



TRINIDAD AND TOBAGO GAZETTE

(EXTRAORDINARY)

VOL. 59

Caroni, Trinidad, Wednesday 3rd June, 2020—Price \$1.00

No. 93

681

APPOINTMENT OF A MINISTER

IT IS HEREBY NOTIFIED for general information that Her Excellency the President, acting in accordance with the advice of the Prime Minister, under the provisions of sections 76(3) and 79(1) of the Constitution of the Republic of Trinidad and Tobago, appointed and assigned to THE HONOURABLE FITZGERALD HINDS, M.P., responsibility for the Ministry of Public Utilities, with effect from 18th May, 2020, in addition to his responsibilities as Minister in the Ministry of the Attorney General and Legal Affairs.

C. JACKMAN-WALDRON
*Secretary to Her Excellency
the President*

18th May, 2020.

682

ASSIGNMENT OF RESPONSIBILITY AS MINISTER OF PUBLIC UTILITIES

DIRECTIONS:

IN EXERCISE of the power vested in me the President by section 79(1) of the Constitution of the Republic of Trinidad and Tobago and acting in accordance with the advice of the Prime Minister, I hereby assign to the Honourable Fitzgerald Hinds, M.P., responsibility for the Ministry of Public Utilities as specified in the Schedule attached hereto, with effect from 18th May, 2020 in addition to his responsibilities as Minister in the Ministry of the Attorney General and Legal Affairs.

PAULA-MAE WEEKES, O.R.T.T.
President

Dated this 18th day of May, 2020.

AMENDED SCHEDULE

Ministry of Public Utilities

Electrical Inspectorate
Electricity
Metrological Services
Postal Services
Public Utilities
Recycling
Telephones
Waste Management
Waste Water Management
Water
Water Resources Management

Statutory Boards and Other Bodies:

Regulated Industries Commission
Trinidad and Tobago Electricity Commission (T&TEC)
Trinidad and Tobago Postal Corporation
Water and Sewage Authority of Trinidad and Tobago (WASA)
—Water Resources Agency

Wholly Owned Enterprises:

National Maintenance Training and Security Company Limited (MTS)
The Trinidad and Tobago Solid Waste Management Company Limited (SWMCOL)

Indirectly Owned Enterprises:

Telecommunications Services of Trinidad and Tobago Limited (TSTT)

NATIONAL FORENSIC DATABANK CUSTODIAN UNIT
MINIMUM STANDARDS OF OPERATIONS

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

INTRODUCTION

- 1. NFDD CUSTODIAN UNIT QUALITY MANAGEMENT SYSTEM**
- 2. STAFFING, TRAINING and VETTING**
- 3. GENERAL STANDARDS OF NFDD**
 - 3.1 DNA Collection for NFDD
 - 3.2 Data Storage and Recovery
 - 3.3 Administrative Reports and Documentation
 - 3.4 Document and Data retention
 - 3.5 Database Operations protocol
 - 3.6 Data Submission to NFDD
 - 3.7 Data Access, Use and Privacy
 - 3.8 Database Information Disclosure
- 4. NFDD DATA INCLUSION STANDARDS**
 - 4.1 General Requirements for NFDD Participating Laboratories
 - 4.2 Technical Requirements for NFDD Participating Laboratories
 - 4.3 Functional Requirements for NFDD Participating Laboratories
- 5. ADDITIONAL NFDD DATA INCLUSION STANDARDS**
 - 5.1 Source of DNA Profiles for Inclusion
 - 5.2 Autosomal and Y-STR Inclusion Standards
- 6. NFDD DATA ENTRY STANDARDS**
- 7. NFDD DATA SEARCHING STANDARDS**
 - 7.1 Search Stringency
 - 7.2 Types of Searches
 - 7.3 Search Requests
 - 7.4 Cross-Referencing
 - 7.5 Non-routine Searches and Minimum Search Criteria
- 8. NFDD DATA MATCHING STANDARDS**
 - 8.1 Candidate Match Report
 - 8.2 Confirmation Documentation
 - 8.3 NFDD Final Match Report
 - 8.4 NFDD General Matching Rules
- 9. NFDD DATA MODIFICATION STANDARDS**
 - 9.1 Data Suspension
 - 9.2 Data Deletion
 - 9.2.1 Deletion by Expunction
 - 9.3 Data Transfer
- 10. CASE REVIEW GUIDELINES**
- 11. DATA CONFIDENTIALITY, SECURITY AND INTEGRITY CONTROL STANDARDS**
- 12. NFDD AUDITING**
- 13. DNA DATABASE PERFORMANCE STANDARDS**
- 14. NFDD RISK MANAGEMENT PROGRAM**
- 15. DEFINITIONS**
- 16. BIBLIOGRAPHY**

Policy Version History

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

- Appendix 1 - NFDD Indexes and Specimen Categories
- Appendix 2 - NFDD Change of DNA Profile Status
- Appendix 3 - NFDD SUBMISSION FORM
- Appendix 4 - NFDD MODIFIED DNA PROFILE RECORD LOG
- Appendix 5 - NFDD MANUAL SEARCH AND DISCLOSURE RECORD
- Appendix 6 - NFDD ELECTRONIC MATCH AND ASSOCIATION RECORD
- Appendix 7 - EXPECTED NUMBER OF ADVENTITIOUS MATCHES [ENAM] LOG
- Appendix 8 - NFDD Search Request Response
- Appendix 9 - NFDD Disclosure Request Response
- Appendix 10 - NFDD Participating Laboratory Status
- Appendix 11 - DNA Profile Search Forms
- Appendix 12 - NFDD Candidate Match Reports
- Appendix 13 - NFDD Candidate Match Report Log
- Appendix 14 - NFDD Confirmation Documentation Log
- Appendix 15 - NFDD Final Match Report Log
- Appendix 16 - NFDD Buccal Swab Technical Specifications
- Appendix 17 - NFDD Candidate Match Report Receipt
- Appendix 18 - NFDD Final Match Report Receipt
- Appendix 19 - NFDD Disclosure Request Completion Log
- Appendix 20 - NFDD Search Request Completion Log
- Appendix 21 - NFDD Corrective Action and Problem Report Record/ NFDD Information Systems (IS) Incident Report
- Appendix 22 - NFDD Final Match Report
- Appendix 23 - NFDD Certificate of Analysis Receipt Record – Persons listed in the 3rd Schedule
- Appendix 24 - NFDD SmallPond DNA Upload log
- Appendix 25 - NFDD Laboratory On-site Visit Form
- Appendix 26 - NFDD DNA Profile Reception Record
- Appendix 27 - Letter of Expungement
- Appendix 28 - NFDD External Quality Assurance Standard (QAS) Audit Document Review Record
- Appendix 29 - NFDD Equipment Maintenance Schedule and Performance Record
- Appendix 30 - NFDD Court Room Expert Witness Testimony Log
- Appendix 31 - NFDD Custodian Unit Annual Competency Test Evaluation Record
- Appendix 32 - Specimen ID# Case File Information
- Appendix 33 - Oath of Secrecy
- Appendix 34 - NFDD Training Record
- Appendix 35 - NFDD Expungement Record
- Appendix 36 - NFDD Equipment Maintenance and Performance Check Form
- Appendix 37 - Audit Trail Review Record

INTRODUCTION

The *Administration of Justice (Deoxyribonucleic Acid) Act Chapter 5:34 (Act 5 of 2012)* hereinafter referred to as the *DNA Act* stipulates the establishment of a National Forensic DNA Databank (NFDD). The NFDD is an electronic repository of DNA profiles generated from crime scenes and known individuals, and is managed by the NFDD Custodian Unit under supervision of the DNA Custodian Manager. The NFDD Custodian Unit is mandated to act as an independent and impartial agency of the Ministry of National Security and loaded DNA data obtained from NFDD participating laboratories is securely stored, confidential and anonymous. DNA data is routinely searched and compared in order to find matches, familial associations and contamination. The *Administration of Justice (Deoxyribonucleic Acid) Regulations, 2018* hereinafter referred to as the *DNA Regulations* is additional legislation that purports to regulate data entry, removal and access. The intention of the NFDD is to deter crime, improve the crime detection rate and solve cold-cases. This document describes the NFDD Minimum Standards of Operations and changes shall be approved by the DNA Custodian Manager.

1. NFDD CUSTODIAN UNIT QUALITY MANAGEMENT SYSTEM

NFDD Quality Management System shall contain, but not limited to the following:

Quality Assurance Standards
Quality Assurance Manual
Health and Safety Manual
Training Program
Risk Management Program
Information Systems Control Policy
SmallPond User and Administrator Guides
Minimum Standards of Operations

2. STAFFING, TRAINING AND VETTING

- The organisational structure of the NFDD Custodian Unit includes the DNA Custodian Manager and Deputy Custodian Manager who oversees and directs all activities of the NFDD Custodian Unit; Database Specialist who ensures Information Communication and Technology (ICT) systems are maintained and available; and the Databank Analyst who ensures submitted data is accurately loaded, stored and searched. All staff shall be qualified, security vetted and trained in relation to their respective duties and job descriptions. See *NFDD Quality Assurance Manual (NFDD-DOC-0002)* for general functions and duties of technical staff.
- Training shall be documented using the **NFDD Training Record** (Appendix 34). Training includes, but not limited to the successful completion of NFDD Training Program (**NFDD-DOC-0004**) and participation in workshops, courses, seminars, webinars, conferences etc.
- NFDD Custodian Unit staff conducting the loading, searching and matching of DNA profiles in the NFDD shall undergo and successfully complete the NFDD Training Program including annual competency tests. Annual competency testing shall be documented on the **NFDD Custodian Unit Annual Competency Test Evaluation Record** (Appendix 31).

3. GENERAL STANDARDS OF NFDD:

All Standard Operational Procedures shall be documented and established in accordance with general quality management requirements, the *DNA Act* and the *DNA Regulations*.

3.1 DNA Collection for NFDD

- Buccal Swabs used for collecting non-intimate reference samples for DNA database inclusion must meet **NFDD Buccal Swab Technical Specifications** (Appendix 16).
- All intimate and non-intimate samples for DNA analysis and databasing shall be submitted to the Trinidad and Tobago Forensic Science Centre (TTFSC) pursuant to Section 5(2) of the **DNA Act**.
- Crime Scene Material for DNA analysis and databasing shall be submitted to the Trinidad and Tobago Forensic Science Centre (TTFSC) or to an **Approved Laboratory** established under Section 6 of **DNA Act**.

3.2 Data Storage, Back-up and Recovery

- All incoming electronic data and records available on the database software (SmallPond™) User interface shall be stored securely on servers and encrypted storage devices.
- Storage, back-up and recovery procedures shall be established and implemented to ensure operability, reliability and consistency of data in the NFDD through structured, formalised, documented and tested policies which provide a compendious plan for transaction data and data-at-rest. Resources must be in place to perform these functions in compliance with international best practice and industry standards.
- Electronic back-up of server data shall be performed weekly and daily at locations restricted to persons authorised by the DNA Custodian Manager. The NFDD Custodian Unit shall ensure minimal downtime, consistent data, full recovery and operationalisation should there be an incident causing system failure.

3.3 Administrative Reports and Documentation

- The NFDD Custodian Unit shall utilise documentation related to the following:
 - Database Software
 - Forensic Laboratory Status
 - NFDD data submission
 - DNA profile modification - deletions, suspensions, amendments, transfers and reinstatements
 - DNA profile search, matches and associations
 - Match confirmation and match reports
 - NFDD **Search** and **Disclosure** Requests and Responses
 - Reports detailing database activity, performance and efficiency
 - Court Room Expert Witness Testimony log (Appendix 30)
 - Equipment maintenance and performance checks
 - NFDD audits
 - Risk Management
 - Training
- Upon request, the NFDD Custodian Unit shall produce **Case Files** for Specimen ID#s (Laboratory/Agency Unique Identifier) including relevant information pertaining to each (See Appendix 32)
- In the case of an audit request, the NFDD Custodian Unit will provide Case Files for each Specimen ID# as soon as reasonably practicable.

3.4 Document and Data retention

- All electronic documents and DNA profiles (Section 7(2) of *DNA Act*) shall be stored indefinitely (sans expungement/ deletion requirements) in labelled folders on secured servers located in data centers. Electronic **full** and **differential** back-up data files are generated weekly and daily and shall be retained for a minimum of ninety (**90**) and fourteen (**14**) days respectively. All physical documents and copies shall be stored indefinitely in secured and locked filing cabinets in dedicated storage areas. Keys to access storage locations on-site shall be kept by Custodian Manager(s).
- The NFDD Custodian Unit shall confidentially keep all **certificates of analysis** relating to reference samples from persons listed in the 3rd Schedule (Section 24 (2b) of *DNA Act*) indefinitely. These certificates shall be hand-delivered to the NFDD Custodian Unit in which a record of delivery shall be kept (Appendix 23- **NFDD Certificate of Analysis Receipt Record – Persons listed in the 3rd Schedule**).

3.5 Database Operations Protocol

NFDD Custodian Unit shall follow the NFDD Quality Assurance Manual, SmallPond™ (DNA Profile Matching System) Site administrator Guide, System Administrator Guide and User's Guide on performing database functions such as import, add, search, delete and modify profiles; create match reports; create databases and view database software generated documentation.

3.6 Data Submission to NFDD

- All data submitted for NFDD inclusion shall follow standard NFDD upload protocols that include:
 - Access secured network/ secured File Transfer Protocol (FTP)
 - Access electronic encrypted source of data or physical source of data
 - Access the **NFDD Submission Form** (Appendix 3)
 - Login to Database software
 - Accept or Reject data with reason
 - Update the **NFDD DNA Profile Reception Record** (Appendix 26)
- Submitted DNA profiles for NFDD inclusion shall be accessed, retrieved, reviewed, deemed eligible (or not) for NFDD entry and processed by authorised NFDD Custodian Unit staff within **five (5)** working days of receiving notice from NFDD participating laboratories that profiles were transferred to Custodian Unit.

3.7 Data Access, Use and Privacy

- NFDD shall comprise anonymised database information and all stored DNA profiles will be explicitly used to provide information relative to the detection, prevention and solving of crime, and to assist in educational or medical research and development provided that no personally identifiable information is disclosed to authorised parties.
- In addition to authorised NFDD Users; the parties or persons who have controlled access to NFDD information are listed in *DNA Act* Section 29(1) and *DNA Regulations* 15(2) and 15(3).

688—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

- Breaches of secrecy; or wilful and unauthorised NFDD access (and attempts) given or gained is an offence with persons being liable on summary conviction and imprisonment pursuant to **DNA Act** section 30(1).
- DNA profiles are considered personal data and shall be stored for specific periods of time or indefinitely according to DNA legislation and shall only be used for the purpose for which it was generated.

