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ISO/WD2 14034
Environmental management- Environmental technology verification and performance evaluation

FOLLOW UP

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Environmental management — Environmental Technology Verification and performance evaluation

Management environnemental — Evaluation de la performance et vérification des technologies environnementales

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 14034 was prepared by Technical Committee ISO/TC 207, *Environmental management*, Subcommittee SC 4, *Environmental performance evaluation*.

This second/third/... edition cancels and replaces the first/second/... edition (), [clause(s) / subclause(s) / table(s) / figure(s) / annex(es)] of which [has / have] been technically revised.

Introduction

The objective of Environmental Technology Verification (ETV) is to provide credible, reliable, independent verification of the performance of environmental technologies. ETV contributes to protecting and conserving the environment by developing, promoting and facilitating market uptake of innovative environmental technologies; especially these whose performance goes beyond established norms and standards.

Through the provision of objective evidence, ETV provides independent and impartial confirmation of whether the technical performance claimed by the technology provider in technical specification and other documents is accurate and relevant. “Environmental technology” is defined as products, processes and services that bring an environmental added value and/or measure environmental parameters. These technologies will have an increasingly important role in dealing with environmental challenges. ETV strengthens the market viability of new, innovative technologies by supporting informed decision making among technology users, many of whom are faced with comparing technologies based on many variables in relation to their needs, including technical performance, costs, environmental effects and other relevant factors.

ETV was established in the United States (of America) in 1995. Canada and the European Union were the next to introduce it, followed by Japan, South Korea and the Philippines. The environmental performance of many technologies has been verified in each country under their own ETV programs. Since 2008, the interest of co- and joint verifications of technology performance for the purpose of mutual recognition of ETV programs has increased. In 2008, the International Working Group on ETV (IWG-ETV) was established with an aim of exploring ways to accelerate international harmonization and recognition of ETV programs.

To this end, the IWG reached a consensus that standardization of the ETV process by means of an ISO/ETV standard was the most appropriate way to establish the credibility and robustness of ETV.

The ISO/ETV standard will: (1) specify the principles and requirements for the key processes of the verification procedure and performance parameters to be verified; and, (2) provide guidance for managing and conducting performance verification. The part of the guidance for managing and conducting performance verification of environmental technologies in this standard refer to ISO/IEC 17020:2012, ISO/IEC 17025:2005 in considering convenience for readers. Examples of existing ETV schemes in the countries and region are described in Annex [To be defined – Informative] to apply effectively for reader of this standard.

As with other standards, this standard is not intended to produce a non-tariff trade barrier and to be used to modify or increase the legal obligations of these entities.

Environmental management — Environmental Technology Verification and performance evaluation

1 Scope

This International Standard describes the approach and steps for a verification organization to perform environmental technology verification (ETV). This standard specifies the principles and requirements of the ETV process and provides guidance for managing and conducting performance verification of environmental technologies.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO ab-c:199x, *General title of series of parts — Part c: Title of part*

ISO xyz (all parts), *General title of the series of parts*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply :

3.1
analytical laboratory
test body (3.19) performing the analysis of samples, generally resulting from tests.

[Adapted from Environmental Technology Verification (ET–) - Part–2 - ETV Procedure]

3.2
applicant
legal entity (3.10), which can be the technology manufacturer or an authorised representative of the technology manufacturer, submitting a technology (3.18) that will be verified through an environmental technology verification (3.9) process.

3.3
environmental added value
reduction of the environmental pressure (3.7) or a positive impact on the environment including but not limited to removal, prevention, reduction, mitigation of pollutants released to the environment, restoration of environmental damages or use of natural resources in a more efficient and sustainable manner.

3.4
environmental parameters
all parameters used to measure the environmental pressure (3.7) or impact on the environment.

3.5
environmental performance
performance (3.11) of a technology (3.18) related to the environmental pressure (3.7) or impact on the environment.

[ISO14001]

3.6
environmental performance evaluation
systematic examination of the environmental performance (3.5).

3.7
environmental pressure
human activities directly or indirectly affecting the environment.

