

DNA SOP-17 DNA Job Duties*Approved by Director: Dr. Guy Vallaro*

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SOP 17: DNA Unit Job Duties

Technical Leader

Carll Ladd

DNA Functions

Assistant Technical Leader Nuclear DNA

Kristin Sasinouski

Assistant Technical Leader Mitochondrial DNA

Kristin Sasinouski

Validation Coordinator

John Schienman

Maintenance Coordinator

Angela Przech (nuclear)
Adrianne Schoefer (mtDNA)

QC Coordinator

Daniel Renstrom (nuclear)
Kristen Madel (mtDNA)

Training Coordinator

Jillian Echard

CODIS State Administrator
CODIS Administrator AlternatePatricia Johannes
Megan OltDatabase Hit Confirmation
Casework Known ProcessingMegan Olt
Michael Morganti

Supply Ordering

Michael Morganti (nuclear)
Kristen Madel (mtDNA)

QC of Reagents

Jian Tao (nuclear)
Kristen Madel (mtDNA)

Outsourcing Data Coordinator

Dahong Sun

Grant Coordinator

Michael Bourke

Description of Job Functions/Duties

1. **Technical Leader.** By QAS definition is an employee who is accountable for the technical operations of the laboratory and who is authorized to stop or suspend laboratory operations. The duties and qualifications of the Technical Leader are outlined in FBI QAS (09-01-11).

- A. The Technical Leader is responsible for evaluating all validations and DNA methods used by the CT Division of Scientific Services and for proposing and approving new or modified analytical procedures to be used by the DNA analysts. All approvals shall be documented.
- B. The Technical Leader is responsible for technical problem solving of analytical methods and for the oversight and approval of validation, training, quality assurance, QARs and proficiency testing in the DNA Unit. All reviews and approvals shall be documented.
- C. The Technical Leader coordinates and reviews internal and external DNA Audit documents and, if applicable, implements and/or approves corrective action(s) to ensure that findings, if any, were appropriately addressed. The review of internal audits is documented on DNA QR-257(A and B). External audits reviewed by the TL are documented by initialing or signing the audit document (i.e. Appendix A, or cover page).
- D. The Technical Leader has the authority to initiate, suspend, and resume DNA analytical operations for the DNA Unit or an individual. Prior to implementation, all DNA related QARs must have documented approval of the Technical Leader.
- E. Review annually the analytical procedures of the DNA Unit, the DNA Quality System Laboratory Quality Manual (GL-1 to GL-20), Training Manual, Validation studies and methodologies currently used in the DNA Unit, and training records of currently qualified analysts. This review will be documented DNA QR-258 and kept with the FB/DNA Section QM. The review and approval of the Quality Manual and of the DNA procedures (documented on QR-258) encompasses the review and approval of the DNA proficiency testing program.
- F. The Technical Leader is responsible for reviewing and documenting the review of the academic transcripts and training records for newly qualified analysts, and to approve their qualifications prior to their conducting independent casework analysis.

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- G. The Technical Leader performs technical and administrative review of DNA case files and reports.
 - H. The Technical Leader provides court testimony and performs additional duties as necessary.
 - I. The TL approves the technical specifications for outsourcing agreements. The TL reviews requests by contract employees for employment by multiple NDIS participating and/or vendor laboratories and, if no potential conflict of interest exists, may approve such requests.
 - J. The TL may assign a subset of clearly defined duties to program or assistant technical leader(s). However, the TL retains responsibility, approval and oversight in the following areas as discussed above and as required by the FBI QAS (Standards 4 & 5.2.3):
 - 1. The technical operation of the DNA Unit.
 - 2. The DNA training program.
 - 3. The DNA proficiency testing program.
 - 4. The DNA quality assurance and safety programs.
 - K. Is the single DNA Technical Leader that is accountable and oversees the entire technical operations of the DNA Unit for the Division of Scientific Services (Casework, Database, mtDNA).
2. **Assistant Technical Leader – Nuclear DNA (or designee):** Has all of the qualifications to meet the Technical Leader standard. Assumes the duties of the Technical Leader in the temporary absence of the Technical Leader.
- Assistant Technical Leader –Mitochondrial DNA (or designee):** Has all of the qualifications to meet the Technical Leader standard. Technical aspects of mitochondrial DNA testing will be brought to the Assistant Technical Leader in a collaborative effort with the Technical Leader.
3. **Forensic Science Examiner 2** (database, casework). Working lead of DNA Unit. In addition to casework and/or database duties, other duties may include establishing unit procedures, providing staff training and assistance, and overseeing QA/QC programs, research and validation projects. May also perform technical and administrative reviews. Performs additional duties as assigned.

