



Standards
Gunshot Residue Examination
(011.1 – 011.2)

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Part I. General Introduction to Standards

§ 1. Background to and aim of the Standards

Reporting forensic experts play a crucial role in the administration of justice. The NRGD aims to ensure justified confidence in forensic expertise for stakeholders. This confidence must be based on the demonstrable independently safeguarded quality of forensic investigators and their reports on the basis of (inter)national forensic-specific standards.

The NRGD is managed by the Court Experts Board (hereinafter: Board). The Board has the legal duty to manage a public register of forensic experts who do comply with the Board's registration requirements. The registration requirements have been laid down in concordance with the field of expertise and have been demarcated in specific Standards per field of expertise. This is important in order to inform applicants, assessors and users of the register (e.g. judge, public prosecutor and attorney) about the activities an expert in the field of expertise in question engages in and about the activities that fall outside the field of expertise. The demarcation of the field of expertise is set out in Part II of these Standards.

The Board also determines the criteria on the basis of which an assessment is made for each field of expertise as to whether an application complies with the quality requirements. The generic requirements are set out in the Register of Court Experts in Criminal Cases Decree (Besluit register deskundige in strafzaken). These requirements are elaborated further for each field of expertise. This elaboration is set out in Part III of these Standards.

Furthermore, the Board determines the assessment procedure. This procedure is described in Part IV of these Standards.

The NRGD has a system of periodic repeat registration. Court experts must demonstrate every five years that they still meet the requirements in force at that time. The Standards are dynamic and are being developed further in order to enhance the quality of the experts. These Standards set out the current state of the (sub-)field of expertise.

§ 2. Types of applications

The NRGD distinguishes two types of applications: the application for initial registration and the application for reregistration. The application for initial registration is submitted by an expert who at the time of submission of the application is not yet registered in the register for the field of expertise to which the application relates. The application for reregistration is submitted by an expert who is already registered in the register for the field of expertise to which the application relates.

These two types of applications are subdivided as follows:

Application for initial registration:

- (i) independent expert: an expert who has independently written and signed the required number of case reports;

- (ii) expert without work of his own: an expert who has not independently written and signed the number of case reports required for registration.
If the assessment is favourable, the expert without work of his own will only qualify for provisional registration.

Application for reregistration:

- (i) after full registration;
(ii) after provisional registration.

The application for initial registration is submitted by an expert who at the time of submission of the application does not have an NRGD registration. This might be:

- the independently reporting expert;
- the newly-trained expert;
- the expert whose earlier application has been rejected by the Board;
- the expert whose registration was previously stricken.

In respect of applications for initial registration, it is necessary to make a clear distinction between the independent expert and the expert without work of his own. An example of an expert without work of his own is the newly-trained expert. This expert has completed the forensic training (training on drawing up forensic reports), but has not yet been able to independently write the number of reports required for the assessment because these are written under the supervision of a tutor during the training. Another example of an expert without work of his own is the expert whose earlier application was rejected and who has been working (partly) under supervision following this rejection.

The Board adopts the following principle. Every applicant must draw up a List of Case Information. This list must include a specific number of cases in a period specified by the Board immediately preceding the application. If the List of Case Information includes one or more cases which have been prepared under supervision, the applicant will be qualified as an 'expert without work of his own'. Additional requirements apply to the applicant whose application was rejected earlier: the case reports must have been drawn up after the date of the Board's decision rejecting the earlier application (Policy Framework for Application after Rejection).

The distinction between the various types of applications for reregistration is important in the context of the assessment procedure, e.g. the documents an expert must submit, the composition of the Advisory Committee for Assessment and the assessment method.

§ 3. Justification of Standards

The draft of these Standards has been published on the NRGD website for public consultation. These Standards have been established by the Board in accordance with the Register of Court Experts in Criminal Cases Decree (Besluit register deskundige in strafzaken) and the Experts in Criminal Cases Act (Wet deskundige in strafzaken).

§ 4. Validity of Standards

The Standards are valid from the date shown on the cover. The validity runs until the moment of publication of a new version. In principle it will be checked annually as being up-to-date. This check can lead to a new version. The aim is to publish the new version

no more than once a year. Intermediate alterations can be incorporated in an addendum, which will be published on the NRGD website as well.

§ 5. Version management and formal revision history

All changes made to the Standards lead to a new version. Newer versions of (parts of) the Standards are designated with a higher version number.

5.1. Version management

In the case of editorial changes, the version number is increased by 0.1. Editorial changes have no substantive impact. In the case of substantive changes, the version number is increased by 1.