[European Commission / Towards environmental pressure indicators for the EU, first edition, 1999 (Eurostat)]

3.8
environmental technology
product (3.14), process (3.13) or service (3.15), that brings an environmental added value (3.3) and/or measures environmental parameters (3.4).

3.9
environmental technology verification
establishment and verification (3.20) of the performance (3.11) of an environmental technology(3.18) by a qualified third party based on test data generated through testing using established protocols or specific requirements.

3.10
legal entity
association, corporation, partnership, proprietorship, trust, or individual that has legal standing in the eyes of law. NOTE: A legal entity has legal capacity to enter into agreements or contracts, assume obligations, incur and pay debts, sue and be sued in its own right, and to be held responsible for its actions.

3.11
performance
measurable effect of a technology (3.18) achieved for its specified application and under specified conditions of use or testing.
NOTE: A performance can be technical (3.17) and/or environmental (3.5).

3.12
performance claim
set of quantified technical specifications representative of the performance (3.11) specified by the applicant (3.2) in order to have its environmental technology (3.8) verified.
[Adapted from General Verification Protocol of the EU ETV pilot programme]

3.13
process
set of interrelated or interacting activities which transform inputs into outputs.

[ISO 17020]

3.14
product
result of a process (3.13).

[ISO 17020]

3.15
service
result of at least one activity necessarily performed at the interface between the supplier and the customer, which is generally intangible.

[ISO 17020]

3.16
stakeholder
representative of a group with an interest in the results of environmental technology verification (e.g. buyer, user, developer, financier, regulator, government, etc.).

3.17
technical performance
performance (3.11) of a technology (3.18) in relation to its purpose.

3.18
technology
product (3.14), process (3.13) or service (3.15) resulting from science that has a practical value.

3.19
test body
legal entity (3.10) responsible for performing and reporting on the testing of environmental technologies (3.8), following the parameters and requirements of a verification plan.

[Adapted from Environmental Technology Verification (ET–) - Part–2 - ETV Procedure]

3.20
verification
confirmation through examination of a given item and provision of objective evidence that it fulfils specified requirements

[ISO VIM]

3.21
verification organization
legal entity (3.10) that performs environmental technology verifications (3.9).

3.22
verification plan

a detailed planning document for implementation of the verification process elements including description of the essential requirements for the test design and data quality of the technology being verified, for the additional tests to be performed if required after assessment of existing data.

[Adapted from General Verification Protocol of the EU pilot programme]

3.23
verification report
document describing all steps of an environmental technology verification (3.9), including the context, description of the environmental technology, verified performance parameters in relation to the performance claim (3.12), verification plan (3.22) and test results.

3.24
verification statement
document confirming the verification of an environmental technology(3.8) including the verified performance parameters and environmental added value, a summary of the verification report (3.23) and all relevant additional information.

3.25
[client (to be defined)]

4 Principles of E.T.V

4.1 General

Environmental technology verification is based upon a number of principles to ensure the reported data, information and related disclosures are free from material discrepancy, avoid bias in their selection and presentation, provide a credible and balanced account, and are capable of being depended upon by intended users and other interested parties.

When conducting environmental technology verification, the verification organization shall apply the following principles in validating, verifying and reporting verifications.

4.2 Independence

To be determined

4.3 Ethical conduct

To be determined

4.4 Confidentiality

To be determined

5 Overview of E.T.V Process

5.1 General

The verification of the performance claim of an environmental technology is done through a process that is administered by a verification organization.

The process shall include at least the following elements:

- application
- application review
- contract review
- initial assessment of the technology to establish its relevance and eligibility of verification
- definition of the **performance claim** including parameters to be verified
- development of a **verification plan** (protocol)
- assessment of existing test data
- test planning if the existing test data does not meet the test requirements
- testing
- development of a test report
- assessment of all data and verification
- reporting
- publication
- post-verification

Note: The sequence of how the elements of the ETV process are executed is not predetermined and may depend on the individual ETV schemes.

5.2 Main processes and elements of ETV

The following table 1 provides the five main processes and related elements in a typical ETV process, from: 1. Application, 2. Pre-verification, 3. Verification, 4. Post-verification, and 5. Re-verification. .