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4. **CODIS Administrator.** The CODIS Administrator serves as the central point of contact between the NDIS participating laboratory and the NDIS custodian. The CODIS Administrator shall be responsible for communicating all information about the participating laboratory to the NDIS Custodian. This correspondence includes changes in the status of the Laboratory, Laboratory Information or CODIS Users, Audits, MOU, and NDIS Participation Assessments. The CODIS State Administrator serves as the gatekeeper for the DNA records entered into CODIS.

The CODIS Administrator shall be notified by the DNA Technical Leader of all non-administrative discrepancies in proficiency test results that affect the typing results, and/or conclusions at the time of discovery.

The CT State CODIS Administrator performs the duties for both CODIS casework and CODIS offender processing. The duties of the CODIS Administrator are as outlined in FBI QAS (09-01-11), the NDIS Memorandum of Understanding (Signed, 12-08-08), and the NDIS Procedures Manual (CODIS Web & CODIS Administrator).

- A. The CODIS Administrator is authorized to terminate an analyst's or the laboratory's participation in CODIS until the reliability and security of the computer data can be assured if an issue with the data is identified.
- B. The CODIS Administrator is responsible for administering the CODIS network, scheduling and documenting CODIS training for casework analysts, assuring the security and quality of the CODIS data is in accordance with state and/or federal law and NDIS operational procedures, and assuring that matches are properly dispositioned.
- C. The Duties of the CODIS Administrator include, but are not limited to the following (see also DNA SOP-10):

DNA Data Acceptance:
DNA Data Acceptance Standards
DNA Data Accepted at NDIS

NDIS Audit Review.

Laboratories:

Initiate Participation in NDIS
Removal of a Laboratory from NDIS
Change Information about a Laboratory

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Users:

- Add a User from a Participating Laboratory to NDIS.
- Removal of a User from a Participating Laboratory in NDIS.
- Change Information about a User from a Participating Lab in NDIS.

Specimen Management:

- Upload Data.
- Expunge a DNA Profile.

Searches:

- NDIS Searches
- Confirm an Interstate Candidate Match.
- NDIS DNA Autosearches.

Missing Persons:

- Missing Persons and Related DNA Data.

Communications:

- CJIS WAN Operational Procedures.

- 5. Alternate CODIS Administrator.** Has all the qualifications to meet the CODIS Administrator standard. Assumes the duties of CODIS Administrator in the absence of the CODIS Administrator. General responsibilities, as outlined above, may be performed by the Alternate CODIS Administrator when applicable (or may be shared with the Alternate where applicable). (See also DNA SOP-10)

6. DNA Analysts. (Nuclear or Mito)

An employee that has successfully completed the laboratory's training requirements for casework sample analysis, passed a competency test, and has entered into a proficiency testing program as outlined in FBI QAS. (Standard 13)

Daily duties include analyzing and interpreting data, reaching conclusions, conducting statistical analysis, preparing reports, performing technical and administrative reviews, and providing testimony (when needed). Some analysts may be classified as "bench analysts" whose duties are limited to DNA processing only. Analysts may also perform evidence examinations and conduct DNA testing, but these tasks may also be completed by Laboratory Assistants (see below).

Additional duties may include participating in research and validation of new technologies, technically reviewing other analysts' work, administratively reviewing other analysts' work, submitting probative data to CODIS, and conducting QC testing on reagents and equipment.

7. Laboratory Assistants/ Connecticut Career Trainee (CCT)

An employee that has successfully completed the laboratory's training requirements for the technician position in the DNA Unit. Case work technicians may conduct quality control testing on reagents; perform DNA examination through CE on the 3130xl. Database technicians will follow the database known processing protocol from extraction through CE on the 3130xl. Technicians do not interpret data or write reports.