5.2. Formal revision history

The revision history starts with version 1.0 as the first formally approved version. Substantive changes made are briefly described in the revision history (Annex C). This makes it possible to trace which Standards are valid at any given moment at all times.

Part II. Demarcation of Gunshot Residue Examination

§ 1. Introduction

The 'Gunshot Residue Examination' field of expertise (further: GSR examination) relates to the examination of the materials produced when a firearm is discharged. It also examines the impact of fired bullets on objects. A firearm (and the suitable cartridges) is capable of accelerating one or more projectiles (also referred as 'bullets') or merely of producing a bang. Firearms use a chemical process through the ignition of a propellant charge and are provided with a combustion chamber and a barrel. A fired bullet can cause multiple damages in objects and persons.

The field of expertise relates to the examination of particles that are expelled from a fired firearm (ballistics of small objects) and on the deposited material surrounding damage caused by a projectile passing through an object such as the human body. The field of expertise also relates to the examination of the morphology of damages produced by bullets. Shooting incidents involving munitions other than the ordinary unit cartridge (for example, propellant, primer and projectile separated) are included as well.

The following disciplines can be distinguished within the field of expertise:

- the presence and distribution of GSR particles;
- the nature of damages and injuries, firing direction and firing distance (ballistics of small objects);
- comparison of GSR particles;
- determination of shooting distance and directions.

§ 2. Core activities

Experts within the GSR examination field of expertise deal with particles formed through the rapid cooling of the discharge gases and solid matter. These particles originate both from partially reacted components of the primer and propellant, and from the metallic components of the ammunition and firearm.

Activities that fall within the GSR examination field of expertise are:

- analysis of samples e.g. from the hands of suspects, weapons, clothing, furniture and other items for the presence of GSR particles and the differentiation between GSR particles and any environmental particles like fireworks, brake pads, etc.;
- GSR comparison studies in order to obtain more information on the origin of the GSR particles;
- assisting with and advising on crime scene examination and crime scene processing, in particular selection of items and sampling;
- determination of shooting distance by examining pieces of evidence such as clothing of victims;

- determining damage and shooting direction in order to establish the relative positions of the victim (or object) and shooter;
- performing scientific testing with experimental setups to examine shooting incident hypotheses.

§ 3. Methodology

The applicant is able to adopt different sampling- and measuring techniques in Gunshot Residue examinations in order to answer legal questions in the field of expertise.

Different measuring techniques are:

- SEM/EDX analysis;
- chemical coloring techniques of the different gunshot particles;
- X-ray fluorescence spectroscopy.

The applicant makes a final report including an interpretation of findings within the context of the case and is able to conduct the examination in cooperation with other experts (e.g. Forensic Weapon and Ammunition Examination, Forensic Pathology, Explosions and Explosives Examination).

§ 4. Boundaries of the field of expertise

Some activities of the GSR examination field of expertise show an overlap to a certain extent with other fields of expertise, but for all fields specific knowledge and experience are needed that set experts within these fields apart from each other. The expert in GSR examination is aware of the possibilities and restrictions of his fields of expertise in relation to other fields of expertise, as mentioned below.

Crime scene examination

The crime scene investigator searches, describes, records, interprets and secures marks and carriers of marks on and around the crime scene. The crime scene investigator is concerned with:

- determining the approach of sample collection;
- determining the approach of the technical examination,
- proposing possible hypotheses and/or scenarios;
- determining potential forensic follow-up examinations.

The expert in GSR Examination can assist and advise the police on site in these activities.

Forensic Weapon and Ammunition Examination

The Forensic Weapon and Ammunition field of expertise is concerned with:

- comparative bullet and cartridge case examination;
- weapon-technical examination for the purpose of reconstruction;
- forensic ballistics examination (exterior ballistics).

Forensic Pathology

The tasks of a forensic pathologist are:

- to establish the cause and mechanism of death (including trigger and pre-existing pathology);
- to establish or to help establish the identity of the deceased;

- to establish or to help establish the nature, cause and consequences of any injuries;
- to establish or to help establish the manner of death.

Explosions and Explosives Examination

Explosions and explosives incidents differ from shooting incidents. The Explosions and Explosives field of expertise primarily deals with the following examinations:

- examination of intact factory produced and improvised explosive constructions;
- identification of intact presumably explosive substances and possible raw materials for explosives;
- research of explosions.

§ 5. Registration

5.1. Registration

The register will record the name of the relevant expert as an expert in the field of GSR Examination.

5.2. Defined subfields

Experts in the field of GSR Examination have a shared knowledge of the process of production and distribution of materials that are produced when a firearm is discharged.

