

23.1 PURPOSE

Technical reviews are performed on all case files prior to reports being issued. Technical reviews are performed by any qualified analyst to verify that the conclusions and data are scientifically supported through the documentation in the case file.

Administrative reviews are performed on all case files prior to reports being issued. Administrative reviews are performed by any laboratory personnel who have been trained to review DNA cases and have access to LIMS. These reviews are used to ensure that the case demographics are correct, there are no typographical errors, and the documentation is consistent with laboratory policies.

In addition, a DNA analyst trainee who has been approved to be an administrative reviewer may AR cases where interpretations are reported. These reviews are used to ensure that the case demographics are correct, there are not typographical errors, and the documentation is consistent with laboratory policies.

Please refer to GL-18: Case Reviews (Technical & Administrative Reviews) for general guidelines.

Note: Technical and Administrative reviews for outsourced casework will be addressed in DNA SOP 21 and GL 18.

23.2 RESPONSIBILITY

DNA section personnel.

23.3 DEFINITIONS

Definitions as per the FBI QAS:

DNA Technician: is an employee or contract employee who performs analytical procedures on forensic samples and/or database, known or casework reference samples under the direction of qualified analyst. This individual has successfully completed the laboratory's training requirements for casework and/or database sample processing, passed a competency test, and has entered into a proficiency testing program. Technicians do not interpret data to reach conclusions on typing results or prepare final reports.

DNA Analyst: is an employee or contract employee, that has successfully completed the laboratory's training requirements for casework sample analysis and/or database analysis, passed a competency test, and has entered into a proficiency testing program. This

individual conducts and/or directs the analysis of forensic samples and/or database, known or casework reference samples, interprets data and reaches conclusions.

Technical Review: is an evaluation of reports, notes, data, and other documents to ensure that there is appropriate and sufficient basis for the scientific conclusions. Elements are documented on DNA QR-4A “Batch Paperwork Review Checklist”, DNA QR-4 “Case Review Checklist”, DNA QR-4E “Male Screen Batch paperwork Review Checklist” and DNA QR-347 “Review Notes Worksheet”.

Technical Reviewer (TR): is an employee or contract employee who is a current or previously qualified DNA analyst in the methodology being reviewed and is not an author of the applicable report. The Technical Reviewer is authorized to conduct technical reviews and has had casework experience prior to performing any technical reviews. The Technical Reviewer must be qualified in the method, technology, typing test kit, platform and interpretation software that the review encompasses. A DNA Technical Reviewer must be proficiency tested semi-annually to the extent to which he or she performs casework.

Administrative review: is an evaluation of the report and supporting documentation for consistency with laboratory policies and for editorial correctness. Elements are documented on DNA QR-4A “Batch Paperwork Review Checklist”, DNA QR-4 “Case Review Checklist”, DNA QR-4E “Male Screen Batch Paperwork Review Checklist” and DNA QR-347 “Review Notes Worksheet”. AR and TR for male screen batch paperwork is completed by one qualified analyst.

Note: AR and TR of DNA reports may be completed by one qualified analyst, as specified in 23.4.2.

Administrative reviewer (AR): is an employee who is not an author of the applicable report.

23.4 **PROCEDURE**

23.4.1 Case documentation:

A DNA analyst/technician receives a set of cases for processing and assigns a unique batch identifier to all cases to be processed together. Batch identifiers typically include the analyst’s initials, date batch is started, and the batch number for that date (i.e., XXX010101). Initials will be added in a manner that clearly demonstrates who conducted the work. For example, an extraction QR requires only the technician initials, not the DNA analyst owning the batch.

The Batch ID is a unique identifier that acts as an address for traceability. Each batch shall be assigned a Batch ID and the Batch ID shall be documented on every page of the batch paperwork.

The batch paperwork for a case is considered part of the entire case record. Inside the physical case file folder will be additional technical and administrative records for the specific case, such as, but not limited to TR/AR checklists, evidence submission receipts, communications, evidence exam worksheets, electropherograms for question samples and known samples (if applicable), CODIS documentation (if applicable), and draft reports.

When sample processing and analysis is completed, the Analyst prints electropherograms to be included in case jackets (for case samples) and relevant control electropherograms (RB, NEG, EP1, and POS) for the. It is not necessary to print ladders.

The Technical Reviewer (TR) technically reviews the electronic data and all bench paperwork. The TR then transfers the batch paperwork to the Administrative Reviewer (AR). The AR administratively reviews the batch paperwork and returns it to the Analyst. All reviews of the batch paperwork are documented on DNA QR-4A "Batch Paperwork Review Checklist". Batch paperwork corrections are documented on DNA QR-347 "Review Notes Worksheet".

