

**SUMMARY OF THE
TNI CONSENSUS STANDARDS DEVELOPMENT
EXECUTIVE COMMITTEE MEETING
NOVEMBER 8, 2012**

The Executive Committee held a conference call on Thursday November 8, 2012, at 1:00 pm EST. Chair Bob Wyeth led the meeting.

Agenda item 1 – Roll call

Attendance:

Joe Aiello, Accreditation Body	absent
JoAnn Boyd, At Large Member	absent
Justin Brown, Field Activities	present
Richard Burrows, Environmental Measurement Methods	absent
Maria Friedman, Stationary Source Audit Sample	present
Paul Junio, Quality Systems	present
Mitzi Miller, Proficiency Testing	absent
Bob Shannon, Radiochemistry	absent
Jane Wilson, At Large Member	present
Bob Wyeth, Chairman, At Large Member	present
Ken Jackson, Program Administrator	present

Associate Committee Member present: Robin Cook

Agenda Item 2 – Review and approval of October 18, 2012, meeting minutes

It was moved by Jane and seconded by Maria to adopt the minutes as presented. All were in favor except Maria who abstained.

Agenda Item 3 – Status of New Expert Committees

The Microbiology Committee charter (attached) was reviewed. Its membership was seen to be balanced, with 4 laboratories, 3 Accreditation Bodies, and 2 Others.

It was moved by Paul and seconded by Jane to accept the charter of the newly-formed Microbiology Expert Committee. All were in favor.

Agenda Item 4 – Revised Consensus Standards Development Executive Committee charter

Bob presented a revised charter (attached) for the Consensus Standards Development Executive Committee. He noted that the 2 new Expert Committee Members (Robin Cook and Bob Shannon) had been added, the name of the Environmental Measurement Methods Expert

Committee had been changed to the Chemistry Expert Committee, milestones had been changed to include the new committees, and the Quality Systems Expert Committee duties and responsibilities had been updated.

It was moved Paul and seconded by Justin to accept the modified Consensus Standards Development Executive Committee charter. All were in favor.

Bob said he would submit to the TNI Chair the two charters approved today, together with the Radiochemistry Expert Committee charter that was approved during the previous month's conference call.

Agenda Item 5 – Expert Committee reports

Stationary Source Audit Sample

Maria reported the committee is about two-thirds done on its update of Method 25. They are also preparing a guidance document for the method. She said the method update will go to EPA for consideration. The SSAS Table Subcommittee is dealing with acceptance limit changes, and the Method 25 Subcommittee is dealing with the rest of it.

Field Activities

At this point Justin had not yet called in, so there was no report.

Proficiency Testing

Ken reported on Mitzi's behalf. He said the committee is well organized in its work to deal with the comments received on its WDS. However, the comments were many and he thought it was unlikely a revised WDS will be presented at the Denver meeting in January. He thought the committee would be presenting its WDS for Volumes 3 and 4 at that meeting.

Quality Systems

Paul said there had been no conference call since the last CSD-EC call. There will be a call within about a week, and then they will push to get things done by e-mail. The committee is working on updating its charter.

Microbiology

Robin reported the committee had its first conference call, which was just an organizational meeting. Ken had presented an orientation to the members.

Radiochemistry

Ken reported for Bob Shannon. He provided the committee with an orientation during its latest conference call.

Accreditation Body

No report.

Chemistry

Ken reported for Richard. The committee had completed its Modified WDS and planned to present this for discussion at the Denver meeting in January. The committee was now continuing its work on editing Appendix B of the 40CFR Part 136 MDL procedure.

Agenda Item 6 – Status of revision of SOP 2-100.

Ken said he had started on the SOP revision, but did not yet have anything to pass on to Jane.

Agenda Item 7 – Guidance Document for Development and Maintenance of Standards regarding structure, formatting and style

The attached draft document had been circulated to the Committee and was discussed.

3.1 The third bullet needed word-smithing to explain and expand “state of the art”. Paul emphasized including Accreditation Bodies and not just laboratories.

4.2.3. It was discussed how many levels of sub-clause should be allowed. Maria suggested not restricting them. Jane said ISO goes to 5 levels. Paul said the QS standard has 5 sublevels, then a, b,c, etc. and then (i), (ii), (iii) etc. Ken suggested saying the number of sublevels should be kept as few as possible. He said if more than 5 is needed, then it is OK to do so, but consider starting a new clause.

5.1.3 (b). Version control is in the titles page, and it was discussed if there should also be lists of approval dates. Volume 1, Module 2 has a lot of this detail in the preface, and Paul favored that amount of detail. It was suggested to keep the detail.

5.1.4. It was agreed just the clause and first-level sub-clause should be in the table of contents. Any tables should also be listed in the contents.

5.3.2. It was agreed TNI will not have any standards that do not include requirements, so this will need to be modified.

5.4.2. It was thought there were no footnotes in the standard, but perhaps they would be used in the future so it was agreed to leave this in.

5.5.5.7. It was agreed to leave this as written.

Ken suggested adding a statement that TNI standards follow the style of ISO, and any ISO clauses included in the standard are in italicized text while the TNI clauses are in normal text.