The following subfields of GSR Examination field of expertise are distinguished in the register:

- 011.1 Gunshot Residue Examination - Instrumental analysis and interpretation
- 011.2 Gunshot Residue Examination - Shooting distance and directions

When submitting a request for registration, the expert must stipulate which specific subfield(s) are being applied for and they will be assessed accordingly by the NRGD.

5.3. The subfields further explained

011.1 Gunshot Residue Examination - Instrumental Analysis and Interpretation

The expert in the subfield of Instrumental Analysis and Interpretation is concerned with the following activities:

- identifying the presence and distribution of GSR particles on samples, by instrumental analysis;
- comparison of GSR particles to reference samples from spent cartridges in order to obtain more information on the origin of the GSR particles;
- examination of particle residue produced by ammunition;
- interpreting the analytical results in the context of the case.

011.2 Gunshot Residue Examination – Shooting distance and directions

The expert in the subfield of Shooting distance and direction has demonstrable knowledge of the work executed by the expert in GSR Examination - Instrumental Analysis. Furthermore, a GSR Examination expert Shooting distance and direction is concerned with the following activities:

- determination of shooting distance by examining pieces of evidence such as clothing of victims;
- determining damage and shooting direction in order to establish the relative positions of the victim (or object) and shooter;
- performing scientific testing with experimental setups to examine shooting incident hypotheses.

Part III. Registration requirements for GSR Examination

The general (repeat) registration requirements are given in the next paragraphs in italics with a reference to Article 12 paragraph 2 in the Register of Court Experts in Criminal Cases Decree (Besluit register deskundige in strafzaken).

An expert will only be registered as an expert in criminal cases upon submission of the application if, in the opinion of the Board, the expert:

- a. has sufficient knowledge and experience in the field of expertise to which the application relates;
- b. has sufficient knowledge of and experience in the field of law concerned, and is sufficiently familiar with the position and the role of the expert in this field;
- c. is able to inform the commissioning party whether, and if so, to what extent the commissioning party's question at issue is sufficiently clear and capable of investigation in order to be able to answer it on the basis of their specific expertise;
- d. is able, on the basis of the question at issue, to prepare and carry out an investigation plan in accordance with the applicable standards;
- e. is able to collect, document, interpret and assess investigative materials and data in a forensic context in accordance with the applicable standards;
- f. is able to apply the current investigative methods in a forensic context in accordance with the applicable standards;
- g. is able to give, both orally and in writing, a verifiable and well-reasoned report on the assignment and any other relevant aspects of their expertise in terms which are comprehensible to the commissioning party;
- h. is able to complete an assignment within the stipulated or agreed period;
- i. is able to carry out the activities as an expert independently, impartially, conscientiously, competently, and in a trustworthy manner.

§ 1. Article 12(2) sub-paragraph a

(...) has sufficient knowledge and experience in the field of expertise to which the application relates.

1.1 Application for initial registration: independent expert

Basic requirements:

- have at least 3 years of relevant work experience at the level of an academic Master's Degree preferably in the field of Chemistry or Physics;
- or
- have at least 5 years of relevant work experience at the level of an academic Bachelor's Degree preferably in the field of Chemistry or Physics;
- and
- be familiar with the summary of concepts and keep abreast of state of the art developments;
 - keep up to date with technological and other developments in the field and taking active steps to maintain competence;
 - be aware of fundamental principles of forensic investigations (e.g. crime scene investigation, chain of custody, principles of evidence);
 - have adequate knowledge of the collection, examination and analysis of data;

- certified knowledge of relevant techniques (e.g. as chemographic methods, scanning electron microscopy and X-ray fluorescence).

Specific requirements:

- have drawn up at least 10 (expert GSR Examination - Instrumental Analysis) respectively 5 (expert GSR Examination - Shooting distance and directions) not older than 5 years which have been subjected to collegial review. These case reports should preferably cover the full spectrum of relevant forensic practice. *In case the applicant is also acting as a supervisor, at least 6 (expert GSR Examination - Instrumental Analysis) and 3 reports (expert GSR Examination - Shooting distance and directions) on the List of Case Information should be independently prepared reports.*
- have spent an average of 40 hours a year over the past 5 years on forensically relevant professional development (e.g. publications, attending conferences, running or attending courses) for one or both subfields;
- working in a laboratory which is accredited to ISO17025 in the methods relevant to the candidates application;
- be aware of possible specific additives in ammunition, for example but not limited to awareness of the use of nationally used police ammunition (elemental compositions, marked and non-marked), the prevalence of such ammunition and the possible consequences when detection particles related to such ammunition (assess issues regarding secondary transfer/contamination).

