



COMBINED DNA INDEX SYSTEM OPERATIONAL AND LABORATORY VULNERABILITIES

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

Audit Report 06-32
May 2006

EXECUTIVE SUMMARY

The Federal Bureau of Investigation (FBI) serves as one of the primary components in the Department of Justice's efforts to further develop the nation's capacity to prevent and control crime and administer justice fairly and effectively. The FBI assists in these efforts through various means, including providing direct technical support to state, local, and tribal law enforcement. One of the most powerful law enforcement tools that the FBI provides is the Combined DNA Index System (CODIS), a national DNA-profile matching service comprised of databases containing DNA profiles from crime scenes, convicted offenders, and sources involving missing persons.

DNA, or deoxyribonucleic acid, is a chemical contained in the nucleus of a cell that carries the genetic instructions, or blueprint, for making living organisms. In the context of criminal investigations, scientists examine the DNA that varies widely among people to develop a profile that will be uniquely identifying (except in the instance of identical twins). DNA analysis, a relatively new law enforcement tool, can provide compelling evidence for solving crimes or exonerating suspects. The FBI began the CODIS Program as a pilot project in 1990, allowing participating laboratories to compare DNA profiles obtained from crime scenes and convicted offenders to generate investigative leads.

This Office of the Inspector General (OIG) audit report examines various aspects of CODIS operations and management to discern whether vulnerabilities exist in the FBI's administration of CODIS.

Background

The FBI implemented CODIS as a database, distributed over three hierarchical levels, that enable federal, state, and local crime laboratories to compare DNA profiles electronically. The National DNA Index System, (NDIS), which became operational in 1998, is the highest level in the CODIS hierarchy. It enables the laboratories participating in the CODIS Program to compare DNA profiles on a national level. Each state maintains a State DNA Index System (SDIS), and participating local laboratories across the country each maintain a Local DNA Index System (LDIS). DNA profiles are entered into CODIS by local and state laboratories, which then flow to the state and national levels where they are compared to determine if a convicted offender can be linked to a crime, if crimes can be linked to each other, or if missing or unidentified persons can be identified.

The CODIS Program is operated by the CODIS Unit, within the FBI Laboratory Division, Scientific Analysis Section, Forensic Analysis Branch. The CODIS Unit is charged with overseeing CODIS and NDIS operations and administration, and ensuring that those operations comply with applicable legislated requirements.

As of November 2005, 175 laboratories were participating in NDIS. These laboratories collectively uploaded nearly 2.9 million profiles to NDIS, including:

- 2,743,068 convicted offender profiles;
- 123,835 crime scene (forensic) profiles;
- 1,481 relatives of missing person profiles;
- 621 unidentified human remains profiles; and
- 269 missing person profiles.

The success of CODIS is measured primarily through the number of cases that CODIS assists through a "hit" (a match between DNA profiles produced by CODIS that would not otherwise have been developed), also referred to as "investigations aided." Through November 2005, CODIS aided 29,666 investigations in 49 states and 2 federal laboratories.

Prior Audits of CODIS

The OIG previously conducted an audit to determine the extent of state and local laboratory participation in CODIS, particularly for those entities receiving laboratory grants, and to evaluate the FBI's implementation and monitoring of CODIS.¹ As part of that audit, we reviewed eight individual laboratories to determine their compliance with applicable statutes and FBI standards.² That audit report, issued in 2001, concluded that:

¹ Department of Justice, Office of the Inspector General. Audit Report No. 01-26, *The Combined DNA Index System*, September 2001.

² Of the eight laboratories, three were in Florida and one each in California, Illinois, North Carolina, Pennsylvania, and Virginia. See Appendix V, "FY 2000" list, for further details.

- The FBI needed to improve its oversight of CODIS-participating laboratories to ensure the laboratories were in compliance with applicable legislation, the FBI's Quality Assurance Standards (QAS), and the FBI requirements for laboratories participating in NDIS.
- The FBI needed to initiate procedures to ensure that DNA profiles in CODIS are complete, accurate, and allowable.

As a result of these findings, we made the following recommendations to the FBI:

- Require that the accuracy, completeness, and allowability of the DNA profiles in NDIS be routinely verified through audits or other means.
- Ensure that analysts performing DNA testing at laboratories uploading DNA profiles to NDIS are aware of the NDIS participation requirements, particularly those requirements delineating the types of allowable profiles.
- Develop and implement a process to ensure that laboratories adequately resolve all deficiencies noted during the QAS-required audits.

Since the issuance of the 2001 audit report, the OIG has completed an additional 24 CODIS laboratory audits.³ This audit report follows up on our previous report and assesses the FBI's administration of CODIS operations.

Audit Approach

This audit was designed to assess the status of CODIS operations and CODIS trends and vulnerabilities. The specific objectives of the audit were to:

1. assess the adequacy of the FBI's administration of CODIS, including its oversight of NDIS;
2. analyze findings from DNA laboratory audits, both OIG-conducted audits and external quality assurance audits, to determine if they reveal trends and vulnerabilities; and

³ See Appendix V for a complete listing of the CODIS laboratory audits conducted by the OIG.

3. evaluate the FBI's implementation of corrective actions in response to findings from the OIG's September 2001 audit, *The Combined DNA Index System*.

To accomplish these objectives, we reviewed various data and documentation provided to us by FBI officials, evaluated the results of past OIG CODIS laboratory audits, interviewed members of the CODIS Unit staff, and collected and analyzed documentation from select NDIS-participating laboratories.

Additionally, to obtain the viewpoints of state and local NDIS-participating laboratories, we surveyed CODIS administrators at those laboratories (not including the FBI).

Summary of OIG Findings

We identified several recommendations for the FBI to: (1) improve its administration of CODIS, (2) track and respond to CODIS trends and vulnerabilities, and (3) improve or complete its corrective action to our 2001 audit, as summarized in the following sections.

FBI Administration of CODIS

The FBI received an overall positive evaluation of its administration of CODIS from the CODIS administrators we surveyed. We determined that the FBI also has given attention to CODIS infrastructure, development, and staffing. However, based on our analysis of the survey responses and FBI documentation, we have identified several areas in need of further improvement. For example:

1. QAS compliance within the CODIS community can be improved and workloads reduced if the FBI ensures that all CODIS administrators receive QAS auditor training;⁴
2. CODIS Unit responsiveness can be improved through sufficient staffing and tracking of information requests;

⁴ The FBI conducts training courses for auditors assessing compliance with the QAS within the DNA community. The primary focus of these courses is to ensure a consistent understanding of the QAS and consistent application of the FBI's audit document.

3. CODIS community understanding and compliance with profile allowability restrictions can be enhanced through increased emphasis on written sources of guidance available to all CODIS users;
4. NDIS Audit Review Panel (Review Panel) timeliness can be improved if guidance is disseminated to the appropriate members of the community, who can ensure that submissions to the Review Panel are complete;⁵ and
5. The FBI can improve information sharing through better use of the CODIS intranet website to disseminate written guidance to the community that is easy to navigate, consistent, and practical.

In addition, from our review of historical staffing data, we found that in the several years prior to 2004, the FBI failed to staff the CODIS Unit commensurate with growing demands and participation, and thereby put at risk the ability of CODIS staff to properly oversee and administer the CODIS Program. However, in February 2004, FBI management took action to increase CODIS staffing and reaffirm the importance of a sufficient number of program manager positions. Yet, progress in filling the positions assigned to the CODIS Unit has been limited due to a variety of delays and difficulties. Of particular concern is the on-going lack of an NDIS Program Manager, especially in light of the trends and vulnerabilities we identify in our report related to the compliance of NDIS-participating laboratories with standards governing participation. Therefore, we recommend that the FBI make concerted efforts to bring the CODIS Unit up to full staffing levels.

Further, in the written documents provided to us, the FBI appears to capture the mission, goals, objectives, strategies, and performance measurements for the CODIS Unit. These documents are interlinked in a way that allows the performance measurements to be meaningful and measurable. However, we identified three activities which are not reflected in the CODIS Unit's performance measurements that are an essential part of the Unit accomplishing its mission: (1) auditing of NDIS data; (2) providing training on QAS compliance; and (3) overseeing the activities of the Review Panel. These three activities comprise the CODIS Unit's primary means of monitoring and assisting NDIS-participants' compliance with the QAS and verifying the integrity of NDIS data. Consequently, we recommend that these three activities should be formalized and clearly reflected as the

⁵ The NDIS Audit Review Panel is a group of volunteer members of the DNA community who meet specific requirements, as well as FBI DNA staff members. The panel reviews all external QAS audits conducted at NDIS-participating laboratories across the country, with the purpose of ensuring consistent and thorough application of the QAS by the auditors and appropriate and complete corrective action by the laboratories.

CODIS Unit's responsibilities in its objectives and performance measurements.

The FBI has taken measures to provide for the operations, maintenance, and security of the CODIS system for the near future. However, continued progress is needed to ensure that the development contract process planned for fiscal year (FY) 2006 is completed, and that the development contract awarded allows for continued responsiveness to legislated changes to CODIS operations.

Trends and Vulnerabilities in the CODIS Community

In assessing the results of the OIG CODIS laboratory audits completed in FY 2004 and FY 2005 (a total of 18 audits), we found that common findings occurred with greatest frequency in the two areas of review that are not audited by QAS auditors within the DNA community: compliance with NDIS participation requirements and the proper upload of forensic profiles to NDIS. Further, the FBI does not intend to have CODIS Unit auditors, once hired, routinely audit compliance with NDIS requirements. Instead, the FBI relies upon the annual CODIS user certifications as the primary means of ensuring the compliance of NDIS data.⁶ From the trends we noted, we concluded that this reliance is insufficient, for the following reasons.

- We noted 13 incidents where forensic profiles in NDIS violated some aspect of NDIS requirements. This occurred in 11 of the 18 laboratories we audited, and suggests that the annual certification forms have not been successful in ensuring CODIS user compliance with profile allowability restrictions.
- We found that 6 of 18 laboratories we audited had not completed the annual user certification forms as required. The forms are completed by laboratories on a self-certification basis and are not required to be submitted to the FBI.

In addition to our assessment of the OIG CODIS laboratory audits, we examined 41 state and local external QAS audits conducted by QAS auditors

⁶ At the beginning of each calendar year, each laboratory's CODIS Administrator is required by NDIS procedures to ensure that each CODIS user is reminded of the categories of DNA data accepted at NDIS. As part of that, the CODIS Administrator has individual users certify that they have received their annual reminder and understand and will abide by what DNA data is accepted at NDIS.

within the DNA community.⁷ We identified trends in findings that implicate significant aspects of laboratory operations, such as chain-of-custody documentation; labeling of evidence and security of evidence storage; and proper monitoring of critical reagents, equipment, and procedures. Further, 10 percent of the findings noted were overturned after examination by the Review Panel, in some cases without full disclosure of the overturned findings to the audited laboratories.⁸ In addition, we determined that the FBI is not systematically and completely tracking common and overturned findings. Without a thorough understanding of trends in common findings, the FBI cannot properly provide the CODIS community additional guidance needed to remedy and prevent compliance weaknesses in the trend areas. Without an understanding of trends in overturned findings, the FBI also cannot take the necessary steps to guide all QAS auditors toward a consistent interpretation and application of the standards and to ensure that QAS auditors obtain feedback on their performance.

Overall, we believe the weaknesses we identified leave the FBI potentially vulnerable to undetected inadvertent or willful non-compliance by CODIS participants and consequently could undermine the integrity of the CODIS Program. We conclude that the FBI needs to develop internal controls over compliance of NDIS data beyond its current reliance on the annual certification forms, and should track audit findings to obtain the type of information that will be beneficial to auditors and audited laboratories.

Implementation of Corrective Action

Previous OIG audit findings identified the need to verify the compliance of NDIS data, to ensure NDIS user compliance with NDIS requirements, and to ensure that laboratories remedy QAS audit findings.

The FBI's corrective action approach to the need to verify NDIS data was two-fold. First, the FBI began requiring FBI QAS auditors to review CODIS profiles as part of their case file reviews (this action was initiated in June 2004). Second, the FBI began taking steps to hire auditors who would systematically audit the profiles contained in NDIS. In assessing this action, we determined that the FBI QAS auditor methodology for reviewing profiles is deficient due to its limited scope. In addition, the FBI does not intend to

⁷ We use the term "QAS auditors" to refer to the scientists within the DNA community who perform QAS audits.

⁸ The Review Panel overturns a finding when it determines that the finding was not justified based upon the commonly accepted interpretation of the QAS. Often, for this to occur, the audited laboratory must challenge the finding before the Review Panel.

have the CODIS Unit auditors, once hired, expand the current methodology to include broader profile reviews. Further, the FBI has not implemented a mechanism to document and track how many profiles are confirmed during these reviews, or the frequency with which these reviews are conducted.

To address the need to ensure NDIS user compliance with NDIS requirements, the FBI instituted a requirement for annual CODIS user certifications, completed on a self-certification basis. However, the process for completing these forms does not provide the FBI with the information it needs to confirm that all CODIS users have completed the forms as required. Further, the continued reliance on self-certification perpetuates the weakness we noted in the 2001 audit.

Finally, the FBI implemented various corrective action measures in response to the need for greater oversight of QAS compliance and the adequacy of laboratories' responses to QAS audit findings. These measures included conducting QAS auditor training courses, implementing a DNA community-wide audit document, and creating the Review Panel to ensure complete and appropriate corrective action to QAS audit findings. However, we identified the need for improved Review Panel timeliness and improved consistency in training through an emphasis on written guidance.

Conclusion and Recommendations

We found that while the FBI has made improvements to several aspects of CODIS operations, the FBI needs to make further improvements to ensure that it properly oversees the CODIS Program and CODIS participants. Further, we identified several opportunities for data tracking and information sharing that would enable the FBI to better assist the CODIS community in its understanding of and compliance with the QAS and NDIS participation requirements.

Accordingly, we made 22 recommendations for corrective actions that are needed for the FBI to improve its administration of CODIS. Among these recommendations are for the FBI to:

- Develop and implement a plan to ensure that all CODIS administrators attend the FBI QAS auditor training.
- Improve information sharing through enhancements to the CODIS website.

- Develop communication policies that will allow the CODIS Unit to provide guidance to members of the DNA community in writing.
- Develop a staffing plan that identifies current hindrances to filling vacant positions in the CODIS Unit, solutions to those hindrances, and a timeline of action.
- Incorporate the three activities we identified (auditing of NDIS data, providing training on QAS compliance, and overseeing the activities of the Review Panel) into the CODIS Unit's objectives and measurements to fully reflect the CODIS Unit's efforts to address its mission.
- Ensure that the internal controls over the compliance of NDIS data are strengthened beyond the current reliance on self-certification annual reminder forms.
- Implement a formal mechanism for tracking findings in audits reviewed by the NDIS Audit Review Panel and for tracking QAS auditor performance.

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INTRODUCTION

CODIS Development and Design

The Federal Bureau of Investigation (FBI) has provided the law enforcement community with the Combined DNA Index System (CODIS), a national DNA-profile matching service comprised of databases containing DNA profiles from crime scenes, convicted offenders, and missing persons.

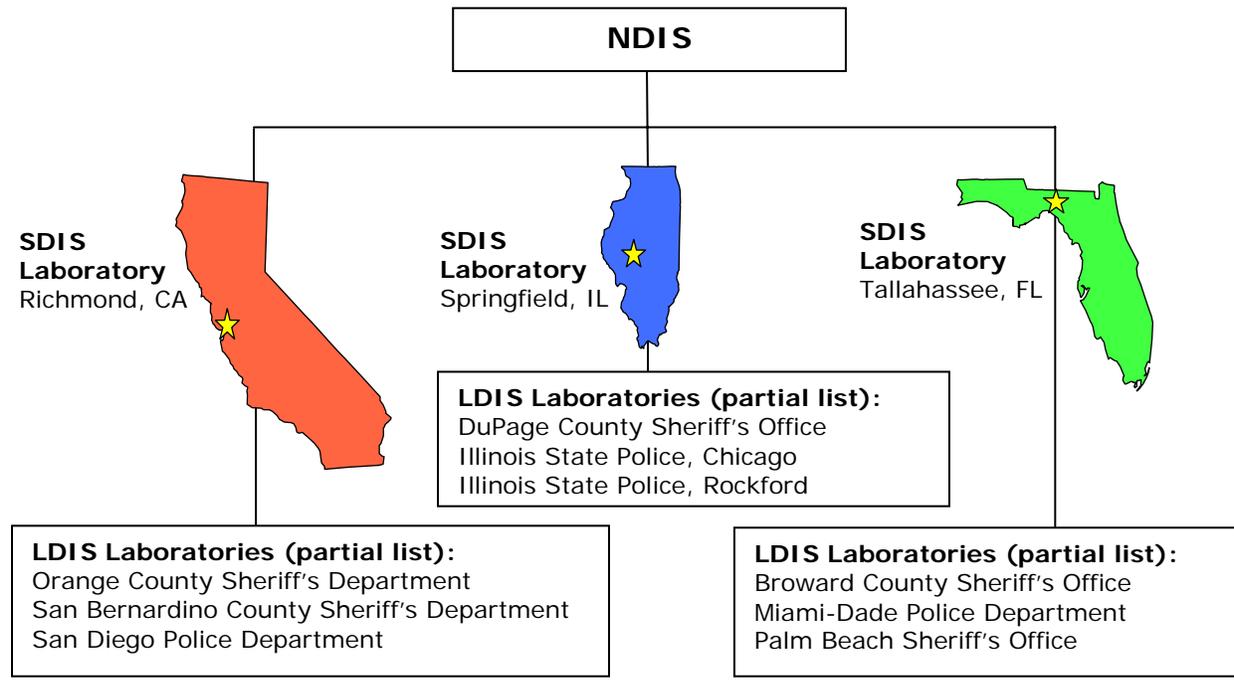
CODIS began as a pilot project in 1990. The DNA Identification Act of 1994 formalized the FBI's authority to establish a National DNA Index System (NDIS) for law enforcement purposes and NDIS became operational in 1998.¹ The Act authorized the FBI to establish an index of DNA identification records of persons convicted of crimes, and analyses of DNA samples recovered from crime scenes and from unidentified human remains. The Act further specified that the index include only DNA information that is based on analyses performed in accordance with the FBI's Quality Assurance Standards (QAS).

The FBI implemented CODIS as a database with three hierarchical levels that enables federal, state, and local crime laboratories to compare DNA profiles electronically. As illustrated on the following page, the three distinct levels are: NDIS, managed by the FBI as the nation's DNA database containing DNA profiles uploaded by participating states; the State DNA Index System (SDIS), serving as each state's DNA database containing DNA profiles from local laboratories; and the Local DNA Index System (LDIS), used by local laboratories. DNA profiles originate at the local or state level and flow upward to the state (if from the local level) and national levels. For example, the local laboratory in the Palm Beach, Florida, Sheriff's Office sends its profiles to the state laboratory in Tallahassee, which then uploads the profiles to NDIS. A laboratory's profiles need to be uploaded to NDIS before they benefit the system as a whole.

NDIS is the highest level in the CODIS hierarchy and enables the laboratories participating in the CODIS Program to compare DNA profiles on a national level. Each state participating in CODIS has one designated SDIS laboratory. The SDIS laboratory maintains its own database and is responsible for overseeing NDIS communications for all CODIS-participating laboratories within the state.

¹ Pub. L. No. 103-322 (1994).

Figure 1 – Example of System Hierarchy within CODIS²



Source: OIG analysis of CODIS system hierarchy

The FBI has distributed CODIS software free of charge to state or local law enforcement laboratory performing DNA analysis. 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 that 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.

CODIS Contents and Growth

As of November 2005, NDIS contained nearly 2.9 million profiles in the following five indices (or databases): (1) the Convicted Offender database, (2) the Forensic database, (3) the Unidentified Human Remains database, (4) the Missing Persons database, and (5) the Relatives of Missing Persons

² The Department of Justice Office of the Inspector General developed this system hierarchy example using information obtained from the FBI.

database. The first two databases work together to form CODIS' crime-solving capabilities, since they can be searched against one another to assist law enforcement personnel in solving crimes. The remaining three databases can be searched against one another in order to identify missing and unidentified persons.

The Convicted Offender database contains DNA profiles from persons convicted of qualifying federal or state crimes where the applicable jurisdiction requires the creation of a DNA record for the convicted person. The Forensic database contains DNA profiles from persons whose identity is not known with certainty; these DNA profiles come from evidence either left at or removed from a crime scene. The DNA profiles in the two databases are compared to determine if a convicted offender can be linked to a crime or if crimes can be linked to each other.

The Unidentified Human Remains database contains DNA profiles from the remains of individuals that cannot be identified by fingerprint, dental, medical, or anthropological examinations, and of individuals who are living, but are unidentifiable using typical investigative methods (such as children and others who cannot or refuse to identify themselves). The Relatives of Missing Persons database contains DNA profiles generated from the relatives of known missing individuals, while the Missing Persons database contains DNA records of missing persons obtained from their effects or deduced from their relatives' profiles. Profiles in these two databases are compared to DNA profiles from unidentified remains or unidentified individuals in an attempt to make an identification.

CODIS has been expanded through various means since NDIS first became operational in 1998, as described below. Laws governing which profiles can be included in NDIS have expanded at both state and federal levels, creating additional databases within CODIS. Further, the number of participating and contributing laboratories has grown significantly. These factors have caused the number of profiles in NDIS to increase dramatically.

Expanding Federal Legislation

The DNA Identification Act of 1994 authorized the FBI to establish NDIS but did not authorize the collection of DNA samples from federal offenders. Enactment of the DNA Analysis Backlog Elimination Act of 2000 remedied this by authorizing collection of DNA samples from federal offenders and from those who commit qualifying crimes in the District of

Columbia, the military, and on tribal reservations.³ Additionally, in response to the events of September 11, 2001, the USA Patriot Act of 2001 expanded the list of offenses for which offender samples would be collected to include acts of terrorism and all crimes of violence.⁴

The Justice for All Act, signed into law on October 30, 2004, authorized the FBI to expand NDIS to include an additional index for DNA profiles of indicted persons.⁵ As a result, those state and local laboratories located in a state where the law authorizes the collection of DNA samples from indicted persons may include the DNA profiles of indicted persons in NDIS. Accordingly, the FBI added the Indicted Persons Index to NDIS in January 2005. The Act also required the state to have expungement procedures in place for removing the implicated profiles in the event that charges are dismissed or prosecution of the charges results in an acquittal. In addition, the Act expanded the list of offenses that require collection of a DNA sample when committed in the District of Columbia, the military, and on tribal reservations to include all felony and comparable military offenses.

The Justice for All Act also authorized the FBI to permit NDIS-participating laboratories to perform a one-time search of certain DNA profiles, which were not allowed to be stored in NDIS, against NDIS databases. Specifically, NDIS-authorized users “may also access that index [NDIS] for purposes of carrying out a one-time keyboard search on information obtained from any DNA sample lawfully collected for a criminal justice purpose except for a DNA sample voluntarily submitted solely for elimination purposes.” The Act further defines keyboard searches as “a search under which information obtained from a DNA sample is compared with information in the index [NDIS] without resulting in the information obtained from a DNA sample being included in the index [NDIS].”

The FBI concluded that “DNA samples lawfully obtained for a criminal justice purpose” included: (1) DNA samples obtained by a state in accordance with applicable state law that are not otherwise authorized for inclusion in NDIS, such as an arrestee sample; or (2) DNA samples obtained by a state or relevant law enforcement agency in accordance with a judicial court order, such as a suspect exemplar obtained pursuant to court order.

Finally, on January 5, 2006, the DNA Fingerprint Act of 2005 was signed into law, and further changed the scope of NDIS as follows:

³ Pub. L. No. 106-546 (2000).

⁴ Pub. L. No. 107-56 (2001).

⁵ Pub. L. No. 108-405 (2004).

- Federal arrestee profiles can be submitted to NDIS.
- Federal detainee profiles can be submitted to NDIS.
- States with legislation authorizing collection of arrestee profiles can submit those profiles to NDIS.
- The responsibility for initiating expungement procedures for profiles in the indicted persons index was reassigned to the person whose charges were dismissed or not prosecuted.
- These changes eliminated the need for the one-time search provision authorized by the Justice for All Act of 2004, because many of the profiles that could have been searched using that provision can now be added directly to NDIS for routine searches.

According to the CODIS Unit Chief, in January 2006, the FBI assessed the implications of this new law, and made changes to the NDIS procedures to reflect this expansion of NDIS. As a result of this new law, and in conjunction with additional administrative changes, the following indices were added to NDIS in January 2006:

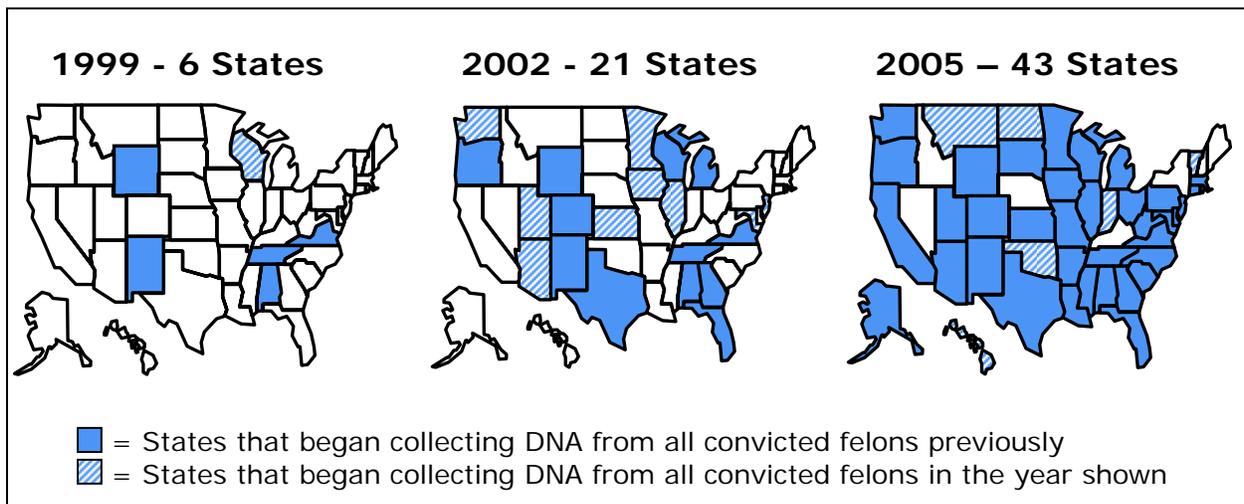
- Arrestee Index, which consists of DNA records of persons who have been arrested or indicted or charged in an information with a crime and are required by law to provide DNA samples. This index replaces the Indicted Persons Index created in 2005 as a result of the Justice for All Act.
- Legal Index, which consists of DNA records of persons whose DNA samples are collected under applicable legal authorities, when the resulting profiles do not belong in one of the other index categories.
- Spouse Index, which consists of the DNA records of a presumptive parent of a common child of a missing person. These records will help deduce the profile of a missing parent when the child's DNA profile is available.

Expanding State Legislation

Individual states also have gradually expanded legislation, particularly as it pertains to the offenses for which, if convicted, a person must supply a DNA sample to that state's CODIS convicted offender database. States also have moved toward requiring a DNA sample from all convicted felons, rather

than limiting their collections to offenders convicted of sexual or violent offenses. Figure 2 displays three snapshots, showing the dramatic increase in offender DNA sample collection legislation across the United States.

Figure 2 – Expansion of State Legislation Governing Offender DNA Sample Collection



Source: Smith Alling Lane, a professional services corporation

These legislative expansions at the state level have resulted in a dramatic increase through the years in the NDIS offender DNA database, as shown on page 7.

Increasing Number of CODIS Participants

Another means of expansion to NDIS has been the increasing number of participating and contributing state and local laboratories. For example, in May 1999, 32 laboratories in 12 states and 1 federal agency (the FBI) participated in NDIS. At the start of our audit in May 2005, 176 laboratories in 50 states and 2 federal agencies (the FBI and the Army) participated in NDIS.⁶ These numbers translate to a 450-percent increase in the number of NDIS-participating laboratories in a 6-year period.

Within these numbers is a secondary area of increase in the number of contributing NDIS laboratories. For a variety of reasons, not every “participating” laboratory was able to immediately contribute profiles to

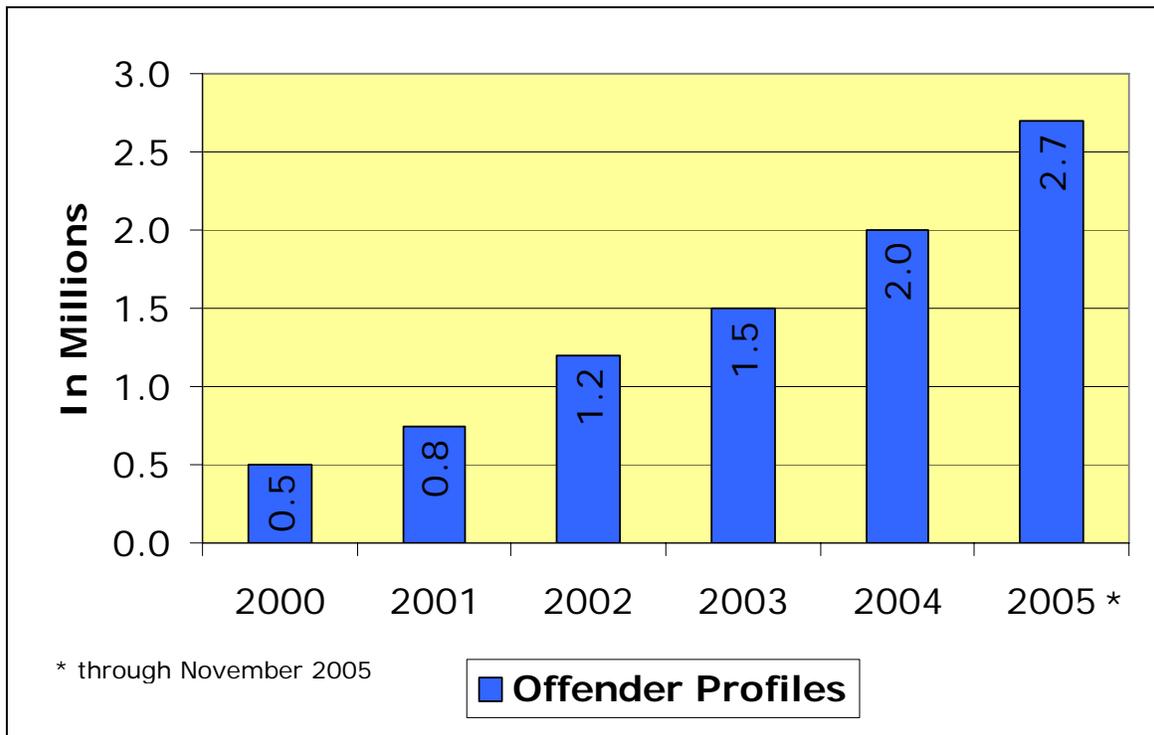
⁶ These statistics reflect the fact that one laboratory that participated in NDIS in the past was suspended pending facility renovation or relocation.

NDIS in the past.⁷ For example, as of May 1999, only 10 of 12 participating states had contributed offender DNA profiles to NDIS, and only 28 of 32 laboratories had contributed forensic DNA profiles to NDIS. However, as of May 2005, all 176 NDIS-participating laboratories had contributed profiles to NDIS.

Increasing Number of Profiles in NDIS

The preceding factors of expansion, including federal and state legislation and increasing numbers of participants, have caused a dramatic increase in the number of profiles contained in the NDIS databases. The following figures and data demonstrate the increases observed.

**Figure 3 – NDIS Offender Database
Cumulative Totals by Year**

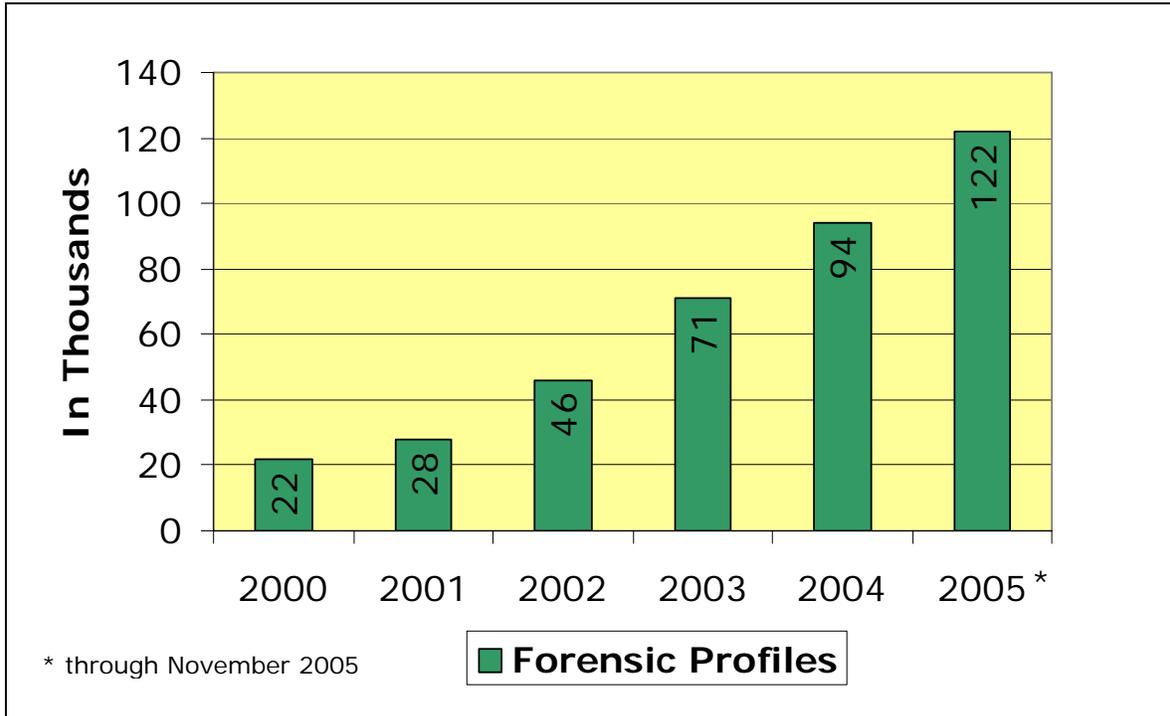


Source: FBI CODIS Unit Chief

Figure 3 illustrates the significant increase from less than 500,000 profiles in 2000 to over 2.7 million profiles by November 2005. Just as dramatic is the increase in forensic profiles, from approximately 22,000 in 2000 to nearly 122,000 by November 2005, as shown in Figure 4.

⁷ These reasons can include such factors as technology changes, limited laboratory resources, or the strain placed upon a laboratory's productivity by changing legislation.

**Figure 4 – NDIS Forensic Database
Cumulative Totals by Year**



Source: FBI CODIS Unit Chief

CODIS Management and Measurements

The FBI's CODIS Unit has only existed since June 2003, following a reorganization within the FBI Laboratory Division. The predecessor of the CODIS Unit, the Forensic Science Systems Unit, managed other Laboratory Division databases in addition to the CODIS Program. The reorganization transferred those other databases to the operational unit counterparts to which they pertained. The Forensic Science Systems Unit, encompassing the CODIS Program and NDIS, was transferred from the Forensic Science Support Section, Operational Support Branch to the Scientific Analysis Section, Forensic Analysis Branch, effective June 2003. With this transfer came the name change to the CODIS Unit.