3.8 Database Information Disclosure

- To ensure NFDD privacy and confidentiality, the DNA Custodian Manager or anyone authorised by him shall disclose DNA data to persons and parties listed in Section 29(1) of **DNA Act** using the **NFDD Disclosure Request Response** form (Appendix 9) once a disclosure request is made;
 - in writing by the Central Authority;
 - via a Court Order;
 - using the **NFDD Disclosure Request Form** (Form 2 in Schedule 1 of DNA Regulations)
- Wilful and unauthorised disclosure, or disclosure of NFDD data to those not listed in Section 29(1) of **DNA Act** is an offence with persons being liable on summary conviction and imprisonment pursuant to section 29(2) and 30(1) of **DNA Act**.
- A disclosure request shall be 'one-off' and the **NFDD Disclosure Request Form** shall be hand-delivered to the NFDD Custodian Unit by or on behalf of authorised individuals. A **NFDD Disclosure Request Form** shall be re-submitted in order for information to be disclosed again.
- A disclosure request originating from any person or agency other than the Court or the Central Authority shall be accompanied by official written correspondence from the Court, Central Authority or the Commissioner of Police authorising and endorsing this disclosure request.
- The NFDD Custodian Unit Staff member receiving **NFDD Disclosure Request Form** and official authorisation correspondence; written request from Central Authority; or Court Order shall complete entry in **NFDD Manual Search and Disclosure Record** (Appendix 5) form.
- The NFDD Custodian Unit Staff member receiving **NFDD Disclosure Request Form** and official authorisation correspondence; written request from Central Authority; or Court Order shall copy, sign, date and stamp each, and if necessary, issue one (1) copy to authorised individual(s).
- The NFDD Custodian Unit shall notify the agency, Court or individual seeking disclosure once the **NFDD Disclosure Request Response** form is completed.
- A signed, dated and stamped copy of the **NFDD Disclosure Request Form** and official authorisation correspondence; written request from Central Authority; or Court Order will be attached to the completed **NFDD Disclosure Request Response** form which shall be available for collection by authorised individuals. Authorised Individuals shall sign and date the **NFDD Disclosure Request Completion Log** (Appendix 19).

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

- Copies of the **NFDD Disclosure Request Form** and official authorisation correspondence; written request from Central Authority; or Court Order and **NFDD Disclosure Request Response** forms will be retained by NFDD Custodian Unit in secured and locked filing cabinets. All Personal identifying information or Personal data may be redacted to ensure privacy and confidentiality.
- Personally identifying Information on **NFDD Disclosure Request forms** is private and shall only be used in relation to the disclosure request. Violation of this standard breaches the **Oath of Secrecy** (Appendix 33) which is part of NFDD Custodian Unit Staff contractual agreement with the Ministry.
- DNA profiles stored on NFDD shall not be used or disclosed inappropriately; or used to solicit unauthorised genetic information.

4. NFDD DATA INCLUSION STANDARDS:

- DNA profiles relating to the investigation or prosecution of offences committed in the Republic of Trinidad and Tobago before, on or after the coming into operation of the **DNA Act** are legally qualified for NFDD inclusion.
- DNA profiles generated from evidence collected by the following individuals are eligible for NFDD inclusion.
 - Qualified Person as specified in the **DNA Act**;
 - Police Officer employed with the Trinidad and Tobago Police Services (TTPS);
 - First Responder trained in crime scene material collection; and
 - Appropriately trained staff of the Trinidad and Tobago Forensic Science Centre (TTFSC)
- DNA profiles generated by **NFDD Participating Laboratories** such as, but not limited to the Trinidad and Tobago Forensic Science Centre and Laboratories approved by the Minister of National Security by Notification pursuant to Section 6 of the **DNA Act** are eligible for NFDD inclusion.
- NFDD Participating Laboratories shall meet the following **General, Functional and Technical requirements**

4.1 General Requirements for NFDD Participating Laboratories

- Lab shall have at least five (5) years' experience in providing Forensic DNA Analysis and Testing Services.
- Lab shall have documented evidence handling, storage and access policies that conform to the rules of continuity and preservation of evidence. Evidence includes 'work product' which is defined as material generated as a function of analysis such as DNA extracts, amplified products, DNA profiles, electropherograms and DNA Reports.
- Lab shall carry out an internal quality assurance program.
- Lab shall provide documented Standard Operating Procedures (SOPs) related to DNA Analysis to the NFDD Custodian Unit upon request. Request shall be made at least once per year; or as needed.

688—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

- Lab shall establish and maintain detailed Chain of Custody documentation.
- Lab shall maintain confidentiality and privacy of DNA Samples, Crime Scene Material and Data and personnel shall subscribe to an oath of secrecy or confidentiality agreement.
- Lab shall have documented and validated procedures related to DNA analysis and interpretation. These procedures include evidence preparation for DNA processing, laboratory techniques, DNA analysis methodologies and reporting of results.
- Lab shall have satisfactory audit documentation that relates to any methodologies used to generate DNA profiles eligible for NFDD inclusion.
- Lab shall have and follow a procedure for identifying possible contamination.
- Lab shall operate systematic quality control schemes to monitor day-to-day and batch-to-batch analytical performance of all DNA analysis undertaken.
- Lab shall ensure that access to DNA samples, crime scene material and data is limited to authorised persons.
- Lab shall enable a secured communication channel with the NFDD Custodian Unit. This channel shall be established and should remain open throughout the process.
- Lab shall enable a secured File Transfer Protocol (FTP) using FTP Software in order to securely transmit and receive sensitive data between itself and the NFDD Custodian Unit. FTP Software shall operate at one hundred percent (100%) efficiency and reliability.

4.2 Technical Requirements for NFDD Participating Laboratories

Note: The TTFSC pursuant to section 5 (1) of *DNA Act*, is the official forensic laboratory for Trinidad & Tobago.

Laboratory shall:

- Provide Forensic DNA Analysis Services accredited to **ISO/IEC 17025** standards by one (1) of the following accrediting agencies; and provide a valid accreditation certificate (including schedule and scope) upon request:
 - The American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB)
 - ANSI-ASQ National Accreditation Board (ANAB)
 - Forensic Quality Services—International (FQS-I)
 - The Standards Council of Canada (SCC)
 - The United Kingdom Accreditation Service (UKAS)
- Meet minimum **FBI Quality Assurance Standards (QAS)** for DNA testing and databasing laboratories or similar internationally accepted quality assurance standards, and provide a statement of compliance to

the NFDD Custodian Unit upon request. Request shall be made once every two (2) years for Approved Laboratories.

- Provide a copy of the **External Quality Assurance Standard (QAS) Audit** documentation for review including the audit report, clarifications, responses and corrective action plans to NFDD Custodian Unit within twenty (20) to thirty (30) working days of a request from the NFDD Custodian Unit. This request will be made once every two (2) years and the NFDD Custodian Unit shall document review using **NFDD External Quality Assurance Standard (QAS) Audit Document Review Record** (Appendix 28). NFDD Participating Laboratories shall contact NFDD Custodian Unit in writing if a time extension is required.
- Adhere to the **Scientific Working Group on DNA Analysis Methods (SWGDM)** Recommendations and Interpretation Guidelines; or similar internationally accepted recommendations and guidelines, and provide a statement of compliance to the NFDD Custodian Unit upon request. Request shall be made once every two (2) years for Approved Laboratories.

4.3 Functional Requirements for NFDD Participating Laboratories

Lab shall:

- Use internationally accepted DNA extraction methods and extraction kits developed by reputable manufacturers.
- Use the **Applied Biosystems 3500 Genetic Analyser** or an internationally accepted DNA Typing Platform.
- Use **GeneMapper IDX** or a similar internationally accepted and NFDD Approved Expert System.
- Use instruments and equipment from internationally recognised and reputable manufacturers.
- Use Polymerase Chain Reaction (PCR) and Real Time-PCR DNA Analysis kits and instruments from reputable manufacturers.
- Ensure all analysis is performed by qualified and trained DNA analysts.
- Ensure submitted DNA data is technically and administratively reviewed.
- Complete as applicable and sign the **NFDD Submission Form** (Appendix 3) once peer reviewed DNA profiles are being electronically or physically (hand-delivered) transferred to the NFDD Custodian Unit for upload. A completed copy of the **NFDD Submission Form** signed by DNA Custodian Management shall be returned to the NFDD Participating Laboratory that submitted profiles using, but not limited to encryption and secured network/ secure FTP; or encrypted email.
- Accompanying the **NFDD Submission Form**, Laboratories may also provide documentation listing the DNA profiles contained in an electronic 'batch file' submitted by laboratories for upload. This would establish data conformity between laboratories and NFDD Custodian Unit.

688—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

- Alert NFDD Custodian Unit in writing within **ten (10)** working days and provide supporting documentation once there is:
 - Quality assurance issues or technical, typographical and administrative errors related to submitted DNA profiles or data
 - Major changes such as ownership, accommodation, equipment, software, protocols, analysis kit, key staff etc.
 - Amendments to its Quality Assurance Manual, DNA Analysis Recommendations and Interpretation Guidelines and Standard Operating Procedures for DNA analysis
- Alert NFDD Custodian Unit in writing if laboratory loses its accreditation status or the capability to perform DNA analysis at its facility within **one (1)** working day from when the laboratory lost capability.
- Maintain DNA and Serology Staff DNA profile database and perform routine checks against them.

5. ADDITIONAL NFDD DATA INCLUSION STANDARDS

5.1 Source of DNA Profiles for Inclusion

NFDD Participating Laboratories shall:

- Submit **DNA profiles** devoid of personally identifying information or personal data generated from:
 - i. **Reference Samples;**
 - For Buccal Swabs collected in pairs, they shall be analysed as such for NFDD inclusion
 - Reference samples shall be submitted to TTFSC with appropriate documentation (i.e. forms of the Second Schedule of **DNA Act** etc.) for NFDD data inclusion
 - ii. **Direct Comparative Evidence** allegedly taken from missing persons;
 - iii. **Unidentified Human Remains**
 - iv. **Crime Scene Material** (Forensic Unknown/ Stain).
- Submit homozygous Genotypes as "p" and heterozygous Genotypes as "p, q" (in ascending order)
- Notify NFDD Custodian Unit in writing when a genotype exists with possible allelic drop-out(s), drop-in(s), mutations, null alleles etc. by detailing Specimen ID# (Laboratory/Agency Unique Identifier) and loci. Suspected drop-out alleles may be annotated with a "-" in NFDD.

5.2 Autosomal and Y-STR Inclusion Standards

NFDD Participating Laboratories shall:

- **Provide Reference Sample** autosomal profiles containing **20** CODIS Core loci and no more than 3 alleles at one (1) locus while the remaining loci can have up to 2 alleles. At least **10** CODIS Core loci for **Reference Samples** shall be accepted once good faith attempts at generating 20 CODIS Core loci fail or in extenuating circumstances (i.e. the analysis kit amplifies < 20 CODIS loci eg. Identifier, PowerPlex™ 16, PowerPlex™ 21, AmpF&STR™ SGM Plus™, AmpF&STR™ NGM Select™)

683—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

20 CODIS Core Loci:

CSF1PO FGA THO1 TPOX VWA D3S1358 D5S818 D7S820 D8S1179 D13S317 D16S539
D18S51 D21S11 D1S1656 D2S441 D2S1338 D10S1248 D12S391 D19S433 D22S1045

- **Provide Direct Comparative Evidence, Unidentified Human Remains and Crime Scene Material** autosomal single source profiles containing **10 – 20** CODIS Core loci with a **random match probability** (RMP) of less than one (1) in ten (10) million, and no more than 3 alleles at one (1) locus while the remaining loci can have up to 2 alleles.
 - **Provide Reference Sample, Unidentified Human Remain and Direct Comparative Evidence** autosomal profiles containing the sex determining region **Amelogenin**.
 - **Provide Autosomal Mixture** containing **10 - 20** CODIS Core loci and no more than 4 alleles per locus.
 - o Autosomal mixtures with **five (5) alleles** at one (1) locus due to a tri-allelic contributor shall be accepted. The NFDD Participating Laboratory shall notify the DNA Custodian Manager or anyone authorised by him of this in writing.
 - o Autosomal mixtures where contributors are 'unknown' shall be submitted to Custodian Unit.
 - o For NFDD participating laboratories performing **Probabilistic Genotyping**, they may submit the most informative putative profile of a contributor who cannot be accounted for.
 - o For NFDD participating laboratories **NOT** performing **Probabilistic Genotyping**, they may submit the most informative mixtures in which at least one (1) contributor cannot be accounted for.
 - **Provide Reference Sample Y-STR** profiles containing at least **23** of the Y-STR loci observed below including at most two (2) alleles at duplicated loci and three (3) alleles at one locus indicating possible tri-allelic pattern.
 - **Provide Direct Comparative Evidence, Unidentified Human Remains and Crime Scene Material Y-STR** profiles containing at least **17** of the Y-STR loci observed below including at most two (2) alleles at duplicated loci and three (3) alleles at one (1) locus indicating possible tri-allelic pattern.
- DYS19 DYS389I DYS389II DYS390 DYS391 DYS392 DYS393 DYS385a DYS385b DYS438
DYS439 DYS437 DYS448 DYS456 DYS458 DYS635 YGATAH4 DYS481 DYS533 DYS549
DYS570 DYS576 DYS643 DYF387S1 DYS449 DYS460 DYS518 DYS627
- **Not submit Y-STR Mixed Profiles** for inclusion in NFDD.
 - **Confirm** rare alleles, new alleles, chromosomal anomalies and microvariants by performing:
 - repeated DNA extraction, PCR, capillary electrophoresis and allele calling

688—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

- re-analysis using different DNA kits
 - literature search variant allele reports, tri-allelic patterns and new alleles
 - the ability to accurately determine them using the Internal lane DNA size standard
- **Submit Composite DNA profiles** obtained from analysis of the same DNA extract or amplification product. **NFDD Participating Laboratories** shall notify NFDD Custodian Unit in writing of all composite DNA Profiles submitted. A notification of “composite DNA profile” shall be documented in SmallPond™ User interface.

6. NFDD DATA ENTRY STANDARD:

- NFDD Participating Laboratories shall **generate** DNA Profiles in formats that allow them to be uploaded i.e. **IMPORTED** or **ADDED MANUALLY** to NFDD. All imported and manually added profiles shall be documented on the **NFDD SmallPond DNA Upload Log** (Appendix 24).

- For DNA profile(s) to be **IMPORTED**, they shall be submitted by participating laboratories:

- Electronically using encryption and secured network/secure FTP, in **export file format** (.csv, .txt, .xml, CMF) within twenty (20) working days of receiving evidence; and
- Labelled with:
 - Name of NFDD Participating Laboratory
 - DNA Analysis kit used; and
 - One (1) of the below **Database Indexes** (if applicable)
 - 1) Crime Scene Material i.e. Forensic Unknown- (Autosomal and or Y-STR)
 - 2) Offenders (i.e. Person Under Suspicion) - (Autosomal only)
 - 3) Victims - (Autosomal and or Y-STR)
 - 4) Family Members– (Autosomal and or Y-STR)
 - 5) Unidentified Human Remains - (Autosomal and or Y-STR)
 - 6) Elimination - (Autosomal only)

See **Appendix 1** for Specimen Category that falls under each Database Index

- For DNA profiles to be **ADDED MANUALLY** using the ‘double-blind’ method, they may be submitted by participating laboratories as:
- Hand-delivered physical copies of **electropherograms** or **official documents** (signed, dated and reviewed by authorised persons); or
 - Scanned non-editable copies of **electropherograms** or **official documents** (signed, dated and reviewed by authorised persons) using encryption and secured network/ secure FTP.
 - For manual entry of **rare alleles**, **new alleles** and **microvariants** from an electropherogram, DNA Custodian Manager or anyone authorised by him may enter them into NFDD according

683—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

to their relative base pair size even if they are between designated points on allelic ladder.

- The letter 'Y' may need to be added to the Specimen ID# by NFDD Custodian Unit staff in order to differentiate between autosomal and Y-STR profiles for the same Specimen ID#.