1.2 Application for initial registration: expert without work of his own

Basic requirements:

- have at least 2 years of relevant work experience at the level of an academic Master's Degree preferably in the field of Chemistry or Physics;
- or
- have at least 3 years of relevant work experience at the level of an academic Bachelor's Degree preferably in the field of Chemistry or Physics;
- and
- be familiar with the summary of concepts and keep abreast of state of the art developments;
- keep up to date with technological and other developments in the field and taking active steps to maintain competence;
- be aware of fundamental principles of forensic investigations (e.g. crime scene investigation, chain of custody, principles of evidence);
- have adequate knowledge of the collection, examination and analysis of data;
- certified knowledge of relevant techniques (e.g. as chemographic methods, scanning electron microscopy and X-ray fluorescence).

Specific requirements:

- have drawn up at least 4 (expert GSR Examination - Instrumental Analysis) respectively 2 (expert GSR Examination - Shooting distance and directions) not older than 2 years which have been subjected to collegial review. These case reports should preferably cover the full spectrum of forensic practice;
- have spent an average of 40 hours a year over the past 2 years on forensically relevant professional development (e.g. publications, attending conferences, running or attending courses) for one or both subfields;

- working in a laboratory which is accredited to ISO17025 in the methods relevant to the candidates application;
- be aware of possible specific additives in ammunition, for example but not limited to awareness of the use of nationally used police ammunition (elemental compositions, marked and non-marked), the prevalence of such ammunition and the possible consequences when detection particles related to such ammunition (assess issues regarding secondary transfer/contamination).

1.3 Application for reregistration: after full registration

Basic requirements:

- be familiar with the summary of concepts and keep abreast of state of the art developments;
- keep up to date with technological and other developments in the field and taking active steps to maintain competence;
- be aware of fundamental principles of forensic investigations (e.g. crime scene investigation, chain of custody, principles of evidence);
- have adequate knowledge of the collection, examination and analysis of data;
- certified knowledge of relevant techniques (e.g. as chemographic methods, scanning electron microscopy and X-ray fluorescence).

Specific requirements:

- have drawn up at least 10 (expert GSR Examination - Instrumental Analysis) respectively 5 (expert GSR Examination - Shooting distance and directions) not older than 5 years which have been subjected to collegial review. These case reports should preferably cover the full spectrum of forensic practice; *In case the applicant is also acting as a supervisor, at least 6 (expert GSR Examination - Instrumental Analysis) and 3 reports (expert GSR Examination - Shooting distance and directions) on the List of Case Information should be independently prepared reports.*
- have spent an average of 40 hours a year over the past 5 years on forensically relevant professional development (e.g. publications, attending conferences, running or attending courses) for one or both subfields;
- working in a laboratory which is accredited to ISO17025 in the methods relevant to the candidates application;
- be aware of possible specific additives in ammunition, for example but not limited to awareness of the use of nationally used police ammunition (elemental compositions, marked and non-marked), the prevalence of such ammunition and the possible consequences when detection particles related to such ammunition (assess issues regarding secondary transfer/contamination).

1.4 Application for reregistration: after provisional registration

Basic requirements:

- be familiar with the summary of concepts and keep abreast of state of the art developments;
- keep up to date with technological and other developments in the field and taking active steps to maintain competence;
- be aware of fundamental principles of forensic investigations (e.g. crime scene investigation, chain of custody, principles of evidence);
- have adequate knowledge of the collection, examination and analysis of data

- certified knowledge of relevant techniques (e.g. as chemographic methods, scanning electron microscopy and X-ray fluorescence).

Specific requirements:

- have drawn up at least 4 (expert GSR Examination - Instrumental Analysis) respectively 2 (expert GSR Examination - Shooting distance and directions) not older than 2 years which have been subjected to collegial review. These case reports should preferably cover the full spectrum of forensic practice; *In case the applicant is also acting as a supervisor, at least 2 (expert GSR Examination - Instrumental Analysis) and 1 report (expert GSR Examination - Shooting distance and directions) on the List of Case Information should be independently prepared reports;*
- have spent an average of 40 hours a year over the past 2 years on forensically relevant professional development (e.g. publications, attending conferences, running or attending courses) for one or both subfields;
- working in a laboratory which is accredited to ISO17025 in the methods relevant to the candidates application;
- be aware of possible specific additives in ammunition, for example but not limited to awareness of the use of nationally used police ammunition (elemental compositions, marked and non-marked), the prevalence of such ammunition and the possible consequences when detection particles related to such ammunition (assess issues regarding secondary transfer/contamination).