The CODIS Unit is charged with overseeing CODIS and NDIS operations and administration and ensuring that those operations comply with applicable requirements. As part of those efforts, the FBI contracted with Scientific Applications International Corporation (SAIC) in 1995 to develop CODIS software and software upgrades, to provide training and technical assistance to software users, and to physically maintain and secure

NDIS. SAIC continues to maintain and operate the CODIS software and system.

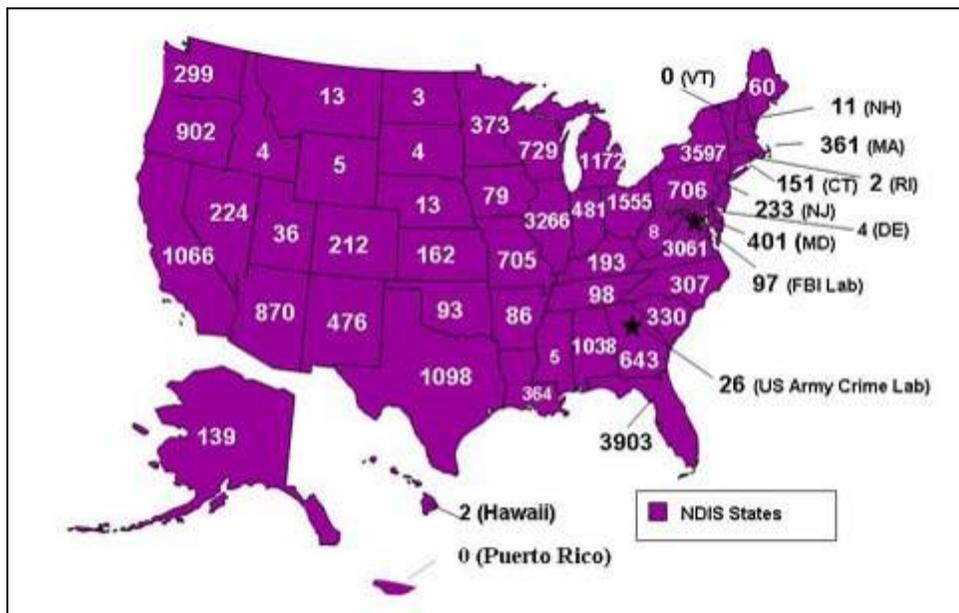
According to the CODIS Unit Chief, as of November 2005, 175 laboratories were participating in NDIS.⁸ These laboratories collectively uploaded nearly 2.9 million profiles to NDIS, of which 96 percent were convicted offender profiles. Specifically, NDIS includes:

- 2,743,068 convicted offender profiles;
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The success of CODIS is primarily measured through the number of cases that CODIS assists through a "hit" (a match between DNA profiles produced by CODIS that would not otherwise have been developed), also referred to as "investigations aided." Through November 2005, CODIS aided 29,666 investigations in 49 states and 2 federal laboratories, as shown in Figure 6.

⁸ The decrease of one laboratory from May 2005 is due to the fact that the NDIS database was moved to the FBI's laboratory building, eliminating one of the NDIS sites.

**Figure 6 – Investigations Aided by CODIS
As of November 2005**



Source: FBI, December 2005

The FBI also provides CODIS software to foreign law enforcement agencies with DNA capabilities to aid in criminal justice investigations. As of November 2005, 39 sites in 24 countries had received CODIS software.⁹

Prior Reviews

The Department of Justice Office of the Inspector General (OIG) previously conducted an audit to determine the extent of state and local laboratory participation in CODIS, particularly for those entities receiving laboratory grants, and to evaluate the FBI's implementation and monitoring of CODIS.¹⁰ At the time of that audit, the FBI did not have the resources to directly evaluate laboratory compliance with the QAS and NDIS requirements. Consequently, oversight was limited to self-certification with the QAS and NDIS participation requirements on the part of each laboratory. We deemed self-certifications to present a high risk that FBI management would not detect instances of non-compliance by NDIS-participating

⁹ The 24 countries are Belgium, Botswana, Canada, Chile, Colombia, Croatia, Czech Republic, Denmark, England, Estonia, Finland, France, Hong Kong, Hungary, Italy, Netherlands, Norway, Poland, Portugal, Singapore, Slovakia, Spain, Sweden, and Switzerland.

¹⁰ Department of Justice, Office of the Inspector General. Audit Report No. 01-26, *The Combined DNA Index System*, September 2001.

laboratories. Consequently, we audited eight individual laboratories to determine compliance with applicable standards.¹¹ The collective results of these efforts were described in the OIG's 2001 audit report. In that report we concluded that:

- The FBI needed to improve its oversight of CODIS-participating laboratories to ensure the laboratories were in compliance with applicable legislation, the FBI's quality assurance standards, and the FBI requirements for laboratories participating in NDIS. Our audits of eight state and local laboratories disclosed that four laboratories did not fully comply with the FBI's quality assurance standards and NDIS participation requirements. Also, we noted that the FBI did not have a process in place to ensure that laboratories instituted appropriate corrective action for findings of quality assurance audits.
- The FBI needed to initiate procedures to ensure that DNA profiles in CODIS are complete, accurate, and allowable. At six of the eight laboratories audited, we found 49 unallowable or incomplete forensic profiles in CODIS out of the 608 forensic profiles reviewed. The unallowable profiles were from a known person other than a suspected perpetrator, such as a victim, an entry that is strictly prohibited from inclusion in CODIS. Further, at 2 of the 8 laboratories we identified 6 incomplete or unallowable convicted offender profiles in CODIS out of the 700 convicted offender profiles we reviewed. We found that the unallowable profiles in CODIS were uploaded either inadvertently or because a laboratory did not fully understand the rules governing acceptable profiles.

As a result of these findings, we made the following recommendations to the FBI:

- Require that the accuracy, completeness, and allowability of the DNA profiles in the national index be routinely verified through audits or other means.
- Ensure that analysts performing DNA testing at laboratories uploading DNA profiles to the national index are aware of the NDIS requirements, particularly those requirements delineating the types of allowable profiles.

¹¹ Of the eight laboratories, three were in Florida and one each in California, Illinois, North Carolina, Pennsylvania, and Virginia. See Appendix V, "FY 2000 Audits" list, for further details.

- Develop and implement a process to ensure that laboratories adequately resolve all deficiencies noted during the QAS-required audits.

When we issued the report, we considered the status of each recommendation resolved because the FBI and the OIG agreed on the finding noted, and the FBI had planned but not completed its corrective action. In resolving the findings, we relied on:

- Documentation that the FBI was working to develop a plan to routinely verify the accuracy, completeness, and allowability of the DNA profiles uploaded to the national index system.
- A draft policy the FBI intended to implement requiring forensic laboratories participating in NDIS to advise DNA analysts of the requirements concerning allowable DNA profiles on an annual basis.
- Documentation that the FBI initiated a program to monitor laboratory quality assurance audits through a review panel of qualified scientists (referred to as the NDIS Audit Review Panel) to verify that the appropriate standards were used and, when applicable, that the laboratory had taken appropriate corrective actions for audit findings.

Since the issuance of that audit report, the FBI has implemented several corrective action measures, which are further analyzed in Finding III. In addition, since that time, the OIG has completed an additional 24 CODIS laboratory audits. (See Appendix V for a complete listing of these audits.)

Audit Approach

This audit was designed to determine the present status of CODIS operations. The objectives of our audit were to:

1. assess the adequacy of the FBI's administration of CODIS, including its oversight of the national DNA database;
2. analyze findings from DNA laboratory audits, both OIG-conducted audits and external quality assurance audits, to determine if they reveal trends and vulnerabilities; and
3. evaluate the FBI's implementation of corrective actions in response to findings from the OIG's September 2001 audit.

To accomplish these objectives, we reviewed various data and documentation provided to us by FBI officials, evaluated the results of past OIG CODIS laboratory audits, interviewed members of the CODIS Unit staff, and collected documentation from select NDIS-participating laboratories to analyze:

- CODIS unit staffing and responsibilities;
- the accuracy of NDIS Audit Review Panel (Review Panel) records;
- the timeliness of the Review Panel process;
- CODIS program goals, objectives, and measurements;
- CODIS unit oversight and monitoring of participants;
- weaknesses in compliance with QAS or NDIS participation requirements;
- the adequacy of the FBI's corrective actions to our previous recommendations;
- the FBI's implementation of legislated changes to NDIS; and
- the FBI's management of CODIS operations and infrastructure.

Additionally, to obtain the viewpoints of state and local NDIS-participating laboratories, we surveyed CODIS administrators at NDIS-participating laboratories (not including the FBI). The results of our audit are detailed in the Findings and Recommendations section of this report, and the audit objectives, scope, and methodology are presented in Appendix I.

FINDINGS AND RECOMMENDATIONS

I. FBI'S ADMINISTRATION OF CODIS NEEDS IMPROVEMENT

The FBI received an overall positive assessment of its administration of CODIS from the CODIS administrators we surveyed. The FBI has given attention to CODIS infrastructure, development, and staffing. However, based on our analysis of the survey responses and FBI documentation, we have identified several areas in need of further improvement, including improved compliance, responsiveness, timeliness, and information sharing. In addition, the FBI needs to identify the current obstacles that prevent the CODIS Unit from achieving full staffing levels, reflect all activities in its performance measurements, and continue the progress made with the system infrastructure.

Administrator Survey Identifies Opportunities for Improvement

Each NDIS-participating laboratory is required by the MOU governing its participation to have an administrator who oversees CODIS operations at that laboratory. The administrator is the liaison between the FBI and CODIS users and is expected to relay necessary information to aid in compliance with NDIS participation requirements. Consequently, the CODIS administrators have an influential role in the CODIS community and have an opportunity to interact with the FBI in a way that would provide them with the experience needed to assist us in assessing the effectiveness of the FBI's administration of CODIS. As part of our effort to assess the FBI's administration of CODIS, we conducted a survey of 174 CODIS administrators.¹²

Our analysis of survey results revealed an overall positive assessment of the FBI's administration of CODIS. However, we identified several opportunities for improvement. For example: (1) QAS compliance within the CODIS community can be improved and workloads reduced if the FBI ensures that all CODIS administrators receive QAS auditor training; (2) CODIS Unit responsiveness can be improved through sufficient staffing, tracking of information requests, and the use of other organizational tools; (3) CODIS community understanding and compliance with profile allowability restrictions can be enhanced through increased emphasis on written sources of guidance that should be available to all CODIS users; (4) Review Panel

¹² See Appendix II for a list of laboratories corresponding to the CODIS administrators we surveyed.

timeliness can be improved if guidance is disseminated to the appropriate members of the CODIS community who can ensure that submissions are complete; and (5) the FBI can improve information sharing through better use of the CODIS intranet website by disseminating written guidance to the CODIS community that is consistent, practical, and easy to navigate. These results are further described in the following sections.

Survey Distribution and Design

Our survey was designed to provide feedback from CODIS administrators on a variety of topics. The survey contained 46 primary questions and 25 secondary and multi-part questions, resulting in 71 total questions. (See Appendix VI for a complete listing of the survey questions and responses received.) Of the total, 26 questions allowed respondents to provide supplemental comments in which to clarify or explain their answer. Supplemental comments were generally added when respondents gave a negative answer. In total, we received 636 supplemental comments.

We developed questions from our analysis of the trends in the OIG's former audits of CODIS laboratories, recommendations from members of the CODIS community, and the findings contained within the OIG's 2001 audit report. In addition, the FBI provided suggestions for survey questions.

We divided the questions into seven topics, covering the major issues we identified as potential areas of weakness in the FBI's administration of CODIS, which were applicable for comment by the administrators. Six of the seven topics contained questions in which respondents could provide additional comment. The seven topics were: (1) demographics, (2) FBI CODIS Unit responsiveness, (3) allowability of DNA profiles, (4) laboratory quality, (5) general CODIS operations, (6) NDIS Audit Review Panel, and (7) FBI guidance to the CODIS community.¹³

We provided administrators with 1 month (including a deadline extension) to submit their responses. In addition, we offered those states not represented in the responses received by the deadline a further opportunity to respond. We received 144 responses from 47 states, which

¹³ The demographics category did not contain questions that would require supplemental comment.

represents an 83-percent response rate.¹⁴ Included in these responses were surveys from 49 SDIS laboratories and 95 LDIS laboratories. With such a large number of both SDIS and LDIS respondents, we believe the responses fairly represent the views of CODIS administrators within the NDIS community.

We analyzed survey results to detect commonalities of response and consensus of opinions. As part of this analysis we tabulated responses for all questions, calculated a consensus for each question, identified trends in supplemental comments, and determined if vulnerabilities were identified by the consensus responses and comment trends. The results of our analysis of the CODIS administrator survey results follow and are referenced throughout this report where applicable. The complete listing of survey questions and responses can be found in Appendix VII.

Survey Results and Analysis

While we generally note positive results below we also identify potential areas for improvement.

Demographics. We began our survey with questions that would help us ascertain the variety of experience, size of laboratories, and duties and activities of the administrators. Responses indicated that the average time the respondents had spent as a CODIS administrator was 3 to 5 years and the average size of the respondents' DNA laboratories was 6 to 10 positions (including all staff specific to the DNA portion of their laboratory). Most respondents (65 percent) were administrators who also had casework analysis duties, and additional respondents (8 percent) were administrators who also performed casework and offender analysis duties. In addition, 13 percent were administrators who filled some other role, such as quality assurance manager or technical manager.

We found that 43 percent of CODIS administrators stated that they have not taken the FBI's QAS auditor training (survey question 5), a course that is designed to ensure a consistent understanding of the QAS and application of the FBI's audit document, as well as an understanding of the

¹⁴ We did not receive a response from Idaho or Rhode Island. We received a response from Connecticut during our testing of the survey document, but we could not include it because of the preliminary condition of the survey and its inconsistencies with the final survey. Connecticut did not respond to the final survey.

principles and objectivity surrounding auditing.¹⁵ In our judgment, while not every administrator may need guidance on how to conduct an audit, the FBI's QAS auditor training course would ensure that administrators are versed in QAS compliance to the degree necessary to assist their laboratories in ensuring compliance.

Further, administrators stated that one of the top reasons for contacting the CODIS Unit relates to QAS matters (survey question 6), meaning that much time and effort is expended by both the administrators and CODIS Unit staff to address QAS issues. We believe this time and effort could be minimized, freeing up time for other duties, if administrators received training in QAS compliance.

In addition, later survey results, in combination with the results of question 5, indicate that some administrators who have not taken the auditor training are still participating in the resolution of QAS audits for their laboratory. We reached this conclusion from the fact that 66 percent of CODIS administrators indicated they are involved in the QAS audit resolution process (questions 30 and 31), but only 57 percent of the administrators have taken the QAS auditor training. If CODIS administrators are to be responsible in their laboratories for handling the audit resolution process, they should have the benefit of receiving training in the accepted interpretation of the QAS and the expected documentation to establish compliance. Without that training, they could contribute to delays in the resolution process by failing to submit complete corrective action documentation or by challenging findings unnecessarily, both of which are factors that we determine hinder the timeliness of the Review Panel. (See our analysis of Review Panel timeliness in Finding III, page 62.)

Separately, our analysis of QAS audit trends in Finding II reveals trends that impact significant aspects of laboratory operations, such as chain-of-custody records and evidence storage and security. (See page 48 for additional detail.) The trends further emphasize the need for the FBI to ensure that all key members of the CODIS community, including CODIS administrators, are fully trained in compliance with the QAS.

We therefore conclude that by ensuring that administrators participate in the QAS auditor training, state and local laboratory compliance can be

¹⁵ The FBI's audit document is both an audit guide and a record of the standardized interpretation of the QAS as developed by the FBI's Scientific Working Group on DNA Analysis Methods (SWGDM), the organization that is entrusted with the maintenance and oversight of the QAS. SWGDM includes representatives from federal, state, and local forensic laboratories.

improved and the workload of both the administrators and CODIS Unit staff can be reduced.

FBI Responsiveness. We asked a series of questions (numbers 6 through 11) to determine how responsive the CODIS Unit has been to members of the CODIS community. According to administrators, the timeliness and helpfulness of FBI CODIS Unit staff is not a significant problem, although we noted from the overall results of the survey that there is room for continued improvement. For example, we determined that 20 respondents made a total of 28 comments regarding the FBI's slow response time and its inaccessibility. Those comments drew attention to various issues that, if addressed, could improve the CODIS Unit's responsiveness. According to these respondents:

- The CODIS Unit is understaffed, contributing to the delays in responses to the CODIS community.
- The CODIS Unit does not currently track requests for information. Tracking could be done using a system similar to the one used when CODIS participants contact the CODIS system help desk.
- The CODIS Unit should organize its staff and use written guidance to improve responsiveness. For example, the CODIS Unit could have resident points of contact on specific topics that would enable CODIS participants to submit their questions on those topics to the appropriate person within the CODIS Unit. Alternatively, the CODIS Unit could use its intranet website to offer frequently asked questions that could have relevance to other labs (thereby reducing information requests), or have on-line information request forms that could be forwarded to the appropriate person.¹⁶

Our analysis of unit staffing confirms that understaffing of the CODIS unit is an important issue (see page 29). Further, without some means of tracking information requests, the FBI cannot ensure that it responds to all requests in a timely fashion. Finally, by identifying topic-specific points of contact and enhancing information sharing through the CODIS intranet, the CODIS Unit can improve its responsiveness to the CODIS community.

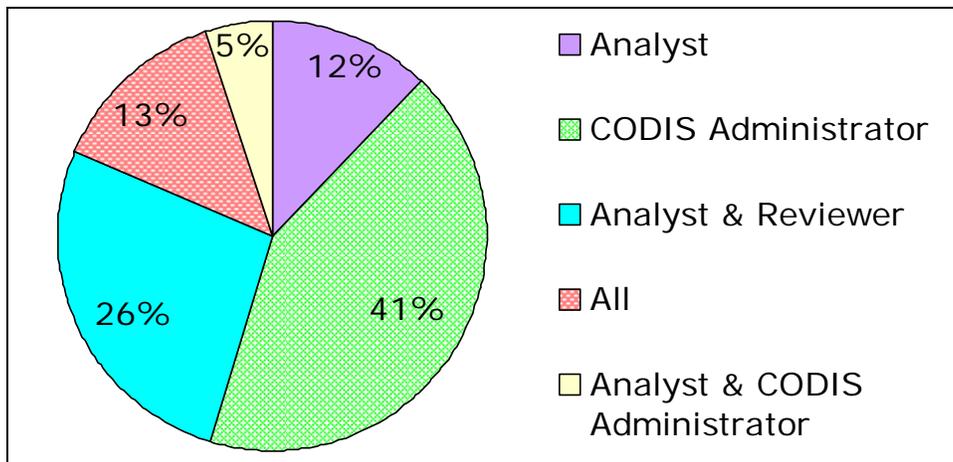
¹⁶ The FBI uses the Criminal Justice Information Systems Wide Area Network (CJIS WAN) to facilitate each laboratory's access to the CODIS system. When CODIS participants log on to the system through the CJIS WAN, they access the CODIS intranet website that is accessible only to CODIS users and that serves as a resource for system assistance, forms, guidance, and notices.

Profile Allowability. NDIS Participation Requirements specify the restrictions for profiles that are permissible for inclusion in NDIS. We asked a series of questions (numbers 12 through 20) to assess the level of administrators' understanding of those restrictions and their ability and confidence to apply that understanding in determining whether a specific profile was permissible, or allowable, for inclusion in NDIS. Results indicate that administrators are knowledgeable and confident in determining profile allowability as a routine part of their duties. However, the survey results also indicate that administrators lack confidence in whether there is consensus in the CODIS community about what is allowable and in the compliance of other laboratories in submitting only allowable profiles.

The survey results indicated that administrators did not identify themselves as solely responsible for making sure casework profiles are uploaded in compliance with NDIS requirements. As shown in Figure 7, analysts and reviewers were identified as the responsible official almost as often as administrators.

Figure 7 – Results of Survey Question 12

In your laboratory, who is ultimately responsible for ensuring casework profiles are uploaded per NDIS requirements?



Source: Responses from 144 CODIS administrators

On-going guidance on profile allowability is provided primarily to CODIS administrators during national CODIS meetings where profile allowability scenarios are discussed in an open forum. The discussion sessions serve as a source of helpful guidance and clarification on profile allowability, as emphasized by the number of comments to this effect from survey respondents. However, not all analysts and CODIS users attend each national meeting. Conversely, as shown in Figure 7, only 41 percent of

administrators are solely responsible for ensuring that profiles uploaded to NDIS are suitable for inclusion. Therefore, we believe this same guidance may not be communicated to the responsible staff in each CODIS laboratory. We conclude that the FBI needs to take steps to ensure that all CODIS users are provided the same guidance that is given at national meetings regarding profile allowability. Such steps could include enhancing the information sharing of the CODIS intranet, through scenarios or decision-trees accessible to all CODIS users.

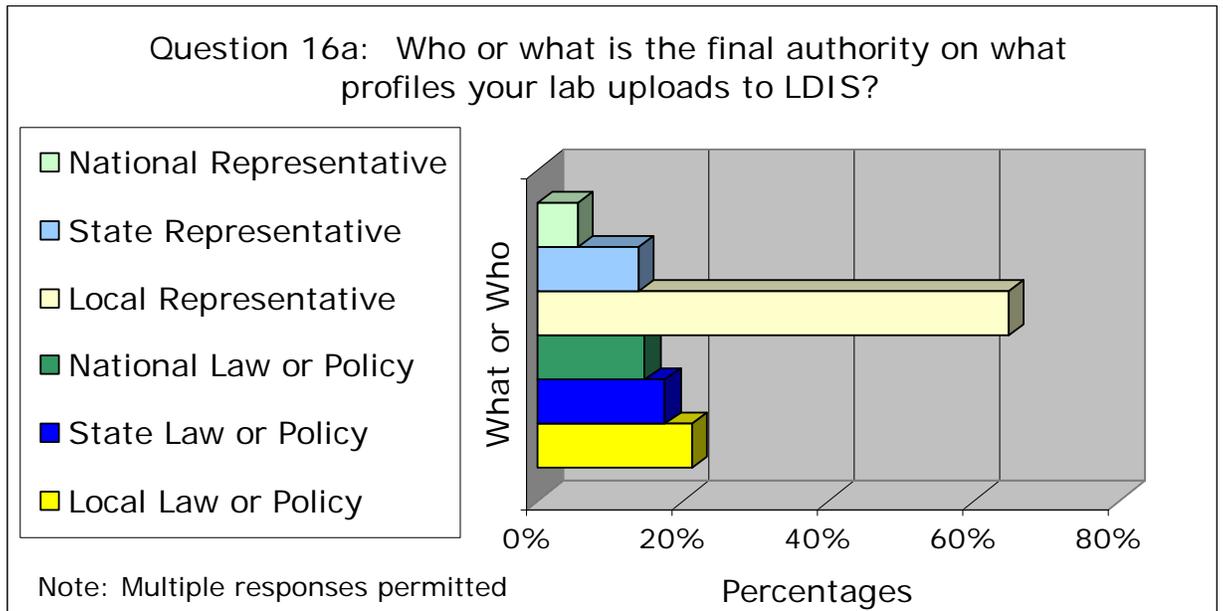
The CODIS Unit Chief told us that all CODIS users are required to sign the profile allowability certification form, which specifies that they know and understand NDIS procedures governing allowability of profiles. However, since the FBI does not verify that those forms are completed as required, the FBI cannot totally rely on those certifications to ensure that all CODIS users who make profile allowability decisions are receiving the necessary guidance to ensure compliance.¹⁷

In addition, we observed that administrators primarily view a person, rather than a law, policy, or other form of written guidance, as their primary source on profile allowability matters. For example, respondents were asked in question 19, "If a member of your DNA laboratory has a question regarding whether a profile is allowable for upload to NDIS, who or what would be their most likely source for clarification?" Respondents could offer more than one reply. Out of 143 responses, as all or part of their answer, 111 respondents cited "CODIS Administrator in their laboratory" as a source of guidance; 27 respondents cited "CODIS Administrator Handbook"; and another 27 respondents cited "CODIS administrator in another laboratory." These responses primarily identify a person, rather than a formal written document, as the source of guidance for the staff within their laboratory.

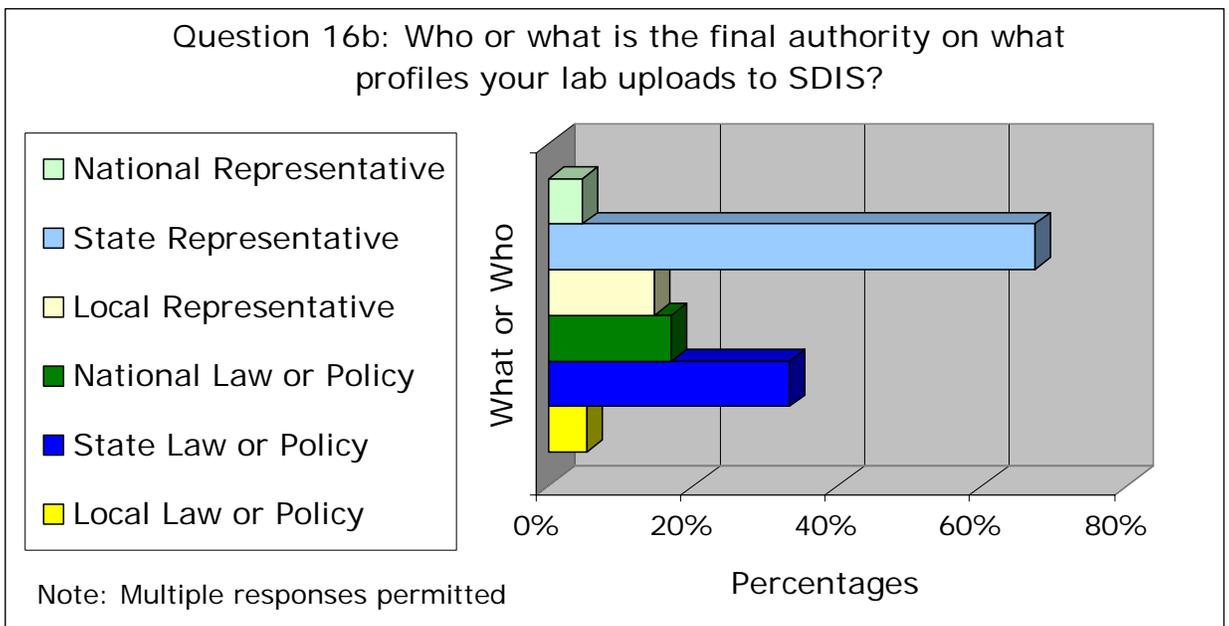
Also, the following results for questions 16a through 16c primarily indicate a person rather than a document as the final authority on what profiles are uploaded to CODIS, as shown in Figure 8.

¹⁷ For more information on completion of the user certification forms, see the results of the trend analysis of OIG CODIS laboratory audits in Finding II and our analysis of corrective action in Finding III.

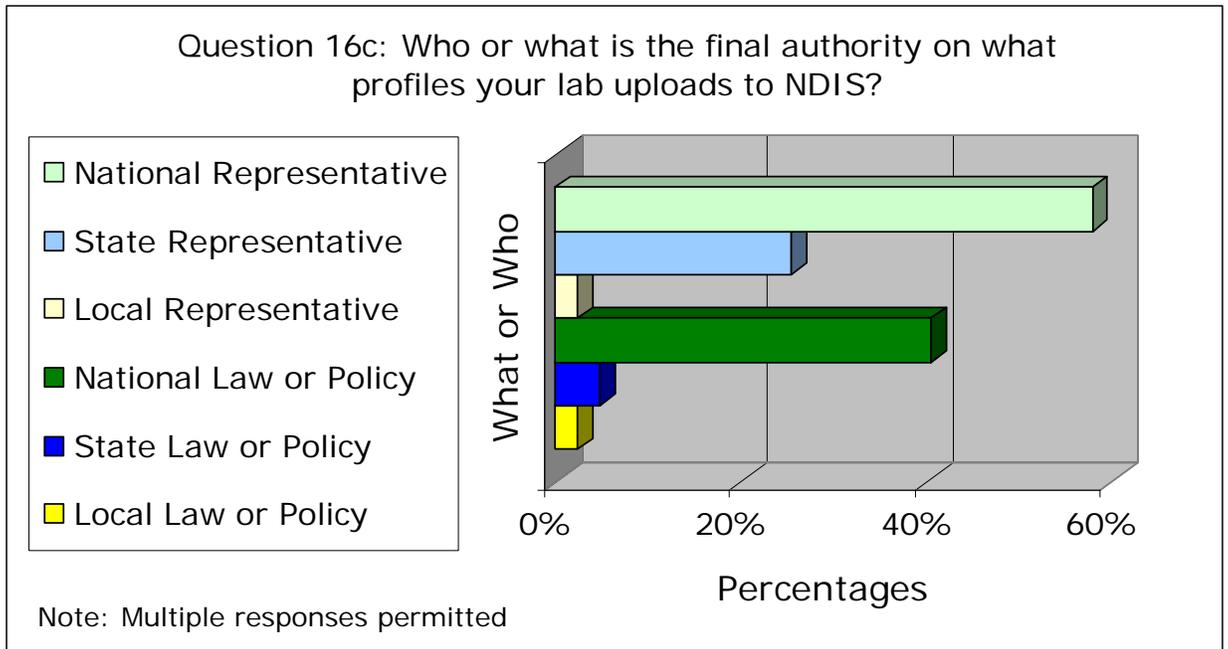
Figure 8 – Results of Administrator Survey Question 16a – 16c



Source: Responses from 119 CODIS administrators



Source: Responses from 129 CODIS administrators



Source: Responses from 133 CODIS administrators

We believe the FBI must take steps to ensure that the NDIS community relies on written law or policy to ensure consistent and thorough compliance with the NDIS requirements, for consistency, reproducibility, and minimization of human error and subjectivity. See the section on “FBI Guidance” results on page 26 for additional discussion of written guidance.

Laboratory Quality. We asked CODIS administrators to comment on the operational quality of their laboratory and other laboratories with which they are familiar (questions 21 through 23). Respondents rated their own laboratory’s quality, as well as the quality of their laboratory in relation to others, fairly high. However, 8 percent of respondents stated that they were aware of a CODIS laboratory operating with what they believed to be a material weakness. Their comments revealed that they identified issues that included the inherent limitations of one-person DNA laboratories, uninvolved off-site technical leaders, laboratories that upload profiles that have not been fully reviewed, and laboratories that emphasize quantity over quality. According to our discussions with the CODIS Unit Chief and the chairperson of SWGDAM, these weaknesses are already known and are being considered in conjunction with on-going revisions to the QAS.¹⁸ However, we recommend continued attention to these material weaknesses.

¹⁸ The QAS are revised by SWGDAM through a formal process requiring discussion and approval at several administrative levels and overall consensus by key members or organizations within the DNA community.

CODIS Operations. We asked administrators to assess various aspects of CODIS operations (questions 24 through 29). The CODIS administrators made it clear through their responses that the overall sentiment regarding general CODIS operations is positive. Specifically, we found that the CODIS contractor, the CODIS software, and the FBI's current management of CODIS all received high marks from respondents, and that administrators felt there had been a fair measure of improvement in the FBI's management of CODIS under the current CODIS Unit Chief's leadership.

Further, respondents identified what they believe to be the most important successes of CODIS:

- crime-solving and prevention;
- system benefits (for example, information management, system capabilities, and software enhancements and upgrades);
- community assistance (for example, grants, national meetings, training, legal assistance, and the help of the CODIS Unit staff); and
- communications and connections (including a national and international network of laboratories and the CODIS website).

Respondents also identified what they believe to be the greatest challenges to CODIS in the next 5 years:

- expansion and change (particularly legislated expansion and resulting changes);
- resource limitations (including backlogs);
- profile integrity (including confusion regarding profile allowability, consistency in what is uploaded to CODIS, and quality control of the data); and
- system operations (including capacity of the system, computer security, and continuity of operations).

NDIS Audit Review Panel. In order for a laboratory to meet the QAS requirement for a biannual external QAS audit, the audit must be conducted using the FBI's approved audit document by QAS auditors that have

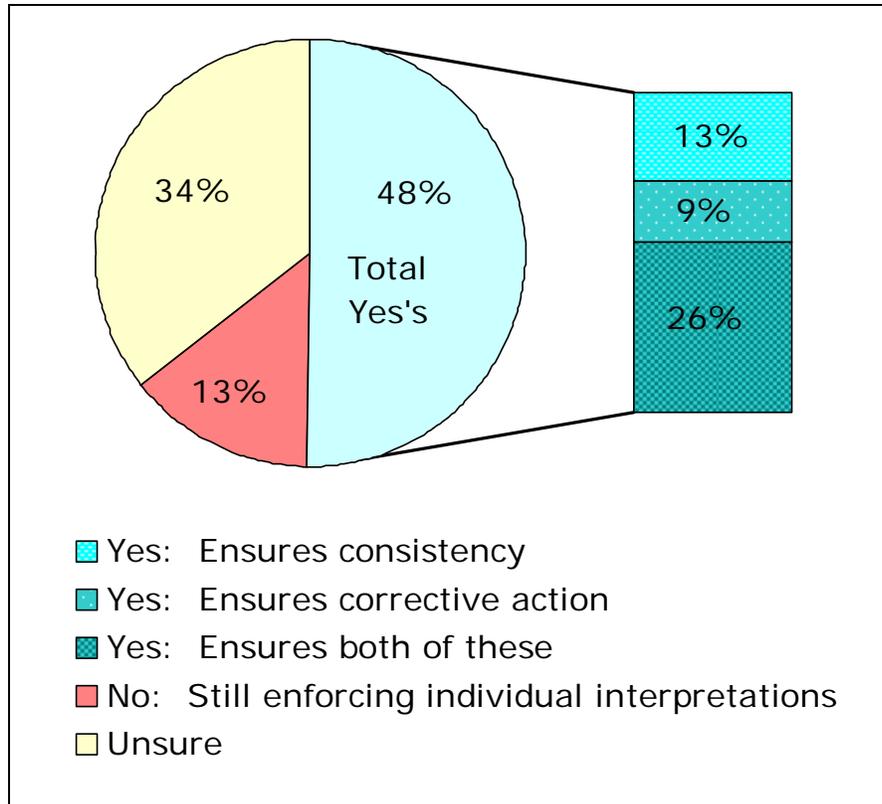
successfully completed the FBI's auditor training.¹⁹ The FBI further requires that these external QAS audits be submitted to the NDIS Audit Review Panel. The CODIS Unit oversees the Review Panel, a group of volunteer members of the DNA community and FBI staff members who meet specific professional criteria. The Review Panel reviews all external QAS audits conducted in NDIS-participating laboratories across the country, with the purpose of ensuring consistent and thorough application of the QAS and appropriate and complete corrective action.

We asked a series of questions (numbers 30 through 35) designed to provide insight into what experience the CODIS administrators have had with the Review Panel process, and what their comments are regarding the Review Panel's accomplishment of its purpose. As shown in Figure 9, overall, respondents who have experience with the Review Panel process feel that it has improved compliance with the QAS.

¹⁹ We use the term "QAS auditors" to refer to the DNA scientists within the DNA community that perform audits of compliance with the FBI's QAS.