Key processes	Element	Purpose	Responsible
1. Application (section 6.1)	**Process and procedures outlining the application administrative review to establish that a complete application against requirements (administrative, technical, legal, fee and others) have been submitted and accepted**	To ensure that the applicant has completed the application as per specified requirements, to be accepted/not accepted or requesting additional information for clarification and completion of application.	Verification Organization
	Process and procedures outlining the initial assessment of the technology to establish its relevance and eligibility for verification	To establish the relevance and eligibility of the technology for verification, including performance claim, any conditions or constraints. Define the scope of the verification.	Verification Organization
	Process and procedures outlining to ensure the assignment of a competent verification organization team to carry out the verification activity.	To assign a competent verification organization Team to conduct the verification based on the scope of application and verification activities.	Verification Organization
2. Pre-verification (planning)(section 6.2)	**Process and procedures outlining the specification of verification parameters**	Validate the performance parameters and the values of those to be verified including any operational constraints or other relevant additional parameters in consultation with the applicant.	Verification Organization/Applicant
	Process and procedures outlining the establishment of the verification plan	Develop a detailed verification planning document to implement the elements of the verification process including definition of the data and data quality required to meet the performance parameters	Verification Organization
3. Verification (3 stages) (section 6.3)	**Stage 1: Process and procedures for assessment of existing data**	Assess any existing data submitted by the applicant that can be used to fulfill the data requirement specified in the completed verification planning document (protocol).	Verification Organization
	Stage 2: Process and procedures for Testing to produce new data.	If existing data is not available or acceptable, a test plan is developed and testing is performed to produce the	Testing Body/Applicant

		needed data in a form of test report as specified in the verification planning document..	
	Stage 3: Process and procedure for the assessment of all data and final verification	Analysis and assessment of all data on the parameters against the verification parameters of the technology	Verification Organization
	Process and procedure for reporting and Verification Statements development	Development of a verification report and/or a verification statement	Verification Organization
4. Post-verification (section 6.4)	**Process and procedures for review and approval of verification of specific technology.**	To conduct an administrative review of the verification plan, report/statement, against the verification organizations procedures and requirements. This to approve or not approve the verification.	Verification Organization
	Process and procedure for publication of verification results	If approved, the publication of a verification statement and report, if relevant. Verification will be included in a publically available directory (e.g. website)	Verification Organization
	Process and procedure to ensure the validity of the verification results	The applicant client is required to notify the verification organization on any changes in the conditions of the performed verification Verification organizations will have to assess and evaluate the submitted changes to determine whether the conditions are changing the currently verified technology. If changes are found and are impacting the current verification, the verification organization will require the applicant to proceed with re-verification of its technology in step 5 below. (note: client may choose to withdraw its verification status at this time).	Applicant/Verification Organization
5. Re-verification (section 6.5)	**Process and procedure to ensure that the verified technology/system is conforming to verification organization requirements.**	If conditions for the performed verification have changed, a re-verification shall be required and follow steps 1-4 above.	Verification Organization

Table 1 — Steps in a typical ETV process.

6 Verification Process

This section outlines the five key processes that constitute the verification procedure outlined in section 5.2 table above. The key processes are: Application (6.1), Pre-verification (6.2), Verification (6.3), Post-verification (6.4), and Re-verification (6.5).

6.1 Application Process

The requirements in this section shall be documented in processes and procedures by the verification organization.

6.1.1 Application requirements

The verification organization shall require the applicant to provide the applicable information to establishing:

a) legally enforceable agreement between the applicant organization and the verification organization;

b) the scope of the technology and related verification;

c) information about applicant organization, including its name and the address(es) of its physical location(s), and any relevant legal obligations;

d) information concerning all outsourced processes used by the applicant that will affect conformity to verification plan (protocol);

e) the standards or other requirements for which the applicant is seeking verification;

The verification organization will ensure the requirements for verification are clearly defined and documented, and have been provided to the applicant

