

OSAC 2025-S-0020

Standard for the Review of Case Records in the Firearms and Toolmarks Discipline

Firearms & Toolmarks Subcommittee
Physics/Pattern Interpretation Scientific Area Committee (SAC)
Organization of Scientific Area Committees (OSAC) for Forensic Science



DRAFT OSAC Proposed Standard

OSAC 2025-S-0020 Standard for the Review of Case Records in the Firearms and Toolmarks Discipline

Prepared by
Firearms & Toolmarks Subcommittee
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Foreword

The standard establishes requirements for conducting reviews of case records as a quality assurance measure prior to the issuance of reports within the firearms and toolmarks discipline.

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Keywords: *case record review, technical review, administrative review*

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Standard for the Review of Case Records in the Firearms and Toolmarks Discipline

1 Scope

This standard provides requirements for conducting reviews of case records as a quality assurance measure prior to report issuance within the firearms and toolmarks discipline. This document does not address the verification of conclusions through the (re)examination of evidence. This standard is designed to ensure a thorough and systematic review in support of a robust quality assurance program.

2 Normative References

There are no normative reference documents.

3 Terms and Definitions

For the purposes of this document, the following definitions apply.

3.1

administrative review

An evaluation of the report and supporting documentation for consistency with laboratory policies and for editorial correctness.

3.2

case record

A type of file (electronic or hard copy) in which all documentation and case-relevant information is kept and maintained. This may include but is not limited to the draft report, final report, notes, data, database search results, photographs, and logs.

3.3

competence/competent

The demonstrated and documented ability of an individual to perform assigned work in a discipline or subdiscipline, in accordance with a laboratory's technical procedures and training manuals.

3.4

forensic science services provider (FSSP)

An organization or individual that provides forensic science services.

3.5

technical review

A qualified second party's evaluation of reports, notes, data, and other documentation to ensure there is appropriate and sufficient support for the actions, results, conclusions, opinions, and interpretations.

3.6**verification**

An independent examination by one or more examiners to ascertain if a decision, conclusion, or opinion is reproduced or is in conflict with the decision, conclusion, or opinion of another examiner.

4 Requirements**4.1 Technical Review****4.1.1 Extent of Technical Review**

All case records involving source conclusions shall be subjected to technical review prior to issuance of a report. If a less-than-100% technical review is conducted for all other types of analyses, the FSSP shall have a policy, based on a risk assessment, that requires the technical review of a representative sample of case records.

4.1.2 Qualifications of Technical Reviewer

The individual conducting the technical review shall be competent to perform the type of testing that is being reviewed and shall be authorized by the FSSP to perform technical reviews.

An individual shall not serve as the technical reviewer of their own work. Whenever practicable, the primary examiner should not select their own technical reviewer. Assignment may depend on factors such as staff size and availability, potential conflict of interest, potential for confirmation bias by any staff members due to known exposure to task-irrelevant case information, or other needs and requirements of the FSSP.

4.1.3 Technical Review Procedure

A technical review shall include a review of all technical records, including the report, examination records, analytical data, photographs, and any other records or documents that form the basis for conclusions. These records are reviewed to ensure the following:

- All relevant policies and procedures were applied appropriately.
- The technical records are such that another reviewer possessing the relevant knowledge, skills, and abilities could evaluate what was done and interpret the data.
- There are no additional tests within available resources, which, if performed, would significantly improve the nature of the information obtained or better support the conclusions.
- Results, opinions, and interpretations are accurate, reasonable, and supported by the documented data.
- Results, opinions, and interpretations are properly qualified in the report.
- All appropriate examination records are present.
- All relevant items have been examined.

- All items examined are reflected in the report.
- All data was accurately transferred and calculations checked, if applicable.
- Any required quality control checks have been satisfactorily performed.
- All report wording is in accordance with policies and procedures.
- Any required verifications have been completed, and the verifier's results are concordant with the primary examiner's results.
- Any deviations to the test method, policy, or procedure are approved and recorded.

4.2 Administrative Review

4.2.1 Extent of Administrative Review

The FSSP shall determine the extent of administrative review. If a less-than-100% administrative review is conducted, the FSSP shall have a policy, based on a risk assessment, that requires the administrative review of a representative sample of case records.