1.5 Application after rejection or after legally expired registration

In accordance with the policy framework 'Application after Rejection', registration requirements listed above under *Application for Initial Registration* apply for experts whose registration has been rejected by the Board in an application procedure or for experts whose registration has legally expired within the previous two years. Exclusively reports written after the date of the rejection will be assessed. Additionally, also reports of supervision and/or collegial review will be included in the assessment (see also Part IV).

§ 2. Article 12(2) sub-paragraph b

(...) has sufficient knowledge of and experience in the field of law concerned, and is sufficiently familiar with the position and the role of the expert in this field.

- In general, an applicant should have adequate knowledge of Dutch criminal law:
 - context of criminal law:
 - Trias Politica, distinction between civil law, administrative law and criminal law.
 - criminal law procedure:
 - pre-trial investigation;
 - coercive measures;
 - stages of the proceedings;
 - actors in the criminal justice system (tasks/powers/responsibilities);
 - regulations concerning experts laid down in the Dutch Code of Criminal Procedure (position and powers of commissioning party, legal position of

- expert, position and powers of lawyer, forms of counter-analysis, register of experts in the context of criminal law);
 - legal decision-making framework of the court in criminal cases (decision-making schedule laid down in Section 350 of the Dutch Criminal Code of Procedure), also with a view to the relevance of the commission to the expert and to the question at issue;
 - course of the criminal trial;
 - position of the expert in the court procedure.
 - substantive criminal law:
 - sanctions and grounds for exemption from criminal liability (very basic).
 - knowledge of the legal context of safeguarding the quality of the expert and the analysis/investigation:
 - position and role of the co-operating organisations in the criminal justice system in safeguarding the quality of the reports;
 - professional codes and relevant regulations in relation to the NRGD Code of Conduct.
- In addition to the above requirements, an applicant for the field of expertise GSR Examination:
- should be familiar with the specific Dutch legislation regarding Gunshot Residue Examination and keep abreast of developments in this regard.

§ 3. Article 12(2) sub-paragraph c

(...) is able to inform the commissioning party whether, and if so, to what extent the commissioning party's question at issue is sufficiently clear and capable of investigation in order to be able to answer it on the basis of their specific expertise.

§ 4. Article 12(2) sub-paragraph d

(...) is able, on the basis of the question at issue, to prepare and carry out an investigation plan in accordance with the applicable standards.

§ 5. Article 12(2) sub-paragraph e

(...) is able to collect, document, interpret and assess investigative materials and data in a forensic context in accordance with the applicable standards.

§ 6. Article 12(2) sub-paragraph f

(...) is able to apply the current investigative methods in a forensic context in accordance with the applicable standards.

An applicant should:

- be familiar with the frameworks of the assessment;
- possess general investigative knowledge and skills in the above area;
- possess specific knowledge and skills relating to the question at issue;
- be able to determine which investigative methods should be used and how. An applicant must be able to record, assess and interpret the results. An applicant must have an in-depth knowledge of all methods and be able to explain these methods;

must have knowledge of the state-of-the-art developments within the field of expertise;

- be aware of the possibilities and limitations;
- be aware of the pros and cons of the various techniques, specialisations and scientific methods used in this field, be aware of and able to explain the possibilities and limitations of these techniques, specialisations and methods (e.g. awareness of possible specific additives in police ammunition);
- be aware of the possibility of searching international databases and take advantage of developments in this area.

§ 7. Article 12(2) sub-paragraph g

(...) is able to give, both orally and in writing, a verifiable and well-reasoned report on the assignment and any other relevant aspects of their expertise in terms which are comprehensible to the commissioning party.

An applicant should:

- be able to write a linguistically correct report which is also understandable and readable for laymen, using neutral, not unnecessarily disqualifying formulations;
- be able to apply the principles of the prevailing formats to the structure and layout of the report;
- be constantly aware of the scope of the report when reporting, such as the picture of the investigated person which the report could paint and the consequences of this for the court's decision (e.g. in terms of providing evidence);
- be able to provide clear information on the field of expertise and the findings of the investigation to the legal body that requests them;
- be able to report comprehensively to laymen on an interpretation and conclusion on the basis of the results (both verbally and in writing).