The Analyst separates electropherograms by case and photocopies the QR-4A and QR-48 (Stop at Quant) associated with Q sample(s) for each case in the set, as applicable. All original worksheets (extraction, quant, amp, injection) and control electropherograms for each batch are scanned to the DNA network. The TR checks that scanning was done appropriately. The batch papers are retained together in the appropriate folder located in the Casework Processing Filing Cabinets. As needed, batch paperwork may be archived.. Batch paperwork will be stored in file folders by year in alphabetical order using the first initial of the analyst's first name in appropriately labeled banker boxes.

If a sample(s) within one previously processed batch is amp'd later, either as a re-amp or using a different amplification kit, label the batch paperwork for the re-amp with the original Batch ID for the sample. After the first and second analyses, add the new batch paperwork to the original batch papers and refile them in the filing cabinet.

If pooling samples from several different previously processed batches to be amp'd later either as re-amps or using a different amplification kit (i.e. Y-STR, etc.), a new unique Batch ID shall be assigned and documented on all pages in that set.

Electropherograms for casework known samples, with their corresponding batch paperwork review worksheets, are distributed to the assigned case Analyst. If a case has not been assigned to an Analyst the paperwork is given to Case Management.

Note: Only official case receipts and records shall be maintained in the DNA case file. All case results/records shall be documented on the appropriate, controlled QR worksheets. For STR analysis, the electropherograms are included in the case folder with the exception of convicted offender samples. All electronic files regarding STR analysis (ie. complete run folders of .fsa sample files together with .ser or .sgf project files) are archived appropriately.

23.4.2 Case review:

- 23.4.2.1 Analysts are expected to thoroughly review their own case work prior to submitting it for technical review. DNA QA/QC Case Work Checklist Review (QR-4) should be used to confirm all appropriate case information resides in the case jacket. In addition, the case jacket should be reviewed for transcriptional and typographical errors.
- 23.4.2.2 If the evidence was examined and forensic biology tests were performed by a DNA analyst authorized in those testing methods, the results may be incorporated into a DNA report. Refer to FB-SOP-05 for Forensic Biology result statements.
- 23.4.2.3 The technical review function is performed by the TR and documented on QR-4 and QR-347 and in LIMS.

The elements of a Technical Review include but are not limited to the following as per the FBI QAS.

A review of all case notes, worksheets and electronic data (or printed electropherograms/images) that support the conclusions.

A review of all DNA types to verify that they are supported by the raw or analyzed data (electropherograms/images).

A review of all profiles to verify correct inclusions and exclusions (if applicable) as well as a review of any inconclusive result for compliance with laboratory guidelines.

A review of all controls, internal lane standards, and allelic ladders to verify that the expected results were obtained.

A review of statistical analysis (if applicable).

A review of the final report to verify that the results/conclusions are supported by the data and that the report has addressed each tested item.

A verification that all profiles entered into CODIS are eligible (NDIS and/or SDIS), have the correct DNA types, and correct specimen category. QR-13 “CODIS Profile Entry” will document the verification of CODIS eligibility and that the profiles entered have the correct DNA types and correct specimen category (Refer to DNA SOP-13 for more detailed guidance on CODIS Entry).

- 23.4.2.3.1 If the TR of the case file was not the person who reviewed the electronic data for the evidentiary (forensic unknown) samples, they must go back and technically review the data for all casework results that have not already been reported. The TR may choose not to technically review the data if the results were previously reported. Any non-concordance of analysis will be addressed between the Analyst, the TR, and the TL (if necessary).
- 23.4.2.3.2 The TR will confirm that all appropriate case information resides in the case jacket.
- 23.4.2.3.3 The TR will verify that the conclusions made in the case are supported through the documentation in the case file.
- 23.4.2.3.4 In addition, the case jacket should be reviewed for transcriptional and typographical errors.
- 23.4.2.3.5 No analyst may technically review their own work.
- 23.4.2.3.6 If the evidence was examined by a forensic biologist, no forensic biology tests were performed, and the forensic biology worksheets reside in the DNA case jacket: a DNA analyst can TR these worksheets. Essentially, the forensic biologist is functioning as a laboratory assistant.
- 23.4.2.3.7 Cases containing forensic biology tests must be Technically Reviewed by a DNA analyst who is competent and at one time proficient for the tests performed.
- 23.4.3 If a DNA report contains known profiles being compared to evidentiary samples, the administrative review function is performed by an additional qualified individual. If a DNA report does not consist of any comparisons, the administrative review function will be performed by the TR during the initial review.

The administrative review is documented on DNA QR-4 “Case Review Checklist”, LIMS, and DNA QR-347 “Review Notes Worksheet”. The elements of an Administrative Review include but are not limited to the following as per the FBI QAS:

A review of the case file and final report for clerical errors.

Approved by Director: Dr. Guy Vallaro

A review of the chain of custody and disposition of evidence.

- 23.4.4 In the event of discrepant conclusions, the examiners will discuss/review the results. Should a discrepancy persist, the data will be reviewed and conclusions approved by the Technical Leader (TL).