**Department of Forensic Science**

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# CODIS
# OPERATING POLICIES
# AND
# PROCEDURES MANUAL

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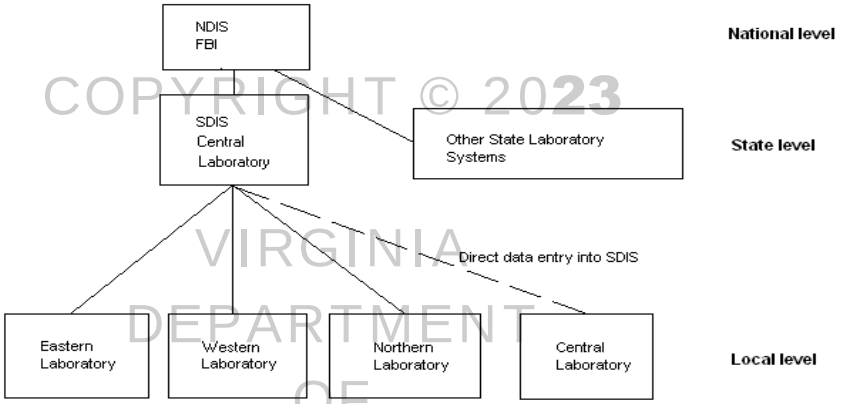
# 1 OVERVIEW OF THE VIRGINIA COMBINED DNA INDEX SYSTEM

**1.1** The Combined DNA Index System (CODIS) is a computerized program designed to house DNA profiles from convicted offenders, arrestees, forensic, and missing persons cases in various searchable indices or databases.

1.1.1 DNA profiles obtained from the evidence in forensic non-subject cases and missing persons cases can be searched against the various indices within CODIS to provide possible leads to the investigators of such cases.

1.1.2 CODIS is made up of Indexes at three distinct levels: Local, State, and National.

1.1.2.1 The CODIS software is located in the Central Laboratory and in each of the three regional laboratories (Northern, Eastern, and Western Laboratories).




**The Levels and Composition of the CODIS System in Virginia**

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1.1.2.2 The current version of CODIS allows for data to be entered directly into an index, where the profile becomes immediately available at that laboratory for search purposes. This allows for data from the Central Laboratory to be searchable at the State DNA Index System (SDIS) immediately upon entry. Data from a regional laboratory is searchable immediately at that laboratory upon entry.

1.1.2.3 The State DNA Index System (SDIS) is located in the Central Laboratory. DNA profiles from the Central Laboratory are entered directly into SDIS, while the profiles from the three regional laboratories are uploaded electronically via the CODIS network into SDIS.

1.1.2.3.1 The Offender and Arrestee Indices contain profiles from individuals as defined by the Code of Virginia.

1.1.2.3.2 The Forensic Indices contain profiles from crime scene evidence deemed appropriate for entry into CODIS, as further defined in this manual.

1.1.2.3.3 The Unidentified Human (Remains) Index contains profiles from living persons of unknown identity (e.g., children and others who can't or refuse to identify themselves) and profiles from recovered dead persons (including body parts and tissues) whose identities are not known.

1.1.2.3.4 The Missing Persons Index contains profiles from known samples of missing persons and profiles obtained by examining intimate items purported to belong to a reported missing person, such as a toothbrush.


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1.1.2.3.5 The Relatives of Missing Person Index contains profiles from the biological relatives of individuals reported missing.

1.1.2.3.6 The Pedigree Tree and Single Typed Node Indices contain profiles of biological relatives and spouses of missing persons that are associated with a pedigree tree.

1.1.2.3.7 The Spouse Index contains profiles of a presumptive parent of a common child of a missing person.

1.1.2.4 The National DNA Index System (NDIS) is a centralized index of DNA profiles administered by the FBI. DNA profiles that are allowed by NDIS are contributed to NDIS by participating State CODIS laboratories. The profiles from cases nationally are searched at this level against other indices based on specimen category. NDIS policy currently requires an arrestee or offender profile to have results from all 20 CODIS core loci (CSF1PO, FGA, TH01, TPOX, vWA, D3S1358, D5S818, D7S820, D8S1179, D13S317, D16S539, D18S51, D21S11, D1S1656, D2S441, D2S1338, D10S1248, D12S391, D19S433, D22S1045). Forensic profiles have specific minimum loci number requirements (refer to Section 3). In addition, some profiles, based on specimen category, must also exceed a statistical threshold for rarity, refer to Section 3.8.

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1.1.2.4.1 Specimen categories associated with missing persons casework require Amelogenin. Profiles in the Relatives of Missing Persons and Spouse Indices require all 20 CODIS core loci. Profiles in the Missing Person Index require 10 of the original CODIS core loci. Profiles in the Unidentified Human (Remains) Index require 7 of the original CODIS core loci to be uploaded and evaluated in identity searches. Unidentified person samples with fewer than seven loci can be uploaded but will only be evaluated in threshold based pedigree searches.

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1.1.2.4.2 Profiles are also considered complete and eligible for upload to NDIS if there is mitochondrial DNA (mtDNA) sequence data available which encompasses all of Hypervariable Region I (HV I) and Hypervariable Region II (HV II).

1.1.3 DNA analysis results are generated by examiners in the Forensic Biology Section at each laboratory and in the Mitochondrial DNA Section at the Central Laboratory. DNA analysis results may also be generated by contract laboratories. The profiles entered into CODIS are verified to confirm that the data is accurate and appropriate for entry into CODIS. DNA profiles that meet NDIS criteria as well as criteria specified in this document are subsequently uploaded to NDIS. Refer to Appendix A for a diagrammatic representation of the flow of CODIS data.

1.1.4 Convicted offender and arrestee profiles, generated by DNA Data Bank analysts in the Central Laboratory or by a designated contractor, are entered directly into SDIS after the data has been technically reviewed. DNA profiles that meet NDIS criteria are subsequently uploaded to NDIS.

1.1.5 A profile from a forensic case is searched against the Offender, Arrestee, Forensic, Forensic Partial, Forensic Mixture, Unidentified Human (Remains), and Missing Persons Indices in SDIS.

1.1.6 Specimens are currently analyzed by the Department using the PowerPlex® Fusion System. Some specimens are also analyzed using the AmpFLSTR® Yfiler® System or mitochondrial DNA (mtDNA) sequence methodology. Pre-existing DNA Short Tandem Repeat (STR) results at the PowerPlex® 16 System, the PowerPlex® 16BIO System or the PowerPlex™ 1.1 and PowerPlex™ 2.1 System loci from Convicted Offender specimens and Forensic specimens are also present in CODIS. Results from the two PowerPlex™ 1.1 and PowerPlex™ 2.1 Systems together fulfill the 13 original CODIS core locus requirement.

**1.2** The CODIS software is designed by and provided to the Virginia Department of Forensic Science by the Federal Bureau of Investigation (FBI).



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1.2.1 Upgrades and modifications to the software are periodically provided to the Department by the FBI through the FBI's contractor.

**1.3** The use of the CODIS system in Virginia is in accordance with the current version of the NDIS Operational Procedures Manual, and/or instructions provided to the Department by the FBI and the FBI's contractor.

**1.4** In accordance with the Memorandum of Understanding and CODIS License Agreement between the Department and the FBI, the Department is strictly prohibited from copying or distributing the CODIS software and associated written material to individuals or organizations outside of the Department.

**1.5** CODIS is a dynamic system, and therefore undergoes frequent major and minor software upgrades, which may cause the actual operation of the software not to exactly reflect the policies and procedures in this document. Modifications to this manual will be made to accommodate the changes as necessary.

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# 2 CODIS SYSTEM ADMINISTRATION

The Virginia CODIS system is managed by a designated administrator in each of the four laboratories. These individuals shall, in accordance with the QAS Document, have the appropriate training on the operation and management of the CODIS system, including at a minimum the completion of the CODIS User Training Class (in person or LMS online) and completion of the FBI QAS/Auditor Training.

**2.1** The Local CODIS Administrator of each regional laboratory ensures the normal day-to-day operation of the CODIS system in that laboratory.

2.1.1 This individual is responsible for administration of the laboratory's local CODIS network, conducting and documenting training of CODIS users in that laboratory, maintaining the security, integrity and quality of data in the CODIS system, managing data backup in the CODIS system, ensuring matches are dispositioned promptly and in accordance with NDIS procedures, and communicating with the State CODIS Administrator and the FBI's contractor personnel to resolve routine problems.

2.1.2 This individual is responsible for informing the State CODIS Administrator promptly of any serious issues that impact the normal operation of the CODIS system in that laboratory. If the situation warrants, the Local CODIS Administrator has the authority to temporarily suspend an analyst's or the laboratory's participation in CODIS pending resolution of the problem.

2.1.3 In addition to specific duties described elsewhere in this document, the Local CODIS Administrator is also responsible for the maintenance of the CODIS system in that laboratory. This includes duties such as activating and deactivating CODIS users, granting user privileges, deleting and changing specimen information, adding or changing loci and allele designations, and implementing configuration changes to Popstats and Searcher.

2.1.4 The Local CODIS Administrator of each laboratory has one designated individual to serve as an alternate and to assist in the administration of the CODIS system in that laboratory. This individual, after receiving training by the Administrator, shall assist the primary Administrator in performing aspects of the above duties such as, but not limited to, data backup, data upload, and communication with the State CODIS Administrator and the FBI's contractor personnel. At the earliest opportunity this alternate individual shall complete the CODIS User Training Class provided by the FBI and complete the FBI QAS/Auditor Training.

**2.2** The State CODIS Administrator shall be located in the Central Laboratory and is responsible for the overall operation of the entire Virginia CODIS system. This individual shall have the appropriate training on the operation and management of the CODIS system statewide, including at a minimum the completion of the CODIS User Training Class provided by the FBI and completion of the FBI QAS/Auditor Training. This individual shall attend periodic retraining with the FBI or the FBI's contractor as the CODIS software is upgraded.

2.2.1 The State CODIS Administrator acts as the official liaison with FBI/FBI's contractor personnel on major CODIS issues, communicates with FBI/FBI's contractor personnel to resolve SDIS problems, advises Department management on current and future issues that affect the Virginia CODIS system, recommends section policy changes related to the operation and use of CODIS, plans and implements periodic software and hardware upgrades to the Virginia CODIS system, transfers data to NDIS and communicates with NDIS personnel, communicates with personnel from other states on CODIS issues, provides training to Local CODIS Administrators when necessary, and coordinates periodic beta-testing of new versions of the CODIS software when requested by the FBI. If a situation arises that affects the reliability of the data and function of CODIS, the State CODIS Administrator has the authority to temporarily suspend an analyst's or laboratory's participation in CODIS pending resolution of the problem. If the State CODIS Administrator position is vacant the Department shall not upload samples to NDIS.

2.2.2 The State CODIS Administrator has a designated individual to serve as an alternate and to assist with the administration of CODIS in the Central Laboratory as well as the entire Virginia CODIS system. This

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individual, after receiving training by the Administrator, shall function as the Local CODIS Administrator, and shall routinely assist in performing aspects of the above duties such as, but not limited to, data backup, data upload, and communication with the Local CODIS Administrators and the FBI's contractor personnel. At the earliest opportunity possible, this individual shall complete the CODIS User Training Class provided by the FBI, and complete the FBI QAS/Auditor Training.

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# 3 DATA INPUT INTO CODIS

## 3.1 General Information

3.1.1 DNA analysis results will be entered into CODIS either by the IMPORT program, data link, or via manual entry. For the Central Laboratory, the data entered into CODIS will be immediately available for searching at SDIS upon entry. For the regional laboratories, the data entered will be immediately available for searching at the local level; however, the data must be uploaded before it is available for searching at SDIS.

3.1.2 For STR/Y-STR data entered into CODIS via the IMPORT program, the output file created from the sizing program may be in the Common Message Format (CMF) or e**X**tensible **M**arkup **L**anguage (.XML). For mtDNA data entered into CODIS via the IMPORT program or data link, the export file created will be .xml format. For Y-STR data entered via data link the export file will be .xml format. Each file to be imported into CODIS should have a unique file name to ensure that the correct file is imported into CODIS.

3.1.3 To ensure the accuracy of manually entered data, the CODIS software requires that the allele values / base calls for all specimens be entered twice for each value/call.

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## 3.2 Profiles of Convicted Offender Specimens and Arrestee Specimens

3.2.1 Profiles of **Convicted Offender specimens** and **Arrestee specimens** will be configured for entry into CODIS using a unique DNA sample number. In addition, the appropriate specimen category for that specimen must be selected.

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3.2.1.1 Profiles from juveniles, adult convicted felons, and qualifying misdemeanants shall have the specimen category of “Convicted Offender” or when appropriate, “Multi Allelic Offender”.

3.2.1.2 Profiles of Arrestee specimens from adults shall have the specimen category of “Arrestee”.

3.2.1.3 Upon written notification to the State CODIS Administrator from the DNA Data Bank Supervisor (or designee) of a conviction for an individual, an Arrestee specimen will be converted to a Convicted Offender specimen by changing the specimen category. This conversion will be performed by the State CODIS Administrator or designee.

3.2.1.4 An Arrestee specimen will be deleted from CODIS upon written notification to the State CODIS Administrator from the DNA Data Bank Supervisor (or designee) of a status change for the individual, such as a conviction reduced to a non-qualifying misdemeanor or charges dropped. Such deletions are done pursuant to the Code of Virginia.

3.2.1.5 The “Source ID” field is not required to be marked for Convicted Offender and Arrestee specimens.

3.2.2 Profiles of Convicted Offender and Arrestee specimens are typically entered into CODIS via the IMPORT program. A specimen will not typically be entered into CODIS until results from all 20 CODIS core loci are obtained.

## 3.3 Forensic Casework Non-Subject Profiles

Forensic DNA profiles entered into CODIS must be from items originating from and/or associated with a crime scene and contain only those alleles potentially attributable to the putative perpetrator(s). The primary purpose of entering a forensic casework non-subject profile into CODIS is to identify the possible perpetrator of that particular crime for which the DNA analysis was conducted. The primary purpose of entering a forensic casework non-subject profile into CODIS is not for identifying possible victims or witnesses of crimes. This should be kept in mind when considering whether a profile is probative and should be entered into CODIS.



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For forensic cases without a suspect or where the suspect has been eliminated, probative DNA profiles obtained from evidence that do not match submitted known samples (such as victim, suspect, or elimination samples) may be treated as non-subject case profiles and entered into CODIS. If appropriate elimination samples were not provided, but a specific request for the elimination sample(s) has been made and documented in the case file, the profile in question may be treated as a non-subject case profile and entered into CODIS.

For forensic subject cases where the primary DNA results include the suspect, other possibly probative DNA profiles obtained from items of evidence in the case that do not match any submitted known samples (such as victim, suspect, or elimination samples) may be treated as non-subject case profiles and entered into CODIS. The examiner will determine whether a profile is probative in such situations by taking into consideration such factors as the nature of the specific item of evidence and the alleged case scenario, and make an informed decision.

**NOTE:** Felony possession type cases (firearms or drugs) are typically not entered into CODIS unless specific information is available that questions possession of the item.

Forensic casework non-subject profiles may be entered into CODIS by manual entry or the IMPORT program. Casework non-subject profiles shall be reviewed before they are entered or uploaded into SDIS. Refer to Section 5.8 for the aspects of this review. The process of data entry will be documented by placing the Specimen Details Report in the case file.

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3.3.1 Forensic, Unknown Non-Subject Profiles

3.3.1.1 A **Forensic, Unknown Non-Subject Profile** is a DNA profile originating from a single source (or a fully deduced profile originating from a mixture) that has results at all 13 original CODIS core loci with no evidence of allelic dropout at those loci and no more than 3 alleles at 1 locus while the remaining loci can have up to 2 alleles.

3.3.1.1.1 Evaluation of allelic dropout is in accordance with procedures set forth in the current version of the Forensic Biology Procedures Manuals.

3.3.1.1.2 For any locus with a result (outside of the 13 original core loci) that may be missing information due to allelic dropout the partial locus flag will be marked YES.

3.3.1.1.2.1 If any locus has the partial locus flag marked YES, the sample partial flag will be marked YES.

3.3.1.2 For entry into CODIS, Forensic, Unknown Non-Subject Profiles will begin with the FS Lab Number followed by an abbreviated description of the evidence. The specimen category will be “Forensic, Unknown,” and the Source ID field will be marked “No.”

The **abbreviated description** of the evidence is recommended below. The item number is not required in the description, but may be incorporated to aid in the specimen description.

3.3.1.3 Recommended abbreviations:

- Vaginal/cervical swabs = VC
- Thighs/ext. genitalia swabs = TEG
- Perianal/buttocks swabs = PB
- Anorectal swabs = ANO or AR
- Lips/lip area swabs = LLA
- Blood stains = BLD
- Oral Rinses = OR
- Pubic area swabs = PA
- Underpants = UPS


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- Sperm fraction = SP
- Non-sperm fraction = NSP
- Perspiration = PRSP
- Touch/Trace = TCH

**EXAMPLES:** The specimen from a Central Laboratory forensic non-subject homicide case C99-10000 with a blood stain on the victim's shirt not matching the victim may be identified as C99-10000BLD.

Specimens from a Western Laboratory forensic non-subject case W99-50001 involving two perpetrators are obtained from the sperm fraction of two semen stains on a sheet (stains A and B). Each stain is potentially associated with a different perpetrator. These specimens may be identified as W99-50001ShA-SP (for stain A) and W99-50001ShB-SP (for stain B).

3.3.2 Forensic Partial Non-Subject Profile

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3.3.2.1 A **Forensic Partial Non-Subject** profile is a DNA profile originating from a single source (or a deduced profile originating from a mixture) that has evidence of allelic and/or locus dropout at any of the 13 original CODIS core loci and no more than 3 alleles at 1 locus while the remaining loci can have up to 2 alleles. Refer to section 3.8 for additional information on CODIS entry of Forensic Partial profiles such as minimum loci number and statistical thresholds for upload**.**

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3.3.2.1.1 For any locus with a result that may be missing information due to allelic dropout the partial locus flag will be marked YES.

3.3.2.1.1.1 If any locus has the partial locus flag marked YES, the sample partial flag will be marked YES.

3.3.2.2 For entry into CODIS, **Forensic Partial Non-Subject Profiles** will begin with the FS Lab Number followed by an abbreviated description of the evidence. Refer to Section 3.3.1.3 for recommended evidence descriptions. The Source ID field will be marked "No".

3.3.2.3 A forensic partial non-subject profile with results at 7 or fewer loci shall **not** be entered into CODIS, unless the section supervisor (or designee) has evaluated the partial profile and concurs with the examiner's reason for entering the profile into CODIS. The supervisor shall document approval by initialing the primary landscape sheet or LDIS (Local DNA Index System) Specimen Details Report.

3.3.2.4 In general, a forensic partial profile with fewer than 6 loci that contain fewer than 8 total alleles is not likely to be suitable for CODIS.

3.3.3 Forensic Mixture Non-Subject Profiles

3.3.3.1 A **Forensic Mixture Non-Subject Profile** is a DNA profile originating from more than one contributor. Refer to section 3.8 for additional information on CODIS entry of Forensic Mixture profiles such as minimum loci number and statistical threshold for upload.

3.3.3.2 If the profile of the major (or minor) contributor is clearly discernible in the mixture and is deemed probative, the complete major (or minor) profile portion of the mixture may be entered into CODIS as described in Section 3.3.1. Otherwise, a **Forensic Mixture Non-Subject Profile** will begin with the FS Lab Number followed by an abbreviated description of the evidence. Refer to Section 3.3.1.3 for recommended evidence descriptions. The Source ID field will be marked "No." If appropriate, the Partial Profile field should be marked "Yes."



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3.3.3.3 The examiner should evaluate the profile using his/her experience in interpreting STR results (taking into account such factors as the overall number of alleles at each locus, the relative allele RFU values, etc.) to determine whether that profile is appropriate for entry into CODIS.

3.3.3.3.1 A forensic mixture non-subject profile is not suitable for CODIS if it is concluded that a search of this profile will result in a large number of ambiguous hits, or that such a profile will frequently become an ambiguous candidate when searches are made of non-subject case profiles.

3.3.3.3.2 The examiner will evaluate the mixture profile and determine whether it is appropriate to enter the whole mixture profile, enter only those alleles clearly foreign to the victim, or not enter the profile into CODIS at all. The goal is to capture the profile attributable to the putative perpetrator. As necessary, the examiner should consult with the Local CODIS Administrator to make this determination.

3.3.3.3.3 It is recognized that some mixture profiles are simply not meaningful and therefore should not be entered into CODIS. A mixture non-subject profile with results at 7 or fewer loci shall not be entered into CODIS, unless the section supervisor (or designee) has evaluated the mixture profile and concurs with the examiner's reasons for entering that profile in CODIS. The supervisor shall document approval by initialing the primary landscape sheet or LDIS Specimen Details Report.

3.3.3.3.4 A Forensic Mixture non-subject profile entered into CODIS shall not have more than 4 alleles at any locus.

3.3.3.4 An option to designate a required allele is available for mixture profiles entered into CODIS. Only one required allele may be designated for each locus. This designation is made by a plus (+) after the allele.

3.3.3.4.1 The required allele designation is helpful in reducing ambiguous matches when the entire mixture profile is entered into CODIS. It will cause the search of this profile to only show match candidates that contain the designated allele at a particular locus. Candidates without that allele for that locus will not be considered a match. Additionally, the required allele designation is used in conjunction with the search stringency – it does NOT replace the search stringency.

**EXAMPLE**: TPOX 8, 9, 11+ indicates that the 11 allele is a required allele and only candidates containing the 11 allele will be considered a match when this profile is searched. In this example, using a moderate search stringency, the only matching candidates are 11; 8, 11; 9, 11; 8, 9, 11; 8, 9, 11, X (X can be any allele).

3.3.3.4.2 Caution is necessary when a required allele designation is used. An important consideration is to not erroneously designate an allele as a required allele, causing the profile of the perpetrator to be missed during the search. If necessary, consult with the Local or State CODIS Administrator regarding the use of the required allele designation and its effect on the search results.

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### 3.3.4 Forensic Non-Subject X Profiles

#### 3.3.4.1 X Profiles

When searched with Moderate stringency at all loci, some forensic non-subject case profiles (such as mixture profiles, partial profiles, and profiles with homozygous results at many loci) will result in a large number of ambiguous candidate matches. The search stringency for such profiles may be customized to High for one or more loci to allow for a more efficient and discriminating search.

3.3.4.1.1 Customization of the search stringency must be made with careful consideration. The main goal is not to erroneously eliminate the actual perpetrator from the pool of candidates by improper stringency customization when the search is conducted.

3.3.4.1.1.1 Such customization will be at the discretion of the examiner in consultation with the Local or State CODIS Administrator and must be documented in the case file.

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3.3.4.1.2 Specimens will be designated with an "X" in front of the specimen number. The specimen category will be "Forensic, XZProfiles" and the Source ID field will be "No." If appropriate, the Partial Profile field will be marked "Yes."

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**EXAMPLE:** XC99-1000vc-sp

3.3.4.1.3 X profiles are required to meet the applicable Moderate Match Estimate (see Section 3.8) to be entered into CODIS.

3.3.4.1.4 After such an "X" profile has been entered into CODIS, the examiner will provide the locus customization information to the State CODIS Administrator in writing. A copy of the Specimen Details Report, with the appropriate locus-specific stringencies indicated, may be used for this purpose.

3.3.4.1.5 X profiles will only be maintained at the State level (i.e., will not be uploaded to NDIS).

## 3.4 Forensic Casework Subject Profiles

Forensic DNA profiles entered into CODIS must be from items originating from and/or associated with a crime scene and contain only those alleles potentially attributable to the putative perpetrator(s). A forensic casework profile that matches a suspect may be entered into CODIS. If the DNA results in a case indicate that only one perpetrator is involved, only the most complete forensic profile for that case matching the **perpetrator** will be entered into CODIS. Other profiles that appear to be from the same perpetrator, but are less complete, will not be entered into CODIS.

In forensic cases involving more than one perpetrator, more than one STR profile may be entered into CODIS if the probative profiles from different items of evidence are found to be consistent with different individuals.

Forensic casework subject profiles may be entered into CODIS by manual entry or the IMPORT program.

Casework subject profiles shall be reviewed before they are entered or uploaded into SDIS. Refer to Section 5.8 for the aspects of this review. The process of data entry will be documented by placing the Specimen Details Report in the case file.



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3.4.1 For entry into CODIS, **Forensic, Unknown Subject Profiles** will begin with the FS Lab Number followed by an abbreviated description of the evidence. Refer to Section 3.3.1.1 for the Forensic, Unknown definition and Section 3.3.1.3 for recommended evidence descriptions. The specimen category of the forensic profile will be "Forensic, Unknown" and the Source ID field will be marked "Yes".

3.4.2 For entry into CODIS, **Forensic Partial Subject Profiles** will begin with the FS Lab Number followed by an abbreviated description of the evidence. Refer to Section 3.3.2.1 for the Forensic Partial definition, Section 3.3.1.3 for recommended evidence descriptions and Section 3.8 for additional information on CODIS entry of Forensic Partial profiles such as minimum loci number and statistical threshold for upload. The Source ID will be marked "Yes.".

3.4.3 **Forensic Mixture Subject Profiles** shall not be entered into CODIS, unless the section supervisor (or designee) has evaluated the mixture profile and concurs with the examiner's reasons for entering that profile in CODIS. The supervisor shall document approval by initialing the primary landscape sheet or LDIS Specimen Details Report. If such profiles are entered into CODIS, the specimen category will be "Forensic Mixture SDIS" and the Source ID field will be marked "Yes". If appropriate, the Partial Profile field will be marked "Yes."

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3.4.4 No forensic subject profiles will be entered into CODIS using the X configuration previously described.

## 3.5 Missing Persons Cases - Profiles of Unidentified Human (Remains), Missing Persons, Spouses, and Relatives of Missing Persons

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The profiles developed from missing persons cases can be entered into CODIS. Amelogenin results (if obtained) for the profiles must be entered into CODIS. Due to the nature of missing persons searches, only fully designated loci – those for which there is no ambiguity regarding the number of alleles – should be entered for profiles residing in the Unidentified Human (Remains), Missing Persons, Relatives of Missing Persons, and Spouse indices. Profiles which will reside in these indices shall be reviewed before they are entered or uploaded into SDIS. Refer to Section 5.8 for the aspects of this review.

3.5.1 In the CODIS context, DNA profiles of unidentified human body parts/tissue and profiles of individuals (dead or alive) of unknown identity (e.g., individuals who are unwilling or unable to identify themselves) are treated similarly. For entry into CODIS, the profiles from unidentified remains and unidentified persons will begin with the FS Lab Number followed by an abbreviated description of the evidence. The specimen category of the profile will be "Unidentified Person" and the Source ID field will be marked "No". If appropriate, the Partial Profile field will be marked "Yes".

3.5.2 Composite profiles are only allowed in the specimen category unidentified person, specifically human remains. A composite DNA profile may be generated by combining typing results from different loci obtained from multiple injections of the same amplified evidentiary sample and/or multiple amplifications of the same DNA extract from a remains sample. In the instance where multiple items are received from one body, a composite profile may be generated from separate items (e.g., tooth and bone). When separate extracts from a given item are combined prior to amplification, the resulting DNA profile is not considered a composite profile. A Memorandum for Record (MFR), signed by the Biology Program Manager, will be required in the case file indicating a composite profile exists.

3.5.3 The DNA profile from Missing Persons may be the known profile of the missing individual, such as that developed from a sample in a child's previously prepared buccal/hair kit. Alternatively, the profile may be a deduced profile developed from an intimate item purported to belong to the individual, such as a toothbrush. For entry into CODIS, a missing person's profile will begin with the FS Lab Number followed by an abbreviated description of the evidence. The specimen category of the profile will be "Missing Person". For entry into CODIS, a deduced profile will begin with the FS Lab Number followed by an abbreviated description of the evidence. The specimen category of the deduced profile will be "Deduced Missing Person". The Source ID field is not required to be marked. If appropriate, the Partial Profile field will be marked "Yes".



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3.5.4 For entry into CODIS, the profiles of relatives of a missing person will begin with the FS Lab Number followed by an abbreviated description of the evidence. The appropriate specimen category of the profile will be chosen from CODIS, i.e., "Biological (Mother, Father, etc.)". The Source ID field is not required to be marked.

## 3.6 Staff Profiles

The Staff Index is used for quality assurance purposes, and is authorized and defined by the Department Quality Manual .

3.6.1 The autosomal STR Staff profiles will be maintained in a **Staff Index** in the Central Laboratory, with the specimen category of "staff". The specimen ID will be "DFS" followed by a unique number assigned by the State CODIS Administrator (or designee). The identifying information shall be maintained in accordance with the AOP. The profiles **will not** be uploaded to NDIS.

## 3.7 Deletions/Expungements of Profiles

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It is recognized that occasionally a profile that was previously entered into CODIS will need to be **deleted** or **expunged**.

3.7.1 Deletion of the profile from a forensic specimen that is **not** in a searchable Index will be at the discretion of the examiner who created the specimen initially. A Specimen Deletion Report is not required for such deletions.

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3.7.2 Deletion of the profile from a forensic specimen that has been entered or uploaded into a searchable Index will be at the discretion of the examiner who created the specimen profile. A Specimen Deletion Report is required in the case file for documentation of such deletions.

3.7.2.1 When a forensic non-subject case profile is deleted from CODIS after a Certificate of Analysis has been issued indicating that the profile will be periodically searched, another Certificate of Analysis will be issued to notify the investigator that the profile is no longer being searched.

3.7.3 Profiles which reside in the Unidentified Human (Remains) and Missing Persons Indices will be deleted from CODIS upon a putative identification of the remains/missing person. A Specimen Deletion Report is required in the case file for documentation. Unidentified Human (Remains) profiles where the "body part" radio button is selected in Metadata may remain in CODIS following a putative identification to facilitate identification of other remains from the missing individual. Missing Persons profiles may remain in CODIS if the profile is associated to a partial set of remains and the direct reference profile or deduced profile is of better quality.

3.7.4 A pedigree tree will be deleted following the putative identification of the missing person. A Pedigree Tree Deletion Report is required in the case file for documentation. If the missing person is associated to a set of partial remains, the relatives' DNA profiles may remain in CODIS to facilitate identification of other remains. The profile of a relative or spouse may also be deleted following the receipt of a written request from the individual asking that their sample be removed from the database. The request and a Specimen Deletion Report are required in the file as documentation.

3.7.5 Convicted Offender or Arrestee specimens that have been entered or uploaded into a searchable index may be deleted at the discretion of the DNA Data Bank Supervisor. The current CODIS software records the deletion date of a specimen.

3.7.6 A Court Order for **Expungement** of a profile from a Convicted Offender specimen, and written notification from the Data Bank Supervisor of the need to remove the profile of an Arrestee specimen are considered special types of specimen deletions. The CODIS Administrator, or designee, will promptly perform the deletion, and the corresponding Specimen Deletion Report or Audit Trial Report will be



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provided to the Data Bank Supervisor for documentation purposes. If the profile of the specimen requiring deletion has been transferred to a higher level in CODIS, the deletion will cascade to all higher CODIS levels at the next upload session.

3.7.7 The Department Quality Manual addresses the **Expungement** of other records.

## 3.8 Statistical Thresholds for Forensic Partial and Forensic Mixture Profiles

3.8.1 In order for a Forensic Partial or Forensic Mixture profile to be entered into CODIS, a Moderate Match Estimate (MME) statistical threshold and a minimum original CODIS core loci number (for NDIS upload) must be satisfied. The Moderate Match Estimate (MME) calculation is automatically performed by the CODIS software when a sample is manually entered or imported into CODIS. The current NDIS Moderate Match Estimate (MME) statistical threshold is set by the NDIS Custodian at 10 million (1.000E+007). The SDIS Moderate Match Estimate (MME) statistical threshold is set at 500,000 (5.000E+005) based on the approximate size of the state database.

3.8.2 Forensic Mixture profiles with DNA results at 8 or more original CODIS core loci and satisfying the MME threshold for NDIS will use the specimen category “Forensic Mixture”. Forensic Mixture profiles with results at 8 or more autosomal loci that satisfy the MME threshold for SDIS only will use the specimen category “Forensic Mixture SDIS.”

3.8.3 Forensic Partial profiles with DNA results at 8 or more original CODIS core loci and satisfy the MME threshold for NDIS will use the specimen category “Forensic Partial”. Forensic Partial profiles with results at 8 or more autosomal loci that satisfy the MME threshold for SDIS only will use the specimen category “Forensic Partial SDIS.”

3.8.4 Forensic Partial and Forensic Mixture profiles that satisfy neither the NDIS nor SDIS statistical threshold shall not be uploaded to SDIS.

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# 4 DATA UPLOAD INTO SDIS

**4.1** All profiles in the regional laboratories suitable for upload to SDIS shall be uploaded promptly into SDIS. To ensure that the data in SDIS is as current as practically possible, data upload to SDIS will normally take place at least once every week for each laboratory.

4.1.1 The upload of data will be performed by the Local CODIS Administrator or designee or alternate in the regional laboratory or automatically executed by the CODIS software as configured by the Local CODIS Administrator.

4.1.2 The upload schedule for the regional laboratory may be extended at the discretion of the Local CODIS Administrator if no new profiles were entered during that one week interval.

**4.2** Under normal circumstances, the upload of data from the regional laboratories will be executed automatically by the software when the data is received at SDIS. Upon completion of the upload, an Upload Reconciliation Report will be generated automatically and returned to the originating laboratory.

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4.2.1 The Local CODIS Administrator, or designee, from each regional laboratory will review the Upload Reconciliation Report to ensure that new specimens and any specimen changes contained in that particular upload were successfully incorporated into SDIS.

4.2.2 If necessary, the Local CODIS Administrator at the regional laboratory will resolve any discrepancy noted in the Upload Reconciliation Report in consultation with the State CODIS Administrator.

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# 5 SEARCHING THE CODIS INDICES

**5.1** Autosearcher and Searcher are CODIS software modules that permit the searching of DNA profiles. Searcher is also used for quality control purposes such as the Random Sample (Data Bank samples only) and Staff Index searches.

**5.2** **Random Samples** will be searched at all loci against the SDIS Offender Index.

5.2.1 Random Samples analyzed in the Central Laboratory will be searched against the State Offender Index by the DNA Data Bank analyst.

5.2.2 The Random Sample search result will be verified and initialed and dated by the State CODIS Administrator or designee.

5.2.2.1 If the Random Sample cannot be verified, the DNA Data Bank analyst will be notified immediately. No further action will be taken on the offender or arrestee samples being analyzed until this is resolved.

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5.2.2.2 If the Random Sample appears to match two or more offender samples, the result cannot be verified until the problem is resolved. The State CODIS Administrator or designee will be notified to resolve the issue. Each Random Sample should match one and only one convicted offender sample.

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5.2.3 The verified Searcher Match Result Report will be maintained in the batch sample file for Convicted Offender and Arrestee sample analysis.

**5.3** A search of the **Staff Index** will be conducted by the case examiner for all forensic evidence profiles that do not match any reference sample profiles in the case, unless the evidence profile is considered inconclusive, of no value, or uninterpretable. In the case of a mixture profile where part of the mixture is unknown (and suitable for search or comparison), it may be desirable to search the entire mixture profile rather than only searching the unknown portion of the profile. When making this decision, consideration should be given to the complexity of the mixture (such as considering the possibility of allelic dropout and alleles overlapping between the known and unknown portions of the profile). Profiles characterized as unidentified persons and deduced missing persons will be searched when the profile has results at six or more loci. Relatives of Missing Persons and spouse profiles will not be searched. Casework non-subject profiles need not be reviewed, as detailed in Section 5.8 of this manual, before they are searched against the Staff Index.

**NOTE:** Profiles developed from samples submitted as “Presumed To Be” unidentified persons for purposes of body identification, submitted by the Office of the Chief Medical Examiner of Virginia, will not be staff searched if the purported relationship of the remains to the submitted known is supported by the genetic data.

5.3.1 The Staff Index search will be conducted at moderate stringency. The Match Result Report will be maintained in the appropriate case file for documentation.

5.3.2 If a match is made to the Staff Index, the examiner will immediately consult with his/her supervisor to resolve the match and will notify the Biology Program Manager (Technical Leader) or Assistant Technical Leader.

5.3.2.1 Any search resulting in a match of a case profile to a profile in the Staff Index will be resolved before further action on the case profile is taken.

5.3.2.2 If a match of the forensic profile to a profile in the Staff Index cannot be resolved, that profile will be considered inconclusive.



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5.3.2.3 Any Match Report that includes a profile in the Staff Index will have the profile of the staff member redacted, dated and initialed after technical review. The redacted Match Report will be maintained in the appropriate case file for documentation.

**5.4 Forensic case profiles** will be searched using the procedures set forth below.

5.4.1 A **forensic subject case** profile is not required to be searched against any Indices.

Depending on the specific case scenario, DNA profiles in certain **subject cases** obtained from items of evidence that do not match any submitted known samples (such as victim, suspect, or elimination samples) may be treated as non-subject case profiles and searched accordingly.

5.4.2 **Forensic non-subject case** profiles will routinely be searched at Moderate stringency.

**EXCEPTION: "**X" Profiles may be searched with customized stringencies (see Section 3.3.4).

5.4.2.1 A **forensic non-subject case** profile from the **regional laboratories** will be searched against the SDIS Offender, Arrestee, Forensic, Forensic Partial, Forensic Mixture, Unidentified Human Remains, and Missing Persons Indices in the Central Laboratory.

5.4.2.1.1 Casework non-subject profiles shall be reviewed before they are searched against SDIS. Refer to Section 5.8 for the aspects of this review.

5.4.2.1.2 The result of the search will automatically be returned by the CODIS software to the originating laboratory.

5.4.2.2 A **Central Laboratory forensic non-subject case** profile will be searched by the examiner against the SDIS Offender, Arrestee, Forensic, Forensic Partial, Forensic Mixture, Unidentified Human Remains, and Missing Persons Indices. Casework non-subject profiles shall be reviewed before they are searched against SDIS. Refer to Section 5.8 for the aspects of this review.

5.4.2.3 Match Detail Reports for all true matches are printed and retained as case file documentation; however, those returns determined to be non-matches are not printed/retained.

5.4.2.3.1 If multiple returns are obtained and include at least one true match, only the Match Detail Report(s) for the true match(es) will be retained.

5.4.2.3.2 If all returns obtained are determined to be non-matches OR if no returns are obtained (blank candidate only), the examiner will document "no hits obtained, *date and initials of examiner*" next to/in close proximity to the "CODIS review" documentation, as detailed in Section 5.8.

5.4.2.4 Subsequent searches of all forensic non-subject case profiles against the SDIS Offender, Arrestee, Forensic, Forensic Partial, Forensic Mixture, Unidentified Human Remains, and Missing Persons Indices will be conducted by the State CODIS Administrator, or designee, following the periodic entry of additional convicted offender and/or arrestee profiles.

5.4.2.4.1 The subsequent searches of forensic profiles with the Source ID field "No" (with the exception of the "X" profiles) will be batch searched at moderate stringency for all loci. These profiles will be subsequently searched once a week, typically on Tuesday.

5.4.2.4.2 The subsequent searches of forensic profiles configured with "X" will be conducted manually with customized stringency. These profiles will be searched at least three times each year.

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5.4.2.4.3 Subsequent Searcher results are automatically forwarded electronically to the individual examiner for review, and the match will be appropriately "dispositioned" by the examiner in the Match Manager part of CODIS.

5.4.2.5 Profiles generated from Missing Persons cases **will not** be searched prior to release of the Certificate of Analysis. These profiles will be searched by the next and all subsequent executions of Autosearcher where the Autosearcher configurations invoke the specified index. Autosearcher configurations for Missing Persons searches are established by the State CODIS Administrator in consultation with the Biology Program Manager. Typically, the searches of these profiles will reflect those conducted at the National level in both configuration and frequency.

**5.5** Requests from **law enforcement agencies outside the Commonwealth of Virginia** for searches of the Virginia CODIS Indices must be made in writing. The request must, at a minimum, include the DNA profile to be searched, the identity and agency of the requesting individual, and the name and phone number of a contact person. The request will be directed to the State CODIS Administrator, who will process the search request.

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5.5.1 Routinely, only profiles with 7 or more loci in common with the STR loci utilized by the Virginia Department of Forensic Science will be searched. However, at the discretion of the State CODIS Administrator or Biology Program Manager, profiles with fewer than 7 loci in common with the Virginia Department of Forensic Science may be searched.

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5.5.2 Unless specifically requested, such search requests will be conducted against the Indices routinely used for forensic searches by the Department except the Staff Index.

5.5.3 Unless otherwise specified by the requesting agency, the contact person will only be notified if a question arises about the request and/or when a possible significant match is made.

5.5.4 CODIS matches generated as a result of such requests will be verified in a manner similar to that outlined in Section 7, with due consideration given to specific needs of the requesting agency.

5.5.5 CODIS matches generated as a result of such requests will generally be reported to the outside agency in the format found in Appendix C, with due consideration given to specific needs of the requesting agency.

**5.6** Requests can be made by **law enforcement agencies within the Commonwealth of Virginia** for searches of the CODIS Indexes of other states. For example, a Virginia non-subject case profile may contain results at fewer than 8 original CODIS core loci and is therefore ineligible for uploading and searching at NDIS. In addition, other state databases may contain samples not acceptable at NDIS.

5.6.1 The request, made in writing or verbally by an investigator to an examiner, will be documented in the case file and brought to the attention of the State CODIS Administrator, who will make the official written request for the search.

5.6.2 At a minimum, the examiner will provide the Specimen ID and the DNA profile to be searched to the State CODIS Administrator in writing (e-mail may be used). A copy of the Specimen Details Report, containing the necessary information, may be used for this purpose.

5.6.3 The State CODIS Administrator, or designee, will make the official request in writing (using the NDIS FAX Network Search request format) for such searches of the CODIS Indices of other states. The examiner will be identified as the point of contact in the official search request. The request will be sent to the specific state(s) requested or to NDIS, where the request will be transmitted to all participating CODIS laboratories. Refer to Document 210-F100 for the sample format used for the request. A copy will be forwarded to the examiner for documentation in the case file.



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5.6.4 CODIS matches generated as a result of such requests will be verified and reported in a manner similar to that outlined in Section 7 using information provided in writing by the other state. The search results and other information regarding the match received from the other state will be maintained in the case file.

**5.7** Requests can be made by **law enforcement agencies within the Commonwealth of Virginia** for a search of the DNA databases of foreign countries via **Interpol**. The request, made in writing or verbally by an investigator to an examiner, will be documented in the case file and brought to the attention of the State CODIS Administrator, who will make the official request via Interpol. Refer to Appendix B.