Alongside the required administrative data (name of commissioning party, date of commission, date of report, commissioning party's reference, own reference, number and type of appendices etc.) a report must contain the following elements:

- a description of the materials received, with information about the date and manner of submission, whether originals were received or copies. Any other conditions of the materials that might be relevant for the examination are mentioned as well (e.g. unreported damage to the documents, whether the documents appear to have been treated with chemicals for fingerprint examination);
- specification of questioned and reference material;
- any relevant background information which could influence the interpretation of the investigation findings;
- questions posed by the commissioning party, and where relevant what has been discussed between the commissioning party and the investigator in accordance with article 12 (2) c;
- the hypotheses applied by the investigator;
- the investigation method(s) used;
- the evaluation of the materials under investigation;
- the evaluation of the reference material;
- the results of the examination;

- the interpretation of the results of the examination;
- the conclusions (with the scale used and its explanation).

§ 8. Article 12(2) sub-paragraph h

(...) is able to complete an assignment within the stipulated or agreed period.

§ 9. Article 12(2) sub-paragraph i

(...) is able to carry out the activities as an expert independently, impartially, conscientiously, competently, and in a trustworthy manner.

An applicant should:

- comply with the NRGD Code of Conduct determined by the Court Experts Board and published on the website of the NRGD.

§ 10. Hardship clause

The Board may decide not to apply or deviate from a registration requirement if application of such requirement would produce very unreasonable results. The hardship clause may only offer a solution in certain exceptional situations. It is up to the applicant himself to submit facts and circumstances showing that a certain registration requirement is unreasonable in his specific case.

Part IV. Assessment procedure for GSR Examinations

§ 1. General

In all fields of expertise, the assessment will be based on the written information provided, including as a minimum requirement case reports and items of evidence, supplemented in principle with an oral assessment. However, such an oral assessment will not be necessary if the applicant's expertise has already been clearly demonstrated by the written information.

The assessment will in principle be carried out on the basis of the information provided by the applicant:

- general information as part of the application package;
- documentary evidence of competence.

If it is felt necessary in the context of the assessment an additional case report and/or information, for example information about the way collegial review and/or supervision is organized within the organization, can be requested.

§ 2. Assessment procedure per type of application

2.1. *Application for initial registration: independent expert*

Documents to be submitted:

- (digital) NRGD application form;
- certificate of Good Conduct (not older than 3 months);
- a clearly legible copy of a valid passport or identity card;
- copies of documents relating to the highest level of professional qualification;
- a curriculum vitae (CV), preferably in English;
- a statement concerning the level of accreditation of the applicant's working environment;
- documentary evidence of the current academic working level, and proof of being an expert authorised to sign (if applicable);
- Overview Continuing Professional Development GSR Examination;
- List of Case Information GSR Examination (at least 10 Instrumental Analysis and Interpretation, and 5 Shooting Distance and Directions reports. When several subfields are combined in one case report, it is possible to provide the same case report for different subfields);
- 3 case reports drawn up in the past 5 years selected by the applicant from the List of Case Information GSR Examination. For each subfield the applicant should have at least two case reports. When several subfields are combined in one case report, it is possible to provide the same case report for different subfields. However, also when subfields are combined, an applicant should always provide at least three case reports. If possible, the case reports should also contain the testimony delivered in court;

These case reports should provide a clear and broad picture of the applicant's competencies. Subsequently, only independently written reports can be submitted.

On request:

- proof of the forms of professional development referred to in the Overview Continuing Professional Development GSR.

Assessment method:

phase a. administrative, by the NRGD Bureau;

phase b. substantive, by an Advisory Committee for Assessment (ACA) made up of at least three people on the basis of the available written material, including possible supplementary written information. In principle this ACA consists of a legal assessor and two subject-matter assessors;

phase c. substantive, by the same ACA by means of an oral assessment. This oral assessment will be waived if the applicant's expertise has already been clearly established in phase b;

phase d. decision by the Board: registration, provisional registration or no registration.

2.2. Application for initial registration: expert without work of his own

Documents to be submitted:

- (digital) NRGD application form;
- certificate of Good Conduct (not older than 3 months);
- a clearly legible copy of a valid passport or identity card;
- copies of documents relating to the highest level of professional qualification;
- a curriculum vitae (CV), preferably in English;
- a statement concerning the level of accreditation of the applicant's working environment;
- documentary evidence of the current academic working level, and proof of being an expert authorised to sign (if applicable);
- Overview Continuing Professional Development GSR Examination;
- List of Case Information GSR Examination (at least 4 Instrumental Analysis and Interpretation, and 2 Shooting Distance and Directions reports. When several subfields are combined in one case report, it is possible to provide the same case report for different subfields);
- 3 case reports drawn up in the past 2 years selected by the applicant from the List of Case Information GSR Examination. For each subfield the applicant should have at least two case reports. When several subfields are combined in one case report, it is possible to provide the same case report for different subfields. However, also when subfields are combined, an applicant should always provide at least three case reports. If possible, the case reports should also contain the testimony delivered in court;

These case reports should provide a clear and a broad picture of the applicant's competencies.