Figure 9 – Results of Administrator Survey Question 30²⁰

Do you believe the NDIS Audit Review Panel has improved community compliance with the QAS? *[Check all that apply]*



Source: Responses from 141 CODIS administrators

Those who did not believe the Review Panel had improved compliance focused on the fact that individual interpretations of the QAS, rather than standardized interpretations, occur within the DNA community. Administrators also indicated that there has been improvement to Review Panel timeliness but that additional improvement is needed.²¹

We found that 31 percent of the respondents with experience in the Review Panel process stated that they had to supply additional corrective action documentation after their original submission to the Review Panel (question 33), which delayed the process for up to 6 months (question 34). In addition, the responses to questions 30 and 31 indicated that a large

²⁰ Note that this chart does not reflect the approximately 4 percent of administrators who designated "Other" as their response, accompanied by an explanatory comment.

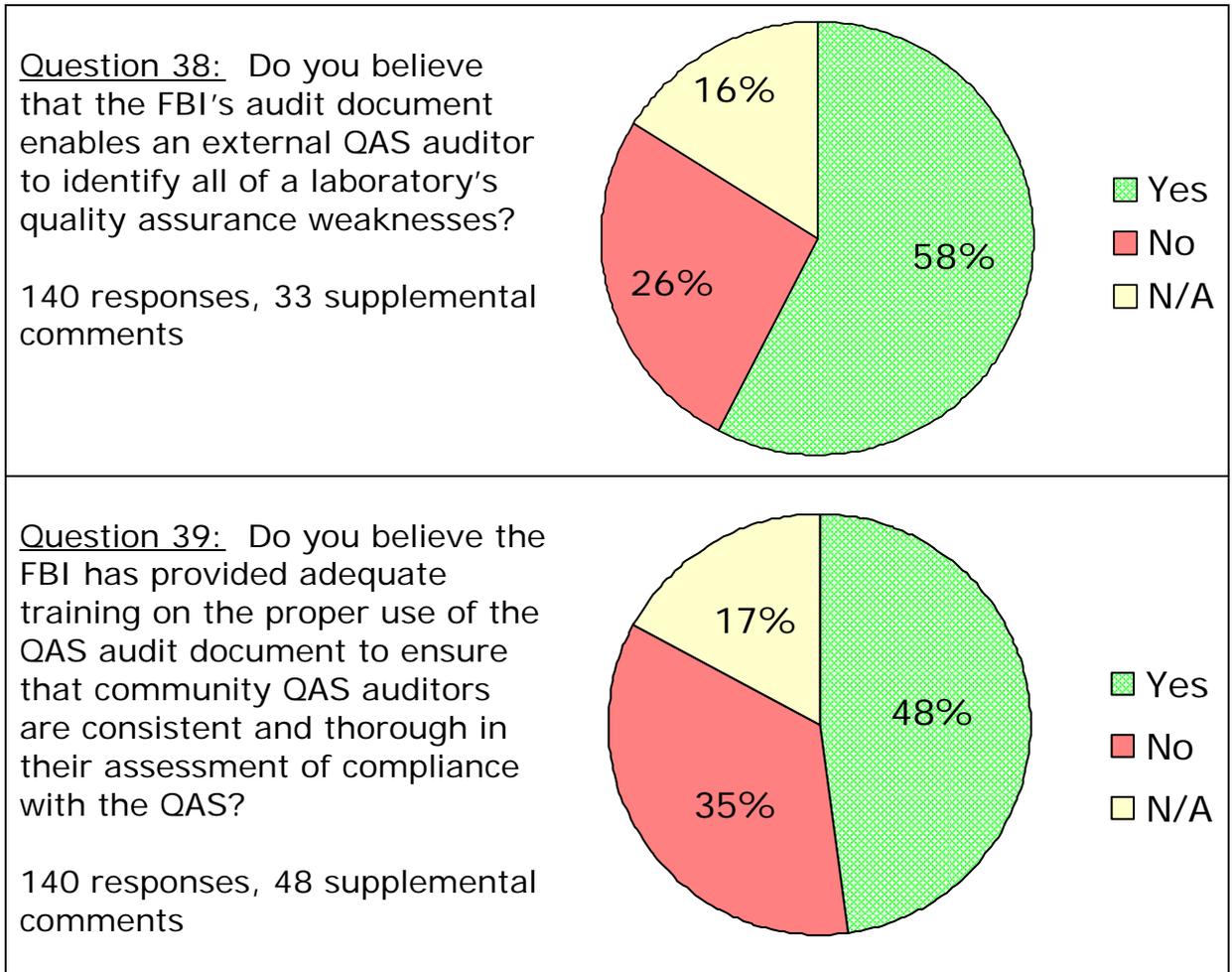
²¹ We further address QAS auditor consistency under Finding II and audit panel timeliness under Finding III.

percentage (34 percent) of the CODIS administrators are not involved in the Review Panel process. Yet, based on our observations, CODIS administrators are the members of the NDIS community who often receive the guidance disseminated at national meetings regarding the Review Panel process and key factors in ensuring that a submission to the panel is complete.

We conclude from these responses that, by providing guidance to pertinent laboratory staff on ensuring their initial submission to the Review Panel is complete, one delay that undermines Review Panel timeliness can be reduced. In presenting our conclusion to the FBI, the CODIS Unit Chief stated that he understood our perspective. He subsequently asked the attendees at the 2005 National CODIS Conference for the contact information for the person in each laboratory who is responsible for the audit resolution process. The CODIS Unit Chief further stated that he would use these points-of-contact to develop a comprehensive mailing list to disseminate guidance or information to the NDIS community regarding the Review Panel process.

FBI Guidance. Finally, we asked administrators to provide feedback on various aspects of the FBI's guidance to the CODIS community (questions 36 through 46). Respondents were fairly positive about the FBI's guidance to CODIS participants on compliance with the QAS and NDIS requirements. Administrators' perception of the FBI's consistency in guidance was moderate, but overall, they stated that inconsistencies had limited impact on their ability to perform and comply with requirements. However, they indicated concern about the FBI-developed QAS audit guide (commonly referred to as the "audit document") and the adequacy of the FBI's guidance on proper use of the audit guide, as shown in Figure 10.

Figure 10 – Responses to Administrator Survey Questions 38 and 39



Source: Responses from 140 CODIS administrators

In the supplemental comments submitted with the responses to these questions, inconsistencies between QAS auditors were emphasized (as with question 30 in Figure 9), as were inconsistencies between the QAS auditors and other members of the DNA community. In addition, we determined that throughout the survey, 83 respondents made a total of 161 comments on inconsistencies in the way the QAS are interpreted within the DNA community. These comments identified the need for increased and improved training and improved guidance for all members of the CODIS community. See Finding III for additional conclusions regarding auditor training.

In addition, 37 of the respondents made a total of 51 comments regarding the need for the FBI to share information better by posting of guidance on the CODIS intranet website, such as frequently asked questions

and common audit findings. We reviewed the contents of the CODIS website at one CODIS laboratory to assess the suggestions that were made for additional content. We found that while the current website appears to be a helpful tool for CODIS users, there are several ways that it could be enhanced to provide better guidance. For example, the website needs better tools for navigating the information it contains, such as a comprehensive table of contents or index for NDIS procedures, decision-trees for profile allowability, and a list of frequently asked questions that direct CODIS users to the correct place within the NDIS procedures for additional guidance on various subjects. In addition, we found that some of the information on the website was not current (such as a list of upcoming QAS auditor courses that showed no entries after January 2005), and therefore was of no benefit. The FBI needs to ensure that the information is updated regularly to further encourage CODIS users to view the CODIS website as relevant and helpful to their daily activities.

When we discussed these suggested changes with the CODIS Unit Chief, he stated that the guidance the website already contains is not used as much as it could be. He added that members of the CODIS community often tell him that they are unsure of what NDIS procedures say, or that they were unaware of a change that had been highly publicized within the CODIS community months prior. We believe that while there may be those in the CODIS community who are not using the CODIS website, this should not prevent the FBI from making improvements to it to maximize the opportunity to provide written, user-friendly, relevant, and comprehensive guidance to the CODIS community.

Overall Analysis. In reviewing the overall survey responses and statements made by FBI management, we found that the FBI placed too much reliance on verbal rather than written guidance in everyday communications and in meeting discussions concerning the QAS and NDIS requirements. For example, the CODIS Unit Chief commented that he gives greater priority to phone rather than to electronic communications in everyday responses to the CODIS community, and that he is hesitant to put guidance in writing when dealing with a laboratory-specific situation. He later clarified that answer by saying that he wants to avoid identifying specific laboratories by name or situation. However, we believe that the CODIS Unit Chief should attempt to use the interaction he has with individual labs as a means of identifying where additional guidance to the entire community is warranted. He could do this through the CODIS website or other avenues, without identifying specific labs.

Verbal communication is inherently more susceptible to misunderstandings, misapplications, and inconsistencies. For example,

administrators who responded to question 44b, which asked administrators for possible causes of the inconsistencies in the FBI's guidance to the community, stated that perceptions shifting over time are primarily to blame for the inconsistencies observed, something that does not occur with written guidance. The FBI can increase the NDIS community's reliance on written guidance through simple practical means, such as the improvements to information sharing previously suggested, documenting guidance given to individual laboratories through written correspondence, and by disseminating that guidance wherever applicable to the overall community.

FBI management responded by saying that they view our conclusions positively, and that our work will be very helpful in identifying ways in which they can better assist the CODIS community, particularly the specific suggestions for how they can improve handling of tools like the CODIS website.

Inadequate CODIS Unit Staffing

At the initiation of this audit in May 2005, the CODIS Unit was comprised of five staff: the unit chief, three program analysts, and a management assistant. An additional seven positions were vacant, two of which had been filled pending completion of security clearances. To assess the adequacy of Unit staffing, we requested and analyzed documentation from the FBI to ascertain its past handling of CODIS Program staffing and to determine its current efforts to fill the vacant positions in the CODIS Unit.

Historical Staffing

We requested staffing information for the CODIS Program since 1997, to assess the FBI's previous efforts in staffing the Program. The information we received revealed the following:

- In the approximate 6 years (August 1997 to October 2003) preceding the current unit chief, there were a total of six unit chiefs (some in an "acting" capacity) who oversaw CODIS operations. In our judgment, this rate of turnover in leadership undermines the ability of anyone to properly oversee the CODIS Program and also undermines the continuity needed for consistent interactions and guidance with the CODIS community.

- Due to staff vacancies, the CODIS Unit Chief also currently functions as the NDIS Custodian and Program Manager.²² That position has not been filled by a dedicated staff member since June 2001. Consequently, there has been a dedicated NDIS Program Manager for approximately 2.5 of the more than 7 years (October 1998 to November 2005) of NDIS operations, or roughly 37 percent of the time. According to the CODIS Unit Chief, no formal description currently exists that describes the NDIS Custodian duties.
- Over 4 years (June 2001 to August 2005) lapsed without a permanent employee to fill the position of CODIS Program Manager.
- Although CODIS and NDIS experienced dramatic growth since NDIS became operational in late 1998 through fiscal year (FY) 2004, there was a minimal increase in positions.

However, beginning in February 2004, the FBI increased the CODIS Unit staff by 7 positions, bringing its full staffing level to 12. In July 2004, a business plan was submitted to FBI management requesting the creation of two new position categories in the CODIS Unit for a total of four new employees, including a paralegal specialist and three CODIS auditors. That business plan was approved in early August 2004. The CODIS Unit's FY 2005 full staffing level of 12 positions is allocated according to the organization chart contained in Figure 11 on page 32.

Current Staffing

The seven vacant positions in the CODIS Unit include both historical positions as well as the new positions approved in August 2004. The current CODIS Unit Chief, who assumed his position in November 2003, provided the following details to demonstrate the progress made in staffing the CODIS Unit.

CODIS Program Manager Position. The CODIS Program Manager position was an existing position that was vacant. In May 2004, the CODIS Unit Chief requested that this position be advertised, which it was in June 2004. However, the posting was cancelled because of an error, and then position was put on hold because of a new hiring process. The position was

²² The NDIS Custodian is the FBI employee responsible for ensuring NDIS is operated in compliance with the DNA Identification Act, the Privacy Act, the NDIS Memorandum of Understanding between the FBI and participating laboratories, and all other relevant legislation or regulations. The NDIS Program Manager serves as the NDIS Custodian and also oversees other aspects of NDIS operations.

not reposted until November 2004. A selection was made in February 2005, the necessary background clearance was completed, and the new CODIS Program Manager reported to duty August 22, 2005.

NDIS Program Manager Position. Another of the existing vacant positions, the NDIS Program Manager, was advertised for 2 weeks in March 2005 and again for 2 weeks in July 2005. No one applied for the March posting, and no applicants with the required experience applied for the July posting. No further action had been taken as of December 2005.

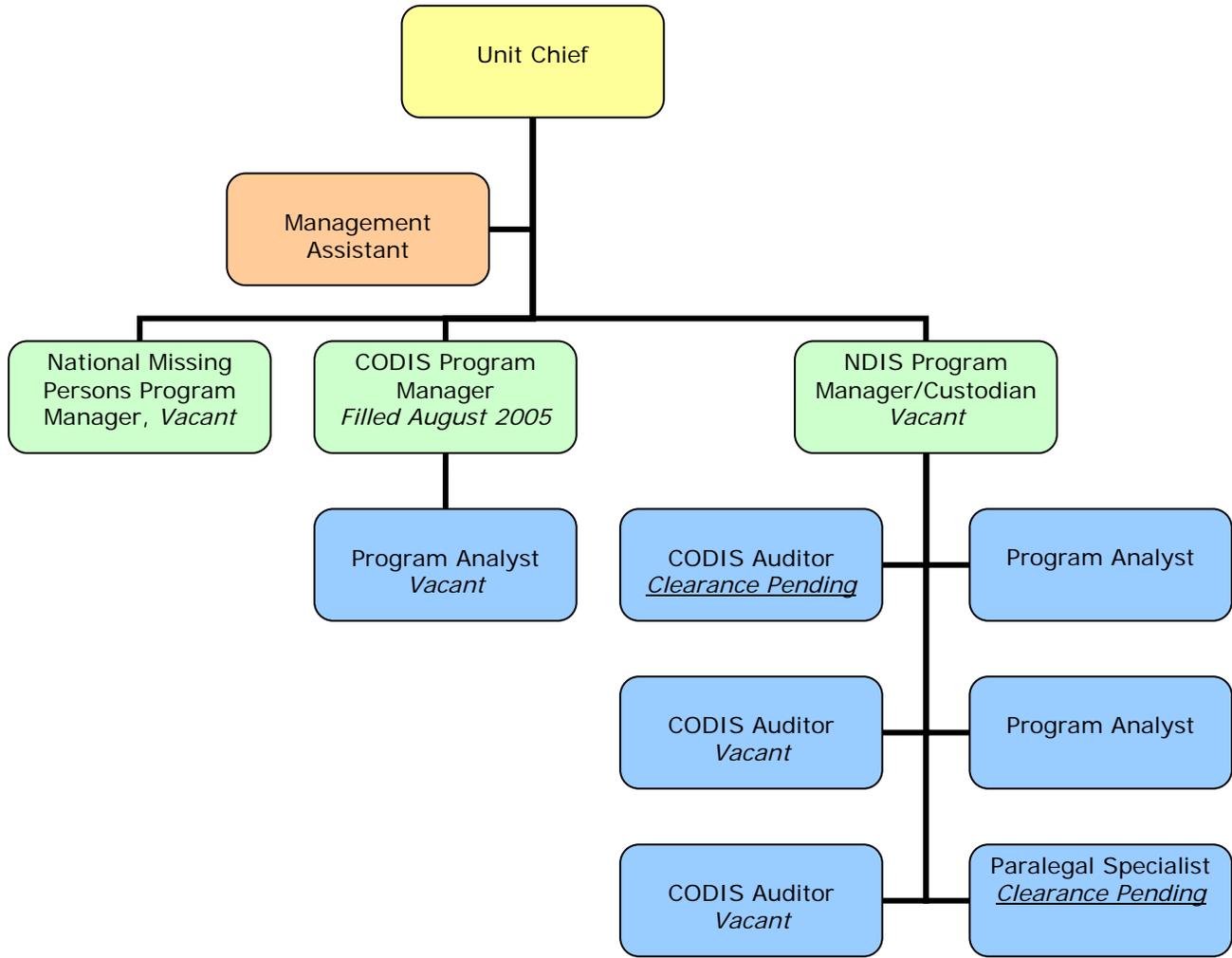
CODIS Auditor Positions. The CODIS auditor positions were approved as new positions within the FBI on August 6, 2004, and were advertised the first 2 weeks of December 2004. From the applications received, only one applicant was considered qualified based upon the position criteria and that person was selected for the position on March 24, 2005. The background clearance needed to allow this person to report to duty was still pending as of December 2005. To fill the remaining two auditor positions, the CODIS Unit Chief requested re-advertising the positions in May 2005 but the FBI did not repost them until November 2005.

Paralegal Specialist Position. The FBI approved the new paralegal specialist position on August 6, 2004 but did not post the position until May 2005. The FBI selected an applicant in September 2005, but the background clearance for that person was pending as of December 2005.

The FBI has not taken any action on the National Missing Persons Program Manager position. In addition, as of the end of September 2005, one of the three program analyst positions was vacated. The FBI posted that position in December 2005.

In summary, as of December 2005, one clearance was completed and the new staff member reported to duty (CODIS Program Manager). In addition, one position was vacated (program analyst) and another two filled pending clearance (CODIS auditor and paralegal). Consequently, the staffing status in December 2005 was the same as it had been in May 2005, with a total of five positions filled, two positions pending clearance, and five positions vacant. Figure 11 reflects the total positions assigned to the CODIS Unit, and the status of those positions as of December 2005.

**Figure 11 – CODIS Unit Organization Chart
as of December 2005**



Source: FBI CODIS Unit management

Conclusion

In the several years preceding 2004, the FBI failed to staff the CODIS Unit commensurate with growing demands and participation and thereby put at risk the ability of CODIS staff to properly oversee and administer the CODIS Program. However, in 2004, FBI management took action to increase CODIS staffing and provide a sufficient number of program manager positions, including a CODIS Program Manager, an NDIS Program Manager (Custodian) and a National Missing Persons Program Manager.

Yet, progress in staffing these positions has been slow. Our results at the unit level are similar to the findings in the report of the National Academy of Public Administration (NAPA) on the FBI's management of human capital.²³ For example, the NAPA report cites the lack of a comprehensive leadership development plan for subordinate levels of management, which we found in the historical handling of the manager positions for the CODIS Program. Further, the NAPA report states that the process to hire all other types of personnel is cumbersome, costly, and untimely, and that hiring plans are inadequate. We noted similar issues for the CODIS Program in both the historical staffing data, as well as the current staffing data. For example:

- Of the four new positions approved for the CODIS Unit in August 2004, the FBI had made selections for only two positions (a CODIS auditor and the paralegal specialist) as of December 2005, approximately 16 months later. Both of these positions were pending background clearances (the clearance processes initiated in April and September 2005, respectively) at that time.
- Of the four new positions, it took over 9 months from the time one of them was approved (August 2004) to the time it was advertised (May 2005). It took approximately 4 months from the time the remaining three positions (CODIS auditors) were approved to the time they were advertised.
- The NDIS Program Manager, a position that existed previously and was reaffirmed with the February 2004 allocation, was not advertised until March 2005, and was re-advertised in July 2005, with no success for either advertisement and no further action taken as of December 2005.

Although the FBI has taken steps to provide increased staffing levels for the CODIS Unit, attention now needs to be given to filling those positions. According to our analysis of trends in the OIG CODIS laboratory audits (see Finding II), most of the findings noted pertain to compliance with NDIS requirements, which demonstrates the need for an NDIS Program Manager. Further, according to the CODIS Unit Chief and CODIS contractor staff overseeing changes to NDIS Procedures for the FBI, FY 2005 brought more changes to NDIS procedures than has occurred in a single year previously. In our judgment, the FBI must give immediate attention to the NDIS Program Manager position, in light of the need for rigorous ongoing

²³ National Academy of Public Administration. *Transforming the FBI: Roadmap to an Effective Human Capital Program* (2005).

oversight of the NDIS community's compliance with, and the maintenance of, the NDIS participation requirements.²⁴

Additional Performance Measurements Needed

The Government Performance and Results Act requires agencies to develop strategic plans that identify their long-range goals and objectives and to establish annual plans that set forth corresponding annual goals and indicators of performance.²⁵ Accordingly, we asked FBI officials to provide us with the documents necessary to assess the CODIS Unit's goals, objectives, and indicators of performance.

After the CODIS Unit was established in June 2003, FBI management decided to reassess the mission, goals, and objectives of the CODIS Program. In September 2004, Laboratory Division management approved the resulting mission, goals, and objectives. According to the revised mission statement, the CODIS Unit is responsible for: (1) developing, providing, and supporting CODIS to federal, state, local, and international law enforcement agencies; (2) managing CODIS and NDIS, including providing administrative support to the NDIS and DNA-related committees and groups and telecommunications support to CODIS participants; and (3) implementing the requirements of the DNA Identification Act of 1994, through creation and management of standards, assistance with DNA-related legislative initiatives, and coordination with DNA-related auditing organizations.

To accomplish this mission, the CODIS Unit has one primary goal: to facilitate the use of DNA technology in assisting the criminal justice community in solving crimes. To achieve that goal, the CODIS Unit outlined eight objectives:

1. Expand the number of states participating in the National DNA Index System to include all 50 states.
2. Encourage states to expand coverage of their state DNA databases to include all felony offenders and misdemeanor sexual offenders.

²⁴ We use the term "NDIS participation requirements" to capture all requirements with which an NDIS participating laboratory must comply, including the MOU for participation and the NDIS procedures. See further details of this criteria in Appendices III and IV.

²⁵ Pub. L. No. 103-62 (1993).

3. Develop and implement a missing persons and mitochondrial DNA database at the national level.²⁶
4. Enhance training and information available to CODIS users.
5. Enhance awareness of the CODIS Program within the criminal justice community.
6. Expand the CODIS Program both domestically and internationally, through the Legal Attaché Program.
7. Ensure administration of NDIS in accordance with applicable federal laws and regulations.
8. Continue to develop CODIS software as a means to assist in the identification and capture of international terrorists.

Of these eight objectives, only two relate to finite tasks that can be accomplished at a point in time (numbers one and three). We were able to determine from information provided to us that these tasks have been accomplished. To address the on-going objectives, the CODIS Unit maintains a record of actions necessary to accomplish the objectives in a document titled "Implementing Actions." These actions, which are specific and numerous, reflect current and planned actions. The actions also appear to be appropriate and sufficiently detailed to allow CODIS Unit management to address the objectives in an on-going manner.

The FBI has established performance measurements, setting targets for each year and then comparing actual accomplishments to those targets. Those measurements are: (1) investigations aided, (2) CODIS matches, (3) NDIS-participating labs, (4) CODIS users trained, (5) NDIS-participating states, (6) offender profiles in NDIS, and (7) forensic profiles in NDIS. These measurements are cross-referenced with strategic plan goal numbers or areas and categories that track to the Laboratory Division's other management documents. Figure 12 captures data provided to us by the FBI for the CODIS Unit's performance measurements, including the goals for FYs 2003 through 2006, and the actual achievements for FYs 2003 through 2005.

²⁶ Mitochondrial DNA is small circular DNA that is inherited maternally, and is found outside the nucleus in most cells. Mitochondrial DNA is more robust than nuclear DNA, but does not have the same power of discrimination, since all maternal relatives share the same mitochondrial DNA.

Figure 12 – CODIS Unit Performance Data, FY 2003 – FY 2006²⁷

	Goals or Expectations			
	FY2003	FY2004	FY2005	FY2006
NDIS Laboratories	175	175	177	177
CODIS Users Trained ²⁸	750	935	1,029	1,143
States Participating in NDIS	50	50	N/A	N/A
NDIS Forensic Profiles	106,000	87,823	102,313	156,000
NDIS Offender Profiles	1,500,000	1,770,000	2,227,408	3,400,000
Investigations Aided	3,652	3,454	3,454	10,000
CODIS Matches	3,855	3,695	3,695	9,800

	Actual		
	FY2003	FY2004	FY2005
NDIS Laboratories	175	175	177
CODIS Users Trained	836	949	1,041
States Participating in NDIS	48	50	N/A
NDIS Forensic Profiles	71,837	100,959	131,111
NDIS Offender Profiles	1,559,364	1,976,573	2,691,786
Investigations Aided	4,202	9,758	9,650
CODIS Matches	4,239	6,825	9,451

Source: CODIS Unit management in December 2005

According to the data in Figure 12, the CODIS Unit has generally achieved or exceeded its goals. Further, we determined that the CODIS Unit Chief has taken steps to ensure the measurement information is accurate, including creating a new baseline for investigations aided and CODIS matches in 2004 by querying all states for confirmed data.

Overall, the combination of documents we reviewed appear to capture the mission, goals, objectives, strategies, and performance measurements for the CODIS Unit and also appear to be interlinked in a way that allows them to be meaningful and measurable.

However, we identified three activities, which are not reflected in the CODIS Unit's performance measurements but that are an essential part of the Unit accomplishing its mission: (1) auditing of NDIS data; (2) providing training on QAS compliance; and (3) overseeing the activities of the Review Panel. The three activities comprise the CODIS Unit's primary means of

²⁷ The following categories include cumulative totals: (1) CODIS Labs, (2) Users Trained, (3) States Participating, (4) Forensic Profiles and (5) Offender Profiles. The following categories include yearly totals: (1) Investigations Aided and (2) CODIS Matches.

²⁸ CODIS User training provides users, particularly new users, with training in how to use the CODIS system and software.

monitoring and assisting NDIS-participants' compliance with the QAS and verifying the integrity of NDIS data. The activities are currently performed on behalf of the CODIS Unit by FBI Laboratory staff outside it. Since they also serve a crucial role in the CODIS Unit's interaction with the NDIS community, the activities should be formalized and clearly reflected as the CODIS Unit's responsibilities in its objectives and performance measurements. These activities are discussed in the following sections.

Integrity of NDIS Data

Currently, as part of the corrective action measures implemented in response to our previous audit of the CODIS Program, FBI staff who perform quality assurance audits at CODIS participating laboratories also review the CODIS profiles uploaded from the cases they review (generally, three to five case files are reviewed for each active DNA analyst in the laboratory). The profiles are reviewed for completeness, accuracy, and allowability. These reviews will continue more systematically once the CODIS Unit auditor positions are filled.²⁹ However, there is no objective tracking mechanism or performance measurement to capture this activity and the role that it is intended to play in allowing the CODIS Unit to address the requirement to verify the compliance of NDIS data with applicable federal laws and regulations. We believe this activity should be reflected with both projected and actual measurements, as well as in the objectives and implementing actions maintained by the CODIS Unit.

Compliance with the Quality Assurance Standards

The DNA Analysis Unit I (DNAUI) has been conducting quality assurance auditor training courses on behalf of the CODIS Unit. The primary focus of these courses is to ensure a consistent understanding of the QAS and consistent application of the FBI's audit document. A second important function of the courses is to instill an understanding of the principles and objectivity surrounding auditing.

No performance measures or targets have been established for this activity, even though it requires a substantial amount of effort from DNAUI staff. As of November 2005, over 950 QAS auditors had been trained in these courses.³⁰ The DNAUI Chief, who currently oversees this training,

²⁹ Since the policy requiring FBI QAS auditors to review NDIS profiles was implemented in June 2004, there have been only three instances of these reviews occurring.

³⁰ Additional analysis of the QAS auditor training is contained in Finding III.

estimates that when preparation, travel, and time used to respond to questions from the DNA community are included with actual classroom instruction time, approximately 20 to 25 percent of the work year for two staff members is devoted to managing this function for the CODIS Unit. The DNAUI Chief pointed out that in addition to lacking performance measurements for this activity, there is an overarching need for FBI management to formally recognize this activity and the resources it needs. For instance, the course needs to have staff, a travel budget, resources to develop web-based instruction tools, and funding for invited guest speakers. The DNAUI Chief stated that formalizing this activity would allow the FBI to conduct training in a more effective manner by bringing improvements to the instructional process and by delivering a more uniform product across the board.

In addition, one of the staff in the DNAUI who is involved in the QAS auditor training also serves as the chairperson for the NDIS Audit Review Panel, a panel of members from the DNA community that reviews the QAS audits completed in NDIS-participating laboratories.³¹ The Review Panel was created in response to findings in a previous OIG audit and serves as a means for the FBI to ensure consistent and thorough application of the QAS in laboratories across the country that participate in NDIS.³² The Review Panel processed over 100 audits in 2004 and received another 80 for processing in 2005. The Review Panel chairperson must assess the records for each audit that are received by the FBI, distribute the audits to Review Panel members, consolidate their comments, follow up on any questions or requests for information with the auditee, and document the resolution of each audit. Substantial effort is required by the Review Panel chairperson to facilitate this activity on behalf of the CODIS Unit. While the Review Panel process is a crucial component of the FBI's confirmation of NDIS-participating laboratories' compliance with the QAS, this activity is not reflected in the performance measurements or objectives for the CODIS Unit.

We believe that FBI management should include these activities under the CODIS Unit's responsibility and strategic planning process (including objectives and measurements). For example, in our analysis of the FBI's QAS auditor training and the Review Panel process reflected in Finding III, we make recommendations for improvements to be implemented by CODIS Unit management. We do not believe that these activities must be

³¹ Panel members must be qualified or previously qualified DNA examiners or analysts who have successfully completed the FBI's training on the QAS Audit Document.

³² Additional analysis of the NDIS Audit Review Panel is covered under Finding III.

conducted by CODIS Unit staff, but we recommend that the CODIS Unit management have the authority to make changes and track performance for these activities which is commensurate with its legislated role of oversight.

While the current performance measurements for the CODIS Unit appear to be reasonable and meaningful, we believe that the three activities we identify should be formalized under the CODIS Unit's responsibility and included in its objectives and measurements to fully reflect the Unit's efforts to address its mission.

Current Progress on CODIS Infrastructure

When we began our audit in May 2005, the FBI informed us that CODIS contractor activity, including the maintenance and operation of the CODIS system and software, was operating under a series of extensions to a contract awarded in 1997. In our judgment, the continued use of contract extensions for that length of time, without a re-evaluation of the needs of the system or the performance of the contractor, constituted a risk to the CODIS Unit's ability to provide for the long-term planning and development of the CODIS system. Based upon this information, we collected and assessed documentation on how CODIS Unit management oversees the CODIS infrastructure, including general operations, enhancements and development, and security and safeguards.³³

Current Operations and Maintenance

The contractor for CODIS operations is the Science Applications International Corporation (SAIC), which the FBI has used for previous CODIS operational contracts. In FY's 1990 through the final contract extension that ran through November 2005, the FBI paid SAIC approximately \$71 million for its work on CODIS. During our audit, the CODIS Unit Chief provided us with a copy of that final extension. We determined that it covered not just current operations and maintenance of CODIS, NDIS, and the FBI's SDIS site under SAIC, but also arranged for the relocation of the NDIS site to the FBI's Quantico, Virginia, laboratory and the implementation of the one-time search authorized by the Justice for All Act of 2004.

In addition, in June 2005, the FBI Contract Review Board decided to authorize a new contract solicitation that would cover the operations and

³³ We did not perform a system-wide test or review of computer security controls. Our data reflects the information conveyed to us by the FBI.

maintenance of CODIS once the latest contract extension expired. The Board approved the competition for a 1-year award with four additional 1-year options. Proposals from bidding contractors were due in August 2005. The contract solicitation spelled out the tasks that should be accomplished by the contractor, the specific deliverables, and the security restrictions that should be expected and imposed on the contractor. Some of the tasks included:

- task management and general support;
- maintenance and support of the FBI's systems;
- CODIS operational support;
- technical support; and
- corrections and enhancements.

The FBI awarded this contract to SAIC in September 2005. If all options are exercised, the operations and maintenance will be covered through September 2010.

We also obtained feedback about the FBI's contractor through the survey we conducted of CODIS administrators (see Appendix VII, question 26). The average response to our question about the contractor's overall performance was a 4.5 on a scale of 1-5 (with 5 being excellent), which is a positive response of SAIC's performance.

In addition, according to the new CODIS Program Manager, the CODIS Unit will be actively seeking input from the CODIS community on whether the SAIC help desk staff is adequate to meet the community's needs. Such feedback will be crucial, because under the operations and maintenance contract, SAIC will not be performing the scope of activities that it was under the previous contract, and the help desk will be the main tool for providing service to the CODIS community.

Implementation of Legislated Expansions

The Justice for All Act, signed into law on October 30, 2004, authorized the addition of an NDIS index for DNA profiles of indicted persons and the use of a one-time search of profiles that were not previously permitted for storage in NDIS against NDIS databases.

The FBI has made changes at the NDIS level to add the indicted persons index. In addition, we asked the CODIS Unit Chief about the implementation of the one-time search provision. He stated that direct keyboard access to NDIS is not currently possible at LDIS or SDIS sites. Rather, in order to comply with the Justice for All Act, CODIS State Administrators in November 2004 agreed to a manual or batch one-time search implementation. In May 2005, the CODIS Unit published a procedure governing the searches that specifies the type of documentation that must be maintained by the states, the certifications required to complete a search, and the rules for which profiles can be searched against which databases.

Two states began completing these searches on a test basis, and with the distribution of an updated software version in November 2005, all CODIS laboratories have the capability to complete the one-time searches. The new CODIS software provides an automated mechanism for local laboratories to create one-time search files and send them to their state laboratories and then to NDIS. The CODIS software also currently allows for the designation of appropriate specimen categories and tracks which samples have already been searched, to preclude the searching of a sample more than one time, in accordance with the federal legislation. This process was demonstrated at a national CODIS meeting by staff of NDIS-participating laboratories.

Consequently, the primary aspects of the Justice for All Act have been functionally implemented. We note that this implementation took approximately 1 year, and included safeguards to prevent improper searches from occurring.³⁴

Further Development of CODIS

According to the CODIS Unit Chief, the FBI's Contract Review Board determined that the development portion of the CODIS contract should be handled separately from operations and maintenance. Consequently, the CODIS Development Contract will be awarded with FY 2006 funding, with the request for proposal expected to be announced in the spring of 2006. The development contract will focus on, among other things, developing kinship analysis for missing persons capability.

³⁴ As a result of the DNA Fingerprint Act, signed into law in 2006, one-time searches have been eliminated because many of the profiles that could have been searched using that provision can now be added directly to NDIS for routine searches.

In addition, an independent assessment looked at the ability of the current CODIS architecture to support the Justice for All Act and also at the need for expanded data storage due to the incorporation of additional DNA profiles.³⁵ Findings from that assessment will be considered in developing the solicitation for bids for the development contract. Of immediate import, the independent assessment determined the Justice for All Act could be implemented and operate over the next 3 to 5 years without exceeding capacity of the current CODIS architecture.

Safeguards for NDIS data

The FBI Security Division certified and accredited CODIS in March 2005 and granted a 3-year certificate of operation. The certification and accreditation process involves detailed analysis of the components and purpose of a system and the necessary safeguards to ensure its secure and successful operation. Therefore, the CODIS system's certificate of operation provides a measure of assurance that the technology and security have been properly scrutinized.

In addition, the FBI stated that the CODIS data is safeguarded in accordance with a system security plan – all servers are routinely backed up, systems can be restored using established back-up procedures and tapes, and additional back-up tapes are stored off-site. Also, the FBI has established a continuity of operations location at an FBI facility. The site will duplicate the NDIS site located in the FBI Laboratory and will allow continued service to the CODIS community in the event of a disaster.

