NATIONAL COMMISSION ON FORENSIC SCIENCE

NIST National Institute of Standards and Technology U.S. Department of Commerce

View of the Commission on Report and Case Record Contents

Subcommittee
Reporting and Testimony
Status
Initial Draft

Date of Current Version	23/04/16
Approved by Subcommittee	11/04/16
Approved by Commission	

Note: This document reflects the views of the National Commission on Forensic Science, and does not necessarily represent the views of the Department of Justice or the National Institute of Standards and Technology. This document does not formally recommend any action by a government entity, and thus no further action will be taken upon its approval by the Commission.

View of the Commission

It is the view of the National Commission on Forensic Science that a report and a case record describing the results of forensic testing should, at a minimum, contain the information identified in Appendix A.

Background

The National Commission on Forensic Science (NCFS) previously expressed its view that Forensic Science Service Providers (FSSPs) should have written policies for documenting the examination, testing, or interpretation of evidence and for reporting results, interpretations, and conclusions.[1] The NCFS concluded that "records should be created during the examination of evidence, and during the technical review, that would allow another analyst or scientist with proper training and experience to understand and evaluate all the work performed, and to independently analyze and interpret the data and draw conclusions."[2]

While this level of documentation is appropriate for the case record, the NCFS recognized that currently it is impractical to require this level of documentation in a report for every case, for every forensic discipline, and every type of test. Instead the NCFS balanced the burden on FSSPs and the needs of the criminal justice system, where significant decisions are made based on reports alone, and concluded that "reports should accurately and clearly convey a statement of the purpose

[1]National Commission on Forensic Science views document on Documentation, Case record and Report Contents adopted December 7, 2015. https://www.justice.gov/ncfs/file/818191/download

[2] *Id*.

of the examination, testing, and interpretation of the evidence; the method and materials used; a summary or a description of the data or results obtained; any conclusions or interpretations derived from the data or results; any discordant results, interpretations, or conclusions; and, where necessary for the interpretation of test results, sources of uncertainty in the procedure and conclusions along with estimates of their scale."[3] And every report "should include a statement that the report does not contain all of the documentation associated with the work performed and that to understand and evaluate all the work performed, and to independently analyze and interpret the data and draw conclusions requires a review of the case record."[4]

To provide further guidance on report and case record contents, the Commission reviewed the work and recommendation developed by the White House Office of Science and Technology Policy, Subcommittee on Forensic Science (SOFS). The SOFS reviewed nineteen existing standards (see Appendix C), reviewed other source material, and consulted subject matter experts. The SOFS generated a compilation of existing standards and a draft recommendation for report contents. The NCFS guidance provided in Appendix A builds on the work of the SOFS. It is guidance that sets forth the minimum information that should appear in a report and case record. This guidance should not be read to suggest that FSSPs should not provide more information in reports or case records, or that standard setting entities should not adopt standards requiring more information be provided in a report.[5] In the views document, "Documentation, Case record and Report Contents" adopted December 7, 2015, and here, the NCFS has tried to balance the needs of the various stakeholders at this juncture in time. This guidance should be viewed in the context of other recommendations by the NCFS including recommendations on pretrial discovery. A critical assumption that informed the development of this guidance is that the case record would be readily available to the government and the defense.

To provide readers with an appreciation of the development of this guidance, attached at Appendix B is the same guidance as appears in Appendix A, but this document identifies, where applicable, the source standards that set forth the same or a similar requirement. This document also identifies substantive modifications made by the Commission to some of the source standards using strikethroughs or red highlights to show deletions and additions.

The NCFS has provided a structure to the report, but provides this only as one of many ways in which the information can be organized. The focus of this effort is on the content and what information must appear in a report and case record.

[3] *Id*.
[4] *Id*.
[5] This view does not address whether an additional report should be created by a testifying expert. That issue is being addressed separately by the NCFS.