On request:

- proof of the forms of professional development referred to in the Overview Continuing Professional Development GSR.

Assessment method:

phase a. administrative, by the NRGD Bureau;

phase b. substantive, by an Advisory Committee for Assessment (ACA) made up of at least three people on the basis of the available written material, including

- possible supplementary written information. In principle this ACA consists of a legal assessor and two subject-matter assessors;
- phase c. substantive, by the same ACA by means of an oral assessment. This oral assessment will be waived if the applicant's expertise has already been clearly established in phase b;
- phase d. decision by the Board: provisional registration or no registration.

2.3. Application for reregistration: after full registration

Documents to be submitted:

- (digital) NRGD application form;
- certificate of Good Conduct (not older than 3 months);
- copies of documents relating to the highest level of professional qualification (if changed);
- an updated curriculum vitae (CV), preferably in English;
- a statement concerning the level of accreditation of the applicant's working environment;
- documentary evidence of the current academic working level, and proof of being an expert authorised to sign (if applicable);
- Overview Continuing Professional Development GSR Examination;
- List of Case Information GSR Examination (at least 10 Instrumental Analysis and Interpretation, and 5 Shooting Distance and Directions reports. When several subfields are combined in one case report, it is possible to provide the same case report for different subfields);
- 2 case reports drawn up in the past 5 years selected by the applicant from the List of Case Information GSR Examination. For each subfield the applicant should have at least two case reports. When several subfields are combined in one case report, it is possible to provide the same case report for different subfields. However, also when subfields are combined, an applicant should always provide at least three case reports. If possible, the case reports should also contain the testimony delivered in court;
These case reports should provide a clear and broad picture of the applicant's competencies. Subsequently, only independently written reports can be submitted.

On request:

- proof of the forms of professional development referred to in the Overview Continuing Professional Development GSR.

Assessment method:

- phase a. administrative, by the NRGD Bureau;
- phase b. substantive, by an Advisory Committee for Assessment (ACA) made up of at least two people on the basis of the available written material. This ACA will in principle consist of a legal assessor and a subject-matter assessor;
- phase c. substantive, by the same ACA to which one subject-matter assessor is added, drawn from the same field of expertise as the applicant, on the basis of the available written material. This will not be necessary if the ACA unanimously gives a positive recommendation to the Board in phase b;
- phase d. substantive, by the ACA specified at phase c by means of an oral assessment. This oral assessment will be waived if the applicant's expertise has been clearly established in phase c;
- phase e. decision by the Board: registration, provisional registration or no registration.

2.4. Application for reregistration: after provisional registration

Documents to be submitted:

- (digital) NRGD application form;
- an updated curriculum vitae (CV), preferably in English;
- a statement concerning the level of accreditation of the applicant's working environment;
- documentary evidence of the current academic working level, and proof of being an expert authorised to sign (if applicable);
- copies of documents relating to the highest level of professional qualification (if changed);
- Overview of Continuing Professional Development GSR Examination;
- List of Case Information GSR Examination, including the checked box at the top of the document declaring compliance with the requirements (at least 4 Instrumental Analysis and Interpretation, and 2 Shooting Distance and Directions reports. When several subfields are combined in one case report, it is possible to provide the same case report for different subfields);
- 2 case reports drawn up in the past 2 years selected by the applicant from the List of Case Information GSR. For each subfield the applicant should have at least 2 case reports. When several subfields are combined in one case report, it is possible to provide the same case report for different subfields. However, also when subfields are combined, an applicant should always provide at least 2 case reports. If possible, the case reports should also contain the testimony delivered in court; *These case reports should provide a clear and broad picture of the applicant's competencies. Subsequently, only independently written reports can be submitted.*

On request:

- proof of the forms of professional development referred to in the Overview Continuing Professional Development GSR.

Assessment method:

phase a. administrative, by the NRGD Bureau;

phase b. substantive, by an Advisory Committee for Assessment (ACA) made up of at least three people on the basis of the available written material. In principle this ACA consists of a legal assessor and two subject-matter assessors;

phase c. substantive, by the same ACA by means of an oral assessment. This oral assessment will be waived if the applicant's expertise has already been clearly established;

phase d. decision by the Board: registration, provisional registration or no registration.