NFDD Participating Laboratories shall provide each DNA profile contained within the **export file format, official document or electropherograms** with:

1. Specimen ID# (Laboratory/Agency Unique Identifier) - NFDD Participating Laboratories should include the letter 'Y' for Y-STR data. Database software will not accept duplicate Specimen ID#s.
2. Name of NFDD Participating Laboratory
3. DNA Analysis Kit used; and
4. One of the following **Specimen or Subject Categories** selected from the Database Indexes

Table 1 – Database Indexes and respective Specimen Categories for NFDD entry

<u>Crime Scene Material i.e. Forensic Unknown/stain</u>		
SOC – Forensic Unknown/stain from Scene of Crime		
<u>Offenders (i.e. Person Under Suspicion)</u>		
ACC'D – Accused/Defendant		
SUSP – Suspect		
DET – Detainee		
CO – Convicted Offender		
PRI – Prisoner		
DEP – Deportee		
JUV – Juvenile Charged		
FNLT – Foreign National who breaches <i>Immigration Act</i>		
<u>Victims</u>		
DEC'D – Identified Deceased Victim		
DCE – Direct Comparative Evidence allegedly taken from missing person (eg. toothbrush, razor, PAP Smear etc.)		
<u>Unidentified Human Remains</u>		
UNDEC'D – Unidentified Deceased (eg. bone, tissue, teeth)		
<u>Elimination</u>		
PSM – Protective Service Member (person listed in 3 rd Schedule of <i>DNA Act</i>)		
LAB – TTFSC Staff member		
SAM – Supporting Agency Member who may attend crime scene (i.e. District Medical Officer, Undertaker)		
<u>Volunteer Family Members of Missing Persons:</u>		
VOLS – Volunteer Son	VOLD – Volunteer Daughter	VOLF – Volunteer Father
VOLM – Volunteer Mother	VOLSBG – Volunteer Sibling	VOLHS – Volunteer Half Sibling
VOLPU – Volunteer Paternal Uncle	VOLMU – Volunteer Maternal Uncle	VOLPA – Volunteer Paternal Aunt
VOLMA – Volunteer Maternal Aunt	VOLPC – Volunteer Paternal Cousin	VOLMC – Volunteer Maternal Cousin
VOLPG – Volunteer Paternal Grandparent	VOLMG – Volunteer Maternal Grandparent	

DNA profiles from **Persons of Interest (POI)** such as persons who may attend a crime scene but not a victim (eg. civilians first on crime scene); and **Volunteers (VOL)** under the following categories: robbery and assault victims, complainants in sexual assault cases, spouses (i.e. volunteers outside of the **Specimen Categories** outlined in **Table 1** above) shall not be uploaded to NFDD according to international best practice but may be manually checked against the NFDD if profile is submitted along with an official NFDD Search Request (see 7.2 below).

All Volunteers, including Family Members of Missing Persons shall provide consent for DNA profile obtained from Reference sample to be checked against the NFDD (i.e. **Form 1** of the Second Schedule of the *DNA Act*)

- Laboratories that generate DNA profiles that do not meet the standards for loading onto database i.e. they do not meet the aforementioned **NFDD Data Inclusion** and **Data Entry Standards** shall not be loaded onto NFDD and marked as rejected on **NFDD Submission Form**. However, these profiles may be searched following a search request (see section 7.3) once the minimum search criteria is met (see section 7.5).

7. NFDD DATA SEARCHING STANDARDS

7.1 Search Stringency

- Searches are performed using DNA database software operating at Moderate, Low or High search stringencies.
 - Moderate Stringency looks for **Partial Matches** (match between two single source profiles having at each locus, all of the alleles of one profile represented in the other profile) between autosomal profiles. Moderate Stringency searches contain a custom configuration in which alleles at one (1) locus may be completely different (**mismatch**). This configuration finds **near matches** (match between two apparent single source profiles in which one (1) locus does not match or does not match completely). Near matches may be due to mixtures, allelic drop-outs, allelic drop-ins, null alleles, mutations, allele call error, typing error, shifted allele size, stochastic effects, no stochastic threshold value, low-level DNA testing or human error.
 - Low Stringency is also known as a 'shared-allele' search stringency and looks for **parent-child relationships** between autosomal profiles. This search method shall contain a custom configuration in which alleles at one (1) locus may be completely different and the **Relationship Index (RI)** threshold is set to '**0**'. The **Relationship Index** is a value calculated by database software using kinship formulas indicating the likelihood of a familial relationship. A threshold value of '**0**' is recommended in order to detect **parent-child** familial associations where one (1) mismatching locus may exist. **RI** is not automatically calculated by SmallPond™ for **parent-child** associations with mismatching loci. A **RI** value of **100** or greater indicates a supportive conclusion that there is a familial relationship between the DNA profiles. Additionally, the 'shared-allele' search stringency shall be customised in order to determine **non parent-child** relationships (i.e. cousins etc.). This search method shall contain custom configurations in which the **Relationship Index (RI)** threshold is set to '**100**' and the locus 'must-match' parameter is set to '**0**' because for relationships more distant than the Parent-Child, there is no guarantee of sharing ANY alleles at ANY locus. **RI** values less than '**100**' indicate non-support for the relationship or an inconclusive finding.

- High Stringency looks for **exact matches at all loci**. A custom configuration allows for one (1) mismatch to account for the possibility of high rate Y-STR mutations and allelic drop-outs. This is the default search stringency for Y-STRs.

7.2 Types of Searches

- **Automatic Searching** is performed when DNA profiles, which are **uploaded** (i.e. imported or added manually) to the NFDD, are automatically and routinely cross-referenced against each other.
- **Manual Keyboard Searching** is performed when a target DNA profile is searched deliberately and is initiated by a **NFDD Search Request Form** (Form 1 in Schedule 1 of DNA Regulations Section 13.9) using the following:
 - Specimen ID# (Laboratory/Agency Unique Identifier); or
 - **DNA Profile Search Form** (Appendix 11)
 - Each Manual keyboard Search is a **one-off search** until another search request is made.
 - Specimen ID# to be searched shall be logged on **NFDD Manual Search and Disclosure Record** form.
 - DNA Profiles not uploaded into NFDD, but subject to a Manual Keyboard Search, shall be provided on **DNA Profile Search Form** which shall be supplied by parties requesting a search.
- **Familial Searches** are deliberate comparisons between the **Offender Database Index** and the **Forensic Unknown Index** to find familial relationships through shared alleles.
 - Familial Searching is non-routine and shall be manually performed following an official **Search Request** from authorised personnel i.e. Commissioner of Police, an investigating Police Officer and the Central Authority of Trinidad and Tobago. A Familial Search Request should be initiated after DNA profiles obtained from the investigation of crime yields insufficient information.
 - When performing Familial Searches, the **Relationship Index (RI) Threshold** may be set to '0' or '100'. A threshold value of '0' is recommended in order to detect **parent-child** familial associations where one (1) mismatching locus may exist. A threshold value of '100' is recommended in order to detect non-parent-child relationships such as cousins, siblings etc.
 - Familial Searches may assist in generating investigative leads in crimes by identifying family members of an unknown DNA source.
- **Missing Person Searches** are performed by comparing profiles in the:
 - **Unidentified Human Remains** database with **Family Members** using a low stringency search
 - **Victims** database with **Forensic unknowns** using a moderate stringency search
 - **Victims** database with **Unidentified Human Remains** using a moderate stringency search
 - **Family Members** database with **Unidentified Human Remains** using Y-STR search
 - **Victims** database with **Unidentified Human Remains, Forensic unknowns** using Y-STR search

688—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

7.3 Search Requests

- Searches of NFDD by the DNA Custodian Manager or anyone authorised by him can be requested by:

- Investigating Officer in course of a criminal investigation or criminal proceedings;
- Central Authority at request of a Country accepted by the Central Authority;
- Central Authority; or
- Commissioner of Police in the course of a criminal investigation or criminal proceedings

using the **NFDD Search Request Forms** and if necessary, the **DNA Profile Search Form**. This request shall be 'one-off' and the Search Request form hand-delivered to the NFDD Custodian Unit by or on behalf of authorised individuals. A NFDD Search Request Form shall be re-submitted for the search to be conducted again.

- A **NFDD Search Request** originating from the Central Authority or an Investigating Officer in course of a criminal investigation or criminal proceeding shall be accompanied by official written correspondence from the Attorney General, Central Authority or the Commissioner of Police authorising and endorsing this search request.
- The NFDD Custodian Unit Staff member receiving **NFDD Search Request Form** and written authorisation (if necessary) shall copy, sign, date and stamp each, and issue one (1) copy to the above mentioned authorised individual.
- The NFDD Custodian Unit Staff member receiving **NFDD Search Request Form** shall complete entry in **NFDD Manual Search and Disclosure Record** form.
- The NFDD Custodian Unit shall notify the agency or individual seeking the information once the NFDD Search is performed and the **NFDD Search Request Response Form** (Appendix 8) is completed.
- Signed, dated and stamped copies of the **NFDD Search Request** and written authorisation (if necessary); and **DNA Profile Search** forms will be attached to the completed **NFDD Search Request Response** form which shall be available for collection by authorised individuals. Authorised Individuals shall sign and date the **NFDD Search Request Completion Log** (Appendix 20).
- Copies of the **NFDD Search Request**, **DNA Profile Search** and **NFDD Search Request Response** forms as well as written authorisation correspondence will be retained by NFDD Custodian Unit in secured and locked filing cabinets or on servers (i.e. electronically).

7.4 Cross-Referencing

Table 2: Autosomal STRs indexes that will be automatically searched against each other:

Database Index	Forensic Unknown	Offender	Victims	Family Members	Unidentified Human Remains	Elimination
Forensic Unknown	Moderate	Moderate	Moderate		Moderate	Moderate
Offender		Moderate			Moderate	Moderate
Victims			Moderate		Moderate	Moderate
Family Members				Moderate	Low	Moderate
Unidentified Human Remains					Moderate	
Elimination					Moderate	Moderate

Table 3: Y-STRs indexes that will be automatically searched against each other:

Database Index	Forensic Unknown	Offender	Victims	Family Members	Unidentified Human Remains	Elimination
Forensic Unknown	Y- STR search		Y- STR search		Y- STR search	
Offender						
Victims					Y- STR search	
Family Members					Y- STR search	
Unidentified Human Remains					Y- STR search	
Elimination						

7.5 Non-Routine Searches and Minimum Search Criteria

- Non-routine searches are initiated by a **NFDD Search Request Form**
- Non-routine searches include Manual Keyboard Searches against DNA profiles **not uploaded** to the NFDD such as:

<u>Autosomal DNA profile(s) that:</u>	<u>Y-STR DNA profile(s) that:</u>
<ol style="list-style-type: none"> do not meet NFDD Data Inclusion and Data Entry Standards contain at least seven (7) CODIS core loci contain at most six (6) alleles per locus 	<ol style="list-style-type: none"> do not meet NFDD Data Inclusion and Data Entry Standards are single source and contain at least nine (9) of the aforementioned Y-STR loci

8. NFDD DATA MATCHING STANDARDS

- Matches shall be **counted** using formula N-1 where N is number of times the matching profile (including partial) is observed in database.
- The DNA Custodian Manager shall inform the Commissioner of Police in writing of a **duplication** (i.e. matching reference sample autosomal profiles within the same database index) discovered within forty-eight (48) hours if the duplication is not a result of an internal NFDD or Laboratory error. The

Commissioner of Police shall investigate the cause of duplication and inform the Custodian Manager of the outcome and include the source of, and reason for duplication in writing. Duplications are **suspended** upon discovery and may be **deleted** upon confirmation (see section 9.1 and 9.2)

- A **candidate match** occurs when two profiles in the NFDD match each other at the observed loci. Partial Matches as well as one (1) mismatching locus is allowed.
- A **confirmed match** occurs when laboratories conduct confirmation procedures following a candidate match.
- An **association** occurs when a search provides results that possibly indicate a familial relationship between two (2) autosomal profiles. For parent-child relationships, one mismatching locus is allowed.
- An **adventitious match** occurs when there is a false positive match between two (2) profiles by coincidence rather than because they originate from a common source.
- A **Random Match Probability (RMP)** is a statistical value which is calculated using the FBI STR Population Data for Trinidad and Tobago (2015) when a match occurs between single source autosomal profiles and signifies the strength of the match and the genetic frequency in a given population. RMP calculations are based on the “product rule” which allows for the multiplication of individual genotype frequencies for unlinked (i.e. inherited independently) loci. In the NFDD, RMP is not calculated for matches involving mixtures. Match Statistics for Y-STRs are calculated using population data obtained from www.yhrd.org (i.e. Y-Chromosome Haplotype Reference Database) and includes an upper 95% confidence interval (upper bound) that accounts for database size and sampling variation; as well as population sub-structure.

8.1 Candidate Match Report (CMR)

- **Candidate Match Report** (Appendix 12) will be produced when:
 - searched profiles match at corresponding loci; and
 - profiles show familial relationship (i.e. association)
- **Candidate Match Report** may include:
 - Testing laboratory that generated DNA profiles and contact information
 - Search stringency used
 - Random Match Probability or Y-STR match statistics with upper 95% confidence interval value
 - Relationship Index
 - Database Disclaimers
 - Limitations that may have affected the significance of the match/association such as: number of loci, number of alleles per locus, DNA analysis kit used, possibility and expected number of adventitious (coincidental) matches, possibility of relatives in database, non-compliance with data inclusion and data entry standards etc.
 - Database Software Generated Documentation (i.e. match detail report, match detail page, etc.)

- Database Software Generated Documentation related to matches and associations may include the disclaimer: *“Matches reported by SmallPond are intended only to generate investigative leads. Users should consider the use of other investigative measures to obtain further support for matches reported by SmallPond”*
- **Candidate Match Report** using Y-STRs shall include disclaimer “all patrilineal related males and an unknown number of unrelated males cannot be excluded as being the source of the matching profiles”
- **Candidate Match Report** shall be reviewed for errors by qualified personnel. Completed reviews will be documented in the **NFDD Candidate Match Report Log** (Appendix 13) which includes:
 - Candidate Match Report number
 - Target Specimen ID #
 - Candidate Match Report date
 - Candidate Match Report submitted by:
 - Candidate Match Report Reviewer
 - Date Reviewed
 - Candidate Match Report Recipient Laboratory
 - Date Submitted
- **Candidate Match Reports** (Appendix 12) will be submitted to Laboratories that generated at least one (1) of the matching or associating profiles using encryption and secured network/secure FTP; or encrypted email.
- Laboratories shall confirm receipt of Candidate Match Reports by completing the **Candidate Match Report Receipt** form (Appendix 17) which shall be submitted with Candidate Match Report. Completed Candidate Match Report Receipt forms shall be returned to the NFDD Custodian Unit using encryption and secured network/ secure FTP; or encrypted email.
- All matches and associations shall be recorded in the **NFDD Electronic Match and Association Record** (Appendix 6). Physical copies of this Record will be stored in a secured and locked filing cabinet which is accessed by the DNA Custodian Manager or anyone authorised by him.