Further, the FBI moved NDIS operations to the FBI's Quantico, Virginia, facility for security and enhancements. According to CODIS Unit management, the move was completed successfully using detailed specifications for stating what equipment needed to be moved and then moving it, and testing the system before and after the move was completed. Also, during that move, the NDIS hardware was upgraded, to include built-in redundancy that has resulted in faster searches.

³⁵ This assessment was performed by the MITRE Corporation, a not-for-profit organization chartered to work in the public interest. MITRE possesses expertise in systems engineering, information technology, operational concepts, and enterprise modernization. MITRE also manages three federally funded research and development centers.

Internal Controls over NDIS Searches

In general, the NDIS system is designed to only allow cross-searches of certain types of profiles, in keeping with legislated restrictions. For example, relatives of missing persons profiles can only be searched against unidentified human remains profiles, not against forensic or offender profiles. The NDIS procedures clearly document the limitations in place for how the NDIS databases are searched. These limitations exist only at the NDIS level. For SDIS and LDIS, state and local laboratories are permitted to set the parameters for searching profiles at each level, based upon the state or local laws that govern those activities.

We also determined that the FBI had implemented system safeguards to ensure that NDIS-participating laboratories were performing one-time searches in accordance with the Justice for All Act, specifically preventing unallowable repeat searches from occurring.³⁶ However, the DNA Fingerprint Act, signed into law in 2006, eliminated the need for one-time searches because any profiles that could have been searched using that provision can now be added directly to NDIS for routine searches.

Conclusion

The FBI has taken measures to provide for the operations, maintenance, and security of the CODIS system for the near future, by providing the following:

- a dedicated program manager to oversee CODIS operations and contract management;
- a contract in place with a company that has a documented ability to handle CODIS operations in a satisfactory manner;
- a continuity of operations plan and site, to ensure service to the CODIS community in case of disaster; and
- upgraded hardware capabilities and physical security enhancements through moving the system to the Quantico, Virginia, FBI Laboratory facility.

³⁶ As stated previously, the Justice for All Act allowed a one-time search of certain DNA profiles, which were not allowed to be stored in NDIS, against NDIS databases.

However, continued progress is needed to ensure that the development contract process is completed as planned and that the development contract awarded allows for continued responsiveness to legislated changes to CODIS operations.

Recommendations

We recommend that the FBI:

1. Develop and implement a plan to ensure that all CODIS administrators attend the FBI QAS auditor training.
2. Improve information sharing through enhancements to the CODIS website, considering the suggestions made by the community and implementing them wherever practicable. Particular attention should be given to assisting viewers in finding all guidance available on a topic and to using the website as a means of posting broadly applicable questions received from laboratories throughout the CODIS community and the relevant answers.
3. Distill profile allowability guidance, including scenarios that are discussed at national meetings, into a decision-tree or other written user-friendly guidance and disseminate that information to all CODIS users. As other scenarios are posed individually, develop an electronic library with situations and explanations that can be accessed by all CODIS users, where appropriate.
4. Formally request that the Scientific Working Group on DNA Analysis Methods consider, as part of its maintenance of the QAS, the operational material weaknesses identified by the CODIS administrators, including: (1) the inherent limitations of one-person DNA laboratories, (2) uninvolved off-site technical leaders, and (3) laboratories that upload profiles that have not been fully reviewed.
5. Ensure that guidance on submission of information to the NDIS Audit Review Panel is sent to those members of CODIS labs that are responsible for this activity.
6. Develop and utilize a mechanism for tracking information requests that are received by the CODIS Unit to ensure a timely response.
7. Develop communications policies that will allow the CODIS Unit to provide written guidance to members of the DNA community to the fullest extent possible.

8. Develop a staffing plan that identifies current hindrances to filling vacant positions in the CODIS Unit, potential solutions to those hindrances, and a timeline of requirements for action to fill those positions.
9. Develop written descriptions of routine activities and responsibilities for current staff in the CODIS Unit, particularly those with multiple roles, and incorporate this information in a procedure manual for each position.
10. Incorporate the three activities we identified that are performed on behalf of the CODIS Unit by other FBI personnel – auditing of NDIS data, providing training on QAS compliance, and overseeing the activities of the Review Panel – into the CODIS Unit’s objectives and measurements to fully reflect the CODIS Unit’s efforts to address its mission.
11. Ensure the development contract process is completed as planned and that the development contract awarded allows for continued responsiveness to legislated changes to CODIS operations.

II. TRENDS AND VULNERABILITIES REVEALED THROUGH AUDIT RESULTS

Based on our analysis of the results of OIG CODIS audits completed in FYs 2004 and 2005, as well as selected external QAS audits, we determined that: (1) the FBI's internal controls over the proper upload of forensic profiles to NDIS are inadequate; and (2) the FBI is not tracking audit findings reviewed by the NDIS Audit Review Panel to detect common and overturned findings, and therefore is unable to ensure that QAS weaknesses or misunderstandings within the community are addressed. These weaknesses leave the FBI potentially vulnerable to undetected, inadvertent, or willful non-compliance by CODIS participants, and consequently could undermine the integrity of the CODIS Program.

Need for Additional Verification of Compliance with NDIS Requirements

The OIG CODIS laboratory audits were initially designed to support the 2001 OIG audit, *The Combined DNA Index System*, which included audits of eight laboratories. Since then, the OIG has completed an additional 24 CODIS laboratory audits. (See Appendix V for a complete listing.) The objective of these audits was to determine if the laboratories audited were in compliance with standards governing CODIS activities. Specifically, we performed testing to determine if the: (1) laboratory was in compliance with the NDIS participation requirements; (2) laboratory was in compliance with the QAS issued by the FBI; and (3) laboratory's DNA profiles in CODIS databases were complete, accurate, and allowable.

Criteria used for these audits included the QAS issued by the FBI in 1998 and 1999; the NDIS Participation Requirements delineated in the participation MOU; and OIG-developed standards for profile completeness and accuracy, and timely response to CODIS matches. See Appendix IV for further details of the audit criteria for these laboratory audits.

Our analysis of trends generally focused on those audits completed in FYs 2004 and 2005.³⁷ We included 18 audits in our review and identified 10 common findings. The findings were in three areas – compliance with NDIS participation requirements, compliance with the QAS, and proper

³⁷ In our analysis, we included two audit reports for audits completed in FY 2005 that were not issued until early FY 2006.

upload of forensic profiles to NDIS.³⁸ Figure 13 details the common findings we identified.

Figure 13 – Finding Trends from 18 OIG CODIS Laboratory Audits

Non-compliance with NDIS Requirements	No. of Labs	Non-compliance with QAS	No. of Labs	Improper Upload of Forensic Profiles to NDIS	No. of Labs
Annual reminder forms were not completed.	6	Insufficient access restrictions to DNA laboratory space.	2	A profile matching the victim of the crime was uploaded.	4
External QAS audit reports were not forwarded to the FBI in a timely manner.	6	Data integrity was not verified for outsourced forensic samples.	2	Inaccurate profile identification numbers were uploaded.	2
Potential NDIS matches were not resolved in a timely manner.	5			Profiles were not obtained from crime scene samples.	2
				Profiles were unverified due to laboratories' poor maintenance of case files.	3
				A profile matching a known person who was not a suspected perpetrator was uploaded.	2
Total Number of Findings	17		4		13

Source: OIG analysis of OIG reports for FYs 2004 and 2005

Common findings occurred with greatest frequency in the two areas of review that are audited primarily by the OIG: compliance with NDIS participation requirements and the proper upload of forensic profiles to NDIS. Currently, audits performed by scientists within the DNA laboratory community do not include any analysis of compliance with NDIS participation requirements, including profile allowability restrictions (excluding those portions of the requirements that overlap with the QAS). The FBI is in the process of hiring staff auditors for the CODIS Unit who could perform audits of NDIS compliance similar to those done by the OIG. However, the CODIS Unit Chief has stated that the plan for the CODIS staff auditors is to conduct QAS audits similar to those already being performed in the DNA community, with a limited additional review of NDIS profiles.³⁹

³⁸ We did not identify any common issues in the findings concerning proper upload of convicted offender profiles to NDIS.

³⁹ Additional analysis of the role of CODIS auditors and their audit methodology is contained in Finding III.

Further, we determined that the FBI currently relies upon the annual CODIS user certifications as the primary means of ensuring the compliance of NDIS data.⁴⁰ From the trends we noted, we conclude that this reliance is insufficient for the following reasons.

- Forensic profiles are supposed to be limited to those from crime-scene evidence that do not unambiguously match the victim or other known individual uninvolved in the crime. Further, documentation should be maintained to demonstrate the allowability of NDIS profiles, and the data in those profiles should be interpretable. As seen in Figure 13, we noted 13 incidents of forensic profile findings that violated some aspect of these restrictions. While these findings may represent a small portion of the profiles we reviewed, the fact that forensic profiles were improperly uploaded at 11 of 18 laboratories we audited indicates that the annual certification forms have not been successful in ensuring CODIS user compliance with profile allowability restrictions.
- We found that 6 of 18 laboratories we audited had not completed annual user certification forms as required. The forms are completed by laboratories on a self-certification basis and are not required to be submitted to the FBI.

Flaws in the FBI's Oversight of QAS Audits

We requested and received from 41 state and local laboratories throughout the CODIS community, documentation of the external QAS audit conducted at each laboratory and cleared by the Review Panel in 2004 and 2005.⁴¹ We analyzed this documentation for trends and statistics. We determined that specific facts within the documentation, such as dates the audits were submitted to the panel, were generally consistent with the FBI's

⁴⁰ At the beginning of each calendar year, each laboratory's CODIS administrator is required by NDIS procedures to ensure that each CODIS user is reminded of the categories of DNA data accepted by NDIS. As part of that reminder, the CODIS administrator has individual users certify that they have received their annual reminder and understand and will abide by what DNA data is accepted by NDIS.

⁴¹ The NDIS Audit Review Panel is a group of volunteer members of the DNA community who meet specific requirements, as well as FBI DNA staff members. The panel reviews all external QAS audits conducted at NDIS-participating laboratories across the country, with the purpose of ensuring consistent and thorough application of the QAS by the QAS auditors and appropriate and complete corrective action by the laboratories.

Review Panel records.⁴² Based on our review we found: (1) there were a total of 112 audit findings noted in the 41 audit reports, of which 11 (10 percent) were overturned after examination by the Review Panel (see Figure 14); and (2) of the 41 audit reports, 6 had no findings (15 percent), 28 shared a finding in common with another audit, and 7 had unique findings.⁴³

We developed a matrix of the findings from the 41 external QAS audits that were selected in our sample and noted several commonalities, as shown in Figure 14. The common findings are listed by QAS section number, with a description of the specific standard and finding that was implicated in a shared finding, the number of labs that shared in that finding, and the number of overturned findings for each QAS section. (See Appendix III for a description of each QAS section.)

⁴² This confirmation of accuracy allowed us to rely upon the FBI's Audit Review Panel records for our analysis of panel timeliness, as shown in Finding III.

⁴³ Findings are overturned when the Review Panel determines that the finding was not justified based upon the commonly accepted interpretation of the QAS. Often, for this to occur, the audited laboratory must challenge the finding to the Review Panel.

Figure 14 – Trends in QAS Audits Conducted and Reviewed by the NDIS Audit Review Panel in 2004 through July 2005

QAS Section	Description of Trends	No. of Labs*	No. of Overturned Findings
5	Std. 5.3.2(b) Laboratories did not document which analysts were competent to analyze bones or teeth.	4	
6	Std. 6.1.4 Laboratories did not document cleaning or decontamination.	6	4
7	Std. 7.1.1 Tube labels were not unique identifiers.	2	
	Std. 7.1.2 Chain-of-custody transfers were not fully documented.	5	
	Std. 7.1.4 Evidence was not secured properly or access limited.	2	
8	Std. 8.1.3.3 No qualifying test was documented for new methods in use.	2	
9	Std. 9.2.1 Guidelines on quality control of critical reagents were incomplete.	3	1
	Std. 9.5 Check of procedures against a NIST-traceable standard was not performed.	3	
	Std. 9.6 There was a lack of mixture interpretation guidelines.	4	
10	Std. 10.2.1 Thermometers for temperature verifications were not properly calibrated.	6	
	Std. 10.2.2 There was no documentation of critical equipment calibrations.	3	
	Std. 10.3 Laboratories did not follow their own equipment calibration or maintenance requirements.	2	
11	Std. 11.1 Information in the case files was not properly referenced.	2	5
	Std. 11.1.1 Laboratories did not retain all records in a case file.	6	
	Std. 11.1.2 Information required for case reports was not included.	2	
12	Std. 12.1 cited in conjunction with a finding for Std. 17.1.1 for databasing laboratories, that contractor data was not reviewed properly. ⁴⁴	N/A	1
15	Std. 15.2 A repeat finding was noted.	2	
16	Std. 16.1 Training required by safety plan was not conducted or documented.	5	
<p>*Some laboratories were part of multiple shared findings within the same QAS section. Therefore, the numbers in this column cannot be totaled to reach the number of unique laboratories with common findings in each section of the QAS.</p>			

Source: OIG analysis of 41 external QAS audits conducted in the CODIS community in 2004 and 2005

⁴⁴ This finding was not part of a trend, but was overturned, and therefore we include it in our table to demonstrate the total number of overturned findings.

As shown in Figure 14, the standards with common findings cover significant aspects of a laboratory's operations, including chain-of-custody documentation, labeling of evidence and security of evidence storage (7 laboratories); completeness of case file documentation (10 laboratories); guidelines for interpretation of mixed profiles (4 laboratories); and proper monitoring of critical reagents (3 laboratories), equipment (10 laboratories), and procedures (3 laboratories).

In a few instances, we noted that some overturned findings were not communicated to the laboratories that challenged the findings. Rather, the laboratories received correspondence that notified them that they were considered to be in compliance, with no acknowledgment that the finding was overturned. For example, four laboratories challenged the finding cited against them for compliance with Standard 11.1.1.⁴⁵ The correspondence received from the FBI for those laboratories did not acknowledge this finding, either to uphold or retract it. Instead, the FBI notified the laboratories that they were deemed to be in compliance with the QAS, leaving laboratory officials to conclude that the finding was overturned. The FBI should ensure that, at a minimum, correspondence with the audited laboratories clearly documents which findings have been overturned and the rationale behind that action.

In addition, we noted inconsistency with the way the Review Panel handled some findings. For example, six different laboratories were cited for non-compliance with Standard 6.1.4. However, when the Review Panel examined the corresponding documentation, it overturned findings for the four laboratories that challenged the finding, while making no adjustment for the two laboratories that did not challenge it. We recognize that it is not the Review Panel's responsibility to challenge findings on behalf of laboratories, but it would be appropriate, in our judgment, to directly provide the laboratories that did not challenge these findings with the information that the Review Panel had concluded in other similar instances.

Most significantly, we noted that the FBI is not formally tracking common and overturned findings. The CODIS Unit Chief stated during our fieldwork, conducted in May 2005, that his unit does not track the findings observed in the reports that go through the Review Panel, and he did not indicate any plans to do so.

However, the current Review Panel chairperson stated that she does an informal tally of findings as a means of getting a sense of where there are

⁴⁵ Standard 11.1.1 states, "The laboratory shall maintain, in a case record, all documentation generated by examiners related to case analyses."

commonalities. The chairperson provided information to the CODIS community at a national meeting in November 2005, confirming these statements. In her presentation, she touched on the issue related to four of the overturned findings for Standard 6.1.4 that we noted in our analysis, making it clear that documentation of cleaning and decontamination in the case file is not required. She further discussed the difference between a laboratory's compliance with accreditation standards versus the QAS, reminding QAS auditors that there can be differences between the two. She also stated that she is attempting to give QAS auditors feedback on findings that were later overturned, but this feedback is done informally rather than systematically in a written, formal context.

In addition, we determined that the previous chairperson also informally tracked overturned and common findings in the audits to provide that information to the CODIS community. In her November 2004 presentation at a national CODIS community meeting, she addressed Standard 6.1.4, as well as the underlying issue for one of the overturned findings we observed for standard 11.1.1. She also clarified the requirements of Standard 9.5, which was included in one of the trends we noted. However, these clarifications were again handled informally, rather than through written guidance or policy updates.

We concluded that while in the last 2 years the FBI Review Panel chairpersons have generally gained a sense of the areas where common and overturned findings occur, that information is not tracked systematically and completely. Without a thorough understanding of trends in common findings, the FBI cannot properly provide the CODIS community with the additional guidance needed to remedy and prevent compliance weaknesses in the trend areas, which our analysis revealed to be significant components of a laboratory's operations.

Further, without a complete understanding of trends in overturned findings, the FBI cannot take the necessary steps to prevent QAS auditors' continued misunderstandings of compliance in those areas, to ensure that all QAS auditors obtain feedback on their performance, and to guide QAS auditors from other organizations – such as those who audit for accrediting bodies – toward a consistent interpretation and application of the standards.

Our CODIS administrator survey results demonstrate that the FBI should track common and overturned findings. Specifically, the results to question 30, as discussed in Finding I, reveal that 13 percent of respondents did not believe that the Review Panel has improved compliance in the DNA community, because individual (or inconsistent) QAS auditor interpretations are still enforced. This sentiment was reiterated 161 times by a total of

83 respondents in comments throughout the survey, demonstrating the magnitude of the problem posed by inconsistent interpretation of the QAS.

Informing the CODIS community of common and overturned QAS audit findings serves as a valuable tool for continuing education in QAS compliance for both the FBI's QAS auditor training courses, as well as for national meetings where compliance is discussed. By tracking findings in a manner similar to the exercise we performed, the FBI should be able to address:

- trends in overturned findings to better train QAS auditors and monitor their performance;
- inconsistencies between organizations on specific standards to better communicate those inconsistencies to the heads of those organizations; and
- trends in common findings to better train the DNA community on compliance.

Overall, we conclude that the FBI needs to develop more rigorous internal controls to ensure that it has proper oversight over compliance with NDIS requirements. Further, the FBI should track audit findings to obtain the type of information that will be beneficial to QAS auditors and audited laboratories.

Recommendations

We recommend that the FBI:

12. Ensure that the internal controls over the compliance of NDIS data are strengthened beyond the current reliance on self-certification annual reminder forms.
13. Implement a formal mechanism for tracking findings in audits reviewed by the NDIS Audit Review Panel so that common findings and inconsistencies in interpretation can be identified.
14. Implement a formal mechanism for tracking auditor performance so that QAS auditors who use incorrect interpretations of the QAS can adjust their performance and also so that the FBI can detect whether individual QAS auditors require additional guidance.

15. Use these mechanisms to provide specific training to the DNA community on common findings and inconsistencies observed, to aid the DNA community's compliance, and to further improve consistency between organizations and QAS auditors.

III. ADDITIONAL CORRECTIVE ACTION NEEDED TO ADDRESS PREVIOUS FINDINGS

Previous OIG audit findings identified the need to verify the compliance of NDIS data, to ensure NDIS user compliance with NDIS requirements, and to ensure that laboratories remedy QAS audit findings. From our analysis of the FBI's corrective actions, we determined that it has not yet implemented routine audits of NDIS profiles and still relies on self-certification in confirming NDIS user compliance with NDIS requirements. The FBI has made improvements in the oversight of QAS compliance within the CODIS community, including conducting QAS auditor training courses, the implementation of a DNA community-wide audit document, and the creation of the Review Panel to ensure consistent and thorough application of the QAS and complete and appropriate corrective action to QAS audit findings. However, we identified the need for improved Review Panel timeliness and improved consistency in training through an emphasis on written guidance.

Verifying the Compliance of Data in NDIS

The FBI's corrective action approach to the OIG's 2001 recommendation to verify the compliance of data in NDIS was two-fold: (1) the FBI began requiring FBI QAS auditors to review CODIS profiles as part of their case file reviews (this action was initiated in June 2004), and (2) the FBI began taking steps to hire staff auditors who would systematically audit the profiles contained in NDIS.

In 2004 and 2005, FBI QAS auditors completed a total of three audits during which they confirmed that the profiles uploaded to NDIS from each case they reviewed were complete, accurate, and allowable. FBI QAS auditor involvement in confirming NDIS profiles was to be a temporary measure until CODIS Unit auditors could be hired. Therefore, we assessed the FBI's QAS auditor approach as a temporary measure and noted that improvements could still be made.

We noted that these reviews cover three to five case files per active DNA examiner in the audited laboratory. We believe such a methodology is deficient because of its limited scope. In the OIG's audits of forensic profiles, a minimum of 50 profiles are selected randomly for review from a list of the profiles currently in NDIS. This methodology permits a review of the work of not only current but also past examiners, as well as profiles produced by another laboratory and uploaded to NDIS by the auditee.

Further, this methodology ensures that for every case file OIG auditors review, an NDIS profile has been uploaded. The FBI's methodology could miss problems with profiles that were uploaded to NDIS on behalf of another laboratory and would not assess profiles produced by any examiner not currently on staff at the laboratory. Consequently, we consider the review methodology to be inadequate.

In addition, we observed that while there is a mechanism for documenting the results of the FBI QAS auditor's profile reviews, there is not a mechanism for documenting and tracking how many profiles are confirmed during these reviews or the frequency with which these reviews are conducted. For example, because FBI QAS auditors can look at 3 to 5 case files per active analyst in each laboratory audited, and because laboratories vary in the number of analysts employed, there is no way of knowing whether 10 or 50 NDIS profiles are reviewed in the context of a particular audit. Considering the difficulty experienced in getting CODIS auditors on staff, we believe the FBI should be tracking this information since this "temporary" measure could continue for a period of years. Records should be maintained to indicate the scope of the profile reviews that are performed to better reflect the extent to which the risk of non-compliance is being alleviated by this management control.

The CODIS Unit Chief intends for the new CODIS auditors to continue the same scope of work to verify compliance with NDIS requirements that the FBI QAS auditors currently perform. As a result, the methodology to review profiles that we consider to be inadequate will continue once permanent CODIS auditors are on staff in the CODIS Unit. Further, the CODIS Unit Chief does not intend to review any other aspect of compliance with NDIS requirements beyond the limited forensic profile review. This approach falls short of the changes intended by the OIG in the recommendations from our earlier report. We believe the intended use of the CODIS auditors is insufficient in light of the fact that the FBI is responsible for ensuring compliance of NDIS participants and that no audits, other than the OIG's, are being conducted within the CODIS community to specifically review compliance with NDIS requirements. For example, below we note the inadequacy of the FBI's reliance on self-certification forms to ensure user compliance with restrictions on data in NDIS. These forms serve as one example of the type of documentation that could be audited for compliance if the FBI is to reconsider its intended use of CODIS auditors.

Continued Reliance on Self-certification

During our prior audit, we found that 6 of 8 laboratories uploaded a total of 55 incomplete or unallowable DNA profiles to CODIS, out of the 1,308 profiles we tested. As a result of these findings, the FBI began requiring that at the beginning of each calendar year, each laboratory's CODIS administrator ensure that each CODIS user is reminded of the categories of DNA data accepted at NDIS.⁴⁶ As part of that reminder, each CODIS administrator has CODIS users at their laboratory certify they have received their annual reminder and understand and will abide by what DNA data is accepted at NDIS. An example of this form can be found in Appendix VI.

The certification or "reminder" forms are handled on a self-certification basis. Administrators sign a certification saying that the reminder forms were completed by CODIS users in their laboratory, but the signed individual forms are not submitted to the FBI. Since the certification signed by an administrator does not indicate the number or identity of CODIS users who signed the form, there is no way for the FBI to confirm that all CODIS users have completed the forms as required.

In addition, while the reminder forms were implemented as corrective action to our previous audit, one of the deficiencies noted under that audit was the FBI's reliance upon self-certifications from CODIS participants. As previously noted, OIG CODIS laboratory audits identified that CODIS users at 6 of 18 laboratories audited in FYs 2004 and 2005 did not complete the forms as required.

We recommend that the FBI revise its current certification process to require laboratories to list CODIS users who are certified each calendar year, which would enable the FBI to ensure that all users registered for each laboratory have completed the forms. This action should be completed in conjunction with the FBI's response to the OIG's current related Recommendation No. 12, for greater oversight of compliance of NDIS data.

Improvement in Oversight of QAS Audits

The FBI implemented various corrective action measures in response to previous OIG recommendations for greater oversight of QAS compliance

⁴⁶ A CODIS user is any state or local laboratory employee who has log-in access to the CODIS system or qualified DNA analysts who are responsible for producing the DNA profiles stored in NDIS.

and the adequacy of laboratories' responses to QAS audit findings. Specific changes were:

- To count toward the biannual audit requirement, the FBI implemented a restriction that external QAS audits had to be performed by FBI-trained QAS auditors, using the FBI-developed audit guide to further consistency and thoroughness in the audits that are performed.
- The FBI began requiring NDIS-participating laboratories to supply a copy of each external QAS audit performed at their laboratory to the CODIS Unit, along with all relevant corrective action documentation. In addition, the FBI instituted the Review Panel to examine the audits submitted to the FBI to confirm the scope and uniformity of the QAS audits and to ensure that corrective action was completed for each finding.

We analyzed several sources of documentation regarding the adequacy of these corrective action measures, including the results of the administrator survey. The results of our analysis are stated below.

QAS Audit Document and QAS Auditor Training

According to QAS Standard 15.1, a laboratory must conduct an annual audit to determine compliance with the QAS. Standard 15.2 requires that once every 2 years, a second agency shall participate in the annual audit (referred to as "external QAS audit"). We determined that the FBI implemented a requirement as of January 2002 that if a QAS audit was to count toward meeting QAS Standard 15.2 for an external audit, the audit must be conducted by FBI-trained QAS auditors. This measure assists the FBI in ensuring that the QAS auditors in the DNA community have been provided guidance on the application of the QAS. The FBI also implemented a requirement that the audits conducted in the CODIS community be performed using the FBI's audit document. This document contains comments and guidance on the accepted interpretation of the standards and also assists the FBI in ensuring consistent and thorough application of the QAS to CODIS-participating laboratories. Both of these measures are significant in their scope and have allowed the FBI to greatly improve the DNA community's overall compliance with the QAS since our previous audit.

Based on the survey results and direct OIG experience with the QAS auditor training courses, we noted the need to ensure that training is based on a comprehensive written curriculum and that the supplemental guidance provided in the context of discussion sessions be documented for future

reference and verification of consistency. Currently, the auditor course is based on a presentation given by the course instructors and is linked closely to what is contained in the QAS audit guide maintained by the FBI.

However, speaker notes that provide context and helpful interpretive guidance to course attendees are not available for public reference. Further, the course instructors can include extemporaneous verbal guidance regarding specific standards that is not included in the presentation materials or in the audit guide on which the training is based. The verbal guidance or explanation given in these courses can result in misunderstanding and therefore misapplied guidance. For example, in a course attended by an OIG manager, the speaker responded to a question regarding the use of contract employees for reviewing casework profiles. That answer led to confusion as to the extent of the FBI's policy. The OIG attempted to contact various FBI personnel to clarify the point, but the incident served as an example of the misinterpretation that can occur when verbal guidance is given that is not directly linked to written guidance. The inconsistency between written and verbal guidance can impact both the QAS auditors, hindering their consistent and thorough assessment of compliance, as well as the auditees' understanding of their obligations under the standards. Therefore, we believe the FBI needs to ensure that any significant verbal guidance given in each course is presented consistently with written guidelines.

In addition, we obtained from the FBI's DNAUI Chief ways in which he believes the course could be improved. Particularly noteworthy was the suggestion for web-based training tools, especially since 37 respondents to our CODIS administrator survey made a total of 51 comments regarding the use of the CODIS website to offer better training and guidance resources. Based upon the support for this concept, we believe the FBI should design and implement web-based training tools as a supplement to the QAS auditor training courses being conducted. Such tools would allow those in the CODIS community who have not yet taken the QAS auditor training course to have access to the guidance and clarification they need to ensure compliance. Administrator survey results indicate that 43 percent of those who responded have not taken the QAS auditor training course.

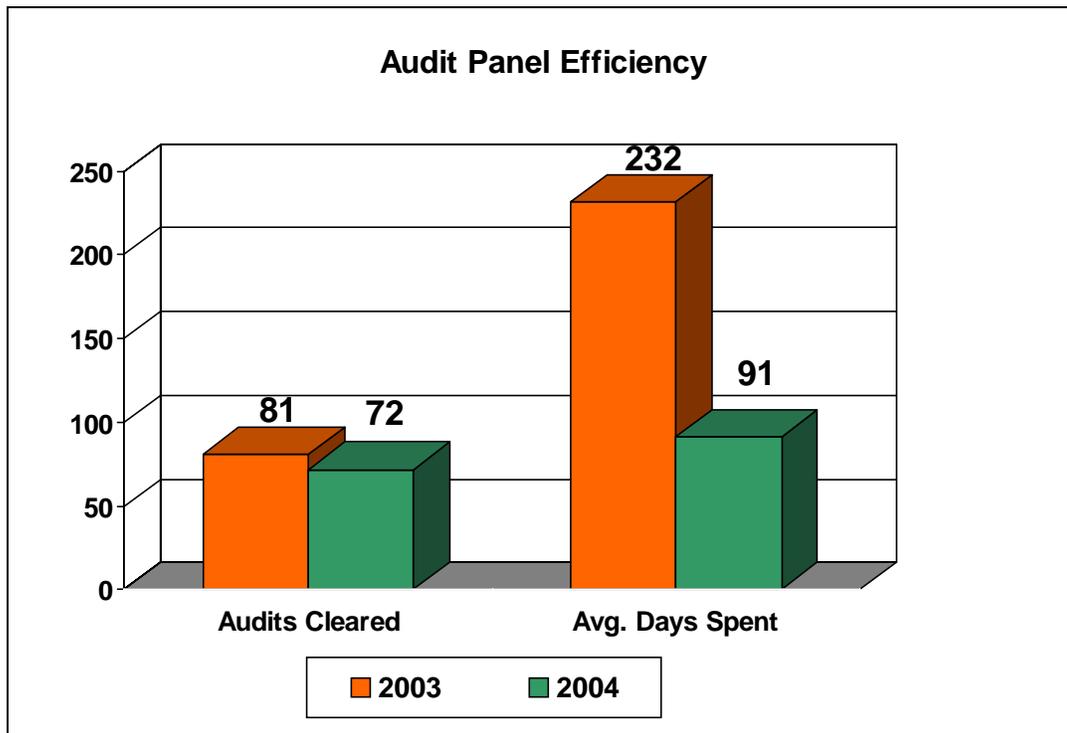
NDIS Audit Review Panel

In January 2002, the FBI instituted a requirement that all external QAS audits performed at NDIS-participating laboratories be provided, along with corrective action documentation, to the Review Panel for examination and clearance. The Review Panel is comprised of volunteer qualified-DNA

examiners who have completed the FBI's QAS auditor training. Each audit is reviewed by four Review Panel members, two from the FBI and two from a state or local forensic DNA laboratory. The Review Panel members provide their analysis of audit findings and corrective action and forward them to the Review Panel chairperson, who consolidates members' analyses and oversees interactions with the audited laboratory. Requests for more information or clarification come from the Review Panel chairperson. When the audit is closed (i.e., the FBI considers the laboratory to be in compliance with the QAS), correspondence to that effect is sent by the NDIS Custodian (currently the CODIS Unit Chief).

Initially, our analysis of FBI data indicated a significant backlog and delay in reviewing and closing the audits submitted to the Review Panel. In our judgment, such delays hinder the FBI's ability to ensure that CODIS participants are currently compliant with the QAS. The CODIS Unit Chief stated that he had taken steps to improve the efficiency of the Review Panel, including a tracking system to ensure timely and complete analysis and response to audits, and assigning a chairperson to the Review Panel who can oversee it. Upon further review, we determined that improvement has been made, as reflected in Figure 15.

Figure 15 – Analysis of Improvement to NDIS Audit Review Panel Efficiency, 2003 to 2004⁴⁷



Source: OIG analysis of NDIS Audit Review Panel records

As can be seen, significant improvements reduced the overall average number of days spent from receipt of the audit to close of the audit from 232 to 91 in just 1 year, while the number of audits cleared remained fairly static. Yet, we noted the following opportunities for additional improvement.

- Review Panel members are required to return their review comments to the chairperson in 30 days. However, we determined that the average time taken in 2004 was 54 days, almost double the time permitted. Although the FBI's ability to enforce that deadline is limited, there is no tracking performed to detect Review Panel members who are consistently and significantly late. We found documentation that consistent delay was true of at least one Review Panel member. The FBI should track Review Panel member timeliness and implement measures that can be taken in the event that panel members are consistently unable to meet the deadline. By remedying this delay, we believe the FBI could improve average turnaround time.

⁴⁷ All of our analysis was done based on calendar days.

- As part of our review of audit trends in 41 external QAS audits, we found that audits where follow-up with the auditee was required averaged 22 days longer, and audits where findings were contested averaged 47 days longer than audits where neither of these delays occurred. By distributing written guidance to the CODIS community regarding how to provide a complete package of information for the panel, the FBI can limit the delays caused by the need to follow up on incomplete information. This guidance must go to the members of the DNA community who are actually compiling the information for the panel. In addition, by ensuring that more members of the CODIS community take the QAS auditor training and by addressing consistency issues with the QAS auditor training, the FBI can reduce the number of challenges to findings by ensuring the QAS auditors are consistent with generally accepted interpretations, and the audited laboratories are clear on what is expected for QAS compliance.
- Finally, the FBI does not have a mechanism for ensuring compliance with the requirement that all external QAS audits be submitted to the Review Panel. While the FBI collects annual information from each NDIS-participating laboratory regarding the audits that were conducted in the preceding year (and in some cases, those that are planned for the current year), there is no cross-check between this information and the Review Panel records to confirm that copies were received of all the external QAS audits conducted. Without a cross-check, the FBI cannot ensure that it is receiving all of the external QAS audits that are conducted at NDIS-participating laboratories. Such a mechanism would require minimal setup and could serve as an added management control to ensure compliance.

In conclusion, we believe the FBI should take action to ensure that its implementation of past corrective action measures fully addresses the weaknesses identified in the OIG's previous audit report and to address additional needs identified in this audit.

Recommendations

We recommend that the FBI:

16. Broaden the current methodology used by FBI QAS auditors for NDIS profile verification to permit the selection of profiles from each laboratory's total profiles in NDIS. This revised methodology should continue once CODIS Unit auditors are on staff.

17. Expand the scope of CODIS Unit auditor duties to include verification of compliance with NDIS requirements.
18. Alter the annual user certification documentation required from laboratories to include information sufficient to confirm that all CODIS users are completing the forms as required.
19. Ensure that QAS auditor training is based upon a comprehensive written curriculum, including guidance that reaches beyond the contents of the audit document.
20. Develop web-based training tools for QAS compliance and auditing information, to aid the CODIS community's awareness, understanding, and consistent interpretation of the QAS.
21. Monitor NDIS Audit Review Panel member performance to ensure that members are timely, and implement procedures for taking action in cases where members are consistently untimely.
22. Track information currently collected from NDIS-participants to ensure all external QAS audits reported to the CODIS Unit are also submitted to the NDIS Audit Review Panel.