APPENDIX A
DOCUMENTATION AND REPORTING OF FORENSIC SCIENCE ANALYSES

Categories	Report	Case Record
ADMIN DATA	Report title. Including if the report is preliminary, supplemental or amended, as applicable. "This report does not contain all of the information needed to independently evaluate the work performed or independently interpret the data. Such an evaluation requires a review of the case record." To the extent possible this statement should be highlighted, bolded or otherwise formatted to make it stand out. Name and address of the FSSP, and the location where the tests and calibrations were carried out, if different from the address of the forensic science service provider. Unique identification of the test report or calibration certificate (such as the serial number), and on each page an identification in order to ensure that the page is a part of the test report or calibration certificate, and a clear identification of the end of the report or calibration certificate. Pagination including page number and total number of pages. The name and address of the customer. The date of report. The laboratory should define the date (e.g. date of the last edit, date the testing was completed) and include that information in the report or in the glossary (see discussion of definitions below). The full name(s), title(s), functions(s), and signature(s), or equivalent identification of the author(s) of the report. Name, signature, address, and affiliation of each person who rendered a conclusion/opinion/interpretation contained in the report and the full name of the person performing the verification. When the test report contains results of tests performed by subcontractors, these results should	Name, address, and affiliation of each person who generated data used to render an opinion contained in the report. Name address and affiliation of each person performing the verification.

Categories	Report	Case Record
	be clearly identified along with the full name of the person performing the testing. Manner of receipt of items (for example, FedEx.) List of items received whether or not tested. The date of receipt of the test or calibration item(s). Disposition of the evidence by the report author.	The case record should contain all the corresponding administrative data and a statement explaining why the evidence was sent for external testing. Date of performance of testing. Date of verification, if any. If a request for analysis on evidence received has been made to the FSSP, the FSSP should document the request, even if the evidence was not analyzed, or the testing was halted at the request of the customer. Chain of custody information including the FSSP's final disposition of the evidence whether through consumption or delivery to another entity.
SUMMARY	The purpose and nature of the activities performed (i.e. the request made to the FSSP). A brief statement of the examination(s) conducted and results. Where applicable, a statement to the effect that suitable items were not compared, and that the examinations were limited, and that the results relate only to the items tested.	The case record should contain an itemized list of items that were not compared/tested and why no comparison/testing was conducted.
BACKGROUND	A glossary or explanation of technical terms necessary for stakeholder understanding. This glossary should also contain definitions for the following: result, opinion, conclusion, and interpretation. This glossary should be included in the report or posted on line with a link provided in the report. The applicable SOP's should be referenced and readily available electronically.	

Categories	Report	Case Record
MATERIALS & METHODS	Identification of method(s) and process(es) used. Identification of methods and processes must include: identification of test methods used (e.g. ASTM E1967, SWGFAST Standard for Friction Ridge Detail Imaging (Latent/Tenprint), ver. 1.1 , Opioid Quantitation and Confirmation by GCMS); and generic class and type of instrumentation used (e.g. elemental analysis by inductively coupled plasma mass spectrometry (ICP-MS). A brief description of the method(s) or process(es) validated parameters and limits in forensic application. A description of and unambiguous identification of the item(s) tested/compared or calibrated. Condition of item(s) tested/compared. All deviations from, additions to, or exclusions from the test method, and information of specific test conditions, such as environmental conditions should be noted. A statement of compliance/noncompliance with requirements and specifications A statement as to whether any individual characteristic database data searches were conducted in an attempt to identify the source of an item, which databases were searched (including private, *ad hoc*, or government databases) and a summary of the results. Reference to sampling plan and procedures used by the FSSP or other body. The results of sampling including: an unambiguous identification of the items sampled; details of the environmental conditions during sampling that may affect the interpretation of the test results; any standard or other specification for the sampling method or procedure; and deviations, additions, exclusions from the specification concerned.	All deviations should be explained in detail in the case record. All steps that were repeated or samples that were redone should be explained. All data derived from the initial steps or samples should be maintained. All noncompliance with requirements and specifications should be explained in detail in the case record. Details on which individual characteristic databases were searched and the results. Details on which reference collections were searched and the results. Information relating to the date(s) and location(s) of sampling should be maintained.