Agenda Item 8 – Other business

Ken reported that Volumes 1 through 4 of the Environmental Sector standard had now been designated by ANSI as American National Standards. Bob complimented all the Expert Committees for achieving this level of excellence.

Adjournment

The meeting was adjourned at 2:30 pm EDT.

LIST OF ACTION ITEMS TO BE COMPLETED

Item No.	Date Proposed	Action	Assigned to:	To be Completed by:
1	2/1/12	The Uniformity of Standards Committee should be re-constituted	Committee	Not yet determined
2	2/1/12	The Executive Committee should prepare a summary of the CSDP plans for laboratory accreditation standard updates with projected time-frames, and submit this to the NELAP Accreditation Council.	Committee	Not yet determined
3	3/8/12	Bob will forward the new roster for the AB Committee to Ken for posting on the website.	Bob	4/3/12
4	3/8/12	Joe Aiello's, list of notes in Volume 2 Module 1 of the standard will be studied by committee members.	All Committee Members	4/12/12
5	3/8/12	Jerry Parr, Paul Junio, Richard Burrows and Ken Jackson will be invited to a conference call re: the EMMEC/QS implementation Work Group	Bob	completed
6	3/8/12	The revised SOP 2-100 and 2-101 will be sent to committee members for an e-mail ballot.	Bob	3/22/12 Final approved SOPs sent to Policy Committee on 4/9/12

Item No.	Date Proposed	Action	Assigned to:	To be Completed by:
7	4/12/12	Review Joe Aiello's notes document	All Committee Members	Ongoing
8	4/12/12	A draft procedure for uniformity of standards review will be prepared and circulated	Bob	Ongoing
9	4/12/12	The draft Guidance Document for Development and Maintenance of Standards will be circulated to Committee Members	Bob	Ongoing
10	5/10/12	It will be recommended which of the notes should remain and which should eventually become standards.	Jane, Mitzi, Ken	Not yet determined
11	5/10/12	A short e-mail will be drafted to the Expert Committee Chairs regarding how notes are to be used, and to clarify the use of any ISO notes.	Mitzi	Not yet determined
12	5/10/12	A draft recommendation to the TNI BoD will be prepared on the proposed formation of additional Expert Committees.	Bob and Ken	Completed

Item No.	Date Proposed	Action	Assigned to:	To be Completed by:
13	5/10/12	A short draft to precede an SOP on the Uniformity of Standards process will be prepared.	Bob	Not yet determined
14	7/12/12	The memo on formation of new committees will be completed and sent to the Board of Directors	Ken, Bob	Completed
15	7/12/12	The report from the Standards Corrective Action Committee will be obtained and sent to CSD-EC members	Ken	8/1/12
16	9/13/12	Ken will discuss with Jerry the development of a tracking system for standards development, and will look for information on the way ASTM does it.	Ken	Not yet determined
17	10/18/12	Bob will forward Kirstin's and Lynn's thoughts from the LASC on the Standards Corrective Action Committee to Ken.	Bob	Not yet determined

Consensus Standard Development Executive Committee
Conference Call
November 8, 2012; 1:00 PM EDT
1-218-936- 4700; code 822174#
AGENDA

1. Roll Call
2. Review and approval of October 18, 2012, meeting minutes
3. Status of new expert committees
 - a. Radiochemistry –approved 10/18/2012
 - b. Microbiology
4. Revised CSD ExC Charter
5. Expert Committee Reports
 - a. Stationary Source Audit Sample
 - b. Field Activities
 - c. Proficiency Testing
 - d. Quality Systems
 - e. Accreditation Body
 - f. Chemistry
 - g. Radiochemistry
 - h. *Microbiology*
6. Stats of Revision of SOP 2-100
7. Guidance Document for Development and Maintenance of Standards regarding structure, formatting and Style.
8. Old Business

COMMITTEE CHARTER

1. Committee Name: Microbiology Expert Committee	2. Version: 1	3. Date: 11/6/2012
4. Mission Statement: To maintain the microbiology standard (TNI Volume 1, Module 5) based on public input; to provide technical assistance on issues related to microbiology; and, to develop tools that facilitate the implementation of the standard.		
5. Program Administrator: Ken Jackson		
6. Committee Members: <i>(indicate Chairperson, insert rows as necessary for additional members)</i>		7. Stakeholder Group: <i>(Accreditation body, laboratory, other)</i>
Robin Cook, Chair		laboratory
Donna Ruokonen		laboratory
Patsy Root		other
Elizabeth Turner		laboratory
Po Chang		AB
Karla Kiegelmann-Fjeld		other
Mary Robinson		AB
Colin Fricker		laboratory
Dwayne Burkholder		AB
8. Objectives: <i>(insert rows as necessary for additional objectives)</i>		
Review and revise standards based on input from all stakeholder groups		
Ensure that the Standard will produce data of known and documented quality		
Provide technical assistance such as responding to Standard Interpretation Requests (SIRs)		
Provide technical assistance in developing tools to facilitate the implementation of the standard		
Ensure continuity with TNI Volume 1 Modules		
9. Success Measures:		
<ul style="list-style-type: none"> • Improving the Standard, such as by: <ul style="list-style-type: none"> • Increasing the clarity of the intