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## Procedure for Documentation with PowerPlex® Fusion

**1.0 Purpose** – To document the requirements and guidelines for electronic note-taking, case file review requirements, and completion of Case Records using the Forensic Advantage (FA) system within the DNA Database Section.

**2.0 Scope** – This procedure applies to those Forensic Scientists in the DNA Database Section who perform DNA Database analysis. For CODIS hit latent print verifications, refer to the Latent Evidence Section Procedure for CODIS.

### 3.0 Definitions

- **Administrative documentation** - Materials associated with Case Records which do not include technical records, but may include internal chain of custody documents, DNA Database Forensic Scientist statement of qualifications (CV), notes and communication logs of case-related conversations, and other pertinent information which relates to the Case Record.
- **Case Record** - Unit of work within a discipline performed by a Forensic Scientist resulting in a single Laboratory Report or memorandum.
- **CODIS** – Combined DNA Index System.
- **Electronic Record** - A data file that has information recorded in a form that only a computer can process.
- **Examination documentation** – Records of tests conducted, standards and controls used, printouts, hand-written notes and other material used by the DNA Database Forensic Scientist.
- **Forensic Advantage (FA)** - The lab wide computer software system used for documenting and storing data and reports generated for each case.
- **Form** - A document with a fixed arrangement of captioned spaces designed for entering and extracting information. Forms become records once completed.
- **Portable Document Format (PDF)** – A file format that preserves most attributes of a source document no matter which application, platform, and hardware type was originally used to create it.
- **Records** - Materials created or received by the Laboratory that are preserved as documentation of the activities of the Laboratory or for the value of the information. Records include, but are not limited to, reports, correspondence, telephone logs, quality records and technical records.
- **Technical records** - Accumulations of data and information which result from performing tests as specified in technical procedures. Technical records include, but are not limited to, forms, worksheets, photographs, and test reports.

### 4.0 Equipment, Materials and Reagents

- Computer with FA software

### 5.0 Procedure

#### 5.1 Case Notes

- 5.1.1** All files shall be generated in such a manner that another trained DNA Database Forensic Scientist can follow and understand all the steps taken during the analysis (including decision making steps).

**5.1.2** DNA Database Forensic Scientists shall create a worksheet in FA for a CODIS Hit confirmation, proficiency test, or training sample analysis. Analysis shall be documented in the DNA Database Forensic Scientist's notes as it is conducted or in the event of extenuating circumstances (e.g., court, FA/instrument issues, sick leave), the Forensic Scientist shall complete the worksheets at the earliest opportunity thereafter.

**5.1.2.1** If samples are to be reanalyzed at any step, that step of the process officially begins when the instrument is started. At that point, documentation shall be maintained in the DNA Database Forensic Scientist's notes.

**5.1.3 Case Record Object Repository** - For each Case Record, the FA Case Record Object Repository shall include electronic versions of all notes or data generated during analysis of the hit confirmation including, but not limited to, the following information: the DNA Database Forensic Scientist's most recent curriculum vitae (primary and secondary scientist, if applicable), the case communication log (if applicable), case notes generated during analysis (to include any corrections made to case notes, as well as the original electronic copy), GeneMapper ID-X Project(s), raw data from instrumentation, the confirmation keyboard search, the scanned DNA Database card, the Match Detail Report, and the Individual Specimen report.

#### **5.1.4 Forensic Advantage DNA Database CODIS Hit Worksheet**

##### **5.1.4.1 Main Page**

**5.1.4.1.1** The type of examination for this worksheet is preselected as CODIS confirmation.

**5.1.4.1.2** This page contains the prewritten draft of the CODIS Confirmation Report. The Results of Examination section shall be filled out to reflect the lab work that was completed and the genetic markers that were tested. It shall be used to create a CODIS Confirmation Report.

##### **5.1.4.2 Extraction**

**5.1.4.2.1** This tab shall not be used for analysis that was performed with PowerPlex® Fusion.

##### **5.1.4.3 Amplification**

**5.1.4.3.1** This tab shall not be used for analysis that was performed with PowerPlex® Fusion. A note shall be added to the "Notes" field of this tab stating that the FA worksheets are not used and the appropriate worksheets are available in the Case Record Object Repository. A copy of the punch/amplification setup worksheet shall be included in the Case Record Object Repository.

##### **5.1.4.4 3100 Data**

**5.1.4.4.1** This tab shall not be used for analysis that was performed with PowerPlex® Fusion. A copy of the 3500xL tray setup worksheet with a note indicating if a Post PCR Review was conducted shall be included in the Case Record Object Repository.

##### **5.1.4.5 Completed Tasks**

- 5.1.4.5.1** For Task-Oriented analysis of CODIS hit confirmations; the secondary Forensic Scientist shall make the following note in the Completed Tasks tab: “Original observations and data collected by FS (name of primary FS). See the object repository for notes.”

### **5.1.5 DNA CODIS Letter Worksheet**

See DNA Database Section Procedure for DNA Database Operations and CODIS Procedures for procedures regarding DNA CODIS Letters.

## **5.2 Generating a Database Report**

- 5.2.1** Once analysis has been completed on the CODIS confirmation and all required information has been entered into the worksheet and /or placed in the Case Record Object Repository, a Laboratory Report shall be generated.
- 5.2.2** Laboratory Reports shall be released on all samples eligible for collection for which CODIS Hit confirmations are analyzed. These shall be prepared in accordance with the State Crime Laboratory Procedure for Reporting Results. All Laboratory Reports shall include:
- 5.2.2.1** Unique case identifier.
  - 5.2.2.2** A description of the sample examined (including the date the items were received and by whom). For offender and arrestee samples, the submitter is the North Carolina State Crime Laboratory via the DNA Repository.
  - 5.2.2.3** Type of examination requested.
  - 5.2.2.4** A description of the methodology (DNA).
  - 5.2.2.5** The results.
  - 5.2.2.6** Date Report is generated. The date listed on the Laboratory Report reflects the date the Laboratory Report was generated. Once all reviews are completed and approved, Forensic Advantage (FA) assigns the report a pending release status. Once the Database Forensic Scientist releases the Report, this date is posted in FA as the release or issue date.
  - 5.2.2.7** Disposition of evidence – For all CODIS confirmations, the punch taken from the database sample is consumed.

## **6.0 Limitations – N/A**

## **7.0 Safety – N/A**

## **8.0 References**

DNA Database Section Procedure for Autosomal DNA STR Interpretation with PowerPlex Fusion

DNA Database Section Procedure for DNA Database GeneMapper ID-X

DNA Database Section Procedure for DNA Database Operations

Procedure for CODIS

State Crime Laboratory Procedure for Evidence Management

State Crime Laboratory Procedure for Record and Data Management

State Crime Laboratory Procedure for Reporting Results

State Crime Laboratory Procedure for Reviewing Laboratory Reports

State Crime Laboratory Procedure for Use of FA

State Crime Laboratory Quality Manual

## 9.0 Records

- Abbreviation List
- Signature Log

## 10.0 Attachments – N/A

Revision History		
Effective Date	Version Number	Reason
08/12/2015	1	Original Document
12/21/2015	2	5.1.2, 5.1.4.4, 5.1.4.5 updated to enable task-oriented analysis; 5.1.3 removed scanned thumb prints, add primary/secondary scientist; 5.2.1 added CROR
04/18/2016	3	5.1.3-removed separate expected results since added to allele call table; 5.1.4.3.1-added requirement for note in FA Amp worksheet; 5.2.2 changed issued report to released