Categories	Report	Case Record
DATA, OBSERV & RESULTS	Examination(s) conducted and results This should include a description of results, including the underlying data or a description of the underlying data and observations that will form the bases of any conclusions, opinions or interpretations reported. Statistical analyses and conclusions and their probative value including statements of the uncertainty or estimate of variability associated with them.	The laboratory should retain records of original observations, derived data and sufficient information to establish an audit trail, calibration records, staff records and a copy of each test report or calibration certificate issued, for a defined period. The records for each test or calibration should contain sufficient information to facilitate, if possible, identification of factors affecting the uncertainty and to enable the test or calibration to be repeated under conditions as close as possible to the original. Specific features relied upon when making an association should be documented. All work-product, including notes, produced during the examination, testing, or comparison should be maintained. All calculations used should be detailed in the case record along with all data, notes, electronic images and observations resulting from the examination. Case specific calibration and quality assurance data
CONCLUSIONS,OPINIONS, INTREP & DISCUSSION	All conclusions/opinions/interpretations Conclusions/opinions/interpretations should be clearly marked as such in a test report. If a report contains the conclusions/opinions/interpretations of more than one person, the conclusion/opinion/interpretation will be attributed to the person who generated them. All quantitative results should include the estimated uncertainty or estimate of variability. All comparison or qualitative results should	

Categories	Report	Case Record
	include statements of possible sources of error[6] and limitations in the method, data, or conclusions. When no definitive conclusions can be reached, the report shall clearly communicate the reason(s). "Inconclusive" or "no value" results must be accompanied by an explanation why no ultimate determination could be made. Disagreements between examiners occurring during verification (however named) and review regarding the reported conclusion(s) should be noted in the report. Disagreements that end in a "no resolution" should be detailed in the report. Disagreements that end in a "resolution" should be noted in the report and documented in the case record.	All supporting data for the determination that no definitive conclusions can be reached. All disagreements should be documented and all documentation relating to a disagreement and the resolution should be maintained in the case record. All information (data, results or facts) relating to the investigation know to the examiner that are not based on observation(s) of the examiner should be identified and maintained in the case record. (e.g. eyewitness descriptions of suspects, results of other testing). All communications with investigators or parties should be documented and maintained in the case record.
LITERATURE CITED	If references were used to augment the examiner's knowledge or to render an opinion, citations should be in the report or maintained in the case record.	Citations to references used to augment the examiner's knowledge or to render opinions (unless cited in the report).

[6]"Error" refers to uncertainty in measurement and should not be confused with "mistake" (for example, mislabeling evidence).

APPENDIX B
DOCUMENTATION AND REPORTING OF FORENSIC SCIENCE ANALYSES
Sources and modifications

Categories	Report	Case Record
ADMIN DATA	Report title (ISO/IEC 17025 5.10.2a). Including if the report is preliminary, supplemental or amended, as applicable. (SWGMAT 4.1.7). This report does not contain all of the information needed to independently evaluate the work performed or independently interpret the data. Such an evaluation requires a review of the case record (NCFS Views Document). To the extent possible this statement should be highlighted, bolded or otherwise formatted to make it stand out. Name and address of the FSSP, and the location where the tests and~~/or~~ calibrations were carried out, if different from the address of the forensic science service provider (ISO/IEC 17025 5.10.2b). Unique identification of the test report or calibration certificate (such as the serial number), and on each page an identification in order to ensure that the page is a part of the test report or calibration certificate, and a clear identification of the end of the report or calibration certificate (ISO/IEC 17025 5.10.2c). Pagination including page number and total number of pages (ISO/IEC 17025 5.10.2 note 1, SWGFAST 2.3). The name and address of the customer (ISO/IEC 17025 5.10.2d). The date of report (derived from ASTM 620 4.1.2). The laboratory should define the date (e.g. date of the last edit, date the testing was completed) and include that information in the report or in the glossary (see discussion of definitions below). The full name(s), title(s), functions(s), and signature (s) , or equivalent identification of the author(s) of the report (derived from ISO/IEC 17025 5.10.2j)	