**5.8** A CODIS Review (as mentioned in Section 3 and Section 5) shall be conducted as follows:

5.8.1 This review is conducted in compliance with the FBI QAS and NDIS requirements that prohibit the entry or search of unreviewed casework DNA data at SDIS.

5.8.2 The purpose of the review is to ensure that profiles that will be searched and all profiles entered into CODIS are verified for eligibility for CODIS, correct DNA types and appropriate specimen category prior to upload to SDIS.

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5.8.3 This **CODIS review** shall be conducted by another qualified examiner of the relevant documentation in the case file, prior to a profile being searched or entered into SDIS:

5.8.3.1 Review of "correct DNA types" and/or haplotype: Evaluation of the data printouts, to ensure the relevant profile data is correct. The positive and negative control data will also be evaluated to ensure no unexpected results are obtained for the controls. (Documents to review = landscape sheets and/or data printouts.)

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5.8.3.2 Review of "correct DNA types": Evaluation of the alleles in a mixture profile selected for entry into SDIS or searching are correct, given any reference profiles submitted in the case. (Documents to review = Copy of landscape sheet and/or data printout with an indication of selected alleles for search or entry into CODIS. Alternatively, review of the LDIS Specimen Details Report can serve this purpose.)

5.8.3.3 Review of "appropriate specimen category": Ensure an evidence profile is given the appropriate specimen category when it is entered into SDIS or searched. (Documents to review = landscape sheet or mtDNA profile validation report with an indication of proposed specimen category, and the RFLE. Alternatively, review of the LDIS Specimen Details Report and RFLE can serve this purpose)

5.8.3.4 Review of "eligibility for CODIS": Ensure that an evidence item is from the crime scene or is otherwise eligible for CODIS entry or search. If questions arise regarding CODIS eligibility for an evidence item, the examiner/supervisor shall contact the investigating agency to confirm the eligibility and document the (attempt at) communication. Ensure that an evidence profile that is attributed to the victim or elimination sample is not inadvertently entered into SDIS or searched. (Documents to review = RFLE, either landscape sheet or data printout, and MFR if appropriate.)

5.8.3.5 Review of "proposed pedigree tree" worksheet if necessary. Ensure that the tree is properly constructed and that the correct sample(s) will be associated to the proper node(s).

5.8.3.6 This CODIS review by another qualified examiner will be documented on the primary landscape sheet, mtDNA validation report, or LDIS Specimen Details Report by "CODIS review, *reviewer initials,* and *date of review".* This documentation will also appear on the" proposed pedigree tree" worksheet if present.

5.8.4 This **CODIS review** can also be accomplished by a documented technical review (as described in the Department Quality Manual) of the entire case file up to that point of analysis, prior to any profile being



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searched or entered into SDIS. Once this technical review is completed, the relevant profile can then be entered and searched at SDIS. This option will necessitate another technical review after the entry and search of the relevant profile at SDIS.

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# 6 ACCESS TO AND RELEASE OF CONVICTED OFFENDER AND ARRESTEE SAMPLE INFORMATION

**6.1** Requests for information on a convicted offender's or arrestee's profile shall be in accordance with the Code of Virginia § 19.2-310.5.

6.1.1 Requests must be in writing and forwarded to the DNA Data Bank Supervisor or CODIS Administrator.

**NO TELEPHONE REQUESTS WILL BE ACCEPTED.**

6.1.1.1 A request received via mail or facsimile must be on the requestor's agency letterhead.

6.1.1.2 A request made by personal contact must be put in writing by the requestor on a piece of plain paper and must include the requestor's agency address. The requestor's identity must be verified before a request submitted in this manner can be accepted. This is generally accomplished by viewing the requestor's agency identification card and confirming that the photograph and name on the card match the requestor. Documentation of the verification will be made on the bottom of the request in the following format: "Identification verified by viewing requestor's identification card - code # _____ or badge # _____." This verification of identity statement will be dated and signed by the DFS employee who verified the requestor's identity.

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6.1.1.3 The request must be made by sworn law-enforcement and signed by the requesting official.

6.1.1.4 Requests must state that the information is being requested in furtherance of an official investigation of a criminal offense.

6.1.1.5 Requests must specify ALL AVAILABLE identifying information for the Convicted Offender or Arrestee, such as full name, social security number, date of birth, race, sex, and SID number.

6.1.1.6 The exemplar letter in Appendix D can be provided to the requestor to use to draft the request to ensure that all requirements are met.

6.1.2 Responses to requests will be made in writing and are routinely provided via encrypted email or faxed to the requestor at the fax number on the requesting agency's letterhead. However, the request response may be provided via US Mail.

6.1.2.1 The DNA Data Bank Supervisor or CODIS Administrator will provide the written response using the form letter in Appendix D or a modification thereof.

6.1.2.2 If the request specifies a fax response, the confirmation of successful transmittal will be retained with the request and response. If it is deemed necessary to verify a fax number, the verification of the fax number will be documented. Documentation will include how the fax number was verified, the date verified, and the initials of the person verifying the number.

6.1.2.3 If the request response is sent via encrypted email, a printed copy of the email will be retained.

6.1.2.4 If a request is denied, that denial shall be in writing, signed by the DNA Data Bank Supervisor or CODIS Administrator. The denial letter will be in narrative form and will specify the reason for the denial. Any denial letter must be approved by the Biology Program Manager prior to being sent to the requestor.

**6.2** The DNA Data Bank Supervisor will maintain all requests, associated responses, and as appropriate, confirmation of successful fax transmittal of responses. These will be filed by agency and the date of the request.



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6.2.1 If the requestor indicated a relationship to a specific case or cases by including the FS Lab #(s) in the request for information, a copy of the request, associated response, and as appropriate, confirmation of successful fax transmittal of the response, will be forwarded to the case examiner(s) to place in the case file(s).

**6.3** When a CODIS match is made between a non-subject case and a Convicted Offender or Arrestee sample, the information on the individual will be provided to the investigator in a Certificate of Analysis after the match has been verified. Refer to Section 7 for information on verifying a CODIS match.

6.3.1 The identifying information reported for the individual will be confined to the information that is available in the Data Bank LIMS system (DB LIMS).

**6.4** Access to the Convicted Offender or Arrestee samples and identifying information associated with these samples stored in the DB LIMS will be limited to those personnel whose job function requires access to the samples and such information.

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6.4.1 Access to the Convicted Offender and Arrestee samples and associated individual information is limited to the CODIS Administrator, alternate CODIS Administrator, DNA Data Bank Supervisor and designees, such as DNA Data Bank analysts and support staff.

6.4.2 The addition or removal of personnel and the degree of access for each level of personnel will be determined by the DNA Data Bank Supervisor in consultation with the CODIS Administrator.

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**6.5** Access to the Convicted Offender or Arrestee profiles in CODIS will be limited to personnel whose job function requires such access.

6.5.1 In the Central Laboratory Forensic Biology Section this may include the State CODIS Administrator, the Local CODIS Administrator, the Biology Program Manager (Technical Leader), Assistant Technical Leader, molecular biologist, casework supervisors, examiners, DNA Data Bank Supervisor, DNA Data Bank analysts, and Data Bank support staff.

6.5.2 In the Forensic Biology Section of each regional laboratory this may include the designated Local CODIS Administrator, casework supervisor and casework examiners.

6.5.3 The addition or removal of personnel and the degree of access for each level of personnel will be determined by the Local CODIS Administrator in consultation with the State CODIS Administrator.



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# 7 VERIFYING AND REPORTING A CODIS MATCH/ASSOCIATION AT SDIS

**7.1** The case examiner will verify or eliminate the possible CODIS match between a **non-subject case profile and a Convicted Offender or Arrestee profile** as soon as possible by comparing the STR allele values of the non-subject case profile and the STR allele values of the possible matching DNA profile of the Convicted Offender or Arrestee. If the examiner determines that the convicted offender or arrestee is not eliminated, the DNA Data Bank staff will be contacted for verification of the profile. Best effort shall be made to resolve matches within thirty business days.

**NOTE:** Potential match candidates whose information will not be released in a Certificate of Analysis due to the inability to calculate a statistic or because the minimum requirements for a conclusion of not-eliminated are not met will be treated procedurally in the same manner as a hit candidate who is not eliminated. The DNA Data Bank staff will be contacted for verification of the profile, and the remainder of the associated procedures will be followed. No verbal hit information will be provided, as detailed in 7.1.3 below. See Section 4.4 of the FB PM Report Writing for appropriate wording for the Certificate of Analysis.

7.1.1 Generally, the presence of alleles in one profile and not in the other profile will constitute an elimination. However, the examiner shall use all factors concerning the profiles in question (such as relative allele intensities, difference in amplification kits, possible allelic dropout, nature of the evidence, mixture interpretation) to make the determination.

7.1.2 For matches involving a non-subject case forensic profile and an Arrestee or Convicted Offender sample, the examiner will immediately contact the Central Laboratory DNA Data Bank Supervisor and the Data Bank staff in writing (via e-mail or fax) and provide the case number, DNA sample number, and case-related information such as the date of the offense (if available). When a hit is obtained to duplicate profiles for two different samples, the notification to the Data Bank Supervisor should include both DNA sample numbers.

7.1.2.1 The DNA Data Bank Supervisor or designee will process the data bank hit verification request in accordance with Section 10 of the DNA Data Bank Operating Policies and Procedures Manual (DB PM), to include obtaining the identifying information for the Arrestee or Convicted Offender (such as name, social security number, date of birth, race, sex, SID number) from the DB LIMS, verification and/or reanalysis of the sample's DNA profile, and confirmation of the qualifying conviction or arrest.

The Data Bank Sample verification and individual information shall be provided to the requesting examiner. This information shall be maintained in the case file as documentation.

7.1.2.2 If the hit is to samples from identical twins, two forms (one for each individual) will be provided to the examiner.

7.1.2.3 If the hit is to duplicate samples belonging to the same offender, that information will be provided to the examiner in writing (via e-mail or fax) by the DNA Data Bank Supervisor or designee. This documentation will be placed in the case file and the Searcher Match Result Report reflecting both DNA sample numbers will be maintained in the case file and documented to reflect that the samples are from the same individual.

7.1.2.4 For hits generated by the scheduled weekly subsequent search, the State Administrator or designee will immediately review the results of the subsequent search, and notify the relevant examiner and DNA Data Bank staff in writing (for example, via e-mail) of a potential hit so the process can begin promptly.

7.1.3 Verbal hit information (such as the name and other individual information of the offender/arrestee) can be provided to an investigator prior to the Certificate of Analysis being issued. However, prior to the contact with the investigator, that hit information must be reviewed by another examiner and appropriate permission obtained from the laboratory management. **It must be emphasized to the investigator that**

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**the match constitutes an investigative lead only, and any possible connection to the non-subject case must be determined through further investigation.** Additionally, the investigator will be informed that, in order to confirm the match, a new sample from the individual must be submitted to the laboratory for STR analysis and direct comparison to the DNA profile from the evidence.