6.1.1.1 Description of the technology

The applicant shall provide a general description of the technology to be verified as follows, but not limited to:

a) information that clearly describes the technology, including its benefits and limitations;

b) state of the technology: on shelve equipment or prototype / (readiness for the market),

c) market sector targeted and relevant alternatives when applicable,

d) information about intended application and function of the technology (e.g. in terms of matrix understood as the type of material that the technology is intended for and purpose understood as the environmental medium, physical, biological or chemical property that is affected by the technology, the way it is affected and the parameters which are to be used to monitor this effect on the target)

e) description of the needs of users;

f) any regulatory, statutes, technical standards constraints on the use of the technology;

Note: the benefits and limitations will provide useful information on the performance of the technology, for both the intended users and the stakeholders with an interest in the verification report and/or verification statement if relevant.

g) Any information relevant to understanding the operation and performance of the technology including constraints and limitations;

h) claimed technical performance on the technology expressed by means of:

i. quantified parameters;

ii. measurable through testing and specific to the technology; and,

iii. any qualitative measures if applicable.

i) claimed environmental performance of the technology expressed as environmental added value, negative and positive impacts, and any other information applicable;

j) any other information relevant for the user of the technology including non-verifiable parameters including but not limited to

i. estimated service time;

ii. life time of technology and its use;

iii. related intellectual property and/or trade secret, if applicable;

iv. any applicable health and safety requirements and considerations;

v. any security requirements and considerations;

k) The verification organization shall ensure that the applicant has provided adequate description of the technology.

l) others

6.1.1.2 Application administrative review

a) The verification organization shall carry out an administrative review of the application and supplementary information to ensure that all requested application information has been provided in accordance with the requirements in section 6.1.1.1.

6.1.1.3 Initial assessment of technology relevance and eligibility for verification

a) The verification organization shall determine the relevance and eligibility of the technology for verification. The following requirements shall be used:

i. the information about the applicant technology is sufficient for the conduct of the verification;

ii. readiness of the technology for commercialization;

iii. relevance of the applicant claim for the technology application and user needs

iv. technological innovation;

v. key environmental factors (impacts) related to the technology (from a life cycle perspective) Upstream/downstream?

vi. the scope of verification of technology and any other points influencing the verification activity (e.g. threats to impartiality, security, legal issues, safety conditions, potential additional testing, language, etc.);

b) Following the initial assessment of the technology, the verification organization shall ensure that any differences in understanding between the applicant and the verification organization are resolved prior to accept or decline an application for verification.. When the verification organization declines an application based on the review of application and supplementary information, the reasons shall be documented and communicated to the applicant.

c) Based on this assessment, the verification organization shall determine the competences it needs to include in its verification team and for the verification decision.

d) Any decision related to the review and assessment process shall be justified and document and the record shall be maintained

e) Based on the review, the verification organization shall determine the competences it needs to include in its verification team and for the verification approval.

The verification team shall be appointed and composed of verifiers (team lead/team members) (and technical experts, as necessary) who, between them, have the collective depth of competences identified by the verification organization for the verification of the applicants' technology. The selection of the team shall be performed with reference to the designations of competence of verifiers and technical, and may include the use of both internal and external human resources (e.g. contracted staff/organizations).

6.2 Pre-verification Process (Planning)

The requirements in this section shall be documented in processes and procedures by the verification organization.

6.2.1 Specification of Verification Parameters

a) Verification parameters and the values shall be specified by the applicant and/or in consultation and agreement between the applicant and the verification organization.

b) The verification parameters shall be quantified, measurable through testing and specific to the technology.

c) The verification organization shall confirm the adequacy of the specified parameters and their values against the intended application, the environmental added value and impacts of the technology. The verification parameters shall include, but not limited to:

i. detailed claim on the technical and environmental performance of the technology
ii. state of the art technical and environmental performance of similar technologies
iii. existing verification procedures and similar relevant technical references including standardized methods, preferably international standards
iv. user needs
v. legal, regulatory, statues requirements, if applicable
vi. relevant operating conditions and technology design features pertaining to the technology performance parameters. They must be clearly described, in order to have a complete information expressing the technology performance.
vii. other requirements, as deemed appropriate. For example, additional parameters may be included in the assessment based on additional input from the applicant, a test body, or by a discussion between the proposer and the verifier.

d) The verification parameters shall be agreed upon between the applicant organization and the verification organization, prior to the establishment of the verification plan.