STATEMENT ON COMPLIANCE WITH LAWS AND REGULATIONS

As required by the *Government Auditing Standards*, we tested FBI records pertaining to the administration of CODIS to obtain reasonable assurance about the FBI's compliance with laws and regulations that, if not complied with, could have a material effect on the administration of CODIS. Compliance with laws and regulations applicable to CODIS records at the national index level is the responsibility of FBI management. An audit includes examining, on a test basis, evidence about compliance with laws and regulations. The pertinent legislation and the applicable regulations it contains are as follows:

DNA Identification Act of 1994⁴⁸

The DNA Identification Act of 1994 authorized the establishment of a national index of: (1) DNA identification records of persons convicted of crimes, (2) analyses of DNA samples recovered from crime scenes, and (3) analyses of DNA samples recovered from unidentified human remains.

In addition, it specified several standards for those laboratories that contribute profiles to the national index system, including proficiency testing requirements for DNA analysts and privacy protection standards related to the information in the national index system.

Finally, it established criminal penalties for individuals who knowingly violate the privacy protection standards, and provided that access to the national index system was subject to cancellation if the quality control and privacy requirements were not met.

Justice for All Act of 2004⁴⁹

This Act instituted material changes to the DNA Identification Act of 1994, including the:

- creation of a new indicted persons index;

⁴⁸ Pub. L. No. 103-322 (1994).

⁴⁹ Pub. L. No. 108-405 (2004).

- expansion of the offenses for which federal and military offender samples are collected;
- enhancement of the criminal penalties for unauthorized use of NDIS;
- authorization of one-time keyboard searches by all NDIS participants of samples not normally included in NDIS (except for voluntarily submitted elimination samples);
- deletion of the separate requirement for semiannual external proficiency tests (although it retained the separate requirement for biannual external audits);
- requirement for state and local forensic laboratories to be accredited by a nationally recognized program within 2 years of enactment (October 30, 2006); and
- requirement for the FBI to report to Congress any plans to change the "core genetic markers" 180 days prior to that change taking effect.



Our tests revealed that the FBI was compliant with the above legislation, as applicable to the activities during our audit period.

STATEMENT ON INTERNAL CONTROLS

In planning and performing our audit of CODIS, we considered the FBI's internal controls for the purpose of determining our auditing procedures. In addition, we evaluated the process used by the FBI to monitor the compliance of CODIS participants. The evaluation of the FBI was not made for the purpose of providing assurance on the internal control structure as a whole; however, we noted certain matters that we consider to be reportable conditions under the generally accepted *Government Auditing Standards*.

Reportable conditions involve matters coming to our attention relating to significant deficiencies in the design or operation of the internal control structure that, in our judgment, could adversely affect the FBI's ability to administer the CODIS Program. We noted deficiencies relating to the FBI's administration of CODIS, specifically the use of self-certification alone as a control over NDIS-participant compliance with specific NDIS requirements, discussed in Findings I and III. We also noted deficiencies concerning the FBI's monitoring of NDIS-participants' compliance with the QAS and the tracking of instances of non-compliance, as discussed in Finding II. However, we did not consider these deficiencies to be a result of systemic internal control issues.

Because we are not expressing an opinion on the FBI's internal control structure as a whole, this statement is intended solely for the information and use of the FBI in administering CODIS.

OBJECTIVES, SCOPE AND METHODOLOGY

We conducted our audit in accordance with the *Government Auditing Standards* and included such tests as were considered necessary to accomplish the audit objectives. Our audit generally covered the period from October 2003 through November 2005, although in some instances it was necessary to consider documentation from outside that timeframe. The objectives of this audit were to:

1. assess the adequacy of the FBI's administration of CODIS, including its oversight of the national DNA database;
2. analyze findings from DNA laboratory audits, both OIG-conducted audits and external quality assurance audits, to determine if they reveal trends and vulnerabilities; and
3. evaluate the FBI's implementation of corrective actions in response to findings from the OIG's September 2001 audit, *The Combined DNA Index System*.⁵⁰

To accomplish the objectives of this audit we:

- Developed and conducted a survey of 174 NDIS participating laboratories to obtain feedback from CODIS administrators on the FBI's administration of CODIS.
- Interviewed CODIS Unit management regarding staffing, position responsibilities, and the planned timeline for filling vacant CODIS Unit positions.
- Interviewed FBI management regarding the mission, goals, objectives, and performance measurements for the CODIS Unit, and obtained copies of all supporting documentation for those strategic planning items.
- Reviewed contract and operations documents to verify the operation, maintenance, and security of the CODIS System.

⁵⁰ Department of Justice, Office of the Inspector General. Audit Report No. 01-26, *The Combined DNA Index System*, September 2001.

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- Reviewed FBI documentation and interviewed FBI management to verify that the proper changes have been made to the database as required by the Justice for All Act of 2004.⁵¹
- Reviewed FBI documentation and interviewed FBI management regarding the current status and plans of each of the corrective action measures implemented as a result of the prior OIG audit of CODIS.
- Reviewed 18 OIG CODIS laboratory audits and identified trends in the findings.
- Reviewed a random sample of 41 external laboratory evaluation reports and supporting documentation for corrective action taken, if any, to determine if any trends or vulnerabilities could be detected from a collective review of quality assurance laboratory findings.⁵²
- Analyzed the tracking system maintained by the CODIS Unit for the processing of audits through the NDIS Audit Review Panel (Review Panel), to determine the efficiency of the process and the timeliness of Review Panel member submissions on their assessment of each audit.

The following sections provide additional detail for work that specific actions listed in the preceding list.

OIG CODIS Administrator Survey

Using information obtained during meetings with the FBI and CODIS administrators, including issues that were raised during open discussion at the SDIS administrator's meeting in May 2005, we developed a survey for completion by CODIS administrators at NDIS-participating laboratories. The survey provided us with feedback on the FBI's administration of CODIS and laboratory concerns about quality issues or problems in the CODIS community. We included open-ended and static-option questions. For those questions where we provided static options, we included space for

⁵¹ Pub. L. No. 108-405 (2004).

⁵² The QAS require that laboratories undergo annual audits and, that at least every other year, the audit must be performed by an external agency that performs DNA identification analysis and is independent of the laboratory being reviewed. These annual audits are not required by the QAS to be performed in accordance with the *Government Auditing Standards* (GAS) and are not performed by the Office of the Inspector General. Therefore, we will refer to the annual audits as evaluations (either an internal laboratory evaluation or an external laboratory evaluation, as applicable) to avoid confusion with our audit, which was conducted in accordance with GAS.

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miscellaneous comments. In addition, we assured the CODIS administrators that responses would be confidential and individual responses would not be singled out in a way that could identify the source of the information.

After the initial draft of the survey was created, we tested the survey on members of the CODIS community. We used information received from the FBI to select experienced individuals to test the survey, being careful not to select CODIS administrators to preserve the universe for our final survey. We contacted six members of the DNA community and all six responded. Additional revisions were made to the survey based upon the test respondents' comments, and were reflected in the final version.

The final version of the survey was e-mailed to 174 CODIS administrators on June 7, 2005. A list of the CODIS participating laboratories to which we sent the survey appears in Appendix II. CODIS administrators were initially given until June 24, 2005, to complete the survey and return it via e-mail, fax, or U.S. mail. On June 21, 2005, we sent out a reminder e-mail and, on June 28, 2005, we sent out a third e-mail extending the deadline to July 7, 2005. We extended the deadline to give non-responding states a chance to reply.

As of July 7, 2005 (the extended deadline), we had received 139 surveys. However, there were 6 states from which we still had not received a response. In a final attempt to give these six states a chance to submit a survey we contacted them via e-mail on July 29, 2005.

After all the extensions (August 15, 2005 was the final cut-off date) we still had not heard from Idaho and Rhode Island. We noted that a member of the Connecticut laboratory had provided a response, but did so during the test phase of the survey, and since the survey changed after that response was received, we could not include it in our results.

The survey contained 46 questions which were broken into seven sections: (1) demographics, (2) FBI CODIS Unit responsiveness, (3) allowability of DNA profiles, (4) laboratory quality, (5) general CODIS operations, (6) NDIS Audit Review Panel, and (7) FBI guidance to the CODIS community.

Additional information about how we tallied the survey responses, and a summary of the actual responses received can be found in Appendix VII.

OIG CODIS Laboratory Audits

During our audit we analyzed a total of 18 OIG CODIS laboratory audits, of which 6 were issued in final for FY 2004 and 12 were issued in final for FY 2005.⁵³ A list of the 18 OIG CODIS laboratory audits is contained in Appendix V.

We identified and analyzed trends from each audit specific to profile allowability as well as the number of findings for the five different QAS sections reviewed during the audits, as follows.

- NDIS participation requirements,
- quality assurance standards (QAS),
- forensic profiles,
- convicted offender profiles, and
- other reportable matters.

External QAS Evaluations

We tested the FBI's records for the Review Panel and the external QAS evaluations submitted to it. We judgmentally selected 10 participating states and compared the FBI's electronic records against the written records used to create the electronic records. We found no material differences in the tracking system. As a result we did not expand our sample and relied on the information contained in the electronic records.

In addition to reviewing the tracking system for data reliability, we determined if delays in the process were significant, if the timeliness was improving, and whether the Review Panel members were meeting the 30-day deadline set forth in the NDIS procedures for reviewing audits. In order to see if the timeliness had improved we analyzed the information contained in the FBI's records for both 2003 and 2004.⁵⁴

⁵³ In our analysis, we included two audit reports for audits completed in FY 2005 that were not issued until early FY 2006.

⁵⁴ All of our analysis was done based on calendar days.

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Working with the information provided to us from the FBI, we determined that there were 72 closed evaluations in 2004 and 11 closed evaluations in 2005. We tested 50 percent, or 41, of these evaluations.

We used random sample selection over the 2 years of interest since our goal was to conduct a trend analysis and to look at findings at more laboratories. Further, we stratified our sample to ensure we selected a percentage of SDIS and LDIS laboratories representative of the whole universe. We excluded laboratories the OIG had already audited, to avoid requesting information similar to what had been requested previously.

We notified the CODIS Unit Chief that we would be contacting the laboratories to request copies of external QAS evaluations and related correspondence. We provided him with copies of any written correspondence we issued in order to acquire the documentation we needed to complete our review.

Using contact information obtained from the FBI we contacted CODIS administrators for each of the laboratories and explained the following:

- We were conducting an audit of the FBI's CODIS Unit, and in connection with that, we needed to obtain documentation to confirm the FBI's records for the Review Panel.
- We had selected a sample of the evaluations conducted and cleared from 2004 through July 2005, and their laboratory's evaluation was one of those selected.
- Since the FBI returns all documentation from the submitting laboratories, we needed to obtain copies of documentation directly from them.
- For the evaluation selected (specific dates were provided), we needed a copy of the completed evaluation document and any correspondence that had been sent to or received from the FBI related to that evaluation (not including complete corrective action documentation, such as revised policies or procedures).

The 41 laboratories in our sample represent 19 states and 1 federal agency. We analyzed the evaluations in our sample for trends and statistics. Specifically, we calculated:

- the number of findings (based on QAS section numbers);

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- the average number of findings per laboratory, with and without adjustments for overturned findings;
- the number and percentage of overturned findings; and
- the number of laboratories with common findings, without common findings, and with no findings, divided into categories of SDIS and LDIS laboratories.

In our analysis, we relied upon the findings and conclusions of the QAS evaluators within the DNA community, and did not perform any assessment as to the scope of their work. In addition, we did not confirm whether those evaluators met the requirements for conducting external QAS evaluations, specifically the requirement that they successfully complete the FBI's QAS auditor training.

We compared the documentation received from the laboratories to the information the FBI had provided in its Review Panel record spreadsheets, to verify accuracy of those records. We also tracked whether the Review Panel had to follow up with the laboratories and whether findings were challenged by the laboratories, to determine if those issues impeded the timeliness of the Review Panel process.

LIST OF SURVEYED LABORATORIES

1. Department of Forensic Science, South Birmingham, Alabama
2. Department of Forensic Science, Huntsville, Alabama
3. Department of Forensic Science, Mobile, Alabama
4. Department of Forensic Science, Montgomery, Alabama
5. Department of Forensic Science, South Birmingham, Alabama
6. Department of Forensic Science, South Birmingham, Alabama
7. Scientific Crime Detection, Anchorage, Alaska
8. State Crime Laboratory, Little Rock, Arkansas
9. Department of Public Safety Crime Laboratory, Flagstaff, Arizona
10. Police Department Crime Laboratory, Mesa, Arizona
11. Department of Public Safety Crime Laboratory, Phoenix, Arizona
12. Police Department Crime Laboratory, Phoenix, Arizona
13. Police Department Crime Laboratory, Scottsdale, Arizona
14. Department of Public Safety Crime Laboratory, Tucson, Arizona
15. Police Department Crime Laboratory, Tucson, Arizona
16. Kern County Regional Crime Laboratory, Bakersfield, California
17. California Department of Justice, Fresno, California
18. California Department of Justice, Richmond, California
19. Los Angeles County Sheriff's Department, Los Angeles, California
20. Los Angeles Police Department, Los Angeles, California
21. Contra Costa County Sheriff's Office, Martinez, California
22. Oakland Police Department Crime Laboratory, Oakland, California

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23. Richmond Missing Persons Laboratory, Richmond, California
24. California Department of Justice DNA Laboratory, Richmond, California
25. Orange County Sheriff's Department, Santa Ana, California
26. District Attorney's Office Laboratory of Forensic Services, Sacramento, California
27. California Department of Justice, Sacramento, California
28. Sheriff's Department Scientific Investigations Division, San Bernardino, California
29. Sheriff's Department Crime Laboratory, San Diego, California
30. Police Department Forensic Science Section, San Diego, California
31. Police Department Criminalistics Laboratory, San Francisco, California
32. Santa Clara County District Attorney's Crime Laboratory, San Jose, California
33. Sheriff's Department Crime Laboratory, Ventura, California
34. Alameda County Sheriff's Criminalistics Laboratory, San Leandro, California
35. Colorado Bureau of Investigation Laboratory Section, Denver, Colorado
36. Colorado Bureau of Investigation Laboratory Section, Montrose, Colorado
37. Colorado Bureau of Investigation Laboratory Section, Pueblo, Colorado
38. Denver Police Department Crime Laboratory, Denver, Colorado
39. State Police Forensic Science Laboratory, Meriden, Connecticut
40. Office of the Chief Medical Examiner, Wilmington, Delaware
41. Broward County Sheriff's Office, Fort Lauderdale, Florida
42. Miami-Dade Police Department, Miami, Florida

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43. Florida Department of Law Enforcement, Jacksonville, Florida
44. Florida Department of Law Enforcement, Pensacola, Florida
45. Florida Department of Law Enforcement, Tampa, Florida
46. Florida Department of Law Enforcement, Tallahassee, Florida
47. Florida Department of Law Enforcement, Tallahassee, Florida
48. Florida Department of Law Enforcement, Orlando, Florida
49. Indian River Crime Laboratory, Fort Pierce, Florida
50. Palm Beach Sheriff's Office Crime Laboratory, West Palm Beach, Florida
51. United States Army Criminal Investigation Laboratory, Forest Park, Georgia
52. Georgia Bureau of Investigation, Decatur, Georgia
53. Georgia Bureau of Investigation, Savannah, Georgia
54. Honolulu Police Department DNA Laboratory, Honolulu, Hawaii
55. Iowa Department of Public Safety Division of Criminal Investigation, Ankeny, Iowa
56. State Police Forensic Services, Meridian, Idaho
57. State Police Forensic Laboratory Biochemistry Section, Chicago, Illinois
58. DuPage County Sheriff's Crime Laboratory, Wheaton, Illinois
59. State Police Forensic Science Laboratory, Carbondale, Illinois
60. State Police Forensic Science Laboratory, Fairview Heights, Illinois
61. State Police Forensic Science Laboratory, Springfield, Illinois
62. State Police Forensic Science Laboratory, Springfield, Illinois
63. State Police Forensic Science Laboratory, Morton, Illinois

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64. State Police Forensic Science Laboratory, Joliet, Illinois
65. State Police Forensic Science Laboratory, Rockford, Illinois
66. Marion County Forensic Services Agency, Indianapolis, Indiana
67. State Police Regional Laboratory, Lowell, Indiana
68. State Police Laboratory, Indianapolis, Indiana
69. Kansas Bureau of Investigation, Great Bend, Kansas
70. Johnson County Criminalistics Laboratory, Mission, Kansas
71. Sedgwick County Regional Forensic Science Center, Wichita, Kansas
72. Kansas Bureau of Investigation, Topeka, Kansas
73. Kansas Bureau of Investigation, Kansas City, Kansas
74. Kentucky State Police Forensic Laboratory, Frankfort, Kentucky
75. North Louisiana Criminalistics Laboratory, Shreveport, Louisiana
76. Acadiana Criminalistics Laboratory, New Iberia, Louisiana
77. Jefferson Parish Forensic Center DNA Laboratory, Metairie, Louisiana
78. Police Department Scientific Investigations Division, New Orleans, Louisiana
79. State Police Crime laboratory, Baton Rouge, Louisiana
80. Police Crime Laboratory, Boston, Massachusetts
81. State Police Crime Laboratory, Sudbury, Massachusetts
82. Anne Arundel County Crime Laboratory, Millersville, Maryland
83. Baltimore County Police Department Forensic Services Division, Towson, Maryland
84. Montgomery County Department of Police Crime Laboratory Forensic Biology Unit, Rockville, Maryland

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85. Prince Georges County Police Department Crime Laboratory, Landover, Maryland
86. Police Department Laboratory, Baltimore, Maryland
87. State Police Forensic Sciences Division, Pikesville, Maryland
88. State Police Crime Laboratory, Augusta, Maine
89. Hennepin County Sheriff's Office, Minneapolis, Minnesota
90. Minnesota Bureau of Criminal Apprehension, St. Paul, Minnesota
91. State Police Crime Laboratory, Lansing, Michigan
92. State Police Crime Laboratory, Northville, Michigan
93. State Police Crime Laboratory, Grand Rapids, Michigan
94. Police Forensic Services Division, Detroit, Michigan
95. State Police Crime Laboratory, Jackson, Mississippi
96. Metropolitan Police Department Laboratory Division, St. Louis, Missouri
97. St. Louis County Police Department Crime Laboratory, Clayton, Missouri
98. State Highway Patrol Crime Laboratory Division, Jefferson City, Missouri
99. Regional Crime Laboratory, Kansas City, Missouri
100. Department Of Justice Forensic Science Division, Missoula, Montana
101. State Patrol Crime Laboratory, Lincoln, Nebraska
102. State Forensics Laboratory Department of Safety, Concord, New Hampshire
103. State Police Central Laboratory, Hamilton, New Jersey
104. Criminalistics Laboratory Metropolitan Forensic Science Center, Albuquerque, New Mexico

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105. DNA ID System Administrative Center, Metropolitan Forensic Science Center, North West Albuquerque, New Mexico
106. Department of Public Safety, Santa Fe, New Mexico
107. Metropolitan Police Department Forensic Laboratory, Las Vegas, Nevada
108. Washoe County Sheriff's Office, Reno, Nevada
109. Erie County Central Police Services, Buffalo, New York
110. Office of the Medical Examiner, Nassau County, East Meadow, New York
111. Suffolk County Crime Laboratory, Hauppauge, New York
112. Office of the Chief Medical Examiner Department of Health, New York, New York
113. Monroe County Public Safety, Rochester, New York
114. Onondaga County Crime Laboratory Center for Forensic Sciences, Syracuse, New York
115. Westchester County Department of Laboratories and Research, Valhalla, New York
116. State Police Crime Laboratory, Albany, New York
117. Charlotte-Mecklenburg Police Crime Laboratory, Charlotte, North Carolina
118. Bureau of Investigation Crime Laboratory, Raleigh, North Carolina
119. Office of Attorney General Crime Laboratory Division, Bismarck, North Dakota
120. Bureau of Criminal Investigation, Bowling Green, Ohio
121. Canton/Stark County Crime Laboratory, Canton, Ohio
122. Hamilton County Coroner's Laboratory, Cincinnati, Ohio

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123. Cuyahoga County Coroner's Office, Cleveland, Ohio
124. Police Department Crime Laboratory, Columbus, Ohio
125. Miami Valley Regional Crime Laboratory, Dayton, Ohio
126. Bureau of Criminal Investigation, London, Ohio
127. Police Department Crime Laboratory, Mansfield, Ohio
128. Lake County Regional Forensic Laboratory, Painesville, Ohio
129. Bureau of Criminal Investigation, Richfield, Ohio
130. State Bureau of Investigation, Oklahoma City, Oklahoma
131. Police Department, Oklahoma City, Oklahoma
132. Police Department Forensic Laboratory, Tulsa, Oklahoma
133. Oregon State Police, Portland Metro Forensic Laboratory, Clackamas, Oregon
134. State Police, Bethlehem, Pennsylvania
135. State Police, Greensburg, Pennsylvania
136. Police Forensic Science Center DNA Identification Laboratory, Philadelphia, Pennsylvania
137. Allegheny County Division of Laboratories, Pittsburgh, Pennsylvania
138. Estado Libre Asociado de Puerto Rico Instituto de Ciencias Forenses de Puerto Rico Laboratorio de Criminalistica, San Juan, Puerto Rico
139. Department of Health Forensic Laboratories, Providence, Rhode Island
140. Law Enforcement Division, Columbia, South Carolina
141. Richland County Sheriff's Department, Columbia, South Carolina
142. Forensic Laboratory, Pierre, South Dakota
143. Bureau of Investigation Crime Laboratory, Knoxville, Tennessee

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144. Bureau of Investigation Crime Laboratory, Memphis, Tennessee
145. Bureau of Investigation Crime Laboratory, Nashville, Tennessee
146. Department of Public Safety Crime Laboratory, Austin, Texas
147. Department of Public Safety Headquarters Laboratory, Austin, Texas
148. Police Department, Austin, Texas
149. Department of Public Safety Crime Laboratory, Corpus Christi, Texas
150. Southwestern Institute of Forensic Sciences Dallas, Texas
151. Department of Public Safety Crime Laboratory, El Paso, Texas
152. Tarrant County Medical Examiner's Office, Fort Worth, Texas
153. University of North Texas Health Science Center DNA Identification Laboratory, Fort Worth, Texas
154. Department of Public Safety Crime Laboratory, Garland, Texas
155. Department of Public Safety Crime Laboratory, Houston, Texas
156. Department of Public Safety Crime Laboratory, Lubbock, Texas
157. Department of Public Safety Crime Laboratory, McAllen, Texas
158. Bexar County Forensic Science Center, San Antonio, Texas
159. Harris County Medical Examiner's Office, Houston, Texas
160. Department of Public Safety Crime Laboratory, Waco, Texas
161. Department of Public Safety Crime Laboratory, Salt Lake City, Utah
162. Western Regional Forensic Laboratory, Roanoke, Virginia
163. Northern Regional Forensic Laboratory, Fairfax, Virginia
164. Eastern Regional Forensic Laboratory, Norfolk, Virginia
165. Central Regional Forensic Laboratory, Richmond, Virginia

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166. Department of Public Safety Forensic Laboratory, Waterbury, Vermont
167. Crime Laboratory, Marysville, Washington
168. State Patrol Crime Laboratory, Seattle, Washington
169. State Patrol Crime Laboratory, Spokane, Washington
170. State Patrol Crime Laboratory, Tacoma, Washington
171. State Crime Laboratory, Madison, Wisconsin
172. State Crime Laboratory, Milwaukee, Wisconsin
173. State Police Crime Laboratory, South Charleston, West Virginia
174. State Crime Laboratory, Cheyenne, Wyoming

AUDIT CRITERIA

In this appendix, we summarize the sources of criteria that we used in the completion of this audit. Note that we only list criteria specific to our audit of the FBI, versus the audit criteria used to complete the OIG's CODIS laboratory audits (addressed in Appendix IV), the results of which we analyzed for this audit.

Federal Legislation

Various pieces of legislation have been enacted over the past 11 years that have helped shape the CODIS program. Two of these have been the primary instruments of creation and change, *The DNA Identification Act of 1994* and the *Justice for All Act of 2004*.⁵⁵ We used these items of legislation as criteria to evaluate the FBI's administration of CODIS (Objective number one and two) and the FBI's implementation of corrective actions in response to previous OIG audit findings (Objective number three).

The DNA Identification Act of 1994

This Act authorized the FBI to establish and maintain CODIS. The Act also established the DNA Advisory Board to compose standards for quality assurance with which CODIS-participating laboratories would have to comply and which the Director of the FBI could then formally institute. The Act also required the FBI to institute physical and electronic controls over the information in CODIS, which led to the creation of the NDIS Requirements.⁵⁶

Justice for All Act of 2004

This Act consists of three sections, The Debbie Smith Act which expands the database and allows for one-time keyboard searches, the DNA Sexual Assault Justice Act which requires all laboratories to be accredited by October 30, 2006, and the Innocence Protection Act of 2004, which establishes various provisions for post conviction DNA testing. A more detailed description of each section is as follows.⁵⁷

⁵⁵ Pub. L. No. 103-322 (1994); Pub. L. No. 108-405 (2004).

⁵⁶ Pub. L. No. 103-322 (1994).

⁵⁷ Pub. L. No. 108-405 (2004).

Debbie Smith Act of 2004. Requires laboratories to implement corrective action to findings identified in QAS audits, giving greater emphasis to the NDIS Audit Review Panel and the DNA community auditing organizations. Expands CODIS to include samples from indicted criminals, and expands the offenses for the Federal Convicted Offender Program to all felons. This section also expands the authority for keyboard searches and increases the penalties for misuse. It also, requires the FBI to report to Congress if changes are made to the CODIS "core genetic markers."

The DNA Sexual Assault Justice Act of 2004. Requires laboratories who receive grant funds to be accredited, and reiterates the requirement for biannual external audits that demonstrate compliance with the QAS. Also requires accreditation by October 30, 2006.

Innocence Protection Act of 2004. This Act deals primarily with post-conviction DNA testing, when and how that testing will be made available, and how the results will be interpreted, including what is entered into NDIS and when those profiles can be retained.

NDIS Participation Requirements

We considered one of the NDIS procedures, *Review of External Audits*, as part of our audit criteria, and tested compliance with the requirements that apply to the FBI's performance, as excerpted below.

Quality Assurance Standard Audit Review – General Overview (Section 5.0):

In response to a finding by the Office of the Inspector General (June, 2001) that the self-certification of compliance with the FBI Director's QAS was insufficient to ensure that audit findings, if any, were appropriately resolved, the FBI Laboratory developed a program to review the external QAS audits conducted at NDIS Participating Laboratories. Therefore, to fulfill its obligations under the DNA Identification Act of 1994, the FBI Laboratory will review all external QAS audits of laboratories seeking to participate in NDIS and NDIS Participating Laboratories to evaluate any findings and determine if further action is warranted.

To facilitate the review process, NDIS Participating Laboratories shall forward the audit report to the NDIS Custodian upon their receipt of the report. The NDIS Custodian will review the report and if there are no findings, the review shall be deemed complete and the documentation returned to the NDIS Participating Laboratory. If there are findings that do

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not relate to DNA and or a laboratory's participation in NDIS, the review shall also be deemed complete and the documentation returned to the NDIS Participating Laboratory. However, if there are any findings relating to DNA or a laboratory's participation in NDIS, the report shall be forwarded to the NDIS Audit Review Panel, which will review the audit report and determine if the findings have been addressed and resolved, as necessary. If there are no findings but comments are present, the external audit report shall be forwarded to the chairperson of the NDIS Audit Review Panel for review and possible action. If further action is warranted, the chairperson of the NDIS Audit Review Panel will follow up with the NDIS Participating Laboratory to resolve any outstanding issues. In the event that the NDIS Participating Laboratory fails to respond to the NDIS Audit Review Panel or that there appears to be non-compliance with the QAS, the matter shall be referred to the NDIS Procedures Board (see Section 6.3) for further action in accordance with the DNA Identification Act of 1994.

All audit documents and related communications will be returned to the NDIS Participating Laboratory for filing upon completion of the review process.

NDIS Audit Review Panel (Section 6.2)

Once the audit documentation is received and forwarded by the NDIS Custodian, the chairperson of the NDIS Audit Review Panel shall review the documentation to ensure that the findings have been resolved and if necessary, follow up with the NDIS Participating Laboratory.

There shall be multiple NDIS Audit Review Panels sufficient to address the number of external QAS audits requiring review. An NDIS Audit Review Panel shall consist of five qualified or previously qualified DNA examiners or analysts who have successfully completed the training on the QAS Audit Document: (1) at least two of whom shall be representatives of state or local forensic DNA laboratories; and (2) at least two of whom shall be representatives of the FBI. The FBI shall designate someone who shall serve as chairperson of each such Review Panel and shall have voting privileges. NDIS Audit Review Panel members shall provide their comments, if any, to the chairperson of the NDIS Audit Review Panel.

NDIS Audit Review Panel members shall have 30 days to complete their review and communicate their findings to the chairperson of the NDIS Audit Review Panel. In the event any NDIS Audit Review Panel member is unable to perform their review within the 30 days, the Review Panel member shall notify the chairperson of the NDIS Audit Review Panel.

NDIS Procedures Board (Section 6.3)

The NDIS Procedures Board shall review all external QAS audits referred to it by the NDIS Custodian.

In instances in which the NDIS Audit Review Panel is unable to resolve a matter because of the NDIS Participating Laboratory's failure to clarify its position or provide additional information, the NDIS Procedures Board shall send a written request to the Laboratory Director requesting the clarification or information within two weeks. In the event that the Laboratory Director does not respond to the request for clarification or information within the requisite timeframe, the NDIS Procedures Board shall notify the Laboratory Director in writing (with a copy to the appropriate Agency head) that the Participating Laboratory's failure to respond within one week shall result in cancellation of that Laboratory's access to NDIS in accordance with the DNA Identification Act of 1994.

In instances in which the NDIS Audit Review Panel found that the NDIS Participating Laboratory did not comply with the external QAS audit or QAS, the NDIS Procedures Board shall send a written request to the Laboratory Director requesting a response within two weeks. In the event that the Laboratory Director does not respond within the requisite timeframe, the NDIS Procedures Board shall notify the Laboratory Director in writing (with a copy to the appropriate Agency head) that the Participating Laboratory's failure to respond within one week shall result in cancellation of that Laboratory's access to NDIS in accordance with the DNA Identification Act of 1994.

Quality Assurance Standards

The QAS are one of the key sources of criteria for audits of CODIS-participating laboratories. Two sets of standards have been instituted: (1) the *Quality Assurance Standards for Forensic DNA Testing Laboratories* effective October 1, 1998; and (2) the *Quality Assurance Standards for Convicted Offender DNA Databasing Laboratories* effective April 1, 1999. While we did not use the QAS as direct criteria for this audit, we did rely upon evaluations of QAS compliance completed by scientists within the DNA community for our assessment of QAS findings and trends. Consequently, we include here a general description of the QAS sections and the topics covered by each section.

- QAS Section 3 addresses standards regarding a laboratory's quality assurance program.

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- QAS Section 4 addresses standards governing a laboratory's organization and management, including requirements for specific personnel roles and duties.
- QAS Section 5 addresses standards governing personnel qualifications and responsibilities.
- QAS Section 6 addresses standards governing facility security and quality control.
- QAS Section 7 addresses standards governing evidence or sample control, security, and handling.
- QAS Section 8 addresses standards governing validation of methods and procedures.
- QAS Section 9 addresses standards governing the scope, quality control, and monitoring of analytical procedures.
- QAS Section 10 addresses standards governing equipment calibration and maintenance.
- QAS Section 11 addresses standards governing reports and corresponding case file records.
- QAS Section 12 addresses standards governing reviews of analytical results, reports, and court testimony.
- QAS Section 13 addresses standards pertaining to proficiency testing, including its nature, frequency, and documentation.
- QAS Section 14 addresses standards pertaining to corrective action documentation and procedures.
- QAS Section 15 addresses standards governing requirements for internal and external audits.
- QAS Section 16 addresses standards governing laboratory safety.
- QAS Section 17 addresses standards pertaining to outsourcing DNA analysis to a contract laboratory.

AUDIT CRITERIA FOR CODIS LABORATORY AUDITS

In conducting the OIG's CODIS laboratory audits, we considered the following elements of the NDIS participation requirements and the QAS. However, we did not test for compliance with elements that are not applicable to the laboratory. In addition, the OIG has established standards to test the completeness and accuracy of DNA profiles and the timely notification of law enforcement when DNA profile matches occurred in NDIS. Further, we considered applicable state legislation, specific to each location audited, as part of our testing of convicted offender DNA profiles.

NDIS Participation Requirements

The NDIS participation requirements, which consist of the 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. Audit criteria for the OIG CODIS laboratory audits includes the following requirements from MOU Appendix A – NDIS Responsibilities.

- Organizational Responsibilities (Requirement II.B.4) – Comply with FBI requirements for safeguarding CODIS against unauthorized use, including providing an appropriate and secure site for the NDIS system.
- System Operation (Requirement III.B.2) – Ensure that appropriate personnel are provided copies of, understand, and abide by the NDIS operational procedures.
- System Operation (Requirement III.B.3) – Identify in writing, in prescribed form, personnel approved to access CODIS and ensure that access to CODIS is limited to them.
- Reporting and Record-keeping Requirements (Requirement VI.B.1) – Report on a monthly basis, confirmed NDIS matches to the FBI in a form prescribed by the FBI.
- Reporting and Record-keeping Requirements (Requirement VI.B.3) – Provide to the NDIS Custodian a written report of deletions or modifications within 10 business days of discovering that a DNA record requires deletion or modification.

- Reporting and Record-keeping Requirements (Requirement VI.B.4) – Maintain records on these personnel, including proficiency testing records and any other report required by the FBI, for a period of 10 years.

Audit criteria for OIG CODIS laboratory audits also includes the following operational procedures from MOU Appendix C - NDIS Procedures Manual.⁵⁸ The remainder of the manual consists of sets of procedures outside the scope of the OIG CODIS laboratory audits.

DNA Data Acceptance Standards⁵⁹

Interpretation of DNA Profiles (Sections 6.4.2 and 6.4.3) – Only forensic profiles derived from forensic evidence matching the suspected perpetrators or an unknown individual can be uploaded to NDIS. Profiles clearly matching the victim or any known person other than the suspected perpetrators cannot be uploaded to NDIS. In the case of mixtures, the profile must not contain any portion of the analysis results that clearly belong only to the victim; a mixture that cannot be clearly separated into a portion matching the victim or other known person and the portion matching the suspected perpetrator is allowable.

Add a User from a Participating Laboratory to NDIS

Adding a State or Local CODIS User to NDIS (Section 4.0) – Adding state or local CODIS users to NDIS can occur under two circumstances. First, users may be added when a state begins to participate in NDIS. Second, users may be added periodically as states add new CODIS users. To add a user, the designated state official will send a letter to the NDIS Custodian requesting the addition.

The letter must be accompanied by:

- FD-484: Privacy Act explanation;
- FD-258: Fingerprint (10 Print) card, two copies;

⁵⁸ The manual, a collection of operational procedures to be followed for various processes pertinent to the functioning of NDIS, was actually issued separately from the MOU, although it is still considered an appendix to the MOU.

⁵⁹ The MOU, Appendix B, addresses DNA data acceptance standards. We did not include Appendix B in our audit criteria because the DNA Data Acceptance Standards' operational procedure addresses the same issues and is more current than Appendix B.

- FD-816: Background Data Information Form;
- CODIS user information;
- External Proficiency Testing Document for each Qualified DNA Analyst; and
- DNA Data Acceptable at NDIS form for each user.