7.1.3.1 Another examiner shall review that the correct Data Bank sample number was provided to the databank, and that individual information for the correct offender/arrestee is returned to the examiner. This information review will be documented as "Verbal hit review, *initial of reviewer* and *date of review*" on the Searcher Match Result report.

7.1.4 At the same time that information is being obtained from the DNA Data Bank Supervisor or designee, the examiner will also notify the State CODIS Administrator or designee in writing (e-mail or fax) of the possible match, so that the appropriate data can be added to the CODIS Hit Counting Charts.

7.1.4.1 This written notification should contain the offender/arrestee sample number and information about the case, such as the FS Lab Number, jurisdiction, type of evidence, date and type of offense, whether a suspect sample was compared and if so, if the suspect was eliminated, and whether the match occurred as a result of an original or subsequent search.

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7.1.4.2 In addition, paper or electronic copies of the Data Bank Hit Information should be provided to the State CODIS Administrator (or designee) as they are available for Hit# assignment purposes.

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7.1.5 The results will be reported in a Certificate of Analysis in accordance with procedures set forth in the current versions of the QM and the FB PM, Report Writing. Additional identifying information such as alias, alternate Social Security numbers and/or alternate birth dates may be reported, but will be confined to the information available in the DB LIMS.

7.1.5.1 The Arrestee or Convicted Offender information will be provided to the investigator in a Certificate of Analysis **after** the confirmation of a qualifying arrestee offense or conviction and, if necessary, the re-analysis of the sample by the DNA Data Bank.

7.1.6 If the forensic profile associated with the match has not been entered into CODIS, it will be entered in accordance with Section 3.

7.1.6.1 For a match resulting from a subsequent search, the specimen would have been previously entered into CODIS. As a result of the match, the Source ID field for that specimen will be changed from "no" to "yes", if applicable. When a match from a subsequent search occurs for profiles with a "Forensic Mixture" specimen category, the mixture profile shall be removed from CODIS. However, if the mixture profile is determined by the examiner and supervisor to be suitable for retaining in CODIS, the specimen category should be "Forensic Mixture-SDIS".

7.1.6.2 The change or removal will be performed by the case examiner and documented by placing a copy of the new LDIS Specimen Details Report or Specimen Deletion Report in the case file.

**7.2** When a potential match is made between a forensic profile and an Arrestee or Convicted Offender profile, the laboratory will make every effort to ensure that the sample is qualified to be in the Virginia DNA Data Bank.

7.2.1 If during the verification process it is determined that the Arrestee or Convicted Offender sample does not qualify for entry, consultation will be made with the Department legal counsel regarding the qualification of a sample and compliance with current Code of Virginia.

7.2.1.1 If it is determined that the sample will be reported, the procedure set forth below will be followed.



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7.2.1.1.1 The Arrestee or Convicted Offender information will be reported to the investigating agency, as per standard procedure for a qualifying sample.

7.2.1.1.2 The DNA profile for the Arrestee or Convicted Offender sample will be immediately removed from CODIS by the State CODIS Administrator or designee, and the deletion report will be provided to the DNA Data Bank Supervisor.

7.2.1.1.3 The Arrestee or Convicted Offender identifying information will be removed from the DB LIMS, in accordance with the DB PM.

7.2.1.2 If it is determined that the sample does not qualify for reporting, the procedure set forth below will be followed.

7.2.1.2.1 The DNA profile for that sample will be immediately removed from CODIS by the State CODIS Administrator or designee. The deletion report will be provided to the DNA Data Bank Supervisor.

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7.2.1.2.2 The Arrestee or Convicted Offender identifying information will be removed from the DB LIMS, in accordance with the DB PM.

7.2.1.2.3 The Arrestee or Convicted Offender information will **NOT** be provided to the investigating agency. In addition, the agency will **NOT** be informed of the existence of the potential match.

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7.2.1.2.4 The case examiner will maintain documentation in the case file concerning the search, the potential match and why the match was not reported but **WILL NOT** maintain any identifying information of the Arrestee or Convicted Offender in the case file.

**7.3** The case examiner will confirm or eliminate a **possible CODIS match between a forensic non-subject case profile and another forensic profile** as soon as possible by comparing the STR allele values for the profiles from each case. Generally, the presence of additional alleles in one profile and not in the other profile will constitute an elimination. However, the examiner shall use all factors concerning the profiles in question (such as relative allele intensities, difference in amplification kits, possible allelic dropout, nature of the evidence, experience in mixture interpretation) to determine whether a possible match is an elimination or an inclusion. The match is considered verified when the manual comparison reveals no unexplained differences between the DNA profiles involved.

7.3.1 The examiner of the non-subject case will notify the State CODIS Administrator of the match.

7.3.1.1 The written notification should contain information about the cases such as the FS Lab Numbers, jurisdictions, types of evidence, dates and types of offenses, and whether the match occurred as a result of an original or subsequent search.

7.3.1.2 If multiple examiners are involved, the examiners will promptly exchange pertinent information (such as agency case number, jurisdiction, investigator, case type) on the matching cases.

7.3.1.3 The information will be provided to the investigator(s) in a Certificate of Analysis.

7.3.1.3.1 The results will be reported in accordance with the procedures set forth in the current versions of the QM and the FB PM, Report Writing.

7.3.1.3.2 In general, if multiple examiners are involved in a match between non-subject cases and all of the cases have been previously reported, the examiner of the non-subject case listed as the target profile will be responsible for generating the



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Certificate(s) of Analysis providing notification of the match in accordance with the Forensic Biology Procedures Manual, Report Writing.

7.3.1.3.3 In general, if reports have not been generated for one or more of the non-subject cases involved in a match, the examiner of the non-subject case(s) that has not been reported will be responsible for generating the Certificate of Analysis providing notification of the match in accordance with the Forensic Biology Procedures Manual, Report Writing.

7.3.1.3.4 If a non-subject case profile matched profiles in more than one index the examiner will report all the matches in Certificates of Analysis in accordance with the Forensic Biology Procedures Manual, Report Writing.

7.3.1.4 If the forensic profile associated with the match has not been entered into CODIS, the specimen will be entered in accordance with Section 3.

7.3.1.5 If a forensic non-subject case profile involved in the match has previously been entered into CODIS, the Source ID field for that specimen will be changed from “no” to “yes”, if applicable. This change will be performed by the case examiner and documented by placing a copy of the new LDIS Specimen Details Report in the case file.

**7.4** SDIS matches and associations involving DNA profiles from Missing Persons cases will be handled following the most current NDIS Operational Procedures Manual.

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# 8 POPSTATS CALCULATIONS

**8.1** The Popstats program is the part of the CODIS software that permits the calculation of statistical probabilities based on allele frequency information for specific loci or the number of times a haplotype has been observed. The allele frequency data for PowerPlex® 16 data entered into CODIS are based on the official Virginia population database. The allele frequency data for PowerPlex® Fusion data entered into CODIS are based on the NIST database. These allele frequency data are identical for all four laboratories.

**8.2** Use of Popstats for statistical calculations will be in accordance with the policies set forth below, and in accordance with the applicable Forensic Biology Procedures Manuals and the Mitochondrial DNA Section Procedures Manual.

8.2.1 Paternity and relationship calculations utilizing Popstats will be reported only by individual(s) specifically trained to do so.

8.2.2 In unusual cases, statistical calculations may be conducted using modifications of the "Forensic Single Sample" or "Forensic Mixture" configuration, but only with the explicit permission of the Biology Program Manager.

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**8.3** The official Virginia population database contains frequencies for the Caucasian, Black, and Hispanic populations. The NIST population database contains frequencies for the Caucasian, African American, Hispanic, and Asian populations as well as combined frequencies. No population frequencies other than Caucasian, Black/African American, and Hispanic will be used for statistical calculation of STR profile frequency without the explicit permission of the Biology Program Manager.

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**8.4** For estimation of population frequency of a mtDNA haplotype the FBI database supplied with the CODIS software will be used.

**8.5** No changes to the Popstats configuration parameters or additions/changes to the STR database allele values within Popstats will be made without the explicit permission of the State CODIS Administrator in consultation with the Biology Program Manager.

**8.6** The Popstats Report will be maintained in the case file as documentation.



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# 9 NDIS-RELATED PROCEDURES

**9.1** In accordance with NDIS requirements, information from all DFS CODIS users (as defined by NDIS) will be provided to the FBI for security clearance. Forms for such information shall be provided by NDIS (or as updated by the FBI) to include to the following:

- FD-857a: Sensitive Information Nondisclosure Agreement
- FD-258: Fingerprint (10 Print) Card, two copies
- CODIS User Information Form
- SF-85: Questionnaire for Non-Sensitive Positions
- SF-86a: Continuation Sheet for Questionnaires SF-85, SF-85p, and SF-86 (as applicable)

**9.2** Only data within SDIS that complies with the Memorandum of Understanding signed between the FBI and the Department will be uploaded to NDIS. The data will comply with the current versions of the NDIS Operational Procedures Manual, the FBI's "Quality Assurance Standards for Forensic DNA Testing Laboratories" and "Quality Assurance Standards for Convicted Offender DNA Databasing Laboratories", and the Federal Justice for All Act 2004.

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9.2.1 The State CODIS Administrator, or designee, will be responsible for uploading eligible arrestee, convicted offender, forensic and missing persons case profiles from SDIS to NDIS. The upload to NDIS is currently scheduled to occur once each week, but may be changed at the discretion of the State CODIS Administrator.

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9.2.2 Forensic profiles are required to have data for at least 8 of the original 13 CODIS core loci (CSF1PO, D3S1358, D5S818, D7S820, D8S1179, D13S317, D16S539, D18S51, D21S11, FGA, TH01, TPOX, and vWA) to qualify for upload into NDIS. Refer to Section 3 for details.

9.2.2.1 Currently, new offender and arrestee STR profiles generated by the Department will be uploaded to NDIS only if the specimens contain results at all 13 original CODIS core loci.

9.2.2.2 **Forensic non-subject** STR profiles in SDIS with the "Forensic Unknown" specimen category that can be "attributed to the putative perpetrator" will be uploaded to NDIS.

9.2.2.3 **Forensic non-subject** STR profiles in SDIS with either the "Forensic Partial" or "Forensic Mixture" specimen category will be uploaded to NDIS.

9.2.2.4 **Forensic subject** STR profiles in SDIS with the "Forensic Unknown" specimen category that can be "attributed to the putative perpetrator" will be uploaded to NDIS.

9.2.2.5 **Forensic subject** STR profiles in SDIS with the "Forensic Partial" specimen category that can be "attributed to the putative perpetrator" may be uploaded to NDIS.

9.2.2.6 **Forensic subject** STR profiles in SDIS with the "Forensic Partial SDIS" or "Forensic Mixture SDIS" specimen category that can be "attributed in part to the putative perpetrator" will **NOT** be uploaded to NDIS.