4.2.2 Qualifications of Administrative Reviewer

The individual conducting the administrative review shall be authorized by the FSSP to conduct administrative reviews. An individual shall not serve as the administrative reviewer of their own work.

4.2.3 Administrative Review Procedure

An administrative review shall include a review of the case record, including the report, to ensure the following:

- The agreed-upon examinations were performed.
- The chain of custody is documented for all evidence examined.
- The reported results are clearly communicated and unambiguous.
- The report is free of grammatical and typographical errors.
- Any corrections/additions are correctly applied in accordance with laboratory policy.
- All required handwritten or electronic signatures, initials, personal identifiers, and dates are present.
- Case identifiers, item identifiers, dates, and names are consistent with the information provided with the case.
- All evidence item identifiers and results are correctly transcribed from the case record to the report.

FSSPs may choose to incorporate administrative review elements into the technical review process rather than conduct a separate administrative review.

4.3 Resolution of Disagreements or Potential Nonconformities

FSSPs shall have a procedure for the resolution of disagreements or potential nonconformities discovered during technical or administrative reviews. This procedure shall specify when the

144 case examiner and reviewer can discuss a disagreement or nonconformity and attempt to
145 resolve it, as well as when it must be reported to FSSP management.

146 Changes to the case record that affect conclusions or result from interpretational discrepancies
147 shall be accompanied by a description of the reason(s) for the change(s).

148 This standard does not address any resulting quality assurance measures that may be
149 implemented.

150 **4.4 Documentation of Technical and Administrative Review**

151 FSSPs shall have a procedure for documenting technical and administrative reviews. At a
152 minimum, this procedure shall require the documentation of the identity of the reviewer(s) and
153 the date the reviews were finalized.

154 FSSP Management should consider utilizing checklists to aid in the Technical and Administrative
155 Review processes to ensure all applicable aspects of these processes are performed. See
156 Annexes A and B.

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157 **Annex A**

158 (Informative)

159 **Sample Administrative Review Checklist**

160 The items on this sample checklist were taken from Section 4.1.3 of this document. FSSPs are encouraged to
161 develop a checklist that best fits their workflow and includes any additional requirements specific to the FSSP.

162 A technical review shall include a review of all technical records, including the report, examination records,
163 analytical data, photographs, and any other records or documents that form the basis for conclusions. These
164 records are reviewed to ensure that:

165	<u>YES</u>	<u>NO</u>	<u>N/A</u>	<u>REQUIREMENT</u>
166	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All relevant policies and procedures were applied appropriately
167	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The technical records are such that another reviewer possessing the relevant
168				knowledge, skills, and abilities could evaluate what was done and interpret the data
169	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are no additional tests within available resources, which, if performed, would
170				significantly improve the nature of the information obtained or better support
171				the conclusions
172	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Results, opinions, and interpretations are accurate, reasonable, and supported by the
173				documented data
174	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Results, opinions, and interpretations are properly qualified in the report
175	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All appropriate examination records are present
176	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All relevant items have been examined
177	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All items examined are reflected in the report
178	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All data was accurately transferred and calculations checked, if applicable
179	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Any required quality control checks have been satisfactorily performed
180	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All report wording is in accordance with policies and procedures
181	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Any required verifications have been completed, and the verifier's results are
182				in accordance with the primary examiner's results
183	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Any deviations to the test method, policy, or procedure are approved and recorded

184 Technical Reviewer: _____ Date: _____

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Annex B

(informative)

Bibliography

Sample Administrative Review Checklist

The items on this sample checklist were taken from Section 4.2.3 of this document. FSSPs are encouraged to develop a checklist that best fits their workflow and includes any additional requirements specific to the FSSP.

An administrative review shall include a review of the case record, including the report, to ensure that:

<u>YES</u>	<u>NO</u>	<u>N/A</u>	<u>REQUIREMENT</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The agreed-upon examinations were performed
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chain of custody is documented for all evidence examined
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The reported results are clearly communicated and unambiguous
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The report is free of grammatical and typographical errors
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Any corrections/additions are correctly applied in accordance with laboratory policy
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All required handwritten or electronic signatures, initials, personal identifiers, and dates are present
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Case identifiers, item identifiers, dates, and names are consistent with the information provided with the case
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All evidence item identifiers and results are correctly transcribed from the case record to the report

Administrative Reviewer: _____ Date: _____