



**COMPLIANCE WITH STANDARDS GOVERNING
COMBINED DNA INDEX SYSTEM ACTIVITIES
WASHOE COUNTY FORENSIC SCIENCE DIVISION
DNA UNIT
RENO, NEVADA**

U.S. Department of Justice
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Audit Division

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EXECUTIVE SUMMARY

The Office of the Inspector General, Audit Division, has completed an audit of compliance with standards governing Combined DNA Index System (CODIS) activities at the Washoe County Forensic Science Division DNA Unit (Laboratory).¹ The Federal Bureau of Investigation (FBI) began the CODIS Program as a pilot project in 1990. The DNA Identification Act of 1994 (Act) formalized the FBI's authority to establish a national DNA index for law enforcement purposes.² The Act specifically 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. The Act further specified that the index include only DNA information that is based on analyses performed in accordance with standards issued by the FBI.

The FBI implemented CODIS as a distributed database with three hierarchical levels that enables federal, state, and local crime laboratories to compare DNA profiles electronically. The National DNA Index System (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. The NDIS became operational in 1998 and is managed by the FBI as the nation's DNA database containing DNA profiles uploaded by participating states. DNA profiles originate at the local level, flow to the state and national levels, and are compared to determine if a convicted offender can be linked to a crime, or if crimes can be linked to each other.

The FBI provides CODIS software free of charge to any state or local law enforcement laboratory performing DNA analysis. A laboratory's profiles have to be uploaded to NDIS before the profiles benefit the system as a whole. Before a laboratory is allowed to participate at the national level a Memorandum of Understanding (MOU) must be signed between the FBI and the applicable state laboratory. The MOU defines the responsibilities of each

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

² Public Law No. 103-322 (1994).

party, includes a sublicense for the use of the CODIS software, and delineates the standards laboratories must meet in order to utilize NDIS.³

The objective of the audit was to determine if the Laboratory was 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 quality assurance standards issued by the FBI; and (3) Laboratory's DNA profiles in CODIS databases were complete, accurate, and allowable.

We determined that the Laboratory was in compliance with the standards governing CODIS activities with some exceptions. Specifically, we noted the following:

- In 2 of the 10 NDIS matches reviewed, the designated law enforcement agency was not timely notified of the confirmed match according to criteria established by the FBI or the OIG. Laboratory management have since implemented a new review checklist that they said will enable them to better ensure that agencies are notified timely of CODIS matches.
- The Laboratory maintains the CODIS system server in an area accessible to all members of the Forensic Science Division (Division), which is not in keeping with the NDIS requirements for physical security of the CODIS system. The area where the server is stored can be secured easily, since it is in a room formerly used as an evidence storage vault. Division management agreed, and initiated immediate action to have the room re-keyed to limit access to approved personnel. Laboratory management subsequently provided documentation that the re-keying effort was completed, and that keys were distributed to DNA personnel and appropriate Laboratory management only. Consequently, we make no further recommendation to address this issue.
- Division staff is generally afforded physical access to all parts of the Division, with the exception of a few areas designated as restricted. While the Laboratory (DNA Unit) is identified as a restricted area, no measures have been taken to ensure that it is treated as such.

³ These standards were appended to the MOU as Appendix C - NDIS Procedure Manual. This manual is comprised of several operational procedures that provide specific instructions for laboratories to follow for procedures pertinent to NDIS. For our purposes, the NDIS participation requirements consist of the MOU and the NDIS operational procedures.

In keeping with established quality assurance standards, and to ensure the application of the Division's own designation of the Laboratory as a restricted area, we conclude that unrestricted access to the Laboratory should be limited to DNA personnel and appropriate management. This is particularly true in light of a separate matter we identified. While evidence within the Division appears to be well secured and accounted for, we confirmed that the Laboratory stores extracted DNA from evidence samples in an unsecured refrigerator within the Laboratory. By further restricting access to the Laboratory, management can ensure that the security of the extracts is also addressed. While Division management disagreed with our interpretation of the quality assurance standards, they have taken steps to limit unrestricted Laboratory access to DNA personnel and management by re-keying the Laboratory door and distributing keys to appropriate personnel. Laboratory management subsequently provided documentation that the re-keying effort was completed, and that keys were distributed only to DNA personnel and appropriate Laboratory management. Consequently, we make no further recommendation to address this issue.

- Of the 100 forensic profiles tested, we determined that 1 was inaccurate and 3 were unallowable. In the case of the inaccurate profile, one allele at one locus was entered incorrectly into NDIS.⁴ For the three unallowable profiles uploaded to NDIS, one was that of a victim, and the other two were those of known individuals rather than from crime scene evidence. Laboratory management remedied these profiles, correcting or deleting the profiles as appropriate.

The results of our audit are discussed in the Findings and Recommendations section of the report. Our audit scope and methodology are detailed in Appendix I of the report and the audit criteria are detailed in Appendix II of the report.

We discussed the results of our audit with Laboratory officials and have included their comments in the report as applicable.

⁴ A locus is a specific location on a chromosome. The plural form of locus is loci.