8.2 Confirmation Documentation

- Laboratories in receipt of a Candidate Match Report shall **confirm** all candidate matches and associations by:
 - Checking for technical, analytical, typographical and administrative errors
 - Checking electropherograms according to DNA Analysis Interpretation Guidelines
 - Considering number of matching/associating loci
 - Evaluating homozygote vs. heterozygote profiles
 - Linking DNA data with case
 - retrieving and checking laboratory case information

688—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

- re-analysing evidence to confirm matches (if necessary)
- Checking names of offenders, deceased etc. (if applicable)
- Once the **candidate match** is confirmed, laboratories shall submit verification or **Confirmation Documentation** (i.e. a confirmatory match/association report verifying accuracy of data) to the NFDD Custodian Unit within ten (10) working days after receiving Candidate Match Report using encryption and secured network/ secure FTP; or encrypted email.
- **Confirmation Documentation** shall include:
 - Findings of verification process; and
 - Relevant information considered by the evaluation and confirmation of the match/association devoid of personally identifying information or personal data
- The NFDD Custodian Unit shall keep an internal record called **NFDD Confirmation Documentation Log** (Appendix 14) detailing:
 - Target Specimen ID#
 - Candidate Match Report Number
 - Confirmation Documentation date
 - Laboratory that submitted Confirmation Documentation
 - NFDD Custodian Unit recipient
 - Date Received and Comments
- Laboratories may from time to time consult with each other and share information regarding profiles before submitting **confirmation documentation** to the NFDD Custodian Unit.
- Laboratories shall provide a reason and mention in **confirmation documentation** if a candidate match:
 - is not probative at the time of the NFDD candidate match; or
 - is not a true match or association following the verification process

8.3 NFDD Final Match Report (FMR)

- NFDD Custodian Unit shall submit a hardcopy of an officially stamped **NFDD Final Match Report** (Appendix 22) including a copy of **Confirmation Documentation, Candidate Match Report** and any other relevant information to the following parties:
 - Trinidad and Tobago Police Services or an authorized law enforcement agency
 - Trinidad and Tobago Forensic Science Centre once an uploaded DNA profile from a reference sample matches crime scene material (Section 15.8 of DNA Regulations) or matches human remains indicating a familial relationship
 - Authorised person(s) or agencies who may request a search or disclosure of DNA data
- The official Custodian Unit stamp on NFDD Final Match Reports is certification that uploaded DNA profiles included in these reports meet the NFDD Data Inclusion and Data Entry standards and that all

data was technically and administratively reviewed and approved by qualified personnel.

- Recipients of all NFDD Final Match Reports shall complete as applicable, sign and date the **NFDD Final Match Report Receipt** form (Appendix 18).
- The NFDD Custodian Unit will not submit **NFDD Final Match Report** to the above mentioned parties until it receives confirmation documentation from all laboratories involved in the match/association.
- The NFDD Custodian Unit shall keep an internal record called **NFDD Final Match Report Log** (Appendix 15) detailing:
 - Final Match Report number
 - Target Specimen ID#
 - Final Match Report date
 - FMR prepared by:
 - FMR Reviewer and date reviewed
 - Final Match Report Recipient Agency or Authorised Individual
 - FMR Date Received

8.4 NFDD General Matching Rules

- A **forensic unknown** profile matching a **reference sample** profile shall not be deleted. This formerly unknown profile will remain in the Forensic Unknown database index. The match or association between them may be displayed as 'closed' on database software interface once there is no further interest or the **Match Report** has been issued.
- A **forensic unknown** profile matching another **forensic unknown** profile will not be deleted. This profile is still unknown and keeping both in the forensic unknown databank is useful for linking different crimes. The match between them may be displayed as 'closed' on database software interface once there is no further interest or the **Match Report** has been issued.
- Matches involving **Elimination Index** profiles shall be investigated by the **TTPS** or the **TTFSC** in order to determine if source of match was due to inadvertent contamination or otherwise. This directive is stipulated in **NFDD Final Match Report** and the NFDD Custodian Unit shall be notified in writing of the outcome of the investigation devoid of personally identifying information or personal data.
- Upon **request** by Law Enforcement Agencies (Submitting Agencies), **Laboratories** should strongly consider and attempt to:
 - Confirm matches/associations using current analysis kits once a NFDD match/association was obtained using analysis kits that provide less discriminatory power and submit findings to relevant authorities and NFDD Custodian Unit once DNA profile obtained is an **upgrade** or **more informative**. If re-analysis results in the **same profile**, laboratories should not submit profile to the NFDD. This directive shall be stipulated in **NFDD Final Match Report**. If re-analysis of the same

688—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

Specimen ID# results in an upgrade, a more informative or the same DNA profile, laboratories shall notify the NFDD Custodian Unit in writing of this before submission (if necessary) and include Specimen ID# in this notification. If necessary, NFDD Custodian Unit shall upgrade DNA profile by amending original profile, or by deleting original before importing upgraded profile.

- Substantiate original candidate matches (eg. Partial Matches, Near Matches) and submit findings to relevant authorities and NFDD Custodian Unit once DNA profile obtained is an **upgrade** or **more informative**. If re-analysis results in the **same profile**, laboratories should not submit profile to the NFDD. This directive may be stipulated in **NFDD Final Match Report**. If re-analysis of the same Specimen ID# results in an upgrade, a more informative or the same DNA profile, laboratories shall notify the NFDD Custodian Unit in writing of this before submission (if necessary) and include Specimen ID# in this notification. If necessary, NFDD Custodian Unit shall upgrade DNA profile by amending original profile, or by deleting original before importing upgraded profile.
- Perform alternative DNA analysis methods such as Y-STR, mitochondrial DNA and submit findings to relevant authorities.
- Confirm **Offender Reference Sample** matches or associations and submit findings to relevant authorities and NFDD Custodian Unit once DNA profile obtained from the new reference sample taken from the 'offender' is an **upgrade**, **more informative** or **indicates a different individual**. If DNA profile obtained from new reference sample taken from the 'offender' is the **same profile** as that of the original Offender Reference Sample, laboratories should not submit profile to the NFDD. This directive shall be stipulated in **NFDD Final Match Report**. Prior to NFDD submission (if necessary), laboratories shall notify the NFDD Custodian Unit in writing:
 - that the DNA Profile obtained from analysis of the new reference sample taken from the 'offender' is for NFDD confirmation purposes;
 - that the resulting DNA Profile obtained is either the **same**, an **upgrade**, **more informative** or **indicates a different individual**; and
 - that the Specimen ID#s of the original and new reference sample taken from the 'offender' devoid of personally identifying information or personal data, is included in this notification

If DNA profile obtained from recollected 'offender' reference sample is an **upgrade** or **more informative**, the original specimen ID# entry will be deleted from NFDD and notes documented. If DNA profile obtained **indicates a different individual**, both Specimen ID#s will be retained and notes documented.

9. NFDD DATA MODIFICATION STANDARDS

- **Data Modification** is the changing of the status of DNA Profile(s) which includes:
 - Suspension
 - Amendment (due to DNA Profile revision, correction or upgrade)
 - Reinstatement
 - Deletion

683—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

- Transfer
- **Modification** of a DNA profile in the NFDD shall be performed by the DNA Custodian Manager or anyone authorised by him and authorised modifications shall be recorded on the **NFDD Modified DNA Profile Record Log** (Appendix 4) and a **NFDD Change of DNA Profile Status Form** (Appendix 2). Information regarding number of modifications shall be included in the NFDD Custodian Unit Annual Report.
- Unauthorised **modification** of a DNA profile or NFDD data is an offence according to section 30(1) of **DNA Act** and shall be documented within twenty four (24) hours of identifying unauthorised modification.
- Any **modification** of, or activity related to a DNA profile will generate an **Audit Trail** in SmallPond™. The Audit Trail is automatically generated by database software and shall be available upon request by qualified auditors or authorised persons.
- Audit Trail shall be reviewed every thirty (30) days by NFDD Custodian Management or authorised persons and any modification of data shall be investigated and documented on the **Audit Trail Review Record** (Appendix 37) to ensure modification was warranted (or not).
- All profile **modifications** will be included in the Specimen ID# **Case File** comprising, but not limited to:
 - A copy of the **NFDD Modified DNA Profile Record Log** detailing the entry;
 - **NFDD Change of DNA Profile Status** form;
 - **Audit Trail** or a **Delete Report**; and
 - other information deemed important regarding the modification
- The NFDD Custodian Unit may **suspend** profile(s) by importing them into a 'non-searchable' **Suspended Profile Database**. Profiles may then be **amended, reinstated or deleted**.
- DNA Custodian Manager shall notify Laboratories, Law Enforcement Agencies and authorised persons in writing that:
 - DNA profile included in a previously delivered Candidate Match Report, NFDD Final Match Report or a Search/Disclosure Response is being **amended** or **deleted** (due to quality issues etc.); or
 - Errors or issues exist in a previously delivered Candidate Match Report, NFDD Final Match Report or a Search/Disclosure Response.
 - Laboratories that received erroneous Candidate Match Report **shall destroy the Candidate Match Report** and **notify NFDD Custodian Unit in writing within 24 hours**. If necessary, a modified Candidate Match Report shall be reissued to Laboratories.
 - Agencies and authorised persons that received erroneous **NFDD Final Match Report** or **Search/Disclosure Request Response** shall return **NFDD Final Match Report** or **Search/Disclosure Request Response** to the NFDD Custodian Unit. If necessary, a modified NFDD Final Match Report

688—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

or Search/Disclosure Request Response shall be reissued.

9.1 Data Suspension

- Reason for suspension:
 - Profile quality and integrity suspected of being compromised
 - Profile suspected of not meeting **NFDD Data Inclusion and Entry Standards**
 - Reference Sample profiles match in same database index and a **Duplication** is suspected
- Following **Suspension**, profiles may be **amended** by DNA Custodian Manager or anyone authorised by him once corrections are made and confirmed by NFDD Participating Laboratory or NFDD Custodian Unit.
- Following **Suspension**, profiles may be **reinstated** by DNA Custodian Manager or anyone authorised by him once investigations by TTPS, NFDD Participating Laboratory or NFDD Custodian Unit reveal profile integrity was not compromised.

9.2 Data Deletion

- Following **Suspension**, profiles may be administratively removed (**deleted**) by DNA Custodian Manager or anyone authorised by him once the outcome of investigations reveal that:
 - Profile quality and integrity was compromised;
 - Profile does not meet **NFDD Data Inclusion and Data Entry Standards**
 - Profile was result of a true **Duplication** (i.e. not identical twins) or an internal NFDD error;
- Profiles may be **deleted** without being suspended by DNA Custodian Manager or anyone authorised by him under the following conditions, but not limited to:
 - Profile and or Specimen ID# was erroneously uploaded;
 - Source of uploaded profile was determined ineligible for collection
 - Evidentiary profile (or forensic unknown) was a result of inadvertent contamination from an individual in the **Elimination Index** following investigations by the TTPS or TTFSC.
 - Profiles were used for Training or Quality Control assessment only.
 - Profile matches at the corresponding loci of an upgraded or more informative DNA profile following re-analysis of Specimen ID#.
 - Offender reference sample profile matches at the corresponding loci of an upgraded or more informative DNA profile following analysis of the Offender's new recollected reference sample.
 - Profile flagged for expunction.
- Profile may be **deleted** after profile is exported from SmallPond for the purpose of re-importing the same profile. This becomes necessary to facilitate the upload of profiles that were submitted as one (1) 'batch file' containing various profiles that belong to different database indices.

683—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

- Following **deletion**, profiles may be **reinstated** by DNA Custodian Manager or anyone authorised by him once investigations reveal profile integrity was not compromised.

9.2.1 Deletion by Expunction

- Expunction or expungement is the deletion of a Reference Sample's DNA profile from the DNA database in response to a court order, directive from the Commissioner of Police or conditions stipulated in the *DNA Act* Section 26.
- DNA Custodian Manager or anyone authorised by him shall expunge DNA profiles once the statute of limitation expires for DNA Profiles generated from:
 - **Children**; ten (10) years after date of analysis once Commissioner of Police is notified in writing by DNA Custodian Manager.
 - NFDD Participating Laboratories shall be requested to provide written correspondence that includes Specimen ID# (Unique Identifier) and DNA analysis dates (DD/MM/YYYY) for children's reference samples (i.e. Juveniles, child Volunteer Family Members of missing persons, etc.) when submitting profiles to NFDD. This shall enable an expunction notification. Custodian Unit may contact participating laboratory for analysis date.
 - **Exonerated** individuals; twenty (20) years after date of exoneration once Commissioner of Police is notified in writing by DNA Custodian Manager.
 - Exonerated individuals may apply for expunction by writing to the Commissioner of Police once twenty (20) years has passed after date of exoneration.
- DNA Custodian Manager shall notify the Commissioner of Police in writing that a DNA profile has been expunged. A notification or letter of expunction is detailed in **Appendix 27** which shall be provided for all expungements. Expungements are documented on the **NFDD Expungement Record** (Appendix 35).

9.3 Data Transfer

- DNA Profiles may be transferred from one database index to another index once notification is provided from Law Enforcement or Participating Laboratories that the Database category affixed to Specimen ID# of interest is incorrect; or for any other legitimate reason.

10. CASE REVIEW GUIDELINES

- A **Candidate Match Report** presents the comparative results between matching or associating DNA profiles.
- The NFDD Custodian Unit shall review all candidate matches and associations before submitting **Candidate Match Reports**. Review includes technical data, typographical and administrative error checking.

688—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

- In addition, NFDD Custodian Unit needs to provide objective interpretation of the match/associations and may include within the **Candidate Match Report**:
 - Match or association between the DNA profiles
 - Laboratory (plus contact information) that generated DNA profiles
 - DNA Analysis kit used
 - Search stringency used
 - Profile type; i.e. mixture, partial or full
 - Size of the searched or relevant database index
 - **Possibility of adventitious (coincidental) matches** by considering:
 - Number of matching loci (Partial Profile and Mixed Profile)
 - ‘Partial Matches’ observed under moderate stringency
 - Homozygote vs. heterozygote profiles and the possibility of mutations and stochastic effects (i.e. allelic drop-outs, allelic drop-ins etc.)
 - Strength of RMP or Y-STR match statistics
 - Possible sources being relatives (i.e. twins)
 - Number of contributors to the mixture
 - Presence of near matches or mismatching loci
 - Limitations using Y-STRs
 - Presence of mutations, rare alleles, chromosomal anomalies etc.
 - If NFDD data inclusion and entry standards were met
 - Any other useful information
 - **Expected Number of adventitious matches (ENAM) per match reported** = ‘RMP’ x ‘Size of searched database index’. ENAM is calculated for single source matches only
 - **Random Match Probability** for single source matches only.
 - **Y-STR** match statistic (with upper 95% confidence interval value)
 - **Relationship Index (RI)** for familial associations and likelihood of the event.
 - “Implication of match should be considered with other non-DNA evidence” (alibi etc.) to boost significance of the RMP since the match was discovered by database search.
 - “Match must be treated purely as an investigative lead (and not proof of guilt)”
 - Text box with all matches that state the following:

POINT OF ATTENTION WITH REGARDS TO A DNA-DATABASE MATCH

DNA-databases contain large numbers of DNA-profiles of known persons and of biological evidence related to unsolved crimes. As the number of DNA profiles in a DNA database increases, so does the chance of obtaining an adventitious match with a person who is not the actual donor of the evidence. This is especially true for partial DNA-profiles and mixed DNA-profiles, because the chance that they would match with a randomly chosen person is greater than the chance that a full, single DNA-profile would match with a randomly chosen person. If there are doubts regarding the matches with the donor of the evidence, for instance because there is no other tactical or technical evidence, the possibility to do additional DNA-testing can be considered. This point of attention particularly applies to matches which are found as a result of large scale DNA profile comparisons.