Note: Only qualified DNA analysts or DNA Unit Leads/Supervisors will "QC Pass" reagents or solutions. At the conclusion of a working test period, CCTs may become DNA analysts.

8. DNA Training Coordinator

Introduce new DNA personnel to the other members of the Unit, members of other laboratory sections, and laboratory administrative staff, including the Quality Manager and Safety Officer.

Distribute controlled or uncontrolled, as appropriate, copies of the DAS A&O Manual, Laboratory Safety Manual, Laboratory Quality Manual, General Laboratory Directives, MSDSs, and DNA Unit SOPs to new personnel, or direct them as to where to find these documents.

Supply new personnel with a copy of the DNA Unit Training Manual. Follow the Manual's training requirements for their position for literature review, bench work training, and analysis training. The Training Coordinator, the employee's direct Supervisor, or a capable designee should fill out each section of the training manual with the new employee, and administer oral or written exams as described in the training manual, at the appropriate time.

Show the new employee around the DNA Unit rooms and give an overview of our system for processing, including evidence examination, DNA extraction, human DNA quantitation, PCR, electrophoresis, and analysis. Explain our anti-contamination measures and one-way-flow of work product.

See that the new employee receives LIMS, DNA network, and GMID logons as appropriate.

Train (or assign a designee) the new employee in each technique that will be part of their job duties. The amount of training given may vary depending on the employee's previous experience. Verify that the employee is proficient and competent with each technique before they can perform it unsupervised.

Explain our quality control system and where to find reagent quality control records and equipment and procedural validation records.

Develop appropriate training materials and training exercises for DNA personnel. Explain evidence testing, quality control, and evidence documentation. Supply Work Instructions or direct the employee on where to find them. Review each training set processed with the new employee and correct anything they've done incorrectly before allowing them to begin the next training set. The number of training samples may be reduced based on the employee's previous experience with the technique; the Technical Leader's approval must be documented if this is done. The number of training samples should be increased for any technique if the new employee does not consistently obtain correct results or is uncomfortable with the technique. Give the new employee a training notebook in which to keep worksheets for their training sets.

When the new employee has successfully completed feels comfortable with all bench work techniques for processing a type of sample, assign them a competency test in that type of processing. The correct results for the competency test must be known. The employee need only become competent in performing the types of testing that will be part of their job duties.

Introduce the employee to GMID and explain analysis, to the extent that it will be a part of their duties.

Document each technique for which the employee has passed a competency test. The Technical Leader must approve their competency before they may begin performing the technique for casework or databasing.

Explain our review process for analysis, bench work documentation, and reporting, and train them in performing those tasks that will be part of the employee's duties. Assure that they understand all statistical methodologies they'll be using.

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Give an overview of how CODIS works, our laboratory's participation, and give them training in CODIS appropriate to their job duties. See that they apply for a CODIS logon if they are intended to become a CODIS user.

Oversee the employee's mock court training, if applicable. See that all requirements of an employee's training manual are fulfilled before they begin signing reports as the analyst or technical reviewer.

Explain our evidence and work product storage processes and the locations of the freezers used for them. Introduce them to Evidence Receiving personnel and go over the processing of receiving and returning evidence through that section.

Ensure that the employee receives a security system code, appropriate keys, and a LIMS evidence transfer PIN, as well as storage space for their evidence, work product, and equipment.

Be available to discuss an employee's training and answer any questions they may have.

When a new procedure is brought online for case or database work, the training coordinator ensures that each employee who will use it receives adequate training, and has access to written Work Instructions for it, and passes a competency test on it. The Technical Leader must approve each person's competency before they may begin performing the technique for casework or databasing.

Look for opportunities for relevant continuing education and valuable literature to review, and when aware of them make them known to the entire DNA Unit.

9. Outsourcing Data Coordinator

When the data/results containing the casework data, DNA processing worksheets, and reports from the vendor laboratory is supplied through a secure FTP site, download the outsource data/results from the secure FTP site to the DNA U: drive. For long-term storage, this data will be burned to discs and kept in the data archive binders.