The letter shall include a certification by the designated state official that all qualified DNA analysts being added will undergo external proficiency testing as required by the DNA Identification Act and the MOU.

DNA Data Accepted at NDIS

Annual Reminder for Users (Section 5.0) – At the beginning of each calendar year, on an annual basis, the CODIS administrator shall ensure that each user (personnel who have log-in access to the CODIS system and or qualified DNA analysts who are responsible for producing the DNA profiles stored in NDIS) is reminded of the categories of DNA data accepted at NDIS. The CODIS administrator shall then have each user confirm they have received their annual reminder and understand and will abide by the DNA data acceptance requirements. Completed annual reminders for each user shall be filed and maintained by the CODIS administrator and available for inspection.

Review of External Evaluations

Notification of External Evaluation and Forwarding of Evaluation Documents (Section 6.1) – It shall be the responsibility of the NDIS Participating Laboratory to arrange and schedule an external QAS evaluation once every two years. After January 1, 2002, the NDIS Participating Laboratory shall have only those persons who have successfully completed the FBI training course for the QAS Audit Document perform such external QAS evaluation. The NDIS Participating Laboratory shall notify the NDIS Custodian once the external QAS evaluation has been conducted and the evaluation report will be forwarded for review within 30 days of the laboratory's receipt of the report. The NDIS Participating Laboratory shall include with the evaluation report any clarifications, responses and or corrective action plans or documents (hereinafter referred to as "evaluation documentation"), as appropriate. The NDIS Custodian shall acknowledge this communication. If the NDIS Participating Laboratory is unable to forward the required evaluation documentation within 30 days, the NDIS

Participating Laboratory shall notify the NDIS Custodian to request an extension of time for sending the required evaluation documentation.

Confirming an Interstate Candidate Match

Responsibilities (Sections 3.2 and 4.2) and Procedures (Sections 3.3 and 4.3) – Candidate matches must be resolved within 30 calendar days. Resolution is refuting or confirming that the candidate match is a valid match. Laboratories are to document the disposition of a candidate match. Further, for confirmed matches, the documentation is to include the interaction between the two laboratories and the notification to law enforcement of the match for unsolved cases.

Expunging a DNA Profile

Responsibilities (Section 3.0) – Included in the DNA Analysis Backlog Elimination Act of 2000 was a requirement for states to expunge the DNA profiles of persons whose qualifying convictions had been overturned. This Act was effective December 19, 2001, and requires that states participating in NDIS “shall promptly expunge from that index the DNA analysis (DNA profile) of a person included in the index by that state if the responsible agency or official of that state receives, for each conviction of the person of an offense on the basis of which that analysis (profile) was or could have been included in the index, a certified copy of a final court order establishing that such conviction has been overturned.”

A participating state shall have procedures in place for expunging a DNA profile, regardless of whether or not its state DNA law requires it.

Quality Assurance Standards

The FBI issued two sets of quality assurance standards – the *Quality Assurance Standards for Forensic DNA Testing Laboratories*, effective October 1, 1998, (Forensic QAS); and the *Quality Assurance Standards for Convicted Offender DNA Databasing Laboratories*, effective April 1, 1999, (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 the OIG CODIS laboratory audits, we generally relied on the reported results of the laboratory's most recent annual external evaluation

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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 quality assurance standards listed below, because they have a substantial effect on the integrity of the DNA profiles uploaded to NDIS.

- Facilities (Forensic QAS and Offender QAS Standard 6.1) – The laboratory shall have a facility that is designed to provide adequate security and minimize contamination.
- Evidence Control (Forensic QAS Standards 7.1 and 7.2) – 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 Standard 7.1) – The laboratory shall have and follow a documented sample inventory control system.
- Analytical Procedures (Forensic QAS Standard 9.4 to 9.4.2 and Offender QAS Standard 9.3 to 9.3.2) – The laboratory shall monitor the analytical procedures using appropriate controls and standards.
- Review (Forensic QAS Standard 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 database sample information, results, and matches.

- Evaluations (Forensic QAS and Offender QAS Standards 15.1 and 15.2) – The laboratory shall conduct evaluations annually in accordance with the QAS. Once every two years, a second agency shall participate in the annual evaluation.
- Subcontractor of Analytical Testing for which Validated Procedures Exist (Forensic QAS and Offender QAS Standard 17.1) – A laboratory operating under the scope of the QAS will require certification of compliance with these standards when a subcontractor performs DNA analyses for the laboratory. The laboratory will establish and use appropriate review procedures to verify the integrity of the data received from the subcontractor. When a subcontractor analyzes convicted offender samples, these procedures must include, but are not limited to

random re-analysis of samples, visual inspection and evaluation of results or data, inclusion of quality control samples, and on-site visits.

Office of the Inspector General Standards

The OIG has established standards to test the completeness and accuracy of DNA profiles and the timely notification of law enforcement when DNA profile matches occur in NDIS. We test for compliance with these standards as part of our CODIS laboratory audits.

- **Completeness of DNA Profiles** – A profile must include all the loci 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.

DOJ OIG CODIS LABORATORY AUDITS, FYS 2000 – 2006

FY 2000 Audits

Audit Report Number GR-80-00-009, *Broward County Sheriff's Office Crime Laboratory, Fort Lauderdale, Florida, April 2000.*

Audit Report Number GR-80-00-011, *Florida Department of Law Enforcement Tallahassee Regional Crime Laboratory, May 2000.*

Audit Report Number GR-80-00-013, *Miami-Dade Police Department Crime Laboratory Bureau, Miami, Florida, June 2000.*

Audit Report Number GR-40-00-013, *North Carolina State Bureau of Investigation Crime Laboratory, Raleigh, North Carolina, June 2000.*

Audit Report Number GR-90-00-019, *California Department of Justice Berkeley DNA Laboratory, Berkeley, California, July 2000.*

Audit Report Number GR-50-00-025, *Illinois State Police Springfield DNA Laboratory, Springfield, Illinois, August 2000.*

Audit Report Number GR-70-00-017, *Pennsylvania State Police Greensburg DNA Laboratory, Greensburg, Pennsylvania, September 2000.*

Audit Report Number GR-30-00-005, *Virginia Division of Forensic Science Central Laboratory, Richmond, Virginia, September 2000.*

FY 2001 Audits

Audit Report Number GR-80-01-005, *Arkansas State Crime Laboratory, Little Rock, Arkansas, January 2001.*

Audit Report Number GR-50-01-003, *Minnesota Bureau of Criminal Apprehension Forensic Science Laboratory, St. Paul, Minnesota, March 2001.*

Audit Report Number GR-80-01-010, *Texas Department of Public Safety Headquarters Laboratory, Austin, Texas, April 2001.*

Audit Report Number GR-40-01-004, *Kentucky State Police Forensic Laboratory, Frankfort, Kentucky, May 2001.*

FY 2002 Audits

Audit Report Number GR-90-02-003, *Orange County Sheriff-Coroner Forensic Science Services, Orange County, California, October 2001.*

Audit Report Number GR-90-2-007, *Portland Forensic Laboratory, Portland, Oregon, December 2001.*

FY 2004 Audits

Audit Report Number. GR-70-04-006, *Office of the Chief Medical Examiner Forensic Sciences Laboratory, Wilmington, Delaware, May 2004.*

Audit Report Number GR-40-04-006, *Georgia Bureau of Investigation Division of Forensic Sciences Laboratory, Decatur, Georgia, June 2004.*

Audit Report Number GR-30-04-005, *Baltimore City Police Department Crime Laboratory, Baltimore, Maryland, July 2004.*

Audit Report Number GR-60-04-009, *Nebraska State Patrol Crime Laboratory, Lincoln, Nebraska, July 2004.*

Audit Report Number GR-30-04-006, *Montgomery County Police Department Crime Laboratory, Rockville, Maryland, September 2004.*

Audit Report Number GR-90-04-015, *San Diego Police Department Forensic Science Section, San Diego, California, September 2004.*

FY 2005 Audits

Audit Report Number GR-40-05-002, *United States Army Criminal Investigation Laboratory, Forest Park, Georgia, October 2004.*

Audit Report Number GR-50-05-001, *Kansas City Police Crime Laboratory, Kansas City, Missouri, November 2004.*

Audit Report Number GR-70-05-005, *New Jersey State Police Forensic Science Laboratory Bureau, Hamilton, New Jersey, December 2004.*

Audit Report Number GR-70-05-009, *The City of New York Office of Chief Medical Examiner Department of Forensic Biology, New York, New York, February 2005.*

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Audit Report Number GR-60-05-005, *Colorado Bureau of Investigation Department of Public Safety DNA Laboratory, Denver, Colorado, April 2005.*

Audit Report Number GR-70-05-011, *State of Connecticut Forensic Science Laboratory, Meriden, Connecticut, April 2005.*

Audit Report Number GR-40-05-007, *South Carolina Law Enforcement Division Forensic Services laboratory, Columbia, South Carolina, May 2005.*

Audit Report Number GR-40-05-008, *Florida Department of Law Enforcement Tampa Bay Regional Operations Center, Tampa, Florida, May 2005.*

Audit Report Number GR-50-05-011, *State of Michigan, Department of State Police Lansing Forensic Science Laboratory, June 2005.*

Audit Report Number GR 60-05-009, *Arizona Department of Public Safety Scientific Analysis Bureau DNA Laboratory, Phoenix, Arizona, June 2005.*

FY 2006 Audits

Audit Report Number GR-90-06-001, *California Department of Justice Bureau of Forensic Services Fresno Regional Laboratory, Fresno, California, November 2005*

Audit Report Number GR-40-06-002, *State of Mississippi Department of Public Safety Mississippi Crime laboratory Jackson, Mississippi. December 2005*

CODIS USER ANNUAL REMINDER FORM

ANNUAL REVIEW OF DNA RECORDS ACCEPTABLE AT NDIS

Name of CODIS User

Name of NDIS Participating Laboratory

Note: This verification shall be completed annually by CODIS users (government employees who: (1) have login access to the CODIS (i.e., state or local) system; or (2) qualified DNA analysts who are responsible for producing DNA profiles stored in NDIS). Please review the following reminders concerning the categories of DNA records that are allowed to be uploaded to the National DNA Index System and indicate your understanding of, and compliance with, these requirements.

- A. In accordance with the DNA Identification Act of 1994, as amended, and the NDIS Privacy Act Notice, only the following types of DNA records are permitted to be maintained in NDIS and thus uploaded to NDIS from a NDIS participating laboratory:
- (1) DNA identification records of
 - a. persons convicted of crimes [Convicted Offender];
 - b. persons who have been charged in an indictment or information with a crime [Indicted Person];
 - c. other persons whose DNA samples are collected under applicable legal authorities, provided that DNA profiles from arrestees who have not been charged in an indictment or information with a crime, and DNA samples that are voluntarily submitted solely for elimination purposes shall not be included in the National DNA Index System [Legal – TO BE IMPLEMENTED];
 - (2) analyses of DNA samples recovered from crime scenes [Forensic];
 - (3) analyses of DNA samples recovered from unidentified human remains [Unidentified Human (Remains)];
 - (4) analyses of DNA samples voluntarily contributed from relatives of missing persons [Relatives of Missing Person]; and
 - (5) analyses of DNA samples from missing persons [Missing Person].

Only DNA records that belong to the above-referenced categories as described in the *NDIS Procedures Manual* shall be uploaded to NDIS.

B. In accordance with the *NDIS Procedures Manual* and *NDIS Standards for Acceptance of DNA Data*, the following additional rules govern the uploading of DNA records:

- (1) DNA profiles submitted to NDIS shall be interpretable (interpretable - any DNA data that could be used to make an exclusion).
- (2) A laboratory submitting a DNA profile to the Forensic Index at NDIS that is derived from forensic evidence, shall only offer those alleles that are attributed to the putative perpetrator(s). Alleles derived from forensic profiles that are unambiguously attributed to a victim or individuals other than the perpetrator(s), such as, but not limited to a husband or boyfriend, shall not be offered to NDIS.
- (3) The DNA results from any locus in which an ambiguity exists in the assignment of one or more alleles to the putative perpetrator(s) may be offered to NDIS. The mere observation of alleles that may be attributed to individuals other than the putative perpetrator, does not in itself, preclude offering DNA profiles to NDIS at that locus.
- (4) Forensic mixture DNA profiles submitted to NDIS shall have up to 4 alleles at a maximum of 4 core loci, the remaining 9 core loci shall have no more than 2 alleles at each locus.

I verify that (a) I have reviewed these requirements relating to the authorized categories of DNA records that can be uploaded to NDIS; (b) I understand these requirements; and (c) I agree to abide by these requirements for participation in NDIS.

Signed By _____ Date _____

Figure 1. Sample Annual Reminder of DNA Records Acceptable at NDIS

OIG CODIS ADMINISTRATOR SURVEY

The following guidance was provided to the survey respondents at the beginning of the survey:

As a rule, please select only one answer to each of the survey questions. Guidance on how to interpret the question is presented in italics. Note that throughout the survey, “NDIS requirements” is used to refer to all of the requirements with which an NDIS-participating laboratory has to comply to use and maintain their CODIS system, including the NDIS operating procedures and NDIS data acceptance standards. However, we do distinguish NDIS requirements from the QAS, even though compliance with the QAS is required for NDIS participation.

Survey respondents were also instructed to provide their responses directly to the OIG, with no copy to any other organization, such as the FBI, the National Institute of Justice, or accrediting organizations.

Below, we describe our strategy for tallying the survey responses, as well as give a list of the survey results, by question.

Tallying of Survey Responses

A few different systems were devised that would allow us to summarize the survey results as well as calculate averages and percentages for various questions. The system was based on the type of question and the calculation that would best portray the results of that question.

We tallied the number of “yes” and “no” responses for questions 5, 23, 27, 33, 36, 37, 38, 39, 40, and 41. In addition, we assigned a number value to questions, 1, 3, 4, 11, 16, 32, 34, 42, 44b, and 46, but the numbers had no positive or negative significance.

Questions 7, 8a, 9, 10, 13, 14, 17, 18, 21, 22, 26, 28, 29, 35, 43, and 44a were assigned a numerical value where the numbers had a positive or negative implication, moving from negative to positive as the numbers became larger. For questions 2, 8b, 12, 19, 20, 30, and 45 we created our own alpha key (i.e., we assigned alphabetic designators, similar to acronyms, that allowed us to tally the responses in the limited space of our spreadsheet).

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Tallying results for question 15 was more complex than the other questions because there was not typically one correct response for the scenarios given in the question. To each scenario, respondents could select "Yes," "Yes, under the following conditions," or "No, for the following reason(s)." As a result we developed a complex grading matrix that could help us evaluate the different factors that a respondent could cite to justify their response. We distinguished between primary, secondary, and peripheral factors that would need to be considered in evaluating each scenario. Some scenarios were simpler and did not have that many factors, but the more complex scenarios had many factors. From that we developed a grading scale where responses were graded based upon the number of factors that they provided. The scale was 1 to 5, with 1 = poor, 2 = marginal, 3 = adequate, 4 = good, and 5 = exceptional. We averaged the grades, but also tracked the number of "1" responses, or "poor" responses received.

For questions 24 and 25 we summarized the comments into phrases. Then we categorized the phrases and grouped them into similar categories. For questions 6 and 31 the actual percentages and dates given by the respondents were used.

In addition, 26 of the questions allowed respondents to provide comments. Some comments were modified slightly by auditors to correct for grammar and sentence structure. The 26 questions were 8, 13, 11, 17 (in two separate places), 20 (in two separate places), 23, 27, 28, 29, 30, 32, 34, 35, 36, 37, 38, 39, 40, 41, 42, 44.b., 45 (in two separate places), and 46. The comments provided were analyzed and trends were identified for each question, as well as across all of the comments.

Survey Results

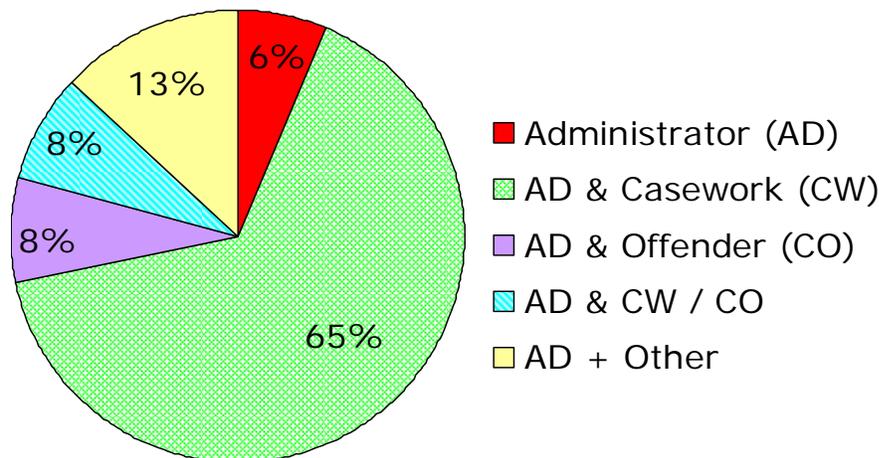
Described below are the results for each question of our survey, along with an explanation of the various options offered to the administrators with each question. Throughout the survey questions, italicized text was used to give instructions to the administrators on how to interpret our questions and proceed through the survey.

Demographics

1. What CODIS level is your laboratory?

Ninety-five respondents were from LDIS laboratories and 49 were from SDIS laboratories.

2. What is your current role in the laboratory?



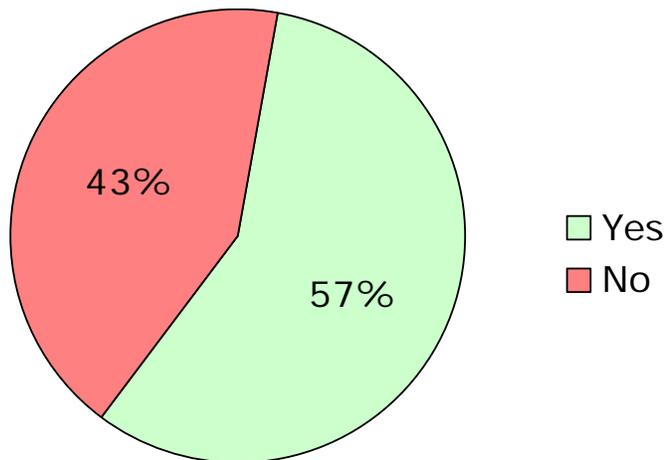
3. How long have you been the CODIS Administrator at your laboratory (include past experience if you are not currently the CODIS Administrator)?

The average time the respondents were CODIS administrators was 3 to 5 years.

4. What is the size of the DNA section in your laboratory (include technicians, examiners, managers, etc., but not clerical support or management that are not specific to the DNA section)?

The average size of respondents' DNA laboratory was 6 to 10 positions. This includes all staff specific to the DNA portion of their laboratory.

5. Are you an FBI-trained quality assurance auditor?



FBI CODIS Unit Responsiveness

6. For your communications with the CODIS Unit during the last 2 years, please estimate what percentage of those communications were for the following purposes:

- _% confirmation on whether a profile is allowable for NDIS
- _% support to defend my decisions to investigators or attorneys
- _% annual certifications, filings, or paperwork
- _% assistance in managing CODIS user information
- _% QAS audit and corrective action submission or responses
- _% guidance on hit counting or match resolution
- _% clarification on NDIS Operating Procedures
- _% submission of other routine required paperwork
- _% Other [please specify]: _____

Percentages were highest for the purposes listed below.

- QAS audits and corrective action,
- information technology matters (mentioned under "Other"), and
- annual certifications and paperwork.

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7. How would you rate the timeliness of responses you have received, in the last 2 years, from the CODIS Unit to questions or concerns you have had on the following topics:

Purposes	Often, no response is received	Often, response delayed more than 2 weeks	Generally, received within 2 weeks	Generally, received in less than 1 week	N/A
Appropriateness of a profile for NDIS			<input checked="" type="checkbox"/>		69%
Support to defend your decisions to investigators or attorneys			<input checked="" type="checkbox"/>		81%
Compliance with / clarification of NDIS requirements			<input checked="" type="checkbox"/>		51%
Compliance with / clarification of QAS			<input checked="" type="checkbox"/>		53%
Assistance in managing CODIS user information				<input checked="" type="checkbox"/>	42%
Completion of misc. required paperwork				<input checked="" type="checkbox"/>	44%

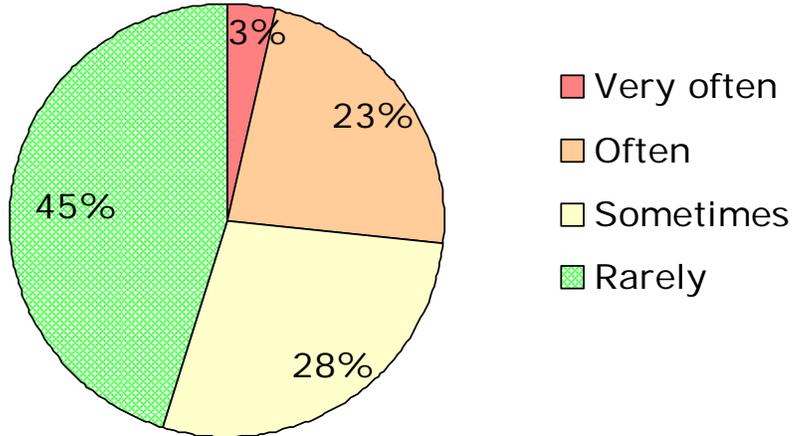
While 139 responses were received to this question, a significant percentage marked "N/A" if the reason we offered did not apply to their usual contact with the FBI. The higher the percentage of "N/A" responses, the fewer the people who contacted the FBI on that topic. The percentage of "N/A" responses can be seen in the "N/A" column for each category.

The chart also shows the average responses for each topic given. The rounded average responses ended up being in the latter two columns.

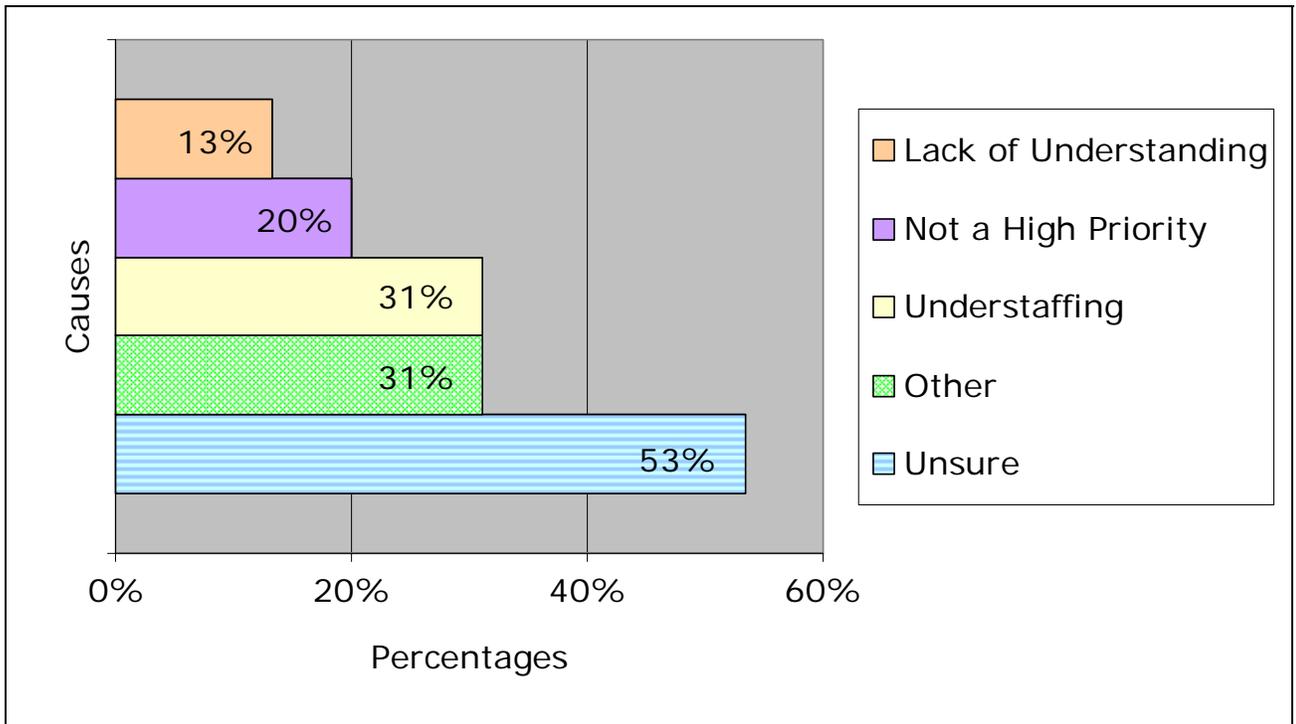
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8. Please complete the following questions if you selected "Often, no response received" or "Often, response delayed more than 2 weeks" to any of the options in the above question.

a. How often did you feel that the untimely responses from the CODIS Unit has limited your ability:



b. To what cause(s) do you attribute the untimely responses from the CODIS Unit? [Check all that apply]



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9. For those matters for which the CODIS Unit has been timely in responding (responses received in less than 2 weeks), to what degree did that response address your questions or concerns?

Purposes	Not at all	Minimally: significant aspects were unaddressed	Partially: minor aspects were unaddressed	Fully	N/A
Appropriateness of a profile for NDIS			<input checked="" type="checkbox"/>		65%
Support to defend your decisions to investigators or attorneys			<input checked="" type="checkbox"/>		70%
Compliance with / clarification of NDIS requirements				<input checked="" type="checkbox"/>	47%
Compliance with / clarification of QAS				<input checked="" type="checkbox"/>	51%
Assistance in managing CODIS user information				<input checked="" type="checkbox"/>	35%
Completion of misc. required paperwork				<input checked="" type="checkbox"/>	39%

While 125 responses were received for this question, a significant percentage marked "N/A" if the purpose did not apply to their usual contact with the FBI. The higher the percentage of "N/A" the fewer the people who contacted the FBI on that topic. The percentage of "N/A" responses can be seen in the "N/A" column for each category and the rounded average responses ended up being in the latter two columns.

10. **If you have raised concerns about CODIS or NDIS operations to the CODIS Unit and those concerns remain unaddressed, to what degree do you believe those concerns have the potential to undermine the long-term success of CODIS (i.e., the ability of CODIS to accomplish its mission)?**

- No potential, since the question or concern was a one-time issue limited to my laboratory**
- Minimal potential, since the question or concern is probably an isolated issue for laboratories similar in size or level to mine**
- Moderate potential, since the question or concern is probably a recurring issue for laboratories similar in size or level to mine**
- Significant potential, since the question or concern is a recurring issue for many laboratories in the CODIS community**

Fifty responses were received for question 10 and the average response was between moderate and minimal potential.

11. **What suggestions do you have for how the CODIS Unit can improve its responsiveness to the CODIS community's questions or concerns?**

We received 39 comments. Trends in the comments were that the CODIS Unit needs more staff, and the CODIS Unit should disseminate more info to the CODIS community via the CODIS Website or Criminal Justice Information System Wide Area Network (CJIS WAN).

In addition, disseminating more information to the CODIS community via the CJIS WAN was also a comment trend identified when all 636 comments were analyzed. Specifically, our analysis showed 37 respondents made a total of 51 comments regarding posting information through the CJIS WAN.

A related comment trend is that while the FBI's accessibility and responsiveness has improved, more improvements are needed; our analysis showed 20 respondents made a total of 28 comments regarding the FBI's inaccessibility and its untimely responses.

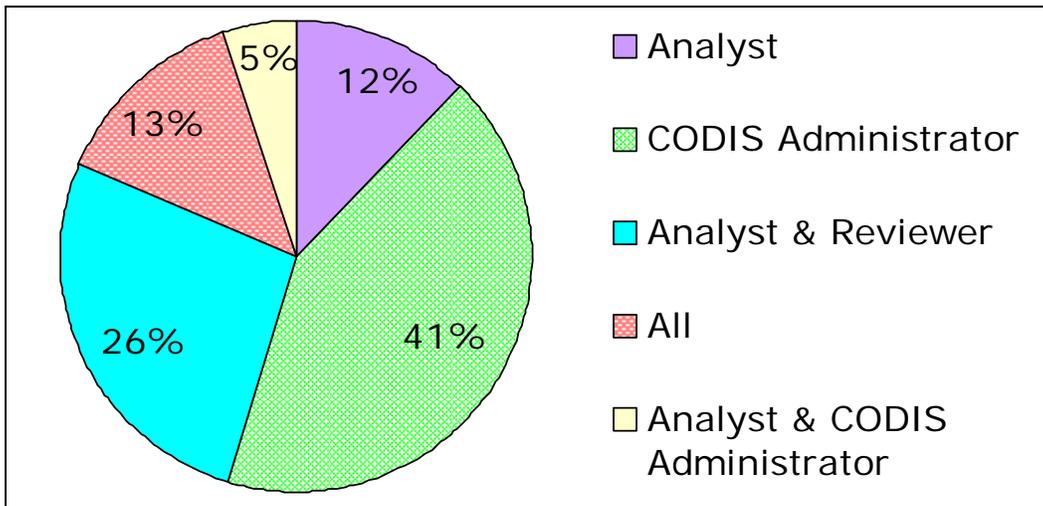
Suggestions were made for the FBI to set standards on timeliness of responses and to have a mechanism for making sure all responses are

addressed, similar to the type of standards or tracking that is done for the CODIS contractor's help desk with information technology questions. In situations where a response cannot be formulated in a timely fashion, suggestions were made for at least a response indicating something along the lines of "X person will respond by Y time with the information you requested."

Allowability of DNA Profiles

- 12. In your laboratory, who currently is ultimately responsible for ensuring that casework profiles are uploaded in accordance with NDIS requirements?** *[Having the final responsibility does not preclude the possibility that the person responsible may consult with another member of the laboratory to confirm their conclusion.]*

If your answer to question 12 indicates you are partially or fully responsible for designating which profiles are uploaded to NDIS, please complete questions 13-15.



13. How difficult is it to determine what categories of profiles can be uploaded to NDIS? *[In the options offered below “another source” is any source other than the documents supplied by the FBI to inform you on these topics, such as the CODIS Administrator’s Handbook, or the NDIS Operational Procedures. Examples of other sources you might consult are the NDIS Custodian or another CODIS Administrator.]*

- Very difficult (routinely requires clarification from another source)**
- Difficult (occasionally requires clarification from another source)**
- Routine (rarely requires clarification from another source)**
- Easy (does not require clarification from another source)**

We received 130 responses to question 13 and the average response was “Routine.”

14. How confident are you personally that when you conclude that a profile is permitted in NDIS, you are correct?

- Completely confident.**
- Consistently confident. On rare occasion I appreciate having additional confirmation from another source on my decision.**
- Generally confident, but would occasionally appreciate having confirmation from another source.**
- Somewhat confident, and often solicit confirmation from another source on my decision.**
- Minimally confident, and routinely solicit confirmation from another source on my decision.**

We received 130 responses to question 14 and the average response was closest to the “consistently confident” option.

15. **Would you categorize the following samples as a “forensic unknown” suitable for NDIS?** *[Please base your analysis only on the information provided in the question, and assume the profiles have ≥ 10 loci.]*

Each scenario offered the following options:

- Yes**
- Yes, under the following conditions:** _____
- No, for the following reason(s):** _____

We used a grading scale that evaluated the quality of response we received from respondents, with 1 = poor and 5 = exceptional.

- a. **A profile developed from crime scene evidence that once analyzed is revealed to match the suspected perpetrator?**

We received 131 responses and the average grade was 3.4.

- b. **A profile developed from crime scene evidence that does not match any reference sample provided (suspect, victim, or elimination)?**

We received 132 responses and the average grade was 3.6.

- c. **A profile developed from an item submitted by a law enforcement agency for analysis (item source or crime committed is unclear) that does not match any reference sample provided?**

We received 132 responses and the average grade was 4.3.

- d. **A profile developed from crime scene evidence that is confirmed to be a mixture of the victim and suspected perpetrator (reference samples are available)?**

We received 132 responses and the average answer was 4.1.

- e. **A profile developed from crime scene evidence that is a mixture of two contributors that could include the victim, but reference samples are not available?**

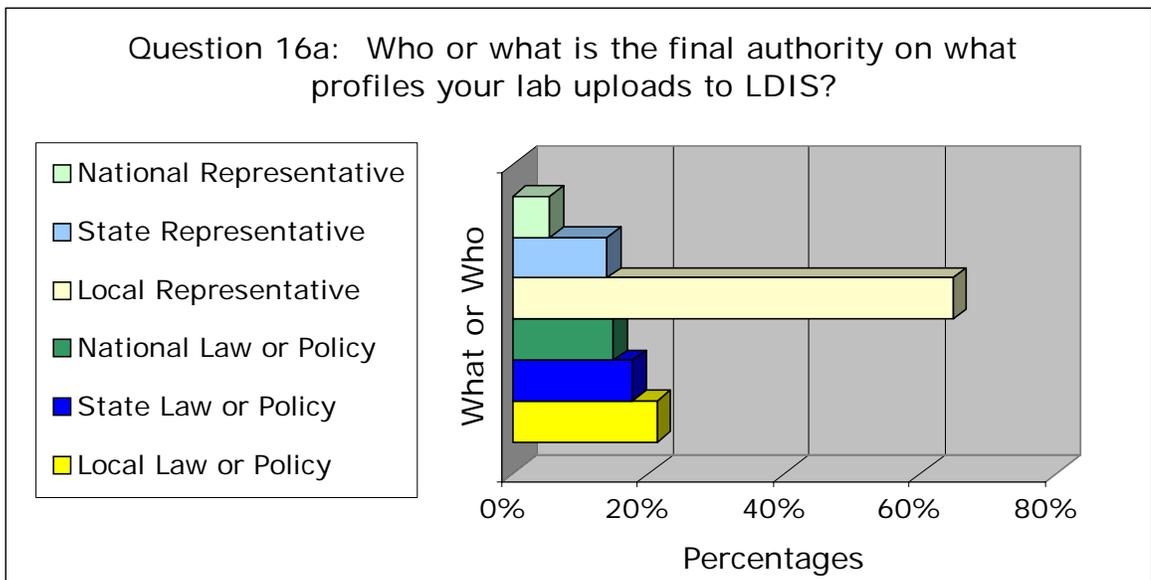
We received 133 responses and the average answer was 3.5.

- f. **A profile developed from crime scene evidence that is a mixture of three contributors, including the victim, and only the victim’s reference sample is available?**

We received 133 responses and the average grade was 3.7.