9.2.2.7 When a forensic non-subject profile is determined to be unsuitable for NDIS after a Certificate of Analysis has been issued indicating that the profile has been submitted to NDIS, another supplemental Certificate of Analysis will be issued to notify the investigator that the profile has been removed from NDIS.

9.2.3 Unidentified Human (Remains), Missing Persons, Relatives of Missing Persons, and Spouse casework profiles will be uploaded to NDIS according to the most current version of the NDIS Operational Procedures Manual. In addition, relatives of missing persons and spouses will require a signed consent form from the individual providing the sample. Signed consent forms may not exist for historical profiles.



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9.2.4 NDIS requires that each CODIS user receive training annually and acknowledge the specimen categories and additional rules for DNA profiles uploaded to NDIS, as described in the NDIS Operational Procedures Manual and the NDIS Standards for Acceptance of DNA Data. This NDIS training is also required for each new CODIS User prior to their access to the CODIS software. This NDIS training is conducted via the CODIS network.

**9.3** All complete DNA profiles uploaded to NDIS will be automatically searched at least once a week by NDIS against the DNA profiles from other states. NDIS searches profiles related to missing persons on a variable schedule with multiple search configurations.

9.3.1 Matches obtained as a result of such searches will be sent automatically via the CODIS network to SDIS. These potential matches will be reviewed by the State CODIS Administrator, or designee, who will coordinate the communication between the CODIS Administrator or personnel of the other state(s) and the Department personnel involved in the evaluation and verification of the potential hit.

9.3.2 The evaluation and verification of NDIS matches will be in accordance with the procedures outlined in the section "Confirmation and Hit Dispositioning" in the NDIS Operational Procedures Manual (most current version, published by the FBI, US-DOJ), and Section 7 of this document, with due consideration given to the requirements of the other state(s) involved in the NDIS Match. Forms used for communication with other states for this purpose shall be in the general format described in "SEARCHES Confirm an Interstate Candidate Match" in the NDIS Operational Procedures Manual.

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9.3.2.1 An NDIS match may occur between a Virginia convicted offender or arrestee profile and a forensic subject case profile from another state. When requested, the individual's name will be provided to confirm the individual's identity. These NDIS matches will not be counted as NDIS hits.

9.3.2.2 An NDIS match may occur between a Virginia forensic subject case profile and a Convicted Offender or Arrestee profile from another state. Sufficient case information shall be provided to the other state for verification purposes. These NDIS matches will not be counted as NDIS hits.

9.3.2.3 An NDIS match may occur between a Virginia forensic subject case profile and a forensic subject case profile from another state. Sufficient case information shall be provided to the other state for verification purposes. These NDIS matches will not be counted as NDIS hits.

9.3.3 The reporting to a Virginia agency of a NDIS hit involving a Virginia forensic profile uploaded from SDIS to NDIS will be in accordance with procedures set forth in the Forensic Biology Procedures Manuals. This applies to a NDIS hit involving a Virginia forensic profile to an offender/arrestee profile or a forensic case profile from another state. Examiners will request confirmation of the NDIS hit from the other laboratory. The hit shall not be reported until the appropriate information is provided in writing by the other state involved. At the request of the other laboratory, the following information may be provided: Whether the match was determined to be a match or non-match, whether the VA case is solved or unsolved, the VA Investigator's contact information and minimal case information to include the offense date and the offense type.

The verification and offender/arrestee information received from the other state's Data Bank shall be maintained in the case file as documentation.

**NOTE:** This verification and offender/arrestee information will be obtained and maintained in the case file as documentation even when the potential match candidate's information will not be released in a Certificate of Analysis due to the inability to calculate a statistic or because the minimum requirements for a conclusion of not-eliminated are not met.


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9.3.4 A NDIS hit involving a Virginia convicted offender or arrestee to a forensic non-subject case profile outside the Commonwealth of Virginia will be reported to the outside agency in accordance with the procedures outlined in the section "SEARCHES Confirm an Interstate Candidate Match" in the NDIS Operational Procedures Manual (most current version, published by the FBI, US-DOJ). A written report of the NDIS match will be provided to the outside agency. An administrative review shall be conducted to confirm accuracy of the personally identifiable information (name, date of birth, SID#, etc.) contained in the correspondence. This review shall be documented with the reviewer's initials on the correspondence. Refer to Appendix C for the format used to report the CODIS match to the outside agency.

9.3.5 NDIS matches and associations involving Virginia DNA profiles from Missing Persons cases will be handled following the most current version of the NDIS Operational Procedures Manual.

**9.4** The expungement of a convicted offender DNA profile that has been previously uploaded to NDIS will be performed in accordance with Section 3.8 of this document and Section 10 of the DB PM.

The expungement of an arrestee DNA profile that has been previously uploaded to NDIS will be performed in accordance with Section 9.1.1.3 of the DB PM.

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In compliance with 42 USC § 14132 (d) (2) (a) (ii) (DNA Fingerprinting Act 2005), a request for expungement of an arrestee DNA profile accompanied by a certified copy of a final court order establishing that the person was not convicted of a qualifying offense (i.e., charge dismissed, resulted in acquittal, nolle prossed, or reduced to misdemeanor) will be processed in the same manner described above. There are currently no statute of limitation time periods applicable to any qualifying arrestee offenses in Virginia.

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**9.5** The CODIS Fax Network Search Request was established by the FBI to facilitate the search of DNA profiles between states that are not routinely uploading profiles to NDIS and those states participating in NDIS. This also allows NDIS participating laboratories to search profiles in state databases that do not qualify for upload to NDIS.

9.5.1 An examiner who has a profile requiring a CODIS Fax Network Search will make the request in accordance with Section 5 of this manual.

9.5.2 The request will be faxed to the FBI NDIS Custodian, who will coordinate the dissemination of the search request to all CODIS laboratories via the CODIS network or by fax. Refer to Document 210-F100 for the CODIS Fax Network Search Request form, which contains the requirements for such searches.

9.5.3 The State CODIS Administrator, or designee, will process the CODIS Fax Network Search requests received by the laboratory in accordance with Section 5 of this manual. CODIS matches generated as a result of such requests will be verified in the manner outlined in Section 7, with due consideration given to the requirement of the other state(s) involved. Refer to Appendix C for the general format used to report the CODIS match to the outside agency.

**9.6** NDIS required documents concerning external audit information will be provided to NDIS at the specified time and in the format prescribed in the NDIS Operational Procedures Manual or by direct communication and/or instructions from NDIS.



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# 10 CODIS DATA MAINTENANCE

**10.1** Maintenance tasks will be periodically performed on the data in SDIS to reduce the unnecessary duplication of data in the CODIS Indices.

10.1.1 New DNA profiles within the Offender and Arrestee Indices will be searched, typically on a monthly basis, against all other profiles in the same index to detect the presence of duplicate profiles of the same individual or identical twins. DNA profiles in the Offender Index will also be searched against profiles in the Arrestee Index.

10.1.1.1 Duplicate offender and/or arrestee profiles will be provided to the DNA Data Bank Supervisor, who will obtain information to resolve the identities of the matched offender profiles. If it is determined that the matching profiles are duplicates of the same individual, one of the duplicate profiles from CODIS will be removed. If it is determined that the matching profiles are from twins, both profiles will remain in CODIS.

**10.2** At least three times each year, a subsequent search of all forensic non-subject case profiles will be conducted at the special search configuration of High stringency at all loci, allowing for one locus mismatch. The results of this search will be evaluated by the State CODIS Administrator, or designee, and forwarded to the examiner for further confirmation/verification if it is determined that there is a potential match.

**10.3** If a convicted offender or arrestee profile that has been entered into SDIS is subsequently determined to be unqualified to remain in CODIS, the State CODIS Administrator will be notified AS SOON AS POSSIBLE and the profile will be promptly removed from CODIS. For example, the DNA Data Bank receives notification of an Arrestee sample status change to a non-conviction.

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# 11 CODIS ACCCESS, DATA SECURITY, AND COMMUNICATION

**11.1** The user ID of each individual with access into the CODIS system must be different**. NO SHARING OF USER ID OR PASSWORD IS PERMITTED**.

**11.2** Password access to the CODIS system in each laboratory will be limited to individuals whose job function requires access to information contained in the CODIS system.

11.2.1 The granting of access rights and the level of access granted to each individual will be determined by the Local CODIS Administrator in consultation with the section supervisor of the laboratory and the State CODIS Administrator.

**11.3** The data within all CODIS levels in Virginia will be backed up onto storage devices.
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11.3.1 Backup of CODIS data will be conducted via methods that are in compliance with DFS data security policies.

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11.3.2 One set of backup data for each laboratory, to be updated weekly, will be kept in a physically separate location. This off-site back up will be in compliance with DFS data security policies.

**11.4** The CODIS software in the regional laboratories will only communicate and exchange data with CODIS in the Central Laboratory via the CODIS network. SDIS in the Central Laboratory will communicate and exchange data with NDIS via the CODIS network.

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11.4.1 Remote access of any laboratory's server and workstations using software such as "pcAnywhere" via the CODIS network will only be granted, on a case-to-case basis, by the Local CODIS Administrator, or designee, of that laboratory or the State CODIS Administrator or designee. Such access will be granted for purposes such as CODIS training, software troubleshooting and repairs, and software upgrades.

11.4.2 The configuration for communication via the CODIS network will not be changed without the explicit instructions of the State CODIS Administrator, upon instructions from the FBI or FBI Contractor.

11.4.3 The configuration of the CODIS network may be changed by the State CODIS Administrator in consultation with the FBI, FBI Contractor and/or DFS IT staff.