- NFDD Custodian Management shall review and approve (if possible) all candidate matches and associations before submitting **Candidate Match Reports**.
- NFDD Custodian Management shall review and approve (if possible) all **Final Match Reports** prepared before submission to authorised persons/agencies by ensuring:
 - all sections on Final Match Report are completed as applicable
 - data is consistent with Candidate Match Report and Confirmation Documentation
 - content is objective, interpretable, clear and concise
 - limitations are stated

11. DATA CONFIDENTIALITY, SECURITY AND INTEGRITY CONTROL STANDARDS

- Integrity and privacy control standards detailed in the **NFDD Information Systems Control Policy** shall be adhered to in order to secure NFDD data.
- Database and FTP software shall be evaluated to ensure one hundred percent (100%) functionality, reliability and accuracy.
- Databasing software shall automate DNA upload process to minimise human error.
- Database computers, critical servers and necessary equipment shall be performance checked annually or as needed by qualified personnel to ensure one hundred percent (100%) functionality and reliability. Performance checks are documented on the **NFDD Equipment Maintenance and Performance Check Form** (Appendix 36) and retained by NFDD Custodian Unit.
- NFDD Custodian Unit shall have necessary emergency power supplies such as generator(s) and UPS.
- NFDD Custodian Unit shall have a **Database Specialist** to ensure database maintenance; ensure ICT network security, integrity and availability; and design operational procedures dedicated to ICT operations. Equipment maintenance shall be documented on the **NFDD Equipment Maintenance Schedule and Performance Record** (Appendix 29) and the **NFDD Equipment Maintenance and Performance Check Form**.
- **Database Specialist** shall implement operational programs and systems to:
 - pre-empt, detect and record all unauthorised attempts to access the NFDD electronically. Unauthorised access and FTP issues shall be reported within twenty four (24) hours of identifying unauthorised access.
 - daily monitor FTP between client(s) and host and document all FTP issues. FTP issues shall be reported within twenty four (24) hours of identifying issue.
- NFDD Custodian Unit shall have Firewalls and Antiviral or Antimalware software installed, updated and enabled on relevant equipment to mitigate the risk of cyber threats.
- NFDD Custodian Unit computers, servers and physical documents shall be located in secured areas with

688—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

features such as alarms, CCTV and Door Access Control Systems that limit access to authorised persons.

- NFDD Servers shall be contained in secured data centers at all times unless in use by **DNA Custodian Management**, the **Database Specialist** and/or **ICT Support Staff** with permission from authorised persons. Physical keys to access servers on-site will be kept by DNA Custodian Management and a 'key' log detailing issuance and return may be enforced if necessary.
- Database operations shall be performed by NFDD Custodian Unit staff knowledgeable and trained in DNA analysis methodology, interpretation and databasing.
- Database information shall be treated as confidential by NFDD Custodian Unit staff who shall subscribe to an **Oath of Secrecy** as part of their contractual agreement.
- Database access shall be limited to vetted, authorised NFDD Custodian Unit staff or persons authorised by Custodian Manager in order to ensure confidentiality, privacy and integrity of data.
- NFDD data access shall be regulated by the use of Usernames and passwords for authorised NFDD Custodian Unit Staff each with distinctive rights, access levels and permissions according to **NFDD User Accounts and Acceptable Use Policy** detailed in the **NFDD Information Systems Control Policy** (NFDD-DOC-0020). Users shall not grant access to other Users under their login. All NFDD Users are responsible for the security of the NFDD and shall log out after each completed session. Passwords shall be changed every three (3) months.
- NFDD Users shall switch off all major electronic equipment in office(s) when not in use to minimise fire risk.
- To ensure NFDD Custodian Unit staff are qualified to perform data uploading, searching, matching, modification and interpretation; key technical staff shall successfully complete the **NFDD Training Program** and participate in **Annual Competency** tests; both of which shall be documented.
 - Competency tests are written and practical and designed to establish that individuals have demonstrated achievement of technical skills and meet minimum standards of knowledge necessary to perform DNA databasing. Relevant technical staff will be assessed on techniques, theories, standards and operating procedures of the NFDD Custodian Unit and DNA testing and databasing laboratories.
- The DNA Custodian Manager or anyone authorised by him shall conduct an on-site visit to the TTFSC at least once annually to ensure the TTFSC has the capabilities to perform DNA analysis services for NFDD databasing. This shall be documented in the **NFDD Laboratory On-Site Visit Form** (Appendix 25).
- To ensure NFDD data integrity, DNA Data for upload shall meet **Data Inclusion** and **Data Entry Standards**. A contract or MOU must be established between the NFDD Participating Laboratories and the Ministry of National Security whereby NFDD Participating Laboratories agree to adhere to these standards which may be modified from time to time.
- DNA profiles must be manually entered using the 'double-blind' method to ensure concordance and accuracy.

688—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

- DNA Data shall be stored and maintained in a reliable database that enables proper logging of all actions and secured ways of importing profiles.
- DNA Data shall be stored and consistently backed-up weekly and daily at scheduled intervals on secured servers and data recovery procedures detailed in the **NFDD Back-up and Data Recovery Manual** (NFDD-DOC-0021) shall be enabled in case of data loss, data corruption or accidental deletion.
- NFDD Custodian Unit may upload profiles for Quality Control purposes to ensure searches and matches are reliable and accurate. Candidate Match Reports may be produced to verify quality of tests.
- NFDD Custodian Unit shall allow for **Custom Searches** to negate effects of loci mismatches, drop-outs, drop-ins, allele calling errors, mutations, incorrect mixture interpretations etc.
- The NFDD Custodian Unit shall document any major changes in a NFDD Participating Laboratory's status using the **NFDD Participating Laboratory Status** form (Appendix 10).
- The NFDD Custodian Unit shall transmit to, and exchange sensitive data with **NFDD Participating Laboratories** using encryption and secured network/ secure FTP; or encrypted emails.
- The NFDD Custodian Unit shall have fax number(s) and an email address in which data and notifications can be securely shared with Laboratories, Law Enforcement Agencies or Authorised Individuals.
- NFDD Custodian Unit shall keep and maintain a **Corrective Action and Problem Report Record** (Appendix 21) detailing unauthorised data modification, unauthorised NFDD access, FTP issues, data and equipment issues, reason for issues, corrective measures implemented etc. **Corrective Action and Problem Report Record** shall also include incidents recorded on the **NFDD Information Systems (IS) Incident Report** form (Appendix 21).

12. NFDD AUDITING

- External audits shall be performed biennially by external qualified auditors knowledgeable in forensic DNA database systems; internal audits shall be conducted annually and monthly by qualified persons to **demonstrate conformance** with processes, procedures and policies referred to, and included in the NFDD Minimum Standards of Operations, NFDD Quality Assurance Manual, the **DNA Act**, DNA Regulations, NFDD Information Systems Control Policy and the **Data Protection Act** (2011).
- Internal audits related to Information Systems operations of the NFDD shall include daily Event Log checks and corrective action measures (if necessary) compiled into electronic monthly or quarterly audit reports.
- Audits shall be performed using an audit template comprising questions that assess operations and management of the NFDD.
- Audits should be performed using a report format in which auditors can provide their opinions. Completed reports shall be available upon request.

- Audits related to Health and Safety Policies of the NFDD Custodian Unit shall be conducted annually or as needed by a designated safety coordinator of the NFDD Custodian Unit.

13. DNA DATABASE PERFORMANCE STANDARDS

- NFDD Performance and statistics shall be included in the Annual Report to the Minister. The NFDD Custodian Unit Annual Report will include the Custodian Unit's role, statistical data, participating laboratories, staff complement, achievements, challenges and management plans.
- Annual report shall provide insight into database activity, NFDD performance and efficiency, audit findings, corrective and improvement actions, size of each database index, number of search and disclosure requests, number of modified profiles; and may also include the expected number of adventitious matches for each match reported i.e. **Expected Number of Adventitious Matches [ENAM] Log** (Appendix 7).
- Activity will be assessed **annually**.
 - Number of profiles uploaded to each database index shall be documented.
 - Number of profiles accepted from each NFDD Participating Laboratory shall be documented.
 - Number of profiles rejected from each NFDD Participating Laboratory shall be documented.
- Performance will be based on information captured in **NFDD Electronic Match and Association Record** and **NFDD Modified DNA Profile Record Log**.
- Performance shall be assessed based on number of confirmed **matches** and **associations** that **aided an investigation**. This is the total number of offences in which the NFDD provided assistance to law enforcement. "The number of investigations aided" is also considered as the number of DNA profiles involved in matches and associations. For example if eight (8) identical DNA profiles are found then there are seven (7) matches (N-1) but 8 investigations were aided. Additionally, for DNA databank purposes an investigation can only be aided once.
- Performance will be assessed on the number of:
 - forensic-forensic matches
 - forensic-offender matches
 - forensic- victim matches
 - forensic-unidentified deceased matches
 - elimination index database matches
 - familial associations and missing persons identification
 - familial search matches
 - duplications
 - identical DNA profiles resulting from identical twins
 - investigations aided annually
- NFDD Efficiency will be assessed on the following parameters:

- i. Number of 'stain-to-person' matches relative to number of forensic Unknowns (stains)
- ii. Number of 'stain-to-person' matches relative to number of persons in a database index
- iii. Number of 'stain-to-stain' matches relative to number of forensic Unknowns (stains)

14. **NFDD RISK MANAGEMENT**

The NFDD Custodian Unit shall have a Risk Management Program in which the Custodian Unit staff or a contracted provider shall perform **Risk Assessment Analysis**, **Risk Mitigation** and **Risk Evaluation** to determine the strengths, weaknesses, gaps, threats and vulnerabilities facing the Custodian Unit as well as the severity, impact, likelihood, mitigation and control factors. Annually or as necessary, these risks will be assessed and a Risk Assessment report shall be produced and available upon request.

15. **DEFINITIONS**

Accreditation

Formal recognition that a DNA laboratory is competent and meets or exceeds a list of standards (ISO/IEC 17025) including applicable Quality Assurance Standards, to perform specific tests by a non-profit professional association of persons actively involved in forensic science that is nationally recognized within the forensic science community in accordance with the provisions of the **DNA Act** or subsequent regulations.

Accrediting Agencies

A non-profit professional association of persons actively involved in forensic science that is nationally recognized within the forensic science community.

Allele

Each of two or more alternative forms of a gene that are found at loci on chromosomes.

Amplified Product

Material generated after Polymerase Chain Reaction of a DNA extract. Amplified products contains in theory millions of copies of DNA strands.

Analysis Kit

A pre-assembled set of reagents that allows the user to conduct a specific DNA extraction, quantification, or amplification.

Approved Laboratory

A laboratory accredited by accrediting bodies listed in the First Schedule of the **DNA Act** which is accountable to the Government of Trinidad and Tobago by entering into an agreement with the Government of Trinidad and Tobago and is approved by the Minister by Notification

Association

A search result that matches autosomal DNA profiles based on shared alleles and kinship algorithms; it does not reflect a direct identity match between profiles but shows a possible familial relation.

688—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

Autosomal

Pertaining to a chromosome that is not a sex chromosome.

Candidate DNA Profile

A DNA profile that matches or is associated with a Target DNA profile.

Candidate Match

A possible match between two or more DNA profiles discovered by database software.

Candidate Match Report

A report generated and distributed to laboratories responsible for the matching profiles after database software determines that two or more DNA profiles match or associate.

Competency

Demonstration of technical skills and knowledge necessary to perform forensic DNA analysis successfully.

Contamination

The unintentional introduction of exogenous DNA into a DNA sample or PCR reaction.

Composite DNA Profile

A DNA profile generated by combining typing results from different loci obtained from multiple injections of the same amplified product and/or multiple amplifications of the same DNA extract from an evidence. When separate extracts from a given item are combined prior to amplification, the resulting DNA profile is not considered a composite profile. Allelic data from separate extractions from different locations on a given evidentiary item should not be combined into a composite profile.

Criminal Justice Agency

A criminal justice agency is an agency or institution of the government which performs as part of its principal function, activities relating to the apprehension, investigation, prosecution, adjudication, incarceration, supervision or rehabilitation of criminal offenders.

Database Software Generated Documentation

Automatic generation of documentation such as audit trails, match detail reports, match detail pages, search results, delete reports etc.

Direct Comparative Evidence

Evidence or items purported to belong to a missing person such as a toothbrush etc., in which its DNA profile is used to compare with unidentified human remains and forensic unknowns, if possible.

DNA Act

The legislation for the National Forensic DNA Databank System that authorizes the establishment of a national DNA identification index for enumerated categories of records subject to privacy and quality control requirements.

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

DNA Analyst

An employee that has successfully completed the laboratory's training requirements for DNA casework and reference sample analysis, passed a competency test, and had entered into an ISO accredited proficiency testing program. This individual conducts and/or directs the analysis of samples, interprets data and reaches conclusions.

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 (eg. short tandem repeat loci).

Electropherogram

The electronic output from capillary electrophoresis instruments. Electropherograms may be used to determine DNA sequence genotypes, or genotypes that are based on the length of specific DNA fragments.

Elimination Index/Database

A separate database index containing autosomal DNA profiles of persons who could inadvertently introduce their own DNA Profile as cross-contamination to investigated evidence. These persons are listed in the Third Schedule of the *DNA Act* as well as District Medical Officers (DMOs), Undertakers etc. Elimination Index profiles are automatically searched against other database indices and any resulting match shall be investigated by the Trinidad and Tobago Police Service or the Trinidad and Tobago Forensic Science Centre in order to determine if source of match was due to contamination or otherwise. Evidentiary DNA Profiles may be deleted from the NFDD if investigations conclude that the DNA profile in question was obtained due to inadvertent contamination from an individual included in the Elimination Index.

Expert System

Software program or set of software programs that interprets the data generated from a DNA analysis instrument platform in accordance with laboratory defined quality assurance rules and accurately identifies the data that does and does not satisfy such rules.

Expungement or Expunction

The deletion of a reference sample DNA profile from NFDD under conditions stipulated in Section 26 of the *DNA Act* or a court order.

Extract, DNA

Material generated from a physical and chemical process that isolates and purifies nucleic acid from cellular material.

Final Match Report

A report generated by NFDD Custodian Unit detailing all relevant information regarding matching or associating DNA profiles. A Final Match Report is submitted to relevant law enforcement agencies; and individuals or agencies requesting a search of, or disclosure of information from the NFDD.

688—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

Forensic Unknown

A biological sample originating from a crime scene and whose source is attributable to a presently unknown individual. These are not reference samples from known individuals, such as from volunteers, suspects, offenders, etc.

FTP

The File Transfer Protocol (**FTP**) is a standard network protocol used for the transfer of computer files between a client and server on a computer network.

Genotype

The genetic constitution of an individual in which alleles and loci are displayed.

Investigation Aided

A metric that tracks the number of criminal investigations where NFDD has added value to the investigative process.

Lab, Laboratory and Laboratories (Forensic)

The laboratory that is accountable to the NFDD Custodian Unit. It is responsible for generating DNA profiles and submitting acceptable profiles to the NFDD Custodian Unit. It is a facility or agency employing at least two full time employees who are qualified DNA analysts; and maintains the capability to perform DNA analysis.

Law Enforcement Agency

An agency or institution of the government which performs as part of its principal function, activities relating to the apprehension, investigation, incarceration of criminal offenders.

Locus (loci) or Marker

The position(s) or location(s) on a chromosome.

Manual Keyboard Search

A manual search of NFDD initiated by the DNA Custodian Manager or anyone authorised by him; or by persons listed in DNA Regulations 15(2) and 15(3).

Match

A match occurs when database software links two or more DNA profiles and a confirmation process is started by laboratory personnel.

Mismatch (locus)

A locus that does not match or does not match completely with the corresponding locus of a matching DNA profile.

Mixture or Mixed DNA Profile

A DNA profile that originates from at least two (2) individuals.

Offender

This term is intended to include persons under suspicion such as accused, suspects, convicted offenders, detainees; as well as deportees, prisoners, juveniles and foreign nationals who breach *Immigration Act*.

Partial Profile

A DNA profile with either locus or allelic drop-out(s) at any of the analysed STR loci.