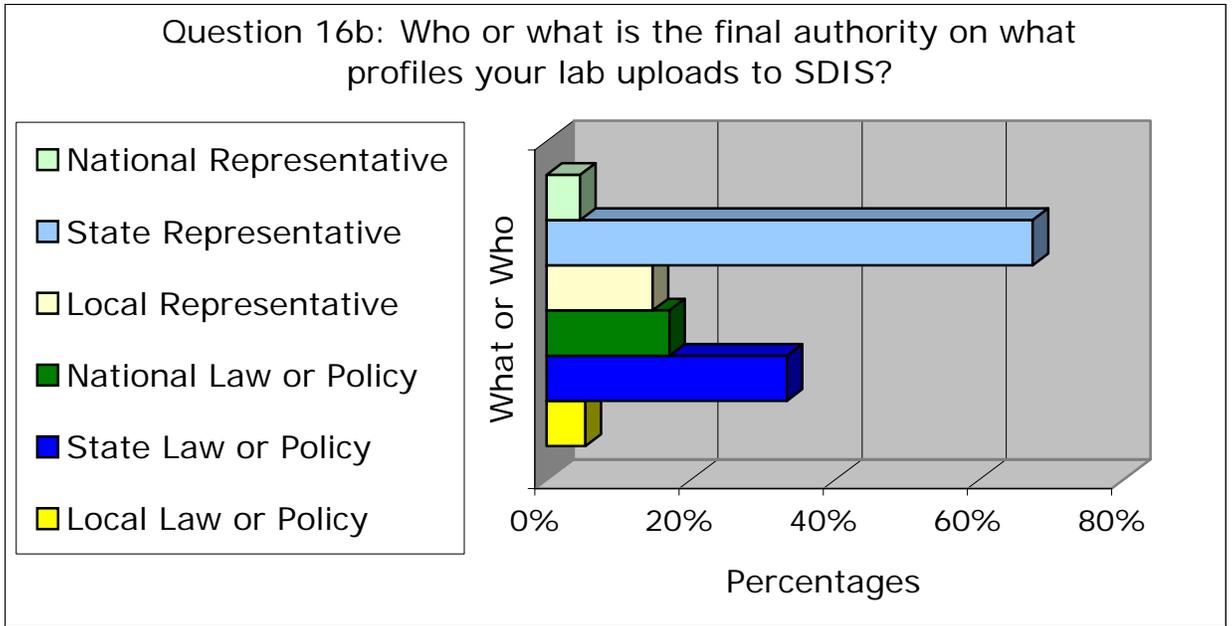
16. **What (as in a law or policy document) or who (as in a position) do you believe to be the final authority on what profiles your laboratory uploads?**

For question 16 most respondents gave multiple answers, even though we asked for a single “final authority.” Consequently, the percentages overlap and do not total 100 percent, which is why we did not put percent labels on these charts, to preclude misinterpretation. However, the dominant responses are clear. “N/A” responses are not reflected but were few.

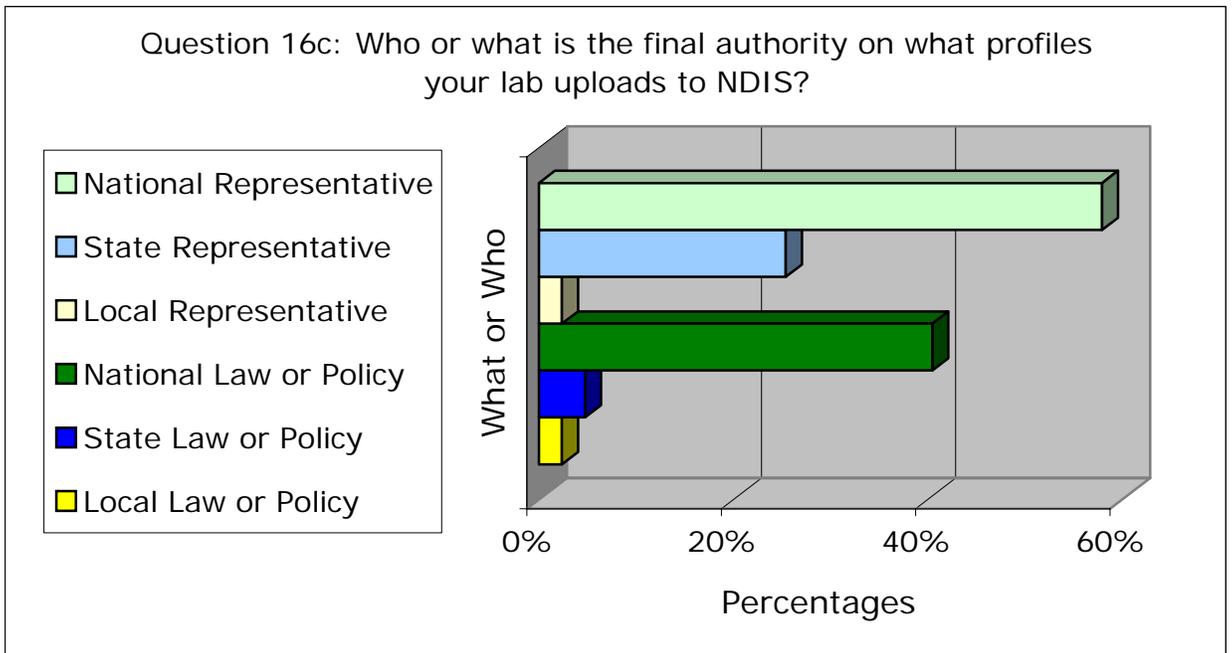


In the preceding chart it is clear that CODIS administrators see the LDIS administrator as the primary authority over what goes into LDIS.

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In the preceding chart it is clear that CODIS administrators see the SDIS administrator as the primary authority over what goes into SDIS, although roughly one-third of the responses included an emphasis on the state law or policy.



In the preceding chart we see NDIS is the only level where respondents weighed the national law or policy almost as heavily as they did the national representative.

17. From your experience in the CODIS community, do you believe that NDIS-participating laboratories have the same understanding of what profiles are suitable for inclusion in NDIS?

- Yes, all laboratories have the same understanding**
- Yes, laboratories have the same understanding with only rare exceptions**
- No, not all laboratories have the same understanding, but community understanding is improving
If possible, please explain: _____**
- No, and community confusion is increasing
If possible, please explain: _____**
- Unsure or not applicable based upon limited experience**

The average response to question 17 was “No, not all laboratories have the same understanding, but community understanding is improving.”

Administrators who said that the CODIS community does not have the same understanding had the option of providing additional comments, and 70 respondents did.

Most of the respondents focused their answers on their participation in discussions at the National CODIS Conferences (NCC). Some took the perspective that the discussions further confused people, while others felt that the discussions helped by clarifying troublesome scenarios.

18. Do you believe there are NDIS-participating laboratories (including your own) that knowingly upload profiles that they believe to be “borderline” (i.e., probably unallowable) if they believe it will further an investigation?

- No**
- Yes, but they are the rare exception**
- Yes, and it could be occurring beyond a rare exception**
- Unsure or not applicable based upon limited experience**

Twenty-three percent of respondents to question 18 said “Unsure or not applicable” and the majority of the remaining responses were “Yes, but they are the rare exception.”

19. If a member of your DNA laboratory has a question regarding whether a profile is allowable for upload to NDIS, who or what would be their most likely source for clarification?

- CODIS Administrator’s Handbook or NDIS Operating Procedures
- CODIS Administrator in their laboratory
- CODIS Administrator in another laboratory
- NDIS Custodian
- An examiner in their laboratory
- Other: _____

Respondents gave multiple answers to question 19, and therefore we were not able to calculate true percentages. Instead, we focused on which sources of guidance were the top three named.

We received 143 responses, with three options selected the most by respondents as all or part of their answer:

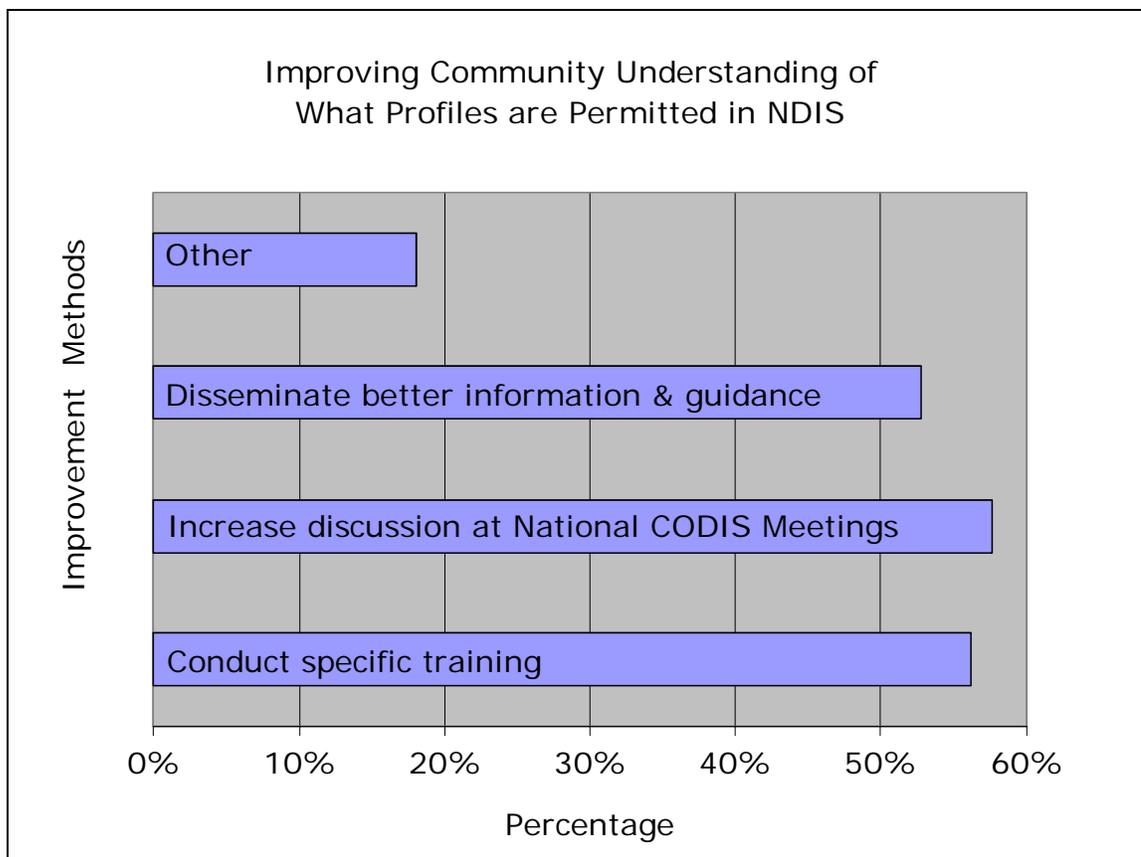
- 111 respondents cited “CODIS Administrator in their laboratory”;
- 27 respondents cited “CODIS Administrator Handbook”; and
- 27 respondents cited “CODIS Administrator in another laboratory.”

20. What do you believe the CODIS Unit can do to improve community understanding of what profiles are permitted at NDIS? *[Check all that apply]*

- Conduct specific training
- Increase discussion at the annual CODIS Conference
- Disseminate better information and guidance
Please describe: _____
- Other: _____

Since this question permitted multiple responses, the chart below is only intended to convey the magnitude of response.

The three primary options we offered were selected pretty evenly, as ways that would help community understanding.



Laboratory Quality

21. Please rank your laboratory’s quality of operations as one of the following:

1 = Poor, since there are still fundamental quality controls we fail to consistently apply OR we have one or more staff members that are not fully committed to QAS compliance.

2 = Fair, since we routinely apply most quality controls in our operations, but still need occasional improvement. All staff are committed to QAS compliance, but occasionally are not properly informed about the standards.

3 = Good, since we consistently apply all appropriate quality controls in our operations. All staff are fully committed to QAS compliance and are proficient in what those standards are.

4 = Excellent, since we apply all appropriate quality controls, and actively pursue enhancing those controls. All staff are committed to QAS compliance, are proficient in what those standards are, and are committed to surpassing those standards whenever warranted to ensure excellence.

We received 143 responses to question 21 and the average answer was 3.6.

22. How would you rank your laboratory's quality of operations in relation to other laboratories?

1 = Below average (the majority of laboratories surpass our laboratory)

2 = Average (our laboratory is comparable to the majority of laboratories)

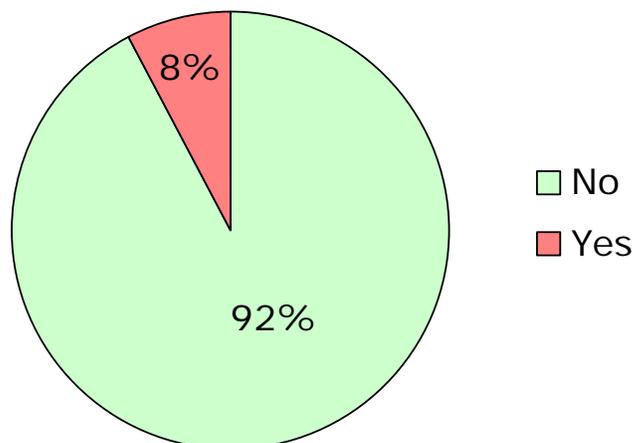
3 = Above average (our laboratory surpasses the majority of laboratories)

4 = Outstanding (our laboratory is a leader in quality in the DNA community)

5 = Unsure or not applicable based upon limited experience

We received 142 responses to question 22 and the average answer was 3.2.

23. Do you know of any NDIS-participating laboratory (including your own) that is currently operating with what you would consider to be a material weakness in its quality of operations?



For question 23 we received 140 responses and the respondents who said “yes” had the opportunity to provide additional comments and 10 did. Comments included statements regarding weaknesses related to the following areas:

- the inherent limitations of one-person DNA laboratories;
- uploading profiles that have not been fully reviewed, or on behalf of other laboratories where quality has not been confirmed;
- uninvolved off-site technical leaders; and
- first-hand knowledge of laboratories (public and private) that emphasize productivity at the expense of quality.

General CODIS Operations

24. What three issues pose the greatest challenge to the mission of CODIS in the next five years?

We received 126 responses to question 24 and the top challenges are listed below.

- 19 percent – Expansion and Change,
- 18 percent – Resources,
- 12 percent – Profile Integrity or System Operations, and

- 11 percent – Data Management or System Administration.

25. What three aspects of CODIS do you believe have been its most important successes?

We received 122 responses to question 25 and the most important successes are listed below.

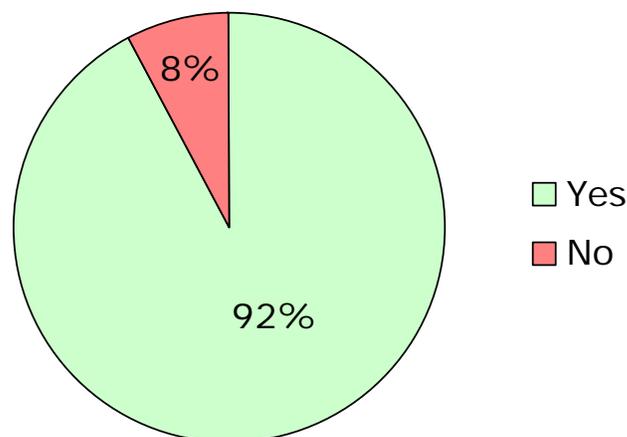
- 34 percent – Crime Solving and Prevention,
- 25 percent – System Benefits, and
- 12 percent – Community Assistance or Communication Connections.

26. How would you rate the FBI CODIS contractor’s overall performance? The numeric rating scale used is below.

- 1 = Unacceptable 4 = Good**
2 = Poor 5 = Excellent
3 = Fair

The average answer was 4.5.

27. Do you believe the CODIS software has addressed the needs of the CODIS community?



28. **How would you characterize the FBI's current management of CODIS?** The numeric rating scale used is below.

- 1 = Unacceptable 4 = Good**
2 = Poor 5 = Excellent
3 = Fair

The average answer was 4 and, of the 143 responses we received to this question, 24 gave additional comments.

29. **To what extent has the FBI's management of CODIS improved over the last 2 years?**

The following numeric rating scale was used:

- 1 = No improvement observed 4 = Substantially**
2 = Minimally 5 = Extensively
3 = Moderately

N/A = Unsure or not applicable based upon limited experience

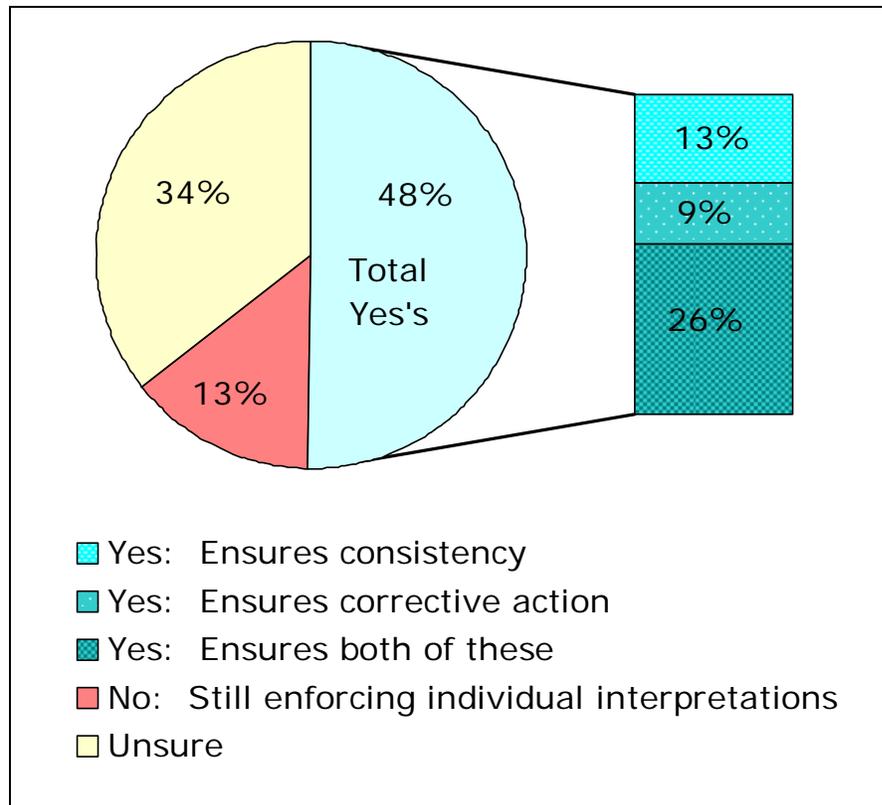
Of the 143 responses received, 21 provided additional comments and 27 percent said "N/A." The average answer was 3.1.

Trends in this section of the survey are listed below.

- SAIC does an excellent job.
- The software has become more user-friendly.
- CODIS Unit communication and accessibility have improved. The NCC, the CODIS website, and NDIS procedure updates have helped but further improvements could be made.

NDIS Audit Review Panel

30. Do you believe the NDIS Audit Review Panel has improved community compliance with the QAS? [Check all that apply]



Note that this chart does not include a small number of "other" designations that were received, accompanied by supplemental comments. The comments further emphasized that individual interpretations of standards still exist.

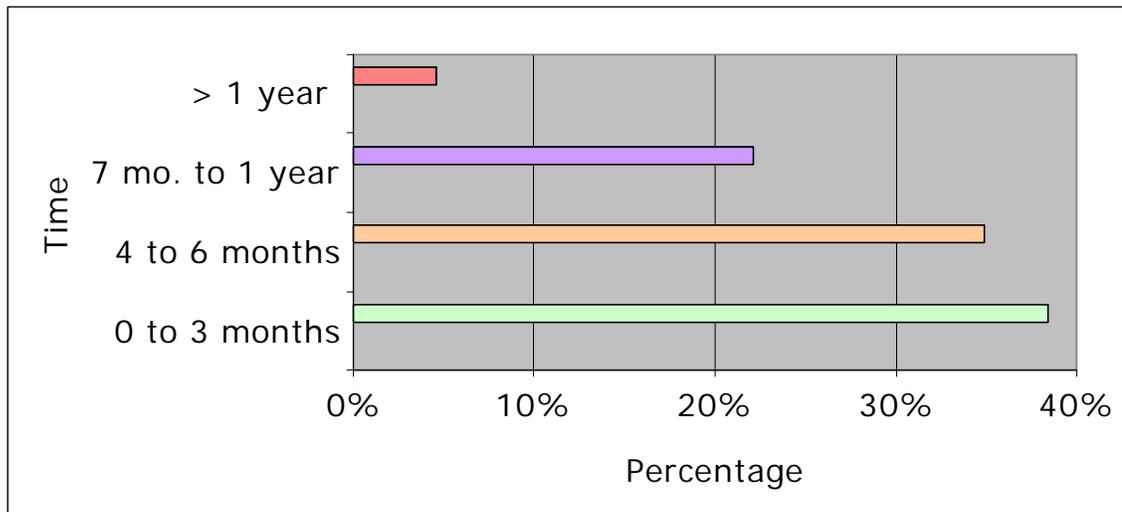
31. For your most recently completed audit panel review, when was the audit and accompanying corrective action documentation submitted to the FBI?

We received 137 responses:

- 18 percent selected the year "2003,"
- 39 percent selected the year "2004,"
- 9 percent selected the year "2005"; and

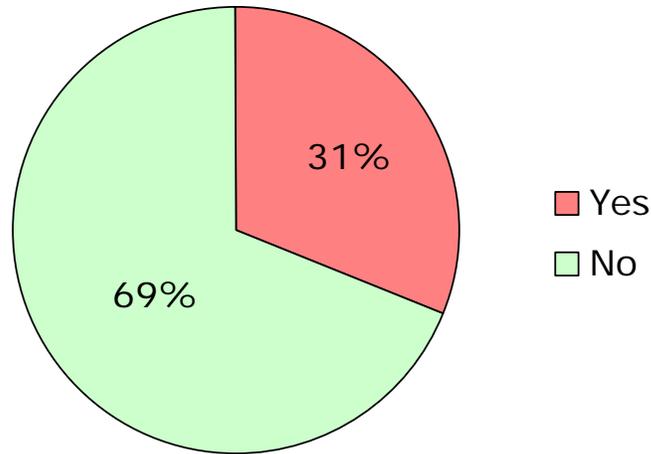
- 34 percent selected “Not applicable,” which was offered as an option to those respondents who did not know or were not involved in this process. These respondents were then asked to skip to question 36.

32. In your most recently completed audit panel review, please estimate how long it took from the time that your audit and corrective action documentation were originally submitted until you received notification that the audit was closed?



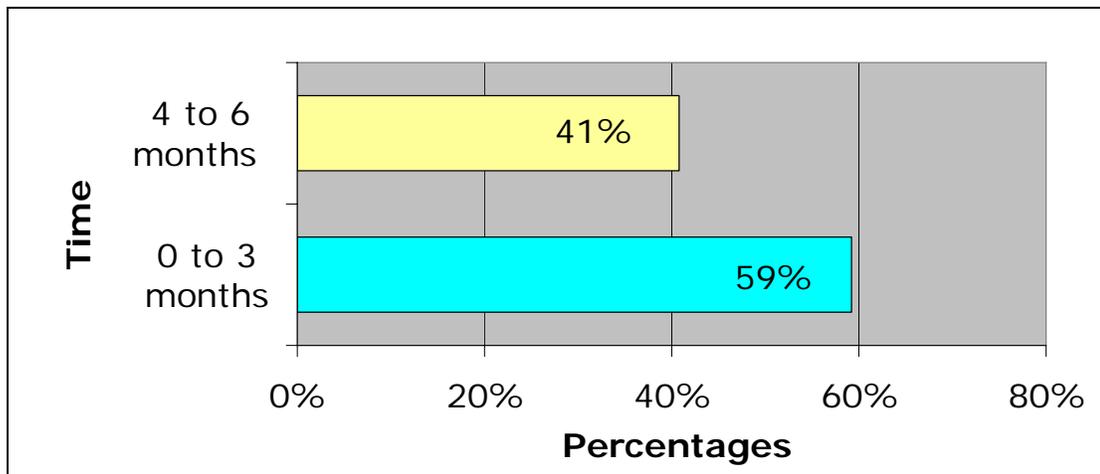
When we asked about the total time it took for the processing of their last completed external QAS audit, we observed that there was slightly less than one-third who said it took longer than 6 months, roughly one-third who said it took from 4 to 6 months and slightly more than one-third who said it took 0 to 3 months. This does not include the less than one percent of “N/A.”

33. **In this same completed audit panel review, were you asked to supply additional corrective action documentation after you made your original submission?**



This information sheds some light on potential causes of delay in closing out audits, since nearly one-third of the respondents indicated that the Audit Review Panel had followed-up to get more corrective action documentation after the original submission by their laboratories.

34. **For this same completed audit panel review, please estimate how much time elapsed after you supplied all additionally requested corrective action documentation until you received notification that the audit was closed?**



This question was conditional upon the response to the preceding question, therefore non-valid responses were disregarded.

35. How would you characterize your perception of any improvements made in the last 2 years in the NDIS Audit Review Panel’s timeliness of review?

The numeric rating system used is below.

1 = Timeliness does not seem to be improving.

2 = Timeliness is improving slowly.

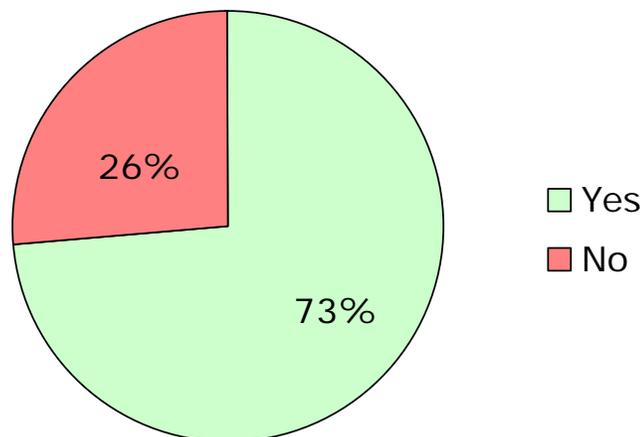
3 = Timeliness is actively improving.

4 = Necessary improvements have already been made.

We received 83 responses and the average was 2.7, closest to the “actively improving” designation. Respondents also had the option of selecting “other” and providing a comment. Eleven of the 81 respondents provided comments and the trend showed that respondents had no basis to form an opinion as to whether the NDIS Audit Review Panel improved the timeliness of their reviews.

FBI Guidance to the CODIS Community

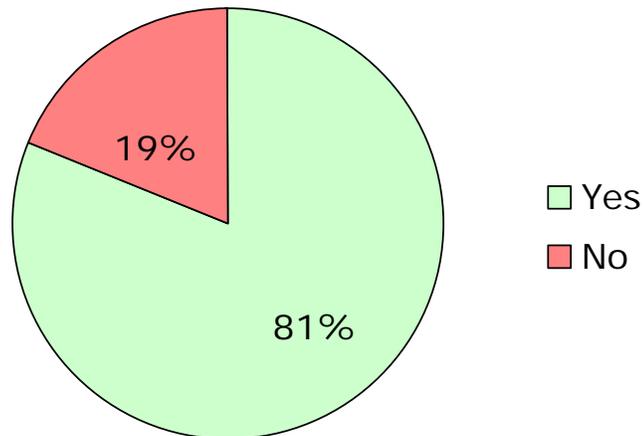
36. Does the FBI provide sufficient guidance on complying with the QAS, to ensure CODIS participants understand and comply with those standards?



Note this does not reflect the less than 1 percent of respondents who said “N/A.” The respondents who said “no” had the option of providing additional comments, and 31 did. The trend in the comments was

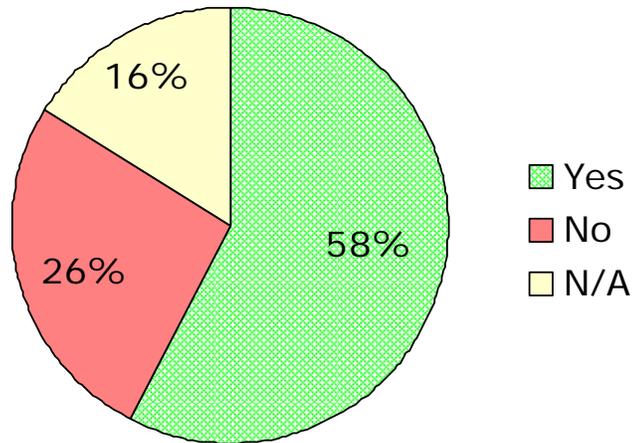
interpretation of standards varies between auditors and the CODIS community as a whole.

37. Does the FBI provide sufficient guidance on complying with the NDIS requirements, to ensure NDIS participants understand and comply with those requirements?



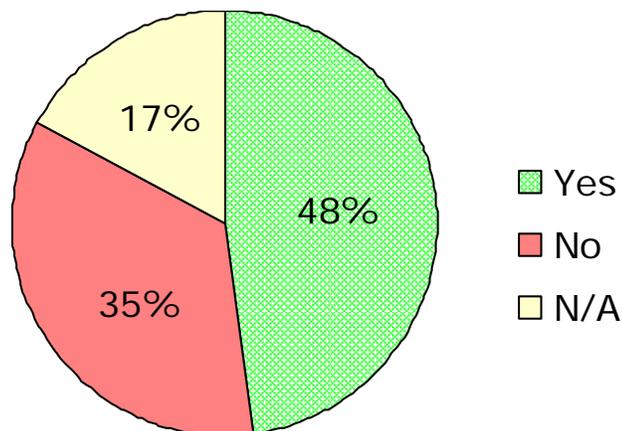
Note this does not reflect the less than 1 percent of respondents who said "N/A." The respondents who selected "no" had the option of providing comments, and 20 did. The trends identified in the comments were interpretation of standards varies between auditors and the CODIS community as a whole and the CODIS Unit does not respond to questions in a timely manor.

38. Do you believe that the FBI’s audit document enables an external QAS auditor to identify all of a laboratory’s quality assurance weaknesses?



We received a total of 140 responses to question 38. The respondents who selected “no” had the option of providing additional comments, and 33 did. The trends identified in the comments were interpretation of standards varies between auditors and the CODIS community as a whole and the standards and the audit document need to be updated.

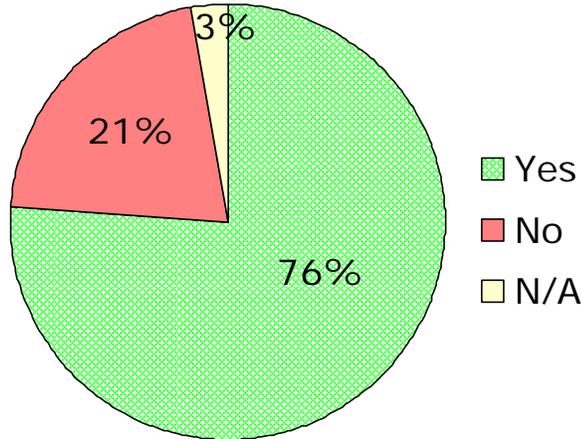
39. Do you believe the FBI has provided adequate training on the proper use of the QAS audit document to ensure that community QAS auditors are consistent and thorough in their assessment of compliance with the QAS?



We received a total of 140 responses to question 39. The respondents who selected “no” had the option of providing additional comments, and 48 did. The trends identified in the comments were interpretation

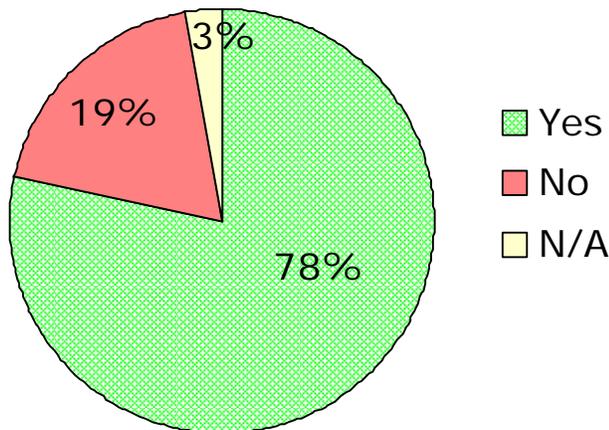
of standards varies between auditors and the CODIS community as a whole.

40. To be effective, do you believe external QAS auditors should be qualified in the method or platform they are auditing?



We received 143 responses to question 40. The respondents who said "no" were given the opportunity to provide comments, and 29 did.

41. To be effective, do you believe external QAS auditors should be qualified in the specific application (casework or offender) they are auditing?



We received 143 responses to question 41. The respondents who said "no" were given the opportunity to provide comments, and 26 did.

The responses received about auditor qualifications to both question 40 and 41 were put into context with the comments that were provided. A few examples are below:

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- Technology, platforms, and methods are similar enough where an auditor who is proficient or qualified in one will know enough to audit them all.
- A casework-qualified auditor can audit an offender laboratory but not vice versa.
- The auditors should be qualified or previously qualified, or at least one person from the audit team should be qualified.

42. Do you have any suggestions for how the DNA community's auditing structure (i.e., the way audits are conducted, processed, and reviewed) can be improved, to better aid national CODIS laboratory quality?

The trends from comments we identified in question 42 are below:

- Interpretation of standards should be made more consistent.
- Actual QAS should be revised and clarified.
- Use the CODIS website to disseminate auditing information to CODIS the community.

43. What level of consistency do you believe has existed in guidance to the CODIS community regarding compliance with NDIS requirements under the current CODIS Unit management? *[Do not count as inconsistencies the changes resulting from expansions in the law to what is permitted in NDIS.]*

The numeric rating scale used for question 43 is below.

1 = Inconsistent. The messages conveyed at meetings or conferences do not match what is contained in written guidance or what is conveyed in individual responses.

2 = Somewhat consistent. The messages conveyed at meetings or conferences periodically match what is contained in written guidance or what is conveyed in individual responses.

3 = Consistent. The messages conveyed at meetings or conferences match what is contained in written guidance or what is conveyed in individual responses, with rare exception.

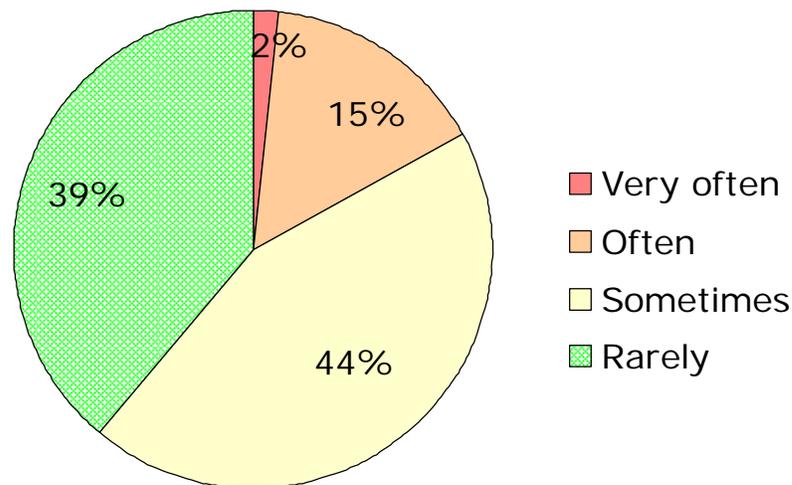
4 = Very consistent. The messages conveyed at meetings or conferences always match what is contained in written guidance and what is conveyed in individual responses.