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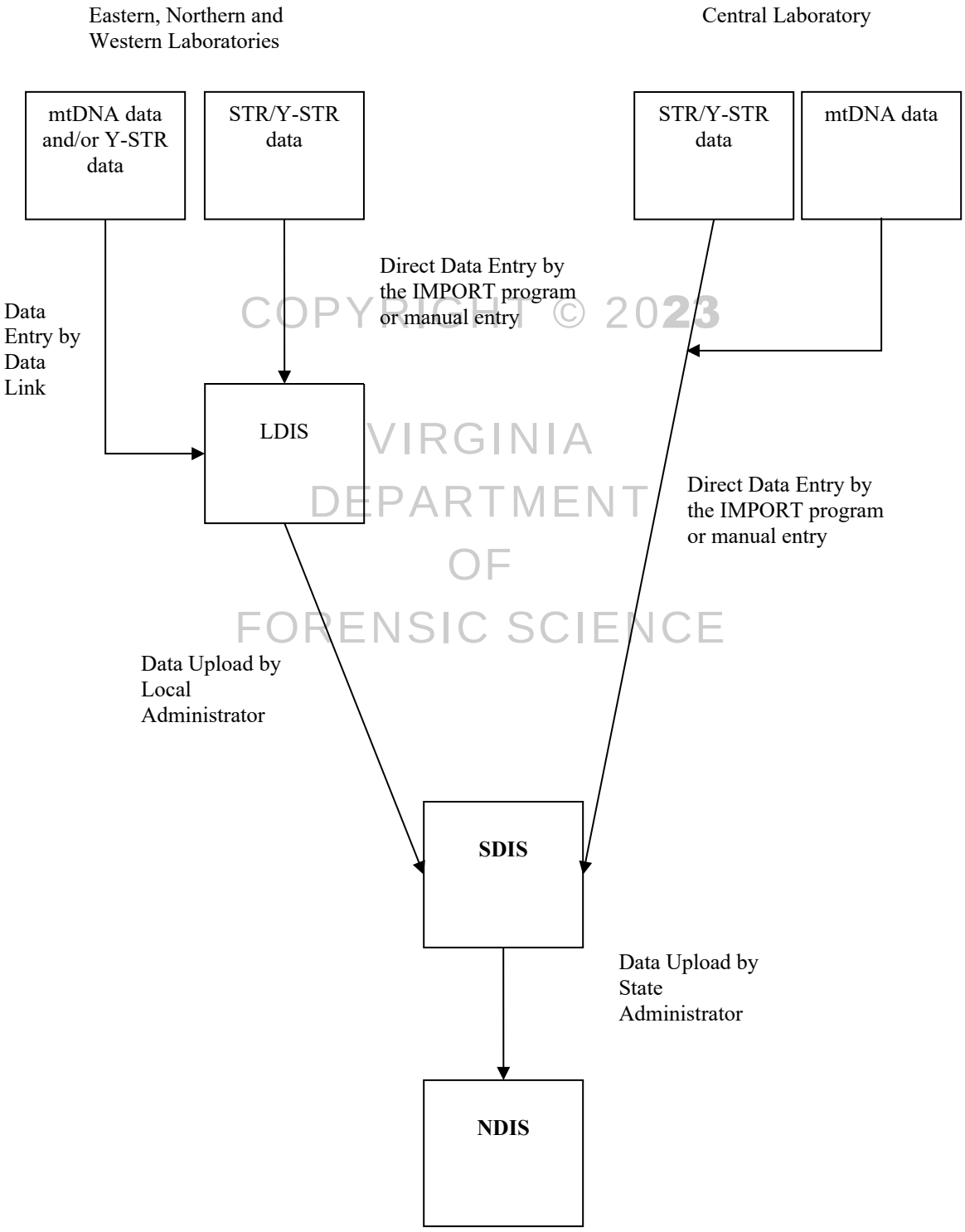
**APPENDIX A – CODIS DATA FLOW CHART**

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## APPENDIX B – INTERPOL DNA SEARCH PROCEDURE

1 Consult with the investigator to determine that there is a potential for the perpetrator in an unsolved case to possibly have international connections.

2 Determine that the evidence profile has sufficient loci for a meaningful search. The Interpol Standard Set of Loci (ISSOL), a standard of 7 STR loci (vWA, TH01, D21S11, FGA, D8S1179, D3S1358, D18S51), has been established. A profile must have results at 6 of these 7 loci before the request will be processed. Refer to the "Interpol Handbook on DNA Data Exchange and Practice" (Interpol, 2001) for further information.

3 Provide the evidence profile to the State CODIS Administrator in writing (e-mail may be used), together with relevant information about the case and nature of the evidence.

4 The State CODIS Administrator, or designee, will submit the profile for a search using the appropriate Interpol DNA search request form. The search will be sent to the United States Interpol liaison officer, who will transmit the search request to Interpol. The Virginia State Police Interpol liaison officer will also be notified of this search by a copy of the Interpol DNA search request.

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5 Potential positive search results will be transmitted by Interpol back to the State CODIS Administrator, who will coordinate the verification of the potential hit.

6 A copy of the Interpol DNA search request and, as appropriate, the positive search results will be maintained in the case file as documentation.

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**APPENDIX C – SAMPLE MATCH REPORT – NON-VIRGINIA LAW ENFORCEMENT AGENCY REQUEST**

# MUST BE ON LETTERHEAD STATIONARY

(Date)

(Agency)
Attn: (Investigator)
(Address)

Re: NDIS Match Result

Your Specimen ID: _____ Laboratory ORI: _____
Specimen Type: _____

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This is to inform you that an investigative lead was generated by a search at the National DNA Index System (NDIS).

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The above specimen was found to match the following convicted offender/arrestee:

Specimen ID: _____ Laboratory ORI: VA122015Y

Name: _____ SSN#: _____ DOB: _____

(Race/Gender) SID#/DCH#/DOC# _____

*Based on information available to the Virginia Department of Forensic Science the current whereabouts of this individual is unknown.*
**OR**
*This individual is currently incarcerated at the (Correctional Facility/Jail) in _____ , Virginia.*

This information is provided only as an investigative lead, and any possible connection or involvement of the individual to the case must be determined through further investigation.

It is recommended that your submitting agency obtain a reference sample from this individual for a DNA comparison by your laboratory.

Please call me at PHONE NUMBER if you have any questions regarding this match.

Sincerely,

_____
NAME, State CODIS Administrator



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**APPENDIX D – SAMPLE FORM LETTER FOR REQUEST FOR RELEASE OF CONVICTED OFFENDER SAMPLE INFORMATION AND RESPONSE LETTER**

# MUST BE ON AGENCY LETTERHEAD STATIONARY

(Date)

DNA Data Bank Supervisor
Virginia Department of Forensic Science
700 North Fifth Street
Richmond, VA 23219

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Dear Data Bank Supervisor:

It is believed that the Virginia Department of Forensic Science has a DNA Data Bank sample on file for a previously convicted felony offender:

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**Offender's Full Name:** _____ _____ _____
**(First Name)** **(Middle Name)** **(Last Name)**

**a.k.a.:** _____ _____ _____
**(First Name)** **(Middle Name)** **(Last Name)**

**Social Security #:** _____

**Date of Birth**: _____
**(Month, Day, Year)**

**Race:** _____ **Sex:** _____
**(No abbreviations, please.)** **(M or F)**

**DOC #:** _____

Please advise if you are in possession of the sample specified and if it has been analyzed. This information is requested in furtherance of an official criminal investigation.

Sincerely,

(Name)
(Title)



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**MUST BE ON LETTERHEAD STATIONARY**

(Date)

(Requestor's Name)
(Requestor's Address)

Dear (Requestor's Name):

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The following information is provided in response to your request dated (Date). The Virginia Department of Forensic Science DNA Data Bank (has/has not) received a sample of blood from the following individual: (convicted offender identifying information provided by requestor). [The sample (has/has not) been analyzed. **when the DNA Data Bank has received a sample**]

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Sincerely,

(Name)
(Title)



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# APPENDIX E - DEFINITIONS

**Association**
A search result that pairs unidentified human (remains) with one or more reference samples or Pedigree Trees; it does not reflect a direct identity match between profiles.

**Biological Child (Specimen Category)**
The known reference sample voluntarily provided by an adult child or provided with the parental/guardian consent for a minor child of a reported missing person. The DNA record for this specimen category is stored in the Relatives of Missing Person Index and the Pedigree Tree Index.

**Biological Father (Specimen Category)**
The known reference sample voluntarily provided by the biological father of a reported missing person. The DNA record for this specimen category is stored in the Relatives of Missing Person Index and the Pedigree Tree Index.

**Biological Mother (Specimen Category)**
The known reference sample voluntarily provided by the biological mother of a reported missing person. The DNA record for this specimen category is stored in the Relatives of Missing Person Index and the Pedigree Tree Index.

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**Biological Sibling (Specimen Category)**
The known reference sample voluntarily provided by the full or half biological adult sibling or provided with the parental/guardian consent of a full or half biological minor sibling of a reported missing person. The DNA record for this specimen category is stored in the Relatives of Missing Person Index and the Pedigree Tree Index.

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**Deduced Missing Person (Specimen Category)**
The DNA profile of a reported missing person that has been generated by examining intimate items purported to belong to the missing person such as a toothbrush, and compared to close biological relatives, if possible. Considered a reference sample, this DNA record is stored in the Missing Person Index.

**DNA Profile**
The genetic constitution of an individual at defined locations (also known as loci) in the DNA. A DNA profile derived from nuclear DNA typically consists of one or two alleles at several loci (e.g., short tandem repeat loci). The DNA profile derived from mitochondrial DNA is described in relation to the revised Cambridge Reference Sequence (Nature Genetics 1999, 23:147).

**DNA Record**
A database record that includes the DNA profile as well as data required to manage and operate the database, i.e., the Originating Agency Identifier which serves to identify the submitting laboratory; the Specimen ID, metadata, and DNA personnel associated with the DNA profile analyses.

**Maternal Relative (Specimen Category)**
The known reference sample voluntarily provided by a maternal biological relative who is not a mother, child or sibling of a reported missing person. The DNA record for this specimen category is stored in the Relatives of Missing Person Index and the Pedigree Tree Index.

**Metadata**
Data that describes the unique characteristics of some CODIS specimens to aid in the identification of a missing person.

**Missing Person (Specimen Category)**
The known reference sample from an individual that is missing. The source of the DNA has been verified as originating from the missing person and is stored in the Missing Person Index.

**Missing Person Index**
A Missing Person Index consists of DNA records from missing persons and deduced missing persons.


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**Paternal Relative (Specimen Category)**
The known reference sample voluntarily provided by a paternal biological relative who is not a father, child or sibling of a reported missing person. The DNA record for this specimen category is stored in the Relatives of Missing Person Index and the Pedigree Tree Index.

**Pedigree Tree**
A Pedigree Tree contains genetic information from two or more biological relatives of missing persons (may include spouses, where applicable). A Single Typed Node Pedigree contains the genetic information from only one biological relative of the missing person.

**Pedigree Tree Index**
A Pedigree Tree Index consists of DNA records of biological relatives and spouses of missing persons that are associated with a Pedigree Tree.

**Relatives of Missing Person Index**
A Relatives of Missing Person Index consists of DNA records from the biological relatives of individuals reported missing.

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**Spouse (Specimen Category)**
The known reference sample voluntarily provided by a presumptive parent of a common child. The DNA record for this specimen category is stored in the Spouse Index and the Pedigree Tree Index.

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**Spouse Index**
A Spouse Index consists of the DNA records of a presumptive parent of a common child of a missing person.

**Unidentified Human (Remains) Index**
An Unidentified Human (Remains) Index consists of DNA records from recovered living persons (e.g., children who can't and others who can't or refuse to identify themselves), and recovered dead persons (including their body parts and tissues) whose identities are not known.

**Unidentified Person (Specimen Category)**
The DNA profile developed from the recovered deceased (including body parts and tissue) or an individual who is unidentified (e.g., children who can't and others who can't or refuse to identify themselves). The DNA record for this specimen category is stored in the Unidentified Human (Remains) Index.



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