Categories	Report	Case Record
	Name, signature, address, and affiliation of each person who rendered a conclusion or opinion contained in the report (ASTM E620-11 4.1.3 and 4.4.1) and the full name of the person performing the verification. When the test report contains results of tests performed by subcontractors, these results should be clearly identified along with the full name of the person performing the testing. (ISO/IEC17025 5.10.6). Manner of receipt of items (for example, FedEx.) (SWGFEX 5.3, optional) List of items received whether or not tested. The date of receipt of the test or calibration item(s). ~~where this is critical to the validity and application of the results~~ (derived from ISO/IEC 17025 5.10.2g) Disposition of the evidence by the report author (SWGFAST 3.10 (optional), SWGMAT 4.5.3 (optional), FBI QAS 11.2.8 (required))	Name, address, and affiliation of each person who generated data used to render an opinion contained in the report (ASTM E620-11 4.2.2, and SWGMAT 4.5.1) Name address and affiliation of each person performing the verification. The case record should contain all the corresponding administrative data and a statement explaining why the evidence was sent for external testing. Date of performance of testing (ISO/IEC 17020 7.4.2c ASTM E620-11 4.1.6) Date of verification, if any (Epstein, NIST NIJ 5.3.5). If a request for analysis on evidence received has been made to the FSSP, the FSSP should ~~issue a report~~/document ~~addressing~~ the request, even if the evidence was not analyzed, or the testing was halted at the request of the customer (derived from the additional guidance on administrative elements developed by the White House Subcommittee) Chain of custody information including the FSSP's final disposition of the evidence whether through consumption or delivery to another entity (SWGFAST 3.10, SWGMAT 4.5.3 , FBI QAS 11.2.8
SUMMARY	The purpose and nature of the activities performed (ASTM E620-11 4.1.7) (i.e. the request made to the FSSP).	

Categories	Report	Case Record
	A brief statement of the examination(s) conducted and results (many standards and guidance documents). Where applicable ~~relevant~~, a statement to the effect that suitable items were not compared, and~~/or~~ that the examinations were limited, and that the results relate only to the items tested (derived from ISO/IEC 17025 5.10.2.k and SWGFAST 2.12).	The case record should contain an itemized list of items that were not compared/tested and why no comparison/testing was conducted.
BACKGROUND	A glossary or explanation of technical terms necessary for stakeholder understanding (SWGFAST 2.11, SWGMAT 5.0) This glossary should also contain definitions for the following: result, opinion, conclusion, and interpretation. This glossary should be included in the report or posted on line with a link provided in the report. The applicable SOP's should be referenced and readily available electronically (derived from the NCFS Directive on Transparency of Quality Management Documents 2016).	
MATERIALS & METHODS	Identification of method(s) and process(es) used (many standards and guidance documents). Identification of methods and~~/or~~ processes must include: identification of test methods used (e.g. ASTM E1967, SWGFAST Standard for Friction Ridge Detail Imaging (Latent/Tenprint), ver. 1.1 , Opioid Quantitation and Confirmation by GCMS); and generic class and type of instrumentation used (e.g. elemental analysis by inductively coupled plasma mass spectrometry (ICP-MS). A brief description of the method(s) or process(es) validated parameters and limits in forensic application A description of and unambiguous identification of the item(s) tested/compared or calibrated (derived from ISO/IEC 17025 5.10.2f) Condition of item(s) tested/compared (derived from ISO/IEC 17025 5.10.2f) ~~Where necessary for the interpretation of test results~~, All deviations from, additions to, or exclusions from the test method, and information	