N/A = Unsure or not applicable based upon limited experience
[skip to question 45]

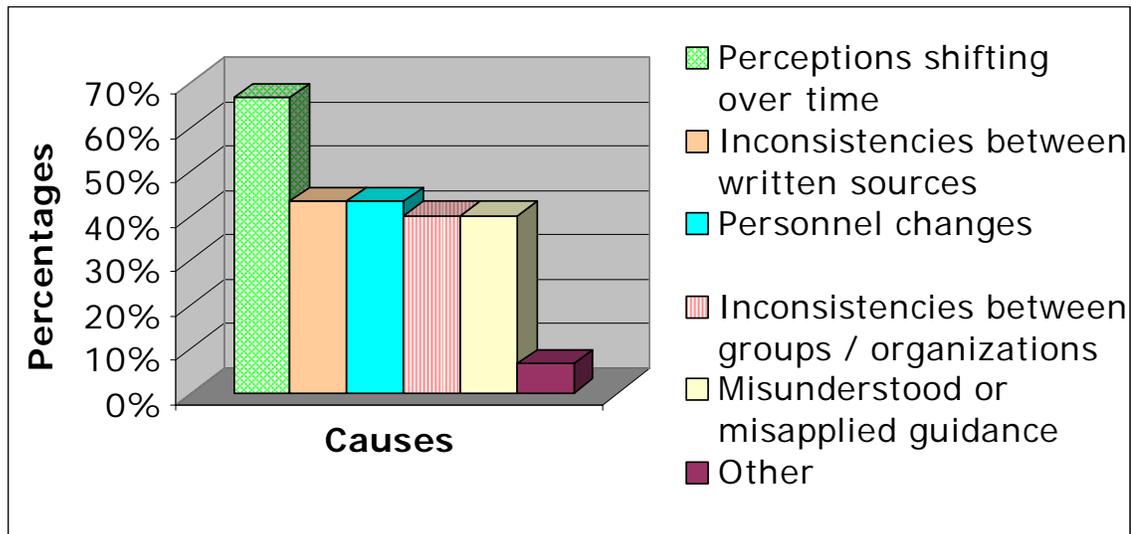
The average rating to this question was 2.8, which is closest to the "consistent" designation. In addition, 12 percent of the respondents said "N/A."

44. If you designated a rating for question 43 as less than consistent:

a. How often did you feel that the inconsistency of guidance has limited your ability to perform your CODIS administrator duties or to comply with the NDIS Requirements?

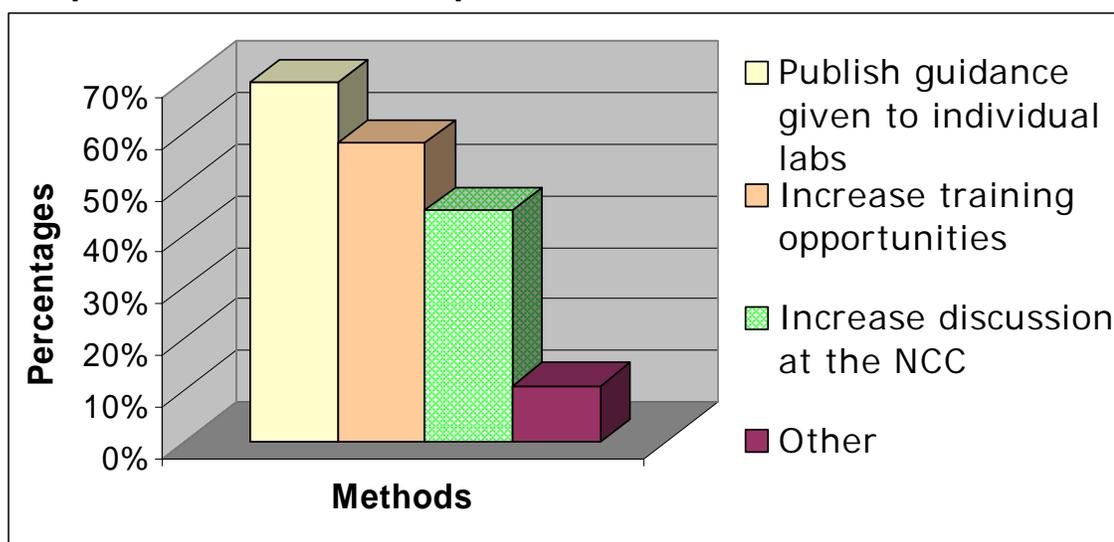


b. To what cause(s) do you attribute the inconsistency of guidance? *[Check all that apply]*



The categories in the preceding graphic were offered as responses and since multiple responses were permitted to this question we could not calculate true percentages. This graphic is intended only as a way to convey the magnitude of the responses given, by the 30 people who responded to this question.

45. What do you believe would improve the consistency of understanding within the CODIS community regarding compliance with NDIS requirements?



Multiple responses were permitted for question 45, and the options displayed above were the ones we offered as responses. In addition there were a total of 47 respondents who provided additional comments. The trends identified in these comments are listed below:

- The QAS and the related audit document need to be updated.
- Post frequently asked questions and answers on QAS and NDIS requirements.

46. Do you have any other comments, suggestions, or concerns that you can offer regarding FBI administration of CODIS, CODIS operations in your laboratory or in the CODIS community as a whole, or factors that have the potential to adversely impact CODIS operations in the future?

We received a total of 40 comments to question 46 and the trends we identified are listed below:

- There are inconsistencies in the way standards are interpreted throughout the CODIS community.
- The CODIS community needs more resources.

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Inconsistencies in interpretation in the standards throughout the CODIS community was also one of our comment trends; specifically we received 161 comments from 83 respondents on the subject.

The second comment trend in question 46 regards resources that include personnel, better technology, and tools, such as expert systems. In addition, comments were made that indicated that the lack of resources force laboratories to make difficult decisions regarding resource allocation, and thus place pressure on quantity versus quality, which may not be best for the CODIS community as a whole.



U.S. Department of Justice

Federal Bureau of Investigation

Washington, D. C. 20535-0001

April 27, 2006

Mr. Guy K. Zimmerman
Assistant Inspector General
for Audit
Office of the Inspector General
U.S. Department of Justice
950 Pennsylvania Avenue, NW
Washington, DC 20530

RE: RESPONSE TO THE OFFICE OF THE INSPECTOR
GENERAL'S (OIG) DRAFT AUDIT REPORT OF THE
COMBINED DNA INDEX SYSTEM (CCDTS) OPERATIONAL
AND LABORATORY VULNERABILITIES

Dear Mr. Zimmerman:

The Federal Bureau of Investigation (FBI) has prepared comments and responses to the draft report of the *Combined DNA Index System Operational and Laboratory Vulnerabilities* (Enclosure 1). The comments, responses, and draft report have undergone sensitivity and classification reviews, and the appropriate comments are attached (Enclosures 2 and 3). An electronic copy of the recommendation comments and responses are also enclosed (Enclosure 4).

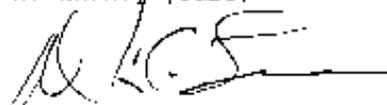
Please contact Sonja Menefee of the External Audit Management Unit, Inspection Division, should you have any questions. Ms. Menefee can be reached at (202) 324-9097 or via e-mail at sonja.menefee@ic.fbi.gov.

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Mr. Guy K. Zimmerman:

You may also contact Dr. Thomas Callaghan, Chief of the CODIS Unit, Laboratory Division, at (703) 632-8315 or thomas.callaghan@ic.fbi.gov, if you have questions on the content of the materials.

Sincerely yours,



David C. Evans
Section Chief
Audit, Evaluation and
Analysis Section
Inspection Division

Enclosures (4)

1 - Mr. Richard Theis
Audit Liaison Group
Department of Justice
1331 Pennsylvania Avenue, NW
Suite 1400
Washington, DC 20530

**THE FEDERAL BUREAU OF INVESTIGATION'S (FBI)
RESPONSE TO THE
OIG'S DRAFT AUDIT REPORT OF THE
COMBINED DNA INDEX SYSTEM OPERATIONAL AND
LABORATORY VULNERABILITIES**

Recommendation #1. Develop and implement a plan to ensure that all CODIS Administrators attend the FBI QAS auditor training.

FBI Response: The FBI agrees that it would be beneficial for all CODIS Administrators to receive the FBI Quality Assurance Standards (QAS) audit training. The CODIS Unit is planning a special auditor training class(es) on the Quality Assurance Standards (QAS) in the fall of 2006 for State and Local CODIS Administrators that have not had auditor training since issuance of the revised FBI Audit Document in July, 2004. All State and Local CODIS Administrators that have not had the auditor training will be expected to attend this training. It will consist of two days of training on the Audit Document and ½ day on the DNA Data Accepted at NDIS scenarios. Following this special auditor course, if there is a new CODIS Administrator, he or she will be required to attend the auditor training on the QAS before assuming his/her full Administrator duties. This requirement will be incorporated into revisions to the Memorandum of Understanding for Participation in the National DNA Index System (NDIS MOU).

Recommendation #2. Improve information sharing through enhancements to the CODIS website, considering the suggestions made by the community and implementing them wherever practicable.

FBI Response: The FBI agrees that the CODIS website should be used to transmit information of interest and importance to the CODIS community. As a result of inquiries that come into the CODIS unit, we are aware that the CODIS website may not be routinely consulted by the CODIS users so the CODIS Unit will solicit suggestions for improving the utility of this website from the State CODIS Administrators during their June 2006 meeting in Dallas, Texas. These suggestions will be reviewed by the Scientific Working Group on DNA Analysis Methods (SWGDM) CODIS Committee and to the extent practicable, implemented and shared with the CODIS community during the Annual CODIS Conference in November 2006.

Recommendation #3. Distill profile allowability guidance, including scenarios that are discussed at national meetings, into a decision-tree or other written user-friendly guidance and disseminate that information to all CODIS users.

FBI Response: The FBI agrees to disseminate additional allowability guidance to CODIS users. The CODIS Unit has included on the CODIS website, the presentations of the scenarios discussed at the Annual CODIS Conference for the past several years. Those scenario presentations are made available on the website following the Conference. With respect to that portion of the recommendation relating to incorporating the rules for profile eligibility into a decision-tree, the CODIS Unit and the SWGDAM CODIS Committee (in preparation for the 2004 Annual CODIS Conference) have each attempted to distill the eligibility determination into a decision tree but these efforts have not been successful. It cannot be overemphasized that each of these factual situations or scenarios is, in fact, unique, and the change of one detail can potentially change the determination of whether the profile is eligible for uploading to NDIS. Accordingly, at this time, we do not believe that the eligibility question can be accurately reduced into a user friendly decision tree.

The CODIS Unit will include all the scenarios discussed at the Annual CODIS Conference in the CODIS Administrators Handbook and on the CODIS web site (with a direct link to the scenarios). Additionally, the CODIS Unit will include on the CODIS web site, to the extent appropriate, scenarios submitted by members of the CODIS community and the response of the NDIS Custodian.

Recommendation #4. Formally request that the Scientific Working Group on DNA Analysis Methods consider, as part of its maintenance of the QAS, the operation material weaknesses identified by the CODIS Administrators, including: (1) the inherent limitations of one-person DNA laboratories; (2) uninvolved off-site technical leaders, and (3) laboratories that upload profiles that have not been fully reviewed.

FBI Response: The FBI agrees that the issues identified by the CODIS Administrators that impact the quality operations of a forensic DNA laboratory should be shared with SWGDAM - the body charged with the responsibility of recommending revisions to the FBI Director for the Quality Assurance Standards (QAS). The weaknesses identified by the CODIS Administrators in the survey distributed by the OIG will be forwarded (once

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the OIG CODIS Audit Report has been finalized) to the SWGDAM Chairman for their consideration during SWGDAM's review of the FBI Director's QAS. Please see enclosed draft correspondence to the SWGDAM Chairman; Enclosure #1-A.

Recommendation #5. Ensure that guidance on submission of information to the NDIS Audit Review Panel is sent to those members of CODIS labs that are responsible for this activity.

FBI Response: The FBI agrees that it is important that the relevant personnel in the CODIS laboratories have sufficient information to enable them to submit appropriate and complete audit documentation. The Chief of the CODIS Unit has already requested that CODIS Administrators provide him with the contact information for the person in their laboratory responsible for the QAS audits. The CODIS Unit will be mailing a copy of the NDIS Procedure on "Review of External Audits" as well as a list of the specific information considered audit documentation to the designated contact persons for their information and review. This information will also be included in the Annual CODIS Conference materials. Additionally, the CODIS Unit, in conjunction with the Chair of the NDIS Audit Review Panel, will present this information verbally at the Annual CODIS Conference in November, 2006 (and annually thereafter) and will request permission from the SWGDAM Chairman to present this information at the semiannual SWGDAM meeting in July, 2006 and the public SWGDAM meeting held in conjunction with the Annual Promega Symposium.

Recommendation #6. Develop and utilize a mechanism for tracking information requests that are received by the CODIS Unit to ensure a timely response.

FBI Response: The FBI agrees that it is important to track requests for information to ensure that they receive an appropriate response. Tracking systems are already in place within the CODIS Unit for the external audit review process as well as the OIG audits of NDIS participating laboratories. The CODIS Unit will post a written request form on the CODIS web site to facilitate inquiries by CODIS users. The written requests submitted to the CODIS Unit that require a response will be logged in and tracked in a Request Log; please see a draft copy of the log - Enclosure #1-B. For those requests requiring a response and that do not contain a due date, a due date for two weeks from the date of receipt will automatically be assigned. This Request Log will be printed out on a weekly basis and provided to the CODIS Unit Chief for review.

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Recommendation #7. Develop communication policies that will allow the CODIS Unit to provide written guidance to members of the DNA community to the fullest extent possible.

FBI Response: As appropriate, the FBI will provide written guidance, through CODIS Technical Bulletins, the CODIS website, or both, on issues of interest and importance to the CODIS community. Additionally, at the time of issuance, all CODIS Technical Bulletins are faxed to each NDIS Participating Laboratory.

Recommendation #8. Develop a staffing plan that identifies current hindrances to filling vacant positions in the CODIS Unit, potential solutions to those hindrances, and a time line of requirements for action to fill those positions.

FBI Response: The FBI is committed to filling those vacancies that currently exist in the CODIS Unit and will be exploring other avenues for advertising those positions. The NDIS Custodian (Program Manager) and CODIS Auditor positions require that the persons have some familiarity with the National DNA Index System and the FBI Director's Quality Assurance Standards. Accordingly, the CODIS Unit Chief has mentioned the available positions at meetings of the CODIS State Administrators, CODIS user community and SWGDAM members in an effort to 'get the word' on these positions. Additionally, the CODIS Unit Chief has encouraged qualified persons to apply. To date, an insufficient number of qualified persons have applied for these remaining positions so additional advertising forums will be explored with the FBI's Personnel Unit. For example, advertisements for the available positions could be placed at forensic-related web sites (American Academy of Forensic Sciences, American Society of Crime Laboratory Directors, etc...). Additionally, FBI hiring is handled by the Administrative Services Division and therefore the process and timeline are outside of the control of the CODIS Unit and the Laboratory Division.

Recommendation #9. Develop written descriptions of routine activities and responsibilities for current staff in the CODIS Unit, particularly those with multiple roles, and incorporate this information in a procedure manual for each position.

FBI Response: The FBI agrees that more detailed information on the routine activities and responsibilities of the current CODIS Unit staff would be helpful in the training process for new staff to the Unit. To ensure that the current staff is not overburdened, the CODIS Unit will consult with the

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Personnel Unit to determine if this additional task may be added to their performance review objectives for the following year. This should facilitate the collection of this information while ensuring that this additional task is appropriately incorporated into the staff's responsibilities.

Recommendation #10. Incorporate the three activities we identified that are performed on behalf of the CODIS Unit by other FBI personnel - auditing of NDIS data, providing of training on QAS compliance, and overseeing the activities of the Review Panel - into the CODIS Unit's objectives and measurements to fully reflect the CODIS Unit's efforts to address its mission.

FBI Response: The FBI is supportive of including additional measurements to demonstrate how the CODIS Unit fulfills its mission and statutory responsibilities. Because the CODIS Unit has not previously been tracking the three areas noted above - auditing of NDIS data, providing of training on QAS compliance, and overseeing the activities of the NDIS Audit Review Panel - the CODIS Unit plans to begin to track these additional areas in Federal Fiscal Year 2007.

Recommendation #11. Ensure the development contract process is completed as planned and that the development contract awarded allows for continued responsiveness to legislated changes to CODIS operations.

FBI Response: In light of the OIG's statements that the "FBI has taken measures to provide for the operations, maintenance, and security of the CODIS system for the near future..." and that "the independent assessment determined the Justice for All Act could be implemented and operate over the next 3 to 5 years without exceeding capacity of the current CODIS architecture", it appears that this Recommendation may be unnecessary. The CODIS Unit, with the assistance of the NDIS Procedures Board, has addressed changes in Federal law, first through the Justice For All Act of 2004 and this year with the DNA Fingerprint Act of 2005 and these changes to procedures and the operation of the National DNA Index System have been implemented as soon as practicable (please refer to OIG report at pages 4 and 5). The CODIS Unit will continue to follow its schedule for the development contract. In the event of future legislative changes to the Federal law affecting the operation of the National DNA Index System, such changes will continue to be addressed and implemented as soon as practicable.

Recommendation #12. Ensure that the internal controls over the compliance of NDIS data are strengthened beyond the current reliance on self-certification annual reminder forms.

FBI Response: The FBI does not agree that the self-certification forms and other mechanisms currently in place are insufficient internal controls for the ensuring the appropriateness of DNA data uploaded to NDIS. The annual reminder forms on DNA Data Accepted at NDIS must be reviewed and signed by each CODIS user. CODIS users in State and Local laboratories submit these forms to their CODIS Administrator who is required to maintain these on file for inspection, if requested by the FBI.

Additionally, the CODIS Unit includes a presentation on the DNA Data Acceptable at NDIS at each Annual CODIS Conference. Beginning in February, 2006, the NDIS Custodian now provides 2 to 3 hours of instruction and discussion on the DNA Data Acceptable at NDIS during each CODIS training class.

The FBI disagrees with the OIG's generalization that the annual certification forms have not been successful in ensuring compliance with profile allowability restrictions based on its review of OIG audits conducted during 2004 and 2005. We would suggest that the 2004 and 2005 audit data be contrasted with the OIG recommendations from their 2001 audit of the CODIS Program. For example, the 2001 CODIS audit found 40 instances of inappropriate DNA profiles uploaded to NDIS by 5 out of 8 labs. While the OIG reports 13 incidences of inappropriate profiles uploaded to NDIS, a review of the data found in Figure 13 indicates that only 8 of those incidences related to specimen eligibility issues while the remaining 5 findings relate to accuracy and review issues. A comparison of these numbers from 2001 (before the annual reminder forms were implemented) and the 2004/2005 audits does demonstrate fewer instances of findings relating to specimen eligibility at NDIS.

Recommendation #13. Implement a formal mechanism for tracking findings in audits reviewed by an NDIS Audit Review Panel so that common findings and inconsistencies in interpretation can be identified.

FBI Response: The FBI agrees that information concerning standards frequently cited in audits and differences in interpretation provide valuable information that can be shared with the CODIS community and auditors to ensure consistent interpretation and application of the FBI Director's Quality Assurance Standards (QAS). The CODIS Unit, and more recently the current

and previous Chairs of the NDIS Audit Review Panels, have been informally tracking this information since 2003 when presentations were made at the public SWGDAM meeting held at Promega (September 2003) and the Annual CODIS Conference (November 2003) which included a review of the external audit review process, observations of common pitfalls in submitting the audits and Standards that generated the most findings.

Beginning in 2006, the FBI has been tracking general information relating to those Standards that generate the most findings. The FBI will now track findings that are subsequently overturned. This information will be used in Auditor Training Classes and will be shared with the CODIS community. The FBI will not be tracking information that would identify a specific laboratory in order to maintain the confidentiality of the audit review process.

Recommendation #14. Implement a formal mechanism for tracking auditor performance so that QAS auditors who use incorrect interpretations of the QAS can adjust their performance and also so that the FBI can detect whether individual QAS auditors require additional guidance.

FBI Response: The FBI has informally been tracking issues relating to inconsistent interpretation of the QAS for the past several years and has informally communicated with the auditors' employing organization concerning such interpretations. Since the FBI is not the employing organization for the auditors, it is left up to these organizations to take whatever corrective measures deemed appropriate by the organizations. As part of the tracking mechanism that will be implemented for QAS standards, the FBI will also track issues of inconsistent interpretation by an auditor. The FBI will continue to advise the auditor's employing organization, as necessary. The FBI will also establish relationships with the regional auditing groups so as to keep them informed of any inconsistency in interpretations of the QAS.

Recommendation #15. Use these mechanisms to provide specific training to the DNA community on common findings and inconsistencies observed, to aid the DNA community's compliance, and to further improve consistency between organizations and QAS auditors.

FBI Response: The FBI will continue to share information with the CODIS community concerning the proper interpretation of the FBI Director's QAS. Additionally, the CODIS Unit will include presentations on such topics during

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the Annual CODIS Conference and will consult with the DNA Analysis Unit I concerning a more formal integration of this information into the FBI sponsored QAS auditor training.

Recommendation #16. Broaden the current methodology used by FBI QAS auditors for NDIS profile verification to permit the selection of profiles from each laboratory's total profiles in NDIS. This revised methodology should continue once CODIS Unit auditors are on staff.

FBI Response: The external QAS audit currently conducted by qualified auditors from the FBI's DNA Analysis Unit I is governed by the QAS Audit document. This Audit document is used by the CODIS community to satisfy requirements for participation in the National DNA Index System. The purpose of the external QAS audit is to ensure compliance with the FBI Director's QAS - a requirement in Federal law for participation in NDIS.

The issue of a profile's eligibility for the National Index is not a quality issue but, rather, an issue of the integrity of the DNA records uploaded to and maintained at NDIS. The eligibility of DNA profiles, while also governed by Federal law, is an issue addressed by NDIS Procedures. As such, the eligibility of DNA profiles is ultimately determined by the NDIS Custodian. The FBI believes it appropriate to have the review the issue of profile eligibility separate from the external quality audit of an NDIS participating laboratory. Thus, the FBI proposes that the review of profile eligibility remain with the CODIS Unit auditors. The CODIS Unit auditors will conduct external QAS audits of NDIS Participating Laboratories that will also include a review of 50-150 DNA profiles per laboratory to ascertain whether DNA profiles uploaded to NDIS were eligible for NDIS. For forensic caseworking laboratories, a total of 50 DNA profiles may be reviewed and for offender databasing laboratories, a total of 100 DNA profiles may be reviewed.

Recommendation #17. Expand the scope of CODIS Unit auditor duties to include verification of compliance with NDIS requirements.

FBI Response: Please refer to the FBI's response to Recommendation #16 above. Additionally, the CODIS Unit auditors, during the external QAS audit process, will perform a review of the following NDIS Procedure requirements:

1. Documentation to ensure that every CODIS user has complied with the Annual Reminder of DNA Data Acceptable at NDIS;

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2. DNA profile eligibility (including review of DNA profiles at NDIS for required loci);
3. Confirmation of Interstate Candidate Matches; and
4. Outsourced DNA data subject to technical review.

Recommendation #18. Alter the annual user certification documentation required from laboratories to include information sufficient to confirm that all CODIS users are completing the forms as required.

FBI Response: The FBI believes that the use of the annual certification forms has increased the CODIS user's awareness of the DNA profiles eligible for NDIS. To ensure that all CODIS users are completing the forms as required, the FBI now requires that the annual certification form is submitted by all new CODIS users with the other documentation required for Adding a CODIS User. Additionally, the CODIS Unit will be proposing changes to the NDIS Procedures to require that each CODIS State Administrator provide the NDIS Custodian, on an annual basis, with a listing of those CODIS Users in their State who have completed and signed their Annual Reminder forms on DNA Data Accepted at NDIS. The CODIS Unit will then check the CODIS users identified on this annual listing to ensure that all approved CODIS users have completed their annual reminder forms. Please refer to response to Recommendation #12.

Recommendation #19. Ensure that QAS auditor training is based upon a comprehensive written curriculum, including guidance that reaches beyond the contents of the audit document.

FBI Response: The FBI's DNA Analysis Unit I has been providing auditor training for five years since September 2000 when the QAS Audit document was first introduced. To date, over 1,000 individuals have received the FBI sponsored auditor training. The training is given by the Chief of the DNA Analysis Unit I and follows a written curriculum. Each student is provided with a notebook containing the presentation (to assist in documenting the course, interpreting Standards and note-taking) as well as the FBI Audit Document. At the conclusion of the auditor training, an examination is administered to the participants and a grade of pass/fail is given.

To ensure the consistent interpretation of the Standards, appropriate guidance has been included in the comment and discussion sections of the QAS Audit Document and that constitutes the written guidance, in addition to the training materials, provided to the participants. Auditors are

encouraged to contact the DNA Analysis Unit I or the CODIS Unit if they have a question concerning the interpretation of a Standard.

Recommendation #20. Develop web-based training tools for QAS compliance and auditing information, to aid the CODIS community's awareness, understanding, and consistent interpretation of the QAS.

FBI Response: The FBI is supportive of any mechanism that will facilitate the CODIS community's awareness, understanding and consistent interpretation of the QAS. The FBI believes that the auditor training is one such mechanism and efforts to expand that training to the internet could further encourage consistent interpretation of the QAS. The FBI will explore what additional resources would be needed for the development of computer-based training tools for QAS compliance and auditing information. Meanwhile, the integration of the CODIS Unit auditors into the external QAS audit process and audit reviews are expected to further consistency in interpreting the QAS.

Recommendation #21. Monitor NDIS Audit Review Panel member performance to ensure that members are timely, and implement procedures for taking action in cases where members are consistently untimely.

FBI Response: The FBI acknowledges the participation of State and local forensic DNA scientists in the NDIS audit review process, and without whose participation, this review process could not have been implemented. The FBI does not agree that there is any need to formally monitor the performance of NDIS Audit Review Panel Members to ensure that members are timely. The overwhelming majority of NDIS Audit Review Panel Members perform their reviews in a timely and satisfactory manner. While the OIG audit has found one Panel Member who has been consistently late in his/her responses, there are currently over 88 NDIS Audit Review Panel Members. Accordingly, in light of the efforts of the NDIS Audit Review Panel members who volunteer their time to assist in this endeavor and the lack of any trend indicating that Panel members are consistently late in their responses, the FBI does not see any need, at this time, to monitor Panel Members' performance for timeliness.

Recommendation #22. Track information currently collected from NDIS participants to ensure all external QAS audits reported to the CODIS Unit are also submitted to the NDIS Audit Review Panel.

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FBI Response: The FBI is supportive of efforts to further improve the audit review process. The CODIS Unit does currently track the audits from receipt to completion and closure of the audit. The CODIS Unit will also compare the audit information reported by the State CODIS Administrators in accordance with NDIS Procedures with the audit information tracked by the Unit in an effort to ensure that all external audits conducted are subject to the NDIS Audit Review process.

OFFICE OF THE INSPECTOR GENERAL ANALYSIS AND SUMMARY OF ACTIONS NECESSARY TO CLOSE THE REPORT

The FBI response to the draft audit report appears in Appendix VIII. In its response, the FBI generally agreed with our recommendations and described the corrective actions it has taken or intends to take with regard to the recommendations. However, the FBI disagreed with a few of the recommendations, and these are identified as "unresolved" in the listing below. The status of the individual recommendations is as follows:

1. **Resolved.** This recommendation can be closed when we receive documentation that: (1) the special QAS auditor training classes scheduled for the fall of 2006 have been conducted, and that current CODIS Administrators who have not yet had this training were in attendance; and (2) the NDIS MOU has been revised to reflect a requirement that new administrators receive this training prior to assuming their full CODIS duties.
2. **Resolved.** This recommendation can be closed when we receive a description of the changes the FBI has implemented to enhance the information sharing capabilities of the CODIS website.
3. **Resolved.** This recommendation can be closed when the FBI provides documentation that it has developed user-friendly resources, on the CODIS website or through other means, for allowing CODIS users to expand and test their understanding of profile allowability.

Relatedly, we believe the FBI needs to reconsider its firm stance against a decision-tree type tool. While we acknowledge that every factual scenario presents different nuances of detail, there are many scenarios that ultimately can be distilled into a series of questions. In other words, to determine profile allowability, a CODIS user has to answer a series of question for each scenario and these could be captured in a tool similar to a decision tree. For example, questions could be given in a series, as follows: "Does this profile, in whole or part, match the victim's profile? If yes, then is there a suspect or other known profile available to compare to, that enables deduction of the victim's portion? If yes, then the victim's portion should not be uploaded to NDIS." Such a tool would not address every situation, but it would help users reason through the major factors that they should consider to determine allowability. The OIG continues to find unallowable forensic profiles in its CODIS laboratory audits, even in

laboratories with experienced CODIS users. We believe that even rudimentary tools that are easy to use and understand would be an assistance to CODIS users as they develop their own understanding of allowability.

4. **Resolved.** This recommendation can be closed when we receive a copy of the formal request that has been sent to the SWGDAM Chairman regarding the material operational weaknesses identified during our audit by CODIS Administrators. The FBI did not provide the draft correspondence to SWGDAM noted in its response.
5. **Resolved.** This recommendation can be closed when we receive documentation that a listing of appropriate contacts for QAS audit resolution in each CODIS laboratory has been developed, and that guidance has been provided to those contacts on how they can ensure that their submissions to the NDIS Audit Review Panel are complete and appropriate to facilitate resolution.
6. **Resolved.** This recommendation can be closed when we receive a written policy or procedure formalizing the process described in the FBI's response, and documentation of its implementation. The FBI did not provide the draft copy of a request log noted in its response.
7. **Resolved.** This recommendation can be closed when we receive the written policy or procedure that formally describes how the CODIS Unit ensures that it provides written guidance to the CODIS community to the fullest extent possible.
8. **Resolved.** This recommendation can be closed when we receive a written plan that identifies where delays and hindrances have occurred in filling long-standing vacant CODIS Unit positions, and specific actions being taken to address those delays and hindrances to facilitate full staffing levels. This plan can include such actions as pursuing other avenues of advertising the positions, as described in the FBI response.
9. **Resolved.** This recommendation can be closed when we receive documentation that each CODIS Unit position's duties, responsibilities, and routine activities have been memorialized into a form of training manual for that position.
10. **Resolved.** This recommendation can be closed when we receive documentation of the formalization of the three activities we describe into performance measurements for the CODIS Unit.

11. **Resolved.** This recommendation can be closed when we receive documentation of the completion of the development contract as well as a description of how that contract provides for continued flexibility to legislative changes to CODIS operations.
12. **Unresolved.** The FBI disagrees with the strength of the OIG's evidence to support this recommendation, as well as what it views as a generalization that the certification forms have not fully accomplished their purpose of ensuring compliance. Yet, the OIG's evidence shows that one-third of the audits we conducted over a 2-year period (6 of 18) found that the laboratories had not completed the forms as required. Further, roughly two-thirds of the audits we conducted in that 2-year period (11 of 18) revealed forensic profiles that were not acceptable, based upon FBI-established criteria.

To support its argument, the FBI draws a comparison between our results in our 2001 audit and current audit trends. FBI management states that we found 40 instances of inappropriate DNA profiles uploaded to NDIS by 5 out of the 8 laboratories audited. This comparison is false in that it compares the number of profiles identified, from our previous report, to the number of laboratories at which those profiles were found, as we quote in our current report. To be consistent, the comparison should state that our 2001 report identified forensic profiles that were not acceptable at 6 of the 8 laboratories we audited. Consequently, a reduction from a 75 percent incident rate (6 of 8) in our 2001 audit report to a 61 percent incident rate (11 of 18) in FY's 2004 to 2005 audit reports is not sufficient to support a claim that the annual reminder forms have accomplished their intended purpose.

Further, the FBI argues that other measures are being taken as part of the internal controls over the appropriateness of data uploaded to NDIS. Such an argument actually supports our recommendation, since our recommendation encourages the FBI to take other measures. This is particularly true in light of the fact that one of the key measures the FBI mentions, the addition of special instruction to each CODIS training class, has been implemented since our audit work concluded. Consequently, we conclude that the FBI's support for disagreement with our recommendation is not sufficient to set aside the legitimate evidence supporting our recommendation.

13. **Resolved.** This recommendation can be closed when we receive: (1) documentation that a formalized tracking system has been implemented to identify common and overturned findings from the

audits reviewed by the NDIS Audit Review Panel, and (2) a policy for how that information will be used to enhance community consistency and compliance.

14. **Resolved.** This recommendation can be closed when we receive: (1) documentation that a formalized tracking system has been implemented to identify auditors who use inconsistent interpretations of the QAS, and (2) a policy for what action should be taken when such auditors are identified.
15. **Resolved.** This recommendation can be closed when we receive documentation that a mechanism has been developed to systematically communicate the information gathered in response to recommendation nos. 13 and 14 to training providers in the DNA community, including the FBI's own QAS audit trainers.
16. **Resolved.** This recommendation can be closed when we receive a copy of the formal policy for the conducting of profile allowability reviews on behalf of the CODIS Unit that reflects: (1) the expanded size of the reviews described in the FBI's response; and (2) the objective and independent methods that will be used to ensure that those profiles are selected from among all of a laboratory's profiles at NDIS.

Relatedly, we want to address what appears to be a misunderstanding by the FBI regarding the nature of our recommendation. The FBI appears to have read our recommendation as advising the FBI to use QAS auditors to perform profile allowability reviews. In actuality, the OIG's recommendation, that flows directly from the support in the report, only acknowledges that the FBI has already been using QAS auditors to perform profile allowability reviews. The recommendation communicates that even now, while the FBI is handling the profile allowability reviews in this way, changes need to be made to the methodology. In our report, as well as in our recommendation, we acknowledge the FBI's stated intention to have the profile allowability reviews conducted by the CODIS Unit auditors. However, at the time of our audit, no such auditors had reported to duty in the Unit. Consequently, our recommendation advises the FBI to implement this change in methodology immediately, rather than at some point in the future when the CODIS Unit auditors are on staff.

17. **Resolved.** This recommendation can be closed when we receive a copy of the formal policy or procedure that describes the scope of the CODIS Unit auditor's reviews, demonstrating that those reviews will

include an analysis of compliance with NDIS requirements, as described in the FBI's response.

18. **Resolved.** This recommendation can be closed when we receive documentation that the changes to the NDIS procedures proposed in the FBI's response have been implemented, to annually confirm that all approved CODIS users have completed their annual user certification forms.
19. **Unresolved.** The FBI's response does not address how it plans to ensure that all guidance given at auditor training courses, including verbal guidance given extemporaneously in discussion sessions as specifically mentioned in our report, is documented in writing for future reference to ensure consistency and to disseminate within the community. Instead, the FBI asserts that the training is already based on a written curriculum. As our report analysis discloses, we agree that a written curriculum exists, but do not believe that it comprehensively documents verbal guidance given supplemental to the audit document in training courses.
20. **Resolved.** This recommendation can be closed when we receive documentation of the implementation of web-based tools to aid the CODIS community's awareness, understanding and consistent interpretation of the QAS.
21. **Unresolved.** The FBI disagrees with this recommendation on the basis that the OIG did not provide compelling evidence to support it, in the form of a trend analysis of how many panel members were untimely. Such a trend analysis was not within the scope of the OIG's work on this audit, but through the course of other work performed, we noted one glaring incident of a panel member being consistently late on audits they reviewed. The FBI argues that since we cite only 1 out of the approximately 88 panel members, our evidence is insufficient. However, the FBI ignores our data analysis of overall panel timeliness that revealed, on average, panel members are taking almost twice as long as permitted to complete their reviews (54 days rather than 30). How many members are implicated by this average was not our concern, but rather the fact that panel member timeliness impacts the overall timeliness of the panel process. Consequently, our audit evidence is sufficient to warrant this recommendation.
22. **Resolved.** This recommendation can be closed when we receive documentation that the CODIS Unit has implemented a procedure to begin comparing the audit information reported annually by the SDIS

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Administrators to the audits received by the NDIS Audit Review Panel, to ensure all appropriate audits have been submitted to that Panel.