2.5. Application after rejection or after legally expired registration (fast-track)

Documents to be submitted:

- (digital) NRGD application form;
- certificate of Good Conduct (not older than 3 months);
- an updated curriculum vitae (CV), preferably in English;
- a statement concerning the level of accreditation of the applicant's working environment;

- documentary evidence of the current academic working level, and proof of being an expert authorised to sign;
- Overview Continuing Professional Development GSR Examination;
- List of Case Information GSR Examination, exclusively listing reports written after the date of rejection by the Board or the date of the legal expiration (at least 10 Instrumental Analysis and Interpretation, and 5 Shooting Distance and Directions reports. When several subfields are combined in one case report, it is possible to provide the same case report for different subfields);
- 3 case reports drawn up after the date of rejection by the Court Experts Board or the date of legal expiration, selected by the applicant from the List of Case Information. For each subfield the applicant should have at least 2 case reports. When several subfields are combined in one case report, it is possible to provide the same case report for different subfields. However, also when subfields are combined, an applicant should always provide at least three case reports. If possible, the case reports should also contain the testimony delivered in court;
These case reports should provide a clear and broad picture of the applicant's competencies.
- all reports of supervision and/or collegial review related to the submitted case reports.

Assessment method:

- phase a. administrative, by the NRGD Bureau;
- phase b. substantive, by an Advisory Committee for Assessment (ACA) made up of at least three people on the basis of the available written material, including possible supplementary written information. In principle this ACA consists of a legal assessor and two subject-matter assessors;
- phase c. substantive, by the same ACA by means of an oral assessment. This oral assessment will be waived if the applicant's expertise has been clearly established in phase c;
- phase d. decision by the Board: provisional registration or no registration.

Annex A NRGD Glossary

Advisory Committee for Assessment	A committee appointed by the Board which advises the Board on the (repeat) applicant's (degree of) suitability for (repeat) registration.
Applicant	Natural person submitting an application to the NRGD in order to be (re)registered in the register.
Application for initial registration	An expert who submits an application to be entered in the register and does not or not yet have an NRGD registration at the time when the application is made.
Application for reregistration	An application submitted by an expert who at the time of submitting the next application already has a NRGD registration, possibly for a provisional registration.
Assessor	A member of an Advisory Committee for Assessment.
Board	The Court Experts Board is the body as referred to in Section 51k(2) of the Code of Criminal Procedure and is charged with managing the register.
Brdis	Register of Court Experts in Criminal Cases Decree (Besluit register deskundige in strafzaken).
Bureau	The NRGD Bureau that supports the Board.
Collegial review	The assessment of another person's work for the purpose of continuous quality control of a person's expertise. There is thereby not a hierarchical but a horizontal relationship between colleagues specialised in the same subject area. The reviewer does not sign the report.
Continuing professional development	All (training) activities that contribute to the ongoing development of knowledge and skills, which is desirable and necessary in order to be able to continue performing the role of court expert in a professional manner.
Expert	An individual who issues a report for the administration of justice and/or gives testimony in court.
Expert without work of his own	An expert who has not independently completed and signed the number of case reports required for registration.
Forensic training on reporting	A coherent and structured arrangement of organised training activities in which the necessary knowledge and experience are acquired to report as a court expert in criminal law proceedings and that is completed by an exam.

Independent expert	An expert who has independently prepared and signed the required number of case reports
Intervision	A structured (interdisciplinary) meeting between people who are working or training in the same professional area, not being an operations meeting. The subject of discussion is in any case the forensic work carried out and the associated problems. The aim is to enhance the expertise of those involved and improve quality of work. Unlike supervision, there is no hierarchical relationship between the participants.
NRGD	The Netherlands Register of Court Experts of which the Board and the Bureau form part.
Provisional registration	The registration of an expert for a period specified by the Board and possibly under certain conditions which must be met within that period. In principle the period to be specified by the Board is two years.
Register	The national public register as referred to in Section 51 k(1) of the Code of Criminal Procedure, which lists the court experts which the Board deems suitable.
Registered expert	An expert who is entered in the register.
Registration	Entry in the register.
Supervision	The assessment of another person's work, the joint consideration of the work and the supervision of a supervisee as part of a training or additional training process. Supervisor and supervisee are thereby in a hierarchical relationship. The supervisor will observe the subject of the investigation (the investigated person) in such a way that they can check the supervisee's investigation, and can endorse and take responsibility for the conclusions thereof. The supervisor will sign the report in all cases.
User	Someone who uses the register in order to find and potentially engages a registered expert.

Annex B Revision History

Version	Date	Revisions made
1.0	2022	First edition, drawn up from Template Standards version 4.0