Categories	Report	Case Record
	of specific test conditions, such as environmental conditions should be noted (ISO/IEC 17025 5.10.3.1). ~~Where necessary for the interpretation of test results and where relevant,~~ A statement of compliance/noncompliance with requirements and~~/or~~ specifications (ISO/IEC 17025 5.10.3.1b). A statement as to whether any individual characteristic database data searches were conducted in an attempt to identify the source of an item, which databases were searched (including private, *ad hoc*, or government databases) and a summary of the results. (derived from SWGFAST 2.9.5). Reference to sampling plan and procedures used by the FSSP or other body ~~where these are relevant to the validity or application of the results~~ (ISO/IEC 17025 5.10.2h). The results of sampling including: ~~Test reports containing the results of sampling shall include the following, where necessary for the interpretation of the results: the date of sampling~~; an unambiguous identification of the items sampled; ~~the location of the sampling;~~ details of the environmental conditions during sampling that may affect the interpretation of the test results; any standard or other specification for the sampling method or procedure; and deviations, additions, exclusions from the specification concerned. (ISO/IEC 17025 5.10.3.2)	All deviations should be explained in detail in the case record. All steps that were repeated or samples that were redone should be explained. All data derived from the initial steps or samples should be maintained. All noncompliance with requirements and specifications should be explained in detail in the case record. Details on which individual characteristic databases were searched and the results. Details on which reference collections were searched and the results. Information relating to the date(s) and location(s) of sampling should be maintained in the case record.
DATA, OBSERV & RESULTS	Examination(s) conducted and results (many standards and guidance documents). (SWGMAT 4.5.5). This should include a description of results, including the underlying data or a description of the underlying data and observations that will form the bases of any conclusions, opinions or interpretations reported.	The laboratory should retain records of original observations, derived data and sufficient information to establish an audit trail, calibration records, staff records and a copy of each test report or calibration certificate issued, for a defined period. The records for each test or calibration should contain sufficient information to facilitate, if possible, identification of factors affecting the uncertainty and to enable the test or calibration to be repeated under conditions as close as possible to the original. (ISO/IEC 17025 4.13.2.1)

Categories	Report	Case Record
		Specific features relied upon when making an association (NIST NIJ 5.3.7) should be documented. All work-product, including notes, produced during the examination, testing, or comparison should be maintained.
	Statistical analyses and conclusions and their probative value including statements of the uncertainty or estimate of variability associated with them. ~~Statistical analysis associated with the conclusions if they are known, and confidence intervals if used~~ (SWGANTH 4.1.3, FBI QAS 11.2.6)	All calculations used should be detailed in the case record along with all data, notes, electronic images and observations resulting from the examination (SWGMAT 4.5.5). Case specific calibration and quality assurance data (SWGMAT 4.5.4).
CONCLUSIONS,OPINIONS, INTREP & DISCUSSION	~~Where necessary for the interpretation of test results and where appropriate and needed,~~ All conclusions/opinions/interpretations (ISO/IEC 17072 5.10.3.1d and 5.10.5) ~~When included,~~ Conclusions/opinions/interpretations should be clearly marked as such in a test report. (ISO/IEC 17025 5.10.5) If a report contains the conclusions/opinions/interpretations of more than one person, the conclusion/opinion/interpretation will be attributed to the person who generated them (derived from ASTM E620-11 4.2.2) ~~An explanation of the significance of an association including qualifying statements and/or limitations.~~ (ASCLD/LAB Supplemental 5.10.3.5, SWGANTH 4.1.4, SWGFAST 3.13, SWGFEX 6.2, SWGMAT 4.3). ~~Where necessary for the interpretation of test results and where applicable, a statement on the estimated of measurement.~~ (ISO/IEC 17025 5.10.3C). All quantitative results should include the estimated uncertainty or estimate of variability. All comparison or qualitative results should	