6.2.2 Verification Plan (i.e. Protocol)

The verification organization shall prepare a detailed verification plan based on the application information provided. The plan shall:

a) to be adapted to the technology being verified;

b) describe how the verification parameters defined in 6.2.2 will be verified;

c) include all the necessary technical and operational details of the planned verification . This may not include the details of the test plan, as defined in section 6.3.2 in this standard. However, if additional testing is required as per section 6.3.2.1, then the plan shall be amended to state that additional testing is required including timelines and testing body;

d) include the overall set-up of the test design and test principles;

e) include the data quality and the assessment method for testing; and,

f) include the data results required. This shall include test-data requirements (specification of amount and quality).

NOTE 1: Requirements on data and data quality shall refer to the quality level (for example regarding repeatability, ranges of confidence, accuracy) generally accepted by the scientific community for the technology or (by default) in the industrial sector concerned.

NOTE 2: Other existing verification plans and similar relevant technical references including applicable legislation and standardized methods, preferably international standards, shall be used or referred to wherever available.

6.2.2.1 Outline of the operational planning document of a verification process

The verification organization shall ensure that the following elements shall be included in the technology verification plan but not limited to:

A. General information on the process

All relevant data and information provided by the applicant and the verification organization at the application stage necessary to identify the verification process shall be included but not limited to:

I. Introductory section
   1) Name of technology
   2) Name and contact of proposer
   3) Name and contact of verification organization
   4) Structure of Verification Organization including experts
   5) General overview of the verification process

II. Scope of the technology verification

Description of the technology to be verified including information provided by applicant as specified in clause 6.1 shall apply.

III. Specification of performance parameters

All data and information as specified in subclause 6.2.2 shall apply including, but not limited to:
   1) Technical Performance parameters for verification
   2) Environmental, performance parameters both positive and negative
   3) Additional parameters

IV. Relevant operating conditions and technology design features pertaining to the specified technology performance parameters to be verified as specified in clause 6.2.2.

Note 1: If the applicant has existing data on verification parameters clause 6.2.5.1.2 shall apply.

Note 2: If the applicant has not existing data on verification parameters clause 6.2.5.1.3 shall apply.

B. Existing data

Existing data on verification parameters, especially test data, provided by the applicant shall be conducted by Testing Bodies meeting section 6.3.2.1 sub-clause c). This to ensure that competent and consistent generation of quality data, assurance, calibration and control of test data will be produced

C. Requirements on test design and data quality

The overall set-up of the test design and test principles to produce data adequate to assess verification parameters and their quality shall be specified, including but not limited to:

a) Test design
b) Reference analyses and measurements, if needed
c) Test data requirements (specification of amount and quality).
d) Data management
e) Quality assurance and control regarding tests and data
f) Test report requirements. For specification of test report requirements clause 6.5 applies.

D. Verification schedule

A schedule of the verification process shall be established and agreed upon between the applicant and the verification organization. This may also include additional timeliness for activities such as testing if required.

E. References

All references shall be listed

F. Appendices

The following shall be included in appendices, but not limited to:

a) Terms and definitions

6.3 Verification Process

The requirements in this section shall be documented in processes and procedures by the verification organization.

Note: The verification process is organized in three stages: Stage one, assessment of existing data; Stage 2, is related to testing requirements, and Stage 3, is the final assessment of all existing data including any further testing data produced in Stage 2.

6.3.1 Assessment of existing data (Stage 1)

a) The applicant may submit existing test data on the technology to the verification organization for consideration. If submitted by the applicant, the quality and reliability of the data shall be evaluated by the verification organization to determine whether the obtained test results (data) are acceptable.

b) In order for the applicant's data to be accepted, during the verification process, the Testing Body that produced the data shall meet the requirements in section 6.3.2.1 sub-clause c) in this international standard.

c) If the testing is performed by the applicant, then the testing plans and all preparatory measures, such as sampling and tests, are implemented in agreement and, where appropriate, witnessed by a Testing Body, meeting the requirements in section 6.3.2.1 sub-clause c) in this international standard. Specifically:

i. The laboratory analysis is performed in accordance with defined procedures.

ii. The test procedures, performance and data are documented and formally controlled.

iii. Raw data and quality control data are made available in a reasonable timeframe related to the technology.

iv. The test design and principles, and the test data fulfill the requirements provided in the verification planning document. .