Partial Match

A match between two single source profiles having at each locus, all of the alleles of one profile represented in the other profile.

Participating Laboratory, NFDD

A Forensic DNA Laboratory contracted by the Government of Trinidad and Tobago and approved by the Minister of National Security by Notification to submit DNA profiles for NFDD inclusion.

Platform

The type of analytical system utilized to generate DNA profiles, such as capillary electrophoresis, real-time gel, and end-point gel instruments or systems.

Polymerase Chain Reaction (PCR)

An enzymatic process by which a specific region of DNA is replicated during repetitive cycles which consist of the following: (1) denaturation of the template; (2) annealing of primers to complementary sequences at an empirically determined temperature and; (3) extension of the bound primers by a DNA polymerase.

Proficiency testing

A quality assurance measure used to monitor performance and identify areas of improvement.

Qualified Auditor

A current or previously qualified DNA analyst who has successfully completed an auditor training course.

Qualified DNA Analyst

A DNA analyst who has satisfied and continues to satisfy the experience, education, training, competency testing, proficiency testing and continuing education requirements of the FBI Director's Quality Assurance Standards or similar international standards.

Quality Assurance Standards (QAS)

Minimum standards for a quality assurance program for forensic DNA analysis issued by, but not limited to a NFDD Custodian Unit accepted accredited agency or the FBI.

Reference Sample

Biological material (eg. buccal swab or sample of intravenous blood) taken from a verified individual.

688—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

Relationship Index (RI)

A calculated index value that indicates the strength of a match between two (2) possibly related individuals.

Solved Case

An investigation for which a putative perpetrator has been identified or charged with a criminal offense.

Stochastic Threshold

A maximum peak height value of an observed homozygous allele that allows for a reasonable assumption that an allelic dropout of a sister allele has occurred at the locus.

STR

A **Short Tandem Repeat** is a molecular biological microsatellite, consisting of a unit of two to thirteen nucleotides repeated hundreds of times in a row on the DNA strand.

Target DNA Profile

A DNA profile submitted by a laboratory, agency or authorised individual for the purpose of searching DNA profiles maintained by NFDD Custodian Unit which could match or become associated with an indexed DNA profile.

Technical Review

An evaluation of reports, notes, data and other documents to ensure there is an appropriate and sufficient basis for the scientific conclusion.

Testing Laboratory

A Forensic DNA Laboratory that is not necessarily an Approved or NFDD Participating Laboratory therefore DNA profiles generated from a testing laboratory may not be eligible for NFDD inclusion.

Unsolved Case

An investigation for which no suspect has been identified and/or charged with a criminal offense.

Validation

A process by which a procedure is evaluated to determine its efficacy and reliability for DNA analysis. Developmental validation is the acquisition of test data and determination of conditions and limitations of a new or novel DNA methodology for use on database, known or casework reference samples. Internal validation is an accumulation of test data within the laboratory to demonstrate that established methods and procedures perform as expected in the laboratory.

YHRD

The Y Chromosome Haplotype Reference Database (YHRD) is a reliable web-based open access, annotated collection of population samples typed for Y chromosomal sequence variants used globally by DNA analyst.

Y-STR

Short Tandem Repeat located on the male specific sex-determining Y chromosome.

16. BIBLIOGRAPHY

- Database Management Review and Recommendations. European Network of Forensic Science Institute (ENFSI) DNA Working Group April 2017
- National DNA Index System (NDIS) Operational Procedures Manual. FBI Laboratory
- Advanced Topics in Forensic DNA Typing: Methodology (2012) – **Butler, John. M**
- Advanced Topics in Forensic DNA Typing: Interpretation (2014) – **Butler, John. M**
- Forensic DNA Typing - Biology Technology and Genetics of STR Markers (2005) – **Butler, John. M**
- Forensic DNA Evidence Interpretation - **Buckleton, J., et al.,** (CRC, 2005) WW
- Washington State Patrol Crime Laboratory Division CODIS SOP Manual
- Scientific Working Group on DNA Analysis Methods - Interpretation Guidelines for Y-Chromosome STR Typing. Scientific Working Group on DNA Analysis Methods . [Online] January 9, 2014. <https://www.swgdam.org/publications>
- DNA Commission of the International Society of Forensic Genetics (ISFG): an update of the recommendations on the use of Y-STRs in forensic analysis. **Gusmão, L. , et al.** 2005, International Journal of Legal Medicine
- Y chromosome STR typing in crime casework. **Roewer, Lutz.** 2009, Forensic Science Medical Pathology, pp. 77–84
- Genetic Diversity in the Lesser Antilles and Its Implications for the Settlement of the Caribbean Basin. **Torres , Jada Benn, et al.** 2015, PlosOne
- Y-STR Profile Frequency Estimation. National Institute of Justice. [Online] **Ballantyne, Jack and Butler, John M.** January 12, 2012. https://strbase.nist.gov/pub_pres/SWGDAM-Jan2012-YSTRs.pdf
- National Research Council. The Evaluation of Forensic DNA Evidence. Washington, D.C. : NATIONAL ACADEMY PRESS, 1996.
- Laboratory of Forensic Science. DNA Statistical Guidelines. Sacramento County District Attorney. [Online] September 2010. <http://www.sacda.org>.
- 2007 Bioethics Annual Report. Nuffield Council for Bioethics. [Online] <http://nuffieldbioethics.org/wp-content/uploads/Annual-Report-2007.pdf>
- Determination of Sibship in any two persons; **Wenk, R.E., et al.,** Transfusion 1993: 33:5 1-4
- Statistical Weight of a DNA Match in Cold-Hit Cases. **Chakraborty, R and Ge, J,** Forensic Science Communications, July 2009: 11:3
- Measuring the Effectiveness and Efficiency of Forensic DNA Databases, Netherlands Forensic Institute. [Online] **Van der Beek, K.** <https://www.promega.com/-/media/files/products-and-services/genetic-identity/ishi-26-oral-abstracts/9-van-der-beek.pdf>
- Procedure for CODIS Forensic Biology Section - North Carolina State Crime Laboratory. [Online] <http://www.ncids.com/forensic/labs/Biology/Technical/DNACasework/Procedure-for-CODIS-12-28-15.pdf>
- Average Percent DNA shared between relatives. Autosomal DNA Statistics. International Society of Genetic Genealogy. [Online] https://isogg.org/wiki/Autosomal_DNA_statistics
- Risk Management Guide for Information Technology Systems. Recommendations of the National Institute of Standards and Technology. **Stoneburner, Gary, et al.** July 2002

688—Continued

NFDD Minimum Standards of Operations v1.6
National Forensic DNA Databank (NFDD) Custodian Unit

No. NFDD-DOC-0001
Effective Date: January 2020

Policy Version History

Version	Date	Description	Approved By
v1.0	March 2018	- Initial Policy Drafted	J. Lewis
v1.1	July 2018	- Included references to the NFDD Information Systems Control Policy - Policy updated to limit subjects who are eligible for NFDD entry - Cross reference table updated - Familial Search policy updated - Criteria for expunging Complainant's profile removed - Specimen Guide added to DNA Profile Search Form	J. Lewis
v1.2	August 2018	- Y-STR Match Statistics included to assess significance of matches - Removed 'Persons who attended crime scenes but not a victim such as DMOs, Undertakers etc.' from "Offender Index" and placed into the "Elimination Index".	J. Lewis
v1.3	February 2019	- Amended document Introduction - Amended Retention Policy to include 'indefinite' retention time - Included a measurable target (100%) regarding efficiency, functionality and reliability of software and ICT equipment - Amended Laboratory definition in 'Definitions' - Included Risk Management section	J. Lewis
v1.4	May 2019	- Incorporated recommendations of the Trinidad and Tobago Bureau of Standards detailed in report dated April 12, 2019 - Key-log is optional rather than a requirement - Passwords to be changed every three (3) months rather than six (6)	J. Lewis
v1.5	August 2019	- Modified High Search stringency description - Modified Y-STR Match Report - Removed 'POI' from Specimen Category list and renamed category to 'SAM' - Supporting Agency Member who may attend crime scene	J. Lewis
v1.6	January 2020	- Removed Afro-Caribbean from Y-STR report as Afro-Caribbean Metapopulation fused with Afro-American Metapopulation in release 62 (R62) of YHRD.org	J. Lewis

688—Continued

Appendix 1

NFDD Indexes and Specimen Categories

Database Index	Autosomal	Y-STR
Crime Scene Material – Forensic Unknown/ Stain	Scene of Crime Evidence	Scene of Crime Evidence
Offender – Person Under Suspicion	<ul style="list-style-type: none"> - Accused/Defendant - Suspects - Detainees - Convicted Offenders - Prisoners - Deportees - Juveniles - Foreign Nationals who breach <i>Immigration Act</i> 	
Victims	<ul style="list-style-type: none"> - Identified deceased - Direct Comparative Evidence allegedly taken from missing persons 	<ul style="list-style-type: none"> - Identified deceased - Direct Comparative Evidence allegedly taken from missing persons
Family Members	<ul style="list-style-type: none"> - Biological Mother/Father - Biological Offspring - Sibling/ Half-Sibling - Maternal and Paternal Relative 	<ul style="list-style-type: none"> - Biological Father - Biological Offspring - Sibling/ Half-Sibling - Paternal Relative
Unidentified Human Remains	<ul style="list-style-type: none"> - Unidentified Deceased 	<ul style="list-style-type: none"> - Unidentified Deceased
Elimination	<ul style="list-style-type: none"> - Protective Service members (<i>DNA Act</i> Third (3rd) Schedule - TTFSC DNA and Serology Laboratory Staff - Supporting Agency Members (i.e. person who attend crime scenes but not a victim such as District Medical Officers, Undertakers) 	

688—Continued

Appendix 2



NFDD Change of DNA Profile Status

Specimen ID# (Laboratory/Agency Unique Identifier): _____

Reference#: _____

Specimen Category (specify): _____

Reason (tick one or more) and date status was changed:

Suspended Deleted Duplicate Amended

Reinstated Transferred Expunged

Details:

If a Duplicate profile suspected, has the Commissioner of Police been notified within 48 hours to determine the reason for the duplication: [Tick one] Yes No Date: _____

Date of reply from the Commissioner of Police about the reason for the duplication: _____

Comments:

Status Change in Databank By:

NFDD Custodian Unit Staff (Signature) Date: _____

NFDD Custodian Unit Staff (Signature) Date: _____

NFDD Custodian Unit Staff (Signature) Date: _____

Approved by: _____ Date: _____
DNA Custodian/ Deputy (Signature)

688—Continued

Appendix 3



NFDD SUBMISSION FORM

LABORATORY NAME: _____
ANALYST NAME: _____
SIGNATURE: _____
SUBMISSION DATE: _____

Batch File Name/ File Name	Specimen ID#	Source/ File Type	Accepted	Rejected	NFDD Custodian Unit Comments

RECEIVED BY: _____ ON _____
NFDD Custodian Unit Staff (Signature) (Date)

REVIEWED BY: _____ ON _____
DNA Custodian/Deputy (Signature) (Date)

APPROVED BY: _____ ON _____
DNA Custodian/Deputy (Signature) (Date)

This Submission Form is to be retained as a permanent record by the National Forensic DNA Databank (NFDD) Custodian Unit

688—Continued

Appendix 4



NFDD MODIFIED DNA PROFILE RECORD LOG

Specimen ID#	Date added	Pond	DATE						Comments
			Suspend	Amend	Delete	Reinstate	Transfer	Expunge	

APPROVED BY: _____ ON _____
DNA Custodian/ Deputy (Signature) (Date)

Appendix 5



NFDD MANUAL SEARCH AND DISCLOSURE RECORD

Target Specimen ID#	Pond	Request Date	Search Date	Match / Association Date	Search/Disclosure Response #	Comments

APPROVED BY: _____ ON _____
DNA Custodian/ Deputy (Signature) (Date)

683—Continued

Appendix 7



EXPECTED NUMBER OF ADVENTITIOUS MATCHES [ENAM] LOG

Match Date	Target Specimen ID#	Pond	Candidate Specimen ID#	Pond	Database Index Size/ Date	Random Match Probability	ENAM

APPROVED BY: _____ ON _____
DNA Custodian/ Deputy (Signature) Date

688—Continued

Appendix 8



NFDD Search Request Response

NFDD Search Request Response #: _____

Name/Rank of Person requesting information: _____

Agency: _____

Date of Request: _____

Contact Number: _____

Search Request made by:

- a. Investigating Police officer acting in the course of a criminal investigation or proceeding
- b. The Commissioner of Police
- c. The Central Authority
- d. The Central Authority, at the request of a country, which has been accepted by the Central Authority

Has the Search Request been authorized and endorsed by the Attorney General or an officer authorized by him? YES NO N/A

Has the Search Request been authorized and endorsed by the Commissioner of Police? YES NO N/A

1. Testing Laboratory : _____

2. Specimen ID#/Laboratory Unique Identifier: _____

Was DNA Profile for Searching attached to Search Request? YES NO N/A

Specimen Category: _____

NFDD Custodian Unit Response:

Search Request received by: _____ on _____

Search Results: _____

Final Match Report included? YES NO

Information released to: _____

Date: _____

Response Prepared by: _____

Date: _____

NFDD Custodian Unit Staff (Signature)

Response Reviewed by: _____

Date: _____

DNA Custodian/ Deputy (Signature)

Response Approved by: _____

Date: _____

DNA Custodian/ Deputy (Signature)

Appendix 9



NFDD Disclosure Request Response

NFDD Disclosure Request Response #: _____

Name/Rank of Person requesting information: _____

Agency (if applicable): _____ Date of Request _____

Contact Number: _____

Disclosure Request made by:

- a. Investigating Police officer acting in the course of a criminal investigation or criminal proceedings
- b. The Person from whom a non-intimate sample was taken from or his representative
- c. Governmental agency or educational institution approved by the Minister, providing that no readily identifiable personal information is disclosed.
- d. Court Order, or a person who has obtained an Order of the Court
- e. A Forensic DNA Analyst employed at the Trinidad and Tobago Forensic Science Centre
- f. The Central Authority
- g. The Central Authority, at the request of a country, which has been accepted by the Central Authority

Has the Disclosure Request been authorized and endorsed by Attorney General or an officer authorized by him?
YES NO N/A

Has the Disclosure Request been authorized and endorsed by the Court or the Commissioner of Police?
YES NO N/A

1. Testing Laboratory : _____

2. Specimen ID#/Laboratory Unique Identifier: _____

Specimen Category: _____

NFDD Custodian Unit Response:

Disclosure Request received by: _____ on _____

Disclosure Results _____

Final Match Report included? YES NO

Information released to: _____

Date: _____

Response Prepared by: _____
NFDD Custodian Unit Staff (Signature)

Date: _____

Response Reviewed by: _____
DNA Custodian/ Deputy (Signature)

Date: _____

Response Approved by: _____
DNA Custodian/ Deputy (Signature)

Date: _____

688—Continued

Appendix 10



NFDD Participating Laboratory Status

Date: _____

Name of Laboratory: _____

Address: _____

Contact Person: _____ Contact Number: _____

Status	Comments
ISO/IEC 17025 Accreditation Compliant	
Quality Assurance Standards - External Audit Report Documentation	
Compliant with Quality Assurance Standards and DNA Analysis Methods, Recommendations and Interpretation Guidelines in SOPs	
Provides DNA profiles in compliance with NFDD Data Inclusion and Data Entry Standards referred to in the NFDD Custodian Unit Minimum Standards of Operations	
NFDD Participation	<input type="checkbox"/> Ongoing <input type="checkbox"/> Suspended <input type="checkbox"/> Cancelled <input type="checkbox"/> Other

Approved by: _____ on _____

DNA Custodian/ Deputy (Signature)

(Date)

688—Continued

Appendix 11

**Autosomal - DNA Profile Search Form**

DNA Custodian Manager
National Forensic DNA Databank

Date: _____

Name of Testing Laboratory: _____

Address of Testing Laboratory: _____

Contact Information: _____

The above named Forensic Science Laboratory has performed **Autosomal DNA STR** analysis on Specimen ID#
 (Laboratory/Agency Unique Identifier): _____

on behalf of the below listed **Agency**: _____

Kindly perform a 'One-off' search of the following DNA Profile against the relevant Database Indices in the National Forensic DNA Databank (NFDD) of Trinidad and Tobago according to the Administration of Justice (Deoxyribonucleic Acid) Act (2012) of Trinidad and Tobago and the DNA Regulations.