When the data is kept on optical discs and is sent via Mail Transport from the vendor laboratory, receive the optical discs and make a copy of this material to the DNA section U: drive. For long-term storage, these discs will be kept in the data archive binders.

When questions/issues arise during review of the cases, the Outsourcing Data Coordinator shall inform the Assistant Director who will contact the vendor laboratory.

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Receive the DNA extracts, organize and put them in the long-term storage freezers. Record the storage location in the appropriate genomic logbook.

10. Laboratory Support Personnel

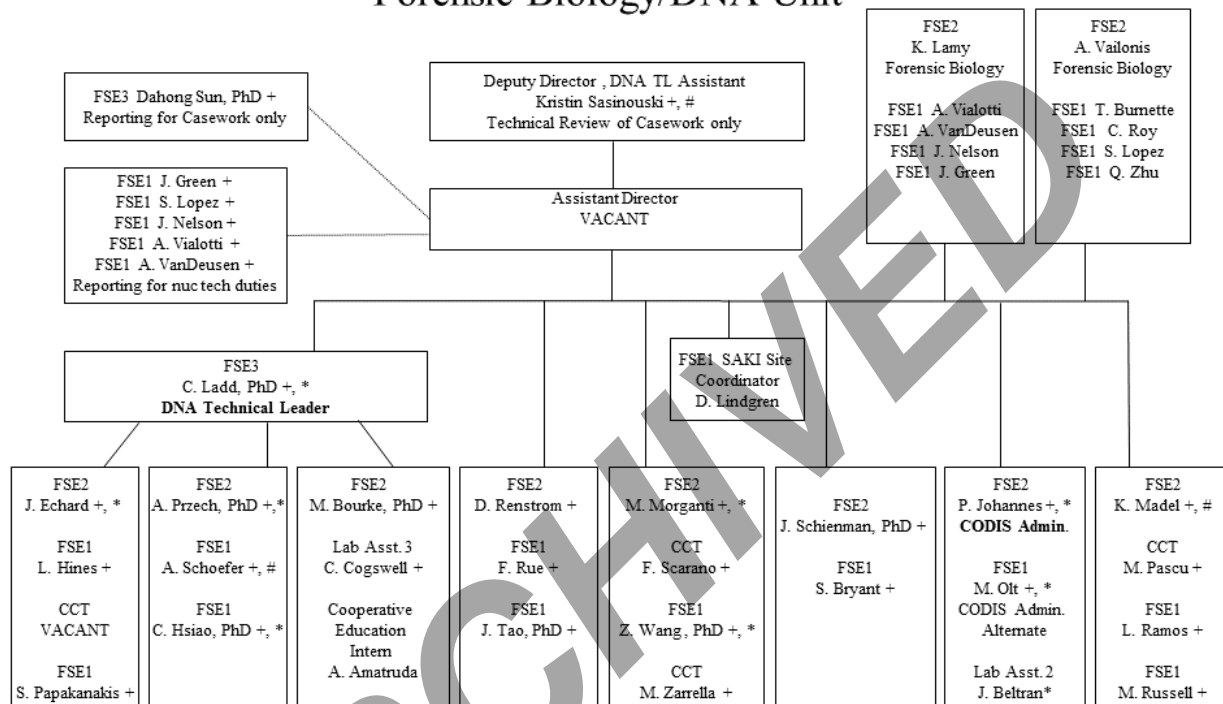
Part-time employees (such as a Cooperative Education Intern) who perform laboratory duties exclusive of analytical techniques on forensic or database samples. Training will be documented and kept in a professional development file.

11. Contingency Plan for the Refilling of the DNA Technical Leader Position:

The following contingency plan has been developed by the Division Laboratory Director, the Laboratory Quality Manager and DNA/Forensic Biology Section Director to deal with the designation of a DNA Technical Leader (TL) in the event the current TL designee is, for whatever reason, unable to continue to serve in that capacity. It is the intention of this plan to comply with the FBI QAS audit document section 4.1.6 and provide the outline for this compliance. The contingency plan is located in General Laboratory Protocol GL-1.7.

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Forensic Biology/DNA Unit



+nuclear casework, *database, # mtDNA casework, ^trainee

DNA Unit Technical Operations