NOTE: If existing data for specified verification performance parameters meet the requirements listed above, then further testing may not be necessary for these parameters.

6.3.2 Testing (Stage 2)

6.3.2.1 Test planning

a) The verification organization shall inform the applicant if additional and/or new testing is required as per the scope of the verification activity and the development of the verification plan as per section 6.2.2.

b) If the verification organization and applicant confirm that testing is needed, the applicant shall:

1) identify a competent Testing Body based on the scope of testing and requirements specified in the verification planning document in consultation with verification organization;
7 establish legally enforceable agreement outlining the tasks to be performed by the Testing Body.

c) Testing Bodies conducting and providing testing and related results shall meet and apply the requirements, as follows:

1) Analytic/Calibration Laboratories shall meet ISO/IEC 17025 international standard;
2) Inspection Bodies shall meet ISO/IEC 17020 international standard;
3) Production Certification Bodies shall meet ISO/IEC 17065 international standard; or,
4) Or combination of a, b, and c above.

d) The Testing Body shall prepare a test plan in accordance with the testing requirements outlined in the verification organization's verification plan, in accordance with section 6.2.2. This test plan shall specify the tests and the manner in which they are to be performed, where and by whom, as well as any and all corresponding quality control tests and analyses.

6.3.2.2 Test performance

a) The Testing Body shall perform tests according to the agreed test plan.

b) The verification organization shall ensure that the technology operates under the predetermined operating conditions identified in the test plan and that all relevant operating data are recorded for each test period.

c) Any changes to the test plan before the start of testing (amendments) or during testing (deviations) shall be reported by the test body and approved by the verification organization.

d) The testing shall be documented in a report (test report). The test report shall include the following items, but not limited to:

1) The name and address of test body;
2) Competencies of test body;
3) The technology evaluated;
4) The date of testing and date of report;
5) The type of tests performed;
6) Name and competencies of person(s) performing tests;
7) The standards, criteria, regulations, and scientific methods used for testing;
8) Any deviations from the standards and methods, and the effect of these deviations on the test results;
9) The test results;
10) Type of testing equipment used;
11) Date of testing equipment calibration, if applicable;
12) Conclusions

Note: The test report can be part of the verification report, as an annex, if no separation of the reports is desired. The report from the analytical laboratory shall contain analytical results together with uncertainty and limit of detection of methods used and all other data required in the test plan

6.3.3 Assessment of all data and final verification (Stage 3)

a) Analysis and assessment of all data on the parameters against the verification parameters of the technology outlined in the verification plan shall be carried out by the verification organization.

b) Assessment procedure of the existing data and data produced from tests during the verification procedures, against the requirements specified under the verification plan (protocol), shall be provided. The procedure should aim at the following, but not limited to:

1) final statement about the verification parameters and performance claim of the technology
2) evaluation of the test quality
3) summary of additional parameters relevant for the user, if not included under (a) above.

6.3.4 Reporting and Verification statement

The verification organization shall develop a verification report and/or a verification statement to be publically available.

[NOTE: To be further developed: structure of report and content requirements. Reporting against the verification plan and outcome/results of verification activity]

6.3.4.1 Verification report

a) A verification report shall be prepared by the verification organization following the structure of the table of content provided in Annex [to be drafted and defined] of this international standard. The verification report shall be based on the assessment and verification results, adherence to the verification plan (protocol) and test report. It shall give information on verification results, test and analysis performed and deviations.

[Quality Assurance requirements to be covered in the test plan – To be discussed]

b) The verification report includes all relevant documents produced during verification as appendices:

1) verification plan (protocol)

2) test plan

3) test report

4) reporting of any deviations from the required procedures.