Type of case: _____ Specimen Category: _____

STR Profile

Locus	Allele(s)	Locus	Allele(s)
D3S1358		FGA	
vWA		D22S1045	
D16S539		D5S818	
CSF1PO		D13S317	
TPOX		D7S820	
Y indel		SE33	
Amelogenin		D10S1248	
D8S1179		D1S1656	
D21S11		D12S391	
D18S51		D2S1338	
DYS391		Penta E	
D2S441		Penta D	
D19S433		DYS570	
TH01		DYS576	

- Please ensure searchable DNA profile contains at least seven (7) CODIS Core loci and at most six (6) alleles per locus
- Please ensure **Specimen Category** is included using the following **Specimen Category Guide**
- Please ensure data is transcribed accurately. NFDD Custodian Unit will not be liable for incorrect data searched
- Please contact the above listed **Agency** or **NFDD Custodian Unit** with any questions

DNA PROFILE SEARCH FORM - SPECIMEN CATEGORY GUIDE

Forensic Unknown/stain from Scene of Crime)	-	SOC
Unidentified Deceased (eg. bone, tissue, teeth)	-	UNDEC'D
Identified Deceased Victim	-	DEC'D
Accused/Defendant	-	ACC'D
Suspect	-	SUSP
Detainee	-	DET
Convicted Offender	-	CO
Prisoner	-	PRI
Deportee	-	DEP
Juvenile Charged	-	JUV
Supporting Agency Member (eg. District Medical Officer, Undertaker etc.)	-	SAM
Person attended crime scene but not a victim (eg. Civilian first on scene)	-	POI
Foreign National	-	FNTL
Direct Comparative Evidence (eg. Toothbrush etc. from missing person)	-	DCE
Child	-	CHILD
Complainant in sexual assault case	-	COMPL
Incapable Person	-	INCAP
Volunteer (eg. robbery and assault victim, spouse/partner etc.)	-	VOL
Protective Service Member (person listed in Third schedule of <i>DNA Act</i>)	-	PSM
TTFSC (Trinidad and Tobago Forensic Science Centre) Staff member	-	LAB

Family Members of Missing Persons:

VOLS – Volunteer Son	VOLD – Volunteer Daughter	VOLF – Volunteer Father
VOLM - Volunteer Mother	VOLSBG – Volunteer Sibling	VOLHS - Volunteer Half Sibling
VOLPU - Volunteer Paternal Uncle	VOLMU - Volunteer Maternal Uncle	VOLPA - Volunteer Paternal Aunt
VOLMA - Volunteer Maternal Aunt	VOLPC - Volunteer Paternal Cousin	VOLMC - Volunteer Maternal Cousin
VOLPG - Volunteer Paternal Grandparent	VOLMG - Volunteer Maternal Grandparent	

683—Continued



YSTR - DNA Profile Search Form

DNA Custodian Manager
National Forensic DNA Databank

Date: _____

Name of Testing Laboratory: _____

Address of Testing Laboratory: _____

Contact Information: _____

The above named Forensic Science Laboratory has performed **Y-STR** DNA analysis on Specimen ID# (Laboratory/Agency Unique Identifier): _____

on behalf of the below listed **Agency**: _____

Kindly perform a 'One-off' search of the following DNA Profile against the relevant Database Indices in the National Forensic DNA Databank (NFDD) of Trinidad and Tobago according to the Administration of Justice (Deoxyribonucleic Acid) Act (2012) of Trinidad and Tobago and the DNA Regulations.

Type of case: _____ Specimen Category: _____

STR Profile

Locus	Allele (s)	Locus	Allele (s)
DYS19		DYS635	
DYS389I		YGATAH4	
DYS389II		DYS481	
DYS390		DYS533	
DYS391		DYS549	
DYS392		DYS570	
DYS393		DYS576	
DYS385a/b		DYS643	
DYS438		DYF387S1	
DYS439		DYS449	
DYS437		DYS460	
DYS448		DYS518	
DYS456		DYS627	
DYS458			

- Please ensure searchable Y-STR DNA profile is single source and contains at least nine (9) of the above listed Y-STR loci
- Please ensure **Specimen Category** is included using the **Specimen Category Guide**
- Please ensure data is transcribed accurately. NFDD Custodian Unit will not be liable for incorrect data searched.
- Please contact the above listed **Agency** or **NFDD Custodian Unit** with any questions.

688—Continued

DNA PROFILE SEARCH FORM - SPECIMEN CATEGORY GUIDE

Forensic Unknown/stain from Scene of Crime)	-	SOC
Unidentified Deceased (eg. bone, tissue, teeth)	-	UNDEC'D
Identified Deceased Victim	-	DEC'D
Accused/Defendant	-	ACC'D
Suspect	-	SUSP
Detainee	-	DET
Convicted Offender	-	CO
Prisoner	-	PRI
Deportee	-	DEP
Juvenile Charged	-	JUV
Supporting Agency Member (eg. District Medical Officer, Undertaker etc.)	-	SAM
Person attended crime scene but not a victim (eg. Civilian first on scene)	-	POI
Foreign National	-	FNTL
Direct Comparative Evidence (eg. Toothbrush etc. from missing person)	-	DCE
Child	-	CHILD
Complainant in sexual assault case	-	COMPL
Incapable Person	-	INCAP
Volunteer (eg. robbery and assault victim, spouse/partner etc.)	-	VOL
Protective Service Member (person listed in Third schedule of DNA Act)	-	PSM
TTFSC (Trinidad and Tobago Forensic Science Centre) Staff member	-	LAB

Family Members of Missing Persons:

VOLS – Volunteer Son	VOLD – Volunteer Daughter	VOLF – Volunteer Father
VOLM - Volunteer Mother	VOLSBG – Volunteer Sibling	VOLHS - Volunteer Half Sibling
VOLPU - Volunteer Paternal Uncle	VOLMU - Volunteer Maternal Uncle	VOLPA - Volunteer Paternal Aunt
VOLMA - Volunteer Maternal Aunt	VOLPC - Volunteer Paternal Cousin	VOLMC - Volunteer Maternal Cousin
VOLPG - Volunteer Paternal Grandparent	VOLMG - Volunteer Maternal Grandparent	

688—Continued

Appendix 12



NFDD Candidate Match Report

Candidate Match Report Number: _____ CMR Prepared by: _____ on _____
NFDD Custodian Unit Staff Date

	Target	Candidate
Specimen ID#		
Pond/Database		
Specimen Category		
Uploaded Date		
Match date		
Testing Laboratory/ Contact Info		
DNA Analysis Kit used		
Profile Type		

The Match between the target and candidate profile was observed at _____ STR loci using a Moderate Stringency Search. The size of the searched database index is: _____.

The Random Match Probability (i.e. RMP) is approximately: _____.

The possibility of this match being adventitious (coincidental) exists due to:

1. _____
2. _____
3. _____
4. _____

The expected number of adventitious matches of searched profile is: _____, therefore an approximate value of _____ coincidental matches can be expected in the _____ database index.

Approved by: _____ NFDD Custodian Unit Staff (Signature)	Reviewed by: _____ DNA Custodian/ Deputy (Signature)
Date: _____	Date: _____

Note: Testing laboratory must provide written notification that DNA profiles have been verified for accuracy.

Points of Attention

1. Match must be treated as an investigative lead and not proof of guilt and implication of match should be considered with other non-DNA evidence
2. DNA-databases contain large numbers of profiles of known persons and biological evidence related to crimes. As the number of DNA profiles in a DNA database increases, so does the chance of obtaining an adventitious match with a person who is not the actual donor of the evidence. This is especially true for partial and mixed DNA-profiles, because the chance that they would match with a randomly chosen person is greater than the chance that a full, single DNA-profile would match with a randomly chosen person. If there are doubts regarding the matches with the donor of the evidence, for instance because there is no other tactical or technical evidence, the possibility to do additional DNA-testing can be considered. This point of attention particularly applies to matches which are found as a result of large scale DNA profile comparisons.



NFDD Candidate Match Report

Candidate Match Report Number: _____ CMR Prepared by: _____ on _____
NFDD Custodian Unit Staff Date

	Target	Candidate
Specimen ID#		
Pond/Database		
Specimen Category		
Uploaded Date		
Association date		
Testing Laboratory/ Contact Info		
DNA Analysis Kit used		
Profile Type		

The association between the target and candidate profile was observed using a:

- Low Stringency Search - Familial Search

The size of the Database in which the associated profile was found in: _____.

The Relationship Index (RI) between the associating profiles is approximately: _____.

A calculated RI value of **100 or greater** indicates a supportive conclusion (likelihood) that a familial relationship between the target and candidate profile cannot be excluded.

Comments: _____

Approved by: _____ <small>NFDD Custodian Unit Staff (Signature)</small>	Reviewed by: _____ <small>DNA Custodian/ Deputy (Signature)</small>
Date: _____	Date: _____

Note: Testing laboratory must provide written notification that DNA profiles have been verified for accuracy.

Points of Attention

1. Match must be treated as an investigative lead and not proof of guilt and implication of match should be considered with other non-DNA evidence.
2. DNA-databases contain large numbers of profiles of known persons and biological evidence related to crimes. As the number of DNA profiles in a DNA database increases, so does the chance of obtaining an adventitious match with a person who is not the actual donor of the evidence. This is especially true for partial and mixed DNA-profiles, because the chance that they would match with a randomly chosen person is greater than the chance that a full, single DNA-profile would match with a randomly chosen person. If there are doubts regarding the matches with the donor of the evidence, for instance because there is no other tactical or technical evidence, the possibility to do additional DNA-testing can be considered. This point of attention particularly applies to matches which are found as a result of large scale DNA profile comparisons.



NFDD Candidate Match Report – Y-STR

Candidate Match Report Number: _____ CMR Prepared by: _____ on _____
NFDD Custodian Unit Staff Date

	Target	Candidate
Specimen ID#		
Pond/Database		
Specimen Category		
Uploaded Date		
Match date		
Testing Laboratory/ Contact Info		
DNA Analysis Kit used		
Profile Type		

The **Y-STR match** between the target and candidate profile was observed at _____ Y-STR loci. Therefore, we cannot exclude the source of the candidate and target profile as being the same male individual. In addition, all patrilineal related males and an unknown number of unrelated males cannot be excluded as being the source of the matching profiles.

As of _____, the total size of the _____ **Admixed, Indian and Afro-American Metapopulation Indexes of yhrd.org** is _____ and the matching Y-STR profile was observed _____ times. Therefore, after applying an upper 95% confidence interval value and accounting for population sub-structure, there is approximately a _____ chance of randomly selecting a second male individual from Trinidad and Tobago with the matching evidentiary Y-STR profile given that it has already been observed. The possibility of this **Y-STR match** being adventitious (coincidental) exists due to:

.....

Approved by: _____ <small>NFDD Custodian Unit Staff (Signature)</small> Date: _____	Reviewed by: _____ <small>DNA Custodian/ Deputy (Signature)</small> Date: _____
---	---

Note: Testing laboratory must provide written notification that DNA profiles have been verified for accuracy.

Points of Attention

1. Match must be treated as an investigative lead and not proof of guilt and implication of match should be considered with other non-DNA evidence.
2. DNA-databases contain large numbers of profiles of known persons and biological evidence related to crimes. As the number of DNA profiles in a DNA database increases, so does the chance of obtaining an adventitious match with a person who is not the actual donor of the evidence. This is especially true for partial and mixed DNA-profiles, because the chance that they would match with a randomly chosen person is greater than the chance that a full, single DNA-profile would match with a randomly chosen person. If there are doubts regarding the matches with the donor of the evidence, for instance because there is no other tactical or technical evidence, the possibility to do additional DNA-testing can be considered. This point of attention particularly applies to matches which are found as a result of large scale DNA profile comparisons.

683—Continued

Appendix 13



NFDD Candidate Match Report (CMR) Log

CMR #	Target Specimen ID #	Candidate Specimen ID #	CMR Date	CMR Approved by (Signature):	CMR Reviewed by (Signature):	Date Reviewed	CMR Recipient Laboratory	CMR Date submitted

APPROVED BY: _____ ON _____
DNA Custodian/ Deputy (Signature) Date

683—Continued

Appendix 14



NFDD Confirmation Documentation Log

CMR #	Target Specimen ID#	Confirmation Documentation date	Confirmation Documentation submitted by (Laboratory)	NFDD Custodian Unit recipient. (Signature)	Date Received	Comments

APPROVED BY: _____ ON _____
DNA Custodian/ Deputy (Signature) (Date)

683—Continued

Appendix 15



NFDD Final Match Report (FMR) Log

FMR #	Target Specimen ID#	Candidate Specimen ID#	FMR Date	FMR approved by:	FMR reviewed by:	FMR Received by/on:	Receiving Agency:

APPROVED BY: _____ ON _____
DNA Custodian/ Deputy (Signature) Date

Appendix 16**NFDD Buccal Swab Technical Specifications**

Specific requirements for the Buccal Swab Kit are as follows:

- i. The buccal swab included in the kit and the kit itself must have an expiry date of no less than 2 years from the date of delivery to the Ministry.
- ii. The buccal swab included in the kit must be manufactured in a facility that is ISO 9001 certified and in a clean room environment to a recognised industry standard for clean room. In the case of kits being sourced from the United States of America or a jurisdiction adopting the US manufacturing practices, such a manufacturing facility must also be cGMP (Current Good Manufacturing Practice) certified. In the case of kits being sourced from the United Kingdom or a jurisdiction adopting the UK manufacturing practices then the proposed kit must meet the PAS 377:2012 standard.
- iii. The buccal swab included in the kit must be manufactured in a facility that has a provision for staff contamination detection and manages the risk of human DNA contamination.
- iv. The buccal swab included in the kit must be post-production treated to mitigate the risk of DNA contamination using an industry recognised treatment process that does not negatively affect the performance or integrity of the swab.
- v. The buccal swab included in the kit must be DNase free, RNase free and free of amplifiable human DNA in accordance with a recognised international industry standard.
- vi. The buccal swab kits must be properly handled and stored in cool and dry conditions prior to delivery to the Ministry of National Security to further ensure quality assurance.
- vii. Each Buccal Swab Kit should include, but is not limited to:
 - a. 1x Mailing Envelope (preferably 7.5" x 10.5" (19cm x 26.7cm))
 - b. 1x Kit Shipping Seal
 - c. 1x Tamper-evident, factory pre-sealed Kit envelope (preferably 6" x 9")
 - d. 1x Instruction Sheet
 - e. 1x Information Card with Attached Swab Envelope
 - f. 1x Pouch of silica gel or desiccant packet
 - g. 1x Re-closeable Bag
 - h. 1x Pair of nitrile or latex powder-free glove, Large, Ambidextrous
 - i. 2x Sterile individually packaged buccal swab
 - j. 2x Tamper-evident police evidence seal

683—Continued

Appendix 17



NFDD Candidate Match Report Receipt

Candidate Match Report Number: _____

Candidate Match Report prepared by: _____ on _____
NFDD Custodian Unit Staff (Signature) Date

Candidate Match Report approved by: _____ on _____
NFDD Custodian Unit Staff (Signature) Date

Candidate Match Report reviewed by: _____ on _____
DNA Custodian/ Deputy (Signature) Date

Target Specimen ID#: _____

Candidate Specimen ID#: _____

Testing Laboratory: _____

Address: _____

Telephone Number(s): _____

Fax Number(s): _____

Email: _____

NFDD Candidate Match Report received by: _____

Authorised Individual

Signature: _____

Date: _____

683—Continued

Appendix 18



NFDD Final Match Report Receipt

Final Match Report Number: _____

Final Match Report prepared by: _____ on _____
NFDD Custodian Unit Staff (Signature) Date

Final Match Report approved by: _____ on _____
NFDD Custodian Unit Staff (Signature) Date

Final Match Report reviewed by: _____ on _____
DNA Custodian/ Deputy (Signature) Date

Target Specimen ID#: _____

Candidate Specimen ID#: _____

Name of Agency or Authorised Person: _____

Address: _____

Telephone Number(s): _____

Fax Number(s): _____

Email: _____

NFDD Final Match Report received by: _____
Authorised Individual

Rank, Service Number *(if applicable)*: _____

Signature: _____

Date: _____

683—Continued

Appendix 19



NFDD Disclosure Request Completion Log

NFDD Disclosure Request Response #	Disclosure Request Received by:		Disclosure Request Response completed by:		Disclosure Request Response received by:			
	Name	Date	Name	Date	Name	Signature	Rank	Date

Approved By : _____ on _____

DNA Custodian/ Deputy (Signature) Date

683—Continued

Appendix 20



NFDD Search Request Completion Log

NFDD Search Request Response #	Search Request Received by:		Search Request Response completed by:		Search Request Response received by:			
	Name	Date	Name	Date	Name	Signature	Rank	Date

Approved By : on Date

DNA Custodian/ Deputy (Signature)

683—Continued



Appendix 21

NFDD CORRECTIVE ACTION AND PROBLEM REPORT RECORD

Initiated By:	DNA Custodian/Deputy:	Date: ___/___/___
Affected Procedure(s):		

Problems:

Major Area/Situations Investigated and Findings:

Initiator/ Authorised Technician:

Corrective Action Taken:

Initiator/Technician:	Date:	DNA Custodian/Deputy:	Date:
-----------------------	-------	-----------------------	-------

FOLLOW UP ACTION NEEDED? YES <input type="checkbox"/> NO <input type="checkbox"/>	Due Date:	Date Closed:
---	-----------	--------------

Conclusions:

Initiator/ Authorised Technician: _____ on _____

Approved By :	on	
---------------	----	--

DNA Custodian/ Deputy (Signature)

Date



SAMM #NFDD-FM-0023-1

National Forensic DNA Databank (NFDD) Custodian Unit
IS Incident Report

Incident Information

Date Incident Occurred:

Date Incident Discovered:

Time Incident Occurred:

Time Incident Discovered:

Incident Category

- Adversarial
- Accidental
- Structural
- Environmental

IS Affected

- MNS
- FTP
- Primary Server

Equipment affected

Source or Cause of Incident

- | | | | |
|---|---|--|--|
| <input type="checkbox"/> Individual | <input type="checkbox"/> User | <input type="checkbox"/> Information Technology (IT) Equipment | <input type="checkbox"/> Natural or man made disaster |
| <input type="checkbox"/> Outsider | <input type="checkbox"/> Privileged User/ Administrator | <input type="checkbox"/> Storage | <input type="checkbox"/> Fire |
| <input type="checkbox"/> Insider | | <input type="checkbox"/> Processing | <input type="checkbox"/> Flood/ Tsunami |
| <input type="checkbox"/> Trusted Insider | | <input type="checkbox"/> Communications | <input type="checkbox"/> Windstorm/ Tornado |
| <input type="checkbox"/> Privileged Insider | | <input type="checkbox"/> Display | <input type="checkbox"/> Hurricane |
| <input type="checkbox"/> Group | | <input type="checkbox"/> Sensor | <input type="checkbox"/> Earthquake |
| <input type="checkbox"/> Ad hoc | | <input type="checkbox"/> Controller | <input type="checkbox"/> Bombing |
| <input type="checkbox"/> Established | | <input type="checkbox"/> Environmental Controls | <input type="checkbox"/> Overrun |
| <input type="checkbox"/> Organisation | | <input type="checkbox"/> Temperature/ Humidity Controls | <input type="checkbox"/> Unusual Natural Event (e.g. sunspots) |
| <input type="checkbox"/> Competitor | | <input type="checkbox"/> Power Supply | <input type="checkbox"/> Infrastructure Failure/ Outage |
| <input type="checkbox"/> Supplier | | <input type="checkbox"/> Software | <input type="checkbox"/> Telecommunications |
| <input type="checkbox"/> Partner | | <input type="checkbox"/> Operating System | <input type="checkbox"/> Electrical Power |
| <input type="checkbox"/> Customer | | <input type="checkbox"/> Networking | |
| <input type="checkbox"/> Nation-State | | <input type="checkbox"/> General Purpose Application | |
| | | <input type="checkbox"/> Mission Specific Application | <input type="checkbox"/> Other |

Description of OTHER Incident

Empty text area for description of other incident.

683—Continued

SAMM #NFDD-FM-0023-1

Description of Incident

Initial Response

Incident requires follow up activities

Yes

No

Cyber Security Incident

Follow-up activities

Recommendations

Attachments and supporting documents

Date:

Reporting Officer:

Signature

DNA Custodian Manager:

Signature

CYBER SECURITY INCIDENT

Security Category

- Low Security Exposure; limited adverse affect
- Moderate Security Exposure; serious adverse affect
- High Security Exposure; severe or catastrophic adverse affect

Information Sensitivity

- Confidential
- Sensitive
- Internal
- Public

Incident Type

- System Compromise/ Intrusion
- Denial of Service, DDoS
- Malicious Code
- Loss, Theft or Missing
- Trojan
- Ransomware
- Back Doors
- Virus
- Buffer Overflows
- Rootkits
- Worm
- Botnets

Other Incident Details

IP address of affected machine(s)	Domain name of affected machine(s)
Operating system(s) of affected machine(s)	Last time affected machine(s) were patched
Functions of affected machine(s)	Application software affected
Description of incident	
Method of detection	
What security infrastructure was in place	Evidence of spoofing
IP address(es) of attackers	Destination port(s) and protocol(s)
Domain name(s) of attacker(s)	Country(ies) of attacker(s)
Suspected method of intrusion/ attack	
Suspected perpetrators and or possible motives	
Name of malicious code(s) if applicable	Other information

Impact and Action Taken

Assessment of the Impact of the incident	
Did the intrusion damage any machine(s)	What action has been taken
<input type="checkbox"/> Yes <input type="checkbox"/> No	
If yes, describe	

Appendix 22



NFDD Final Match Report

Final Match Report Number: _____

Final Match Report Prepared by: _____ on _____
NFDD Custodian Unit Staff (Signature) (Date)

Target Specimen ID#: _____

Candidate Specimen ID#(s): _____

Testing Laboratory 1: _____

Testing Laboratory 2: _____

FMR Conclusion:	

Reviewed By :	on	
<small>DNA Custodian/ Deputy (Signature)</small>		<small>Date</small>
Approved By :	on	
<small>NFDD Custodian Unit Staff (Signature)</small>		<small>Date</small>

Appendix 23



NFDD Certificate of Analysis Receipt Record – Persons listed in the 3rd Schedule

Report Submitted by:

Lab Reference #	Testing Laboratory	Specimen ID#	Name	Signature	Date	Received by	Date

Approved By : _____ On _____

DNA Custodian/ Deputy (Signature)

Date

Appendix 24



NFDD SmallPond DNA Upload Log

Specimen ID#	Batch File Name	Pond Upload Batch No.	Secure FTP Submission date	Database Upload Date	Pond	Uploaded by (User)

APPROVED BY: _____ ON _____
 DNA Custodian/ Deputy (Signature) Date

683—Continued

Appendix 25



NFDD Laboratory On-Site Visit Form

Name of NFDD Participating Laboratory: _____ Date Visited: _____

Item	Comments
Is laboratory ISO/IEC 17025 Accredited?	[Tick one] Yes <input type="checkbox"/> No <input type="checkbox"/>
Upkeep of DNA and Serology workstations and storage environment	
DNA Analysis Standard Operating Procedures	
DNA Analysis equipment maintenance and calibration documentation	
Genetic Analyser Annual Maintenance documentation	
Miscellaneous	

APPROVED BY: _____

ON _____

DNA Custodian/ Deputy (Signature)

(Date)

Appendix 26



NFDD DNA Profile Reception Record

Specimen ID#	Batch File Name	Pond Upload Batch No.	Date and Time Submitted	Laboratory	Profile Accepted? (Yes / No)	Comments

APPROVED BY: _____ ON _____
DNA Custodian/ Deputy (Signature) (Date)

683—Continued

Appendix 27



MINISTRY OF NATIONAL SECURITY

GOVERNMENT OF THE REPUBLIC OF TRINIDAD AND TOBAGO

NS/DNA: 108/3/11 Vol. 1

Date:

Commissioner of Police
Police Administration Building
Corner Edward and Sackville Streets
Port of Spain, Trinidad and Tobago

Attention: Commissioner of Police

Expungement of DNA Profile from National Forensic DNA Databank (NFDD)

Dear Sir,

In compliance with the Administration of Justice (Deoxyribonucleic Acid) Act Chapter 5:34 (Act 5 of 2012) Section 26 of Trinidad and Tobago, the DNA Profile pertaining to the following information was expunged from the National Forensic DNA Databank (NFDD) on Please do not hesitate to contact the NFDD Custodian Unit with any questions relating to this matter.

Table with 2 columns: Field Name and Yes/No checkboxes. Fields include Specimen ID#, Specimen Category, NFDD Upload date, NFDD Participating Laboratory, DNA analysis date, Exonerated date, Copy of Court Order request for expungement attached, and Copy of Commissioner of Police request for expungement attached.

Sincerely,

(f) DNA Custodian Manager

CC: Custodian Unit
Port of Spain

683—Continued

Appendix 28



NFDD External Quality Assurance Standard (QAS) Audit Document Review Record

Participating Laboratory	Technical Assessors	External QAS Documentation received on:	External QAS Documentation reviewed on:	External QAS Documentation Reviewed by	Comments: (A) Laboratory complied with external QAS audit requirement and the QAS; (B) Laboratory did not comply with external QAS audit requirement and/or the QAS (C) Other, please explain:

APPROVED BY: _____ ON _____
DNA Custodian/ Deputy (Signature) Date

683—Continued

Appendix 29



NFDD Equipment Maintenance Schedule and Performance Record

Name of Instrument/Equipment	Date	Maintained and Performance checked by: <i>Name and Company</i>	Signature	Comments

APPROVED BY: _____ ON _____
DNA Custodian/ Deputy (Signature) Date

683—Continued

Appendix 30



NFDD Court Room Expert Witness Testimony Log

NFDD Custodian Unit Staff - Name	Signature	FMR#	Matching or Associating Specimen ID#s	Date of Court Attendance	Location of Court

APPROVED BY:

ON

DNA Custodian/ Deputy (Signature)

Date

683—Continued

Appendix 31



NFDD Custodian Unit Annual Competency Test Evaluation Record

NFDD Staff Name/Signature/Date: _____ / _____ / _____

Position: _____

Date of Assumption: _____

Date of Competency Test: _____

Test Issued by: _____

Name and Position

Test Assessment or Score: _____

Satisfactory Unsatisfactory:

Errors and Corrective Actions (if applicable)

Comments:

APPROVED BY _____ ON _____

DNA Custodian/ Deputy (Signature) Date

683—Continued

Appendix 32



Specimen ID# Case File Information

Specimen ID#				Comments
Name of Testing Laboratory				
Name of Pond				
Submission Date(s)				
NFDD Upload Date(s)				
Analysis Date(s)				
Re-Analysis Date(s)				
Analysis Kit(s) used				
Profile Modification dates	Amended			
	Reinstated			
	Suspended			
	Deleted			
	Expunged			
	Transferred			
Manual Keyboard Search Request Date(s)				
Disclosure Request Date(s)				
Match/Association Date(s)				
Candidate Match Report Number(s)				
Candidate Match Report Date(s)				
Final Match Report Number(s)				
Final Match Report Date(s)				
Miscellaneous				

Include ALL copies of documentation related to Specimen ID#

APPROVED BY: _____ ON _____
DNA Custodian/ Deputy (Signature) Date

683—Continued

Appendix 33



REPUBLIC OF TRINIDAD AND TOBAGO

OATH OF SECRECY

I....., employed at/performing a function in the office of the Trinidad and Tobago National DNA Databank Custodian Unit or the Trinidad and Tobago Forensic Science Centre, do solemnly and sincerely swear that in the performance of my duties and functions in the service of the Trinidad and Tobago National DNA Databank Custodian Unit or the Trinidad and Tobago Forensic Science Centre, pursuant to the Administration of Justice (Deoxyribonucleic Acid) Act, I shall treat all records and information relating thereto as secret and confidential and I shall not disclose or communicate to any unauthorised person or allow any such person to have access to any such record or information.

.....
Signature

DECLARED before me thisday of

..... 20..... at the office of the

Trinidad and Tobago National Forensic DNA Databank Custodian Unit, or the
Trinidad and Tobago Forensic Science Centre

..... Justice of the Peace



683—Continued

Appendix 34



NFDD Training Record

Analyst Name	Description of Training	Start Date	Completion Date	Comments

APPROVED BY: _____ ON _____
DNA Custodian/ Deputy (Signature) Date

683—Continued

Appendix 35



NFDD Expungement Record

Specimen ID# (Laboratory/Agency Unique Identifier): _____

Specimen Category (specify): _____

Pond/ Database Index: _____

DNA Profile Removed from Databank by: _____ on _____
(NFDD Custodian Unit Staff) (Date)

Reason for expunging DNA Profile:

Other comments:

Reviewed by : _____
Signature: _____
Position: _____
Date: _____

Approved by : _____
Signature: _____
Position: _____
Date: _____

683—Continued

Appendix 36



NFDD Equipment Maintenance and Performance Check Form

Initiated By:	DNA Custodian/Deputy:	Date: ___/___/___
Name of Equipment:		
Nature of Maintenance or Performance Check:		
Findings:		
Authorised Technician:	Date:	DNA Custodian/Deputy:
		Date:
Conclusion:		
Authorised Technician:		

Approved By :	on	
DNA Custodian/ Deputy (Signature)		Date

683—Continued

Appendix 37



NFDD Audit Trail Review Record

Initiated By DNA Custodian Manager/Deputy :	Date: _____
Audit Trail thirty (30) day period under review: From _____ to _____	Review Period Satisfactory? Yes <input type="checkbox"/> No <input type="checkbox"/>

DNA Profile - Specimen ID#	<u>Modification</u> Deleted/ Suspended/ Amended/ Reinstated/ Transferred	Modification documented? YES/ NO	Investigation Required? YES/ NO	Remarks
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			

Approved By :	on	Date
DNA Custodian/ Deputy (Signature)		Date