarding the re-review of the remaining profiles and will continue to monitor the Laboratory's progress in completing this task.

In its response to our draft audit report, however, the Laboratory stated that although it has reviewed profiles entered into CODIS from 2006 to 2010, it does not believe that profiles entered into CODIS in 2011 and 2012 need to be reviewed because of the increasing amount of documentation it found in the case files from one year to the next

between 2006 and 2010. It further stated that the review of the 2010 profiles for CODIS eligibility has not revealed many issues. The Laboratory stated that profiles entered into CODIS in 2011 and 2012 have been performed under updated Laboratory procedures and with observations made from the OIG audit in mind.

As a result of our audit, we identified a total of 44 profiles that we believe were inappropriate for NDIS and were subsequently removed. We also found instances of Laboratory personnel not basing DNA profile-eligibility conclusions on documented information from its case files. In fact, of the 100 profiles in our sample, 53 percent did not contain sufficient information to determine eligibility until we requested it during our audit and even after we requested additional information, there were profiles that continued to lack sufficient information. We consider 44 to be a large number of inappropriate profiles resulting from an OIG CODIS audit and based on the issues discussed in our report, we believe the Laboratory may have additional ineligible profiles in NDIS. To help ensure the integrity of the database, laboratories must strictly abide by federal regulations governing which profiles are appropriate for upload. Due to the significant findings revealed in this audit, we believe that the Laboratory should review each of the remaining profiles uploaded through April 2012 to ensure they adhere to these federal guidelines.

This recommendation can be closed when we receive evidence of the Laboratory completing its review of profiles from 2006 through April 2012, including information on how many profiles were removed from CODIS as a result of the review.