6.3.4.2 Verification statement

If relevant the verification organization shall produce a short document summarizing the full verification report. It shall include as a minimum:
a) A summary description of the technology verified, complete denomination or reference number, purpose and conditions of use;
b) The verified performance parameters, including the field of application, tests conditions and assumptions under which the verified performance parameters are met;
c) A summary of the procedures followed by the verification organization and TB where relevant including the statistical confidence range on specifications where applicable;
d) A summary of the tests results as detailed in the test report;
e) Any information necessary to understand and use the verification statement

Note: The verification organization shall ensure that if it is necessary to include information not verified under during the ETV procedure, this should be clearly stated and explained.

6.3.4.3 Verification report and statement submission

a) The report and the statement, if relevant shall be signed by the verification organization
b) The verification organization shall submit the report to the applicant for review and approval
c) other requirements

6.4 Post-verification Process

The requirements in this section shall be documented in processes and procedures by the verification organization.

6.4.1 Review and Approval

This review and approval process is a quality control mechanism to ensure that the verification teams have followed the set of processes and procedures for the conduct of a verification of a technology.

a) Specifically, the verification organization shall: conduct an administrative review of the verification plan, report/statement, against the verification organization's procedures and requirements. This to ensure that the verification organization's processes and procedures have been followed for a specific technology verification.

b) After review, approve or not approve the verification.

c) The person(s) conducting the review and approval shall not be a member of the verification organization that conducted the verification or been part of the planning or any relationship to the technical process. The person shall be impartial.

6.4.2 Publication

The verification organization shall ensure that verification verification statement or report are made publicly available in an open and comprehensive manner to the intended user. As a minimum:

a) If approved by verification organization, the Publication of a verification statement and report shall be carried out and provided to the applicant.

b) The verification statement shall be publically available. Where appropriate or required by legal or other parties, verification report, verification plans (protocols) and test plans may also be published The verification statement shall be publically available including statement number, date of verification, ID-number, or other required information needed by the parties.

c) A publically available directory (e.g. website) of verifications and statements;

6.5. Re-verification Process

The requirements in this section shall be documented in processes and procedures by the verification organization.

a) The verification organization shall ensure that verified technology is conforming to the verification organization requirements, as per the initial verification and published verification statement, and is in good standing. Verification organizations shall ensure that verification statements are only valid as long as the verified technology is not changed in a way that materially affects its performance as verified and reported.

b) The applicant shall notify the verification organization if any of the following changes to the verified technology have occurred:

   i. including the conditions for the verified performance parameters;

   ii. change of ownership;

   iii. change standards, technical requirements, statues, legal requirements;

   iv. change/modification of technology – design changes; and,

   v. Other changes that impact and modifies the initial performance result;

Note: Substitution of one part with another with the same documented specifications is not considered a change.

c) Verification organizations may establish an expiration date on the verification statement. After the defined time period, upon demonstration that no changes have occurred in the technology or improvements related to the claim in competing technology, the validity of the verification statement will be extended under the same conditions.

d) The terms of use of verification report and statement must be clear for the applicant. In particular, the applicant shall make the statement available to users in full and shall not use parts of the statement for any fraudulent purpose.

e) It is the responsibility of the applicant to inform the verification organization, or other designated body, in writing, of any changes that are made to the technology that may materially affect the performance as verified and reported. The verification organization will then decide whether a re-verification is required in order to maintain that technology's verification statement

[Surveillance process/ Misuse of verification still need to addressed]

Annex A
(informative)

Guidance for the use of the standard

Bibliography

[1] ISO 9001:2008--Quality management systems--Requirements;

[2] ISO 14050:2006--Environmental management--Vocabulary;

[3] ISO/IEC 17000:2004--Conformity assessment--Vocabulary and general principles;

[4] ISO/IEC 17020:2012--Conformity assessment--General criteria for operation of various types of bodies performing inspection;

[5] ISO/IEC 17025:2005--General requirements for the competence of testing and calibration laboratories; and

ISO/IEC/FDIS 17065:2011 1st. Ed.--Conformity assessment--Requirements for bodies certifying products, processes a