Categories	Report	Case Record
	include statements of possible sources of error[7] and limitations in the method, data, or conclusions.	
	When no definitive conclusions can be reached, the report should clearly communicate the reason(s) (ASCLD/LAB Supplemental 5.10.3.7) "Inconclusive" or "no value" results must be accompanied by an explanation why no ultimate determination could be made.	All supporting data for the determination that no definitive conclusions can be reached.
	Disagreements between examiners occurring during verification (however named) and/or review regarding the reported conclusion(s) should be noted in the report. ~~will be disclosed. A statement such as, "A disagreement occurred between examiners about the reported conclusion. Notes documenting the nature of the disagreement and its resolution can be found in the case records" should be included in the report when a disagreement has occurred~~ (Epstein, NIST NIJ 5.3.5). Disagreements that end in a "no resolution" should be detailed in the report. Disagreements that end in a "resolution" should be noted in the report and documented in the case record.	All disagreements should be documented and all documentation relating to a disagreement and the resolution should be maintained in the case record.
		All information (data, results or facts) relating to the investigation know to the examiner that are not based on observation(s) of the examiner should be identified and maintained in the case record. ~~Identification of data and facts not based on observation by the expert~~ (i.e. eyewitness descriptions of suspects, or results of other testing) (ASTM E620 4.2.2, NIST-NIJ 5.3.5, NAME Checklist F3e).

[7]"Error" refers to uncertainty in measurement and should not be confused with "mistake" (for example, mislabeling evidence).

Categories	Report	Case Record
		All communications with investigators or parties should be documented and maintained in the case record.
LITERATURE CITED	If references were used to augment the examiner's knowledge or to render an opinion, citations should be in the report or maintained in the case record (SWGMAT 4.5.7).	Citations to references used to augment the examiner's knowledge or to render opinions (unless cited in the report) (SWGMAT 4.5.7).

APPENDIX C

- National Research Council of the National Academy of Science, Strengthening Forensic Science in the United States: A Path Forward.
- International Organization for Standardization and International Electrotechnical Commission (ISO/IEC) ISC/IEC 17025:2005(E), General requirements for the competence of testing and calibration laboratories.
- ISO/IEC 17020:2012(E), Conformity assessment – Requirements for the operation of various types of bodies performing inspection.
- International Laboratory Accreditation Cooperation (ILAC) ILAC-G19:2002, Guide 19, Guidelines for Forensic Science Laboratories.
- American Association for Laboratory Accreditation (A2LA), R221: Specific Requirements: Forensic Examination Accreditation Program – Testing.
- ASCLD/LAB-*International*, Supplemental Requirements for the Accreditation of Forensic Science Testing Laboratories.
- Forensic Quality Services, American National Standards Institute-American Society for Quality (FQS ANSI-ASQ) FQS ANSI-ASQ Document 11, ISO/IEC 17025 Accreditation and Supplemental Requirements for Forensic Testing, including FBI QAS.
- Laboratory Accreditation Bureau (LAB), Program Requirements Forensic Science Laboratory Accreditation Program, LABRP 413.
- American Society for Testing and Materials (ASTM) International, Standard Practice for Reporting Opinions of Scientific or Technical Experts, E620-11.
- ASTM International, Standard Practice for Quality Assurance of Laboratories Performing Seized-Drug Analysis, E2327 – 10.
- Federal Bureau of Investigation (FBI) Quality Assurance Standards for Forensic DNA Testing Laboratories.
- Scientific Working Group for Anthropology (SWGANTH), Documentation, Reporting and Testimony.
- Scientific Working Group for the Analysis of Seized Drugs (SWGDRUG), Recommendations.
- Scientific Working Group on Friction Ridge Analysis, Study, and Technology (SWGFAST), Standard for Reporting Friction Ridge Examinations (Latent/Tenprint).
- Technical Working Group for fire and Explosions (TWGFEX), Standard Guide for Fire Debris Report Writing.
- Scientific Working Group for Materials Analysis (SWGMAT), Expert Reporting Guideline.
- National Institute of Standards and Technology (NIST) and National Institute of Justice (NIJ) Expert Working Group on Human Factors in Latent Print Analysis, Latent Print Examination and Human Factors: Improving the practice through a Systems Approach.
- National Association of Medical Examiners (NAME), NAME Inspection and Accreditation Checklist, Second Revision.
- NAME, Forensic Autopsy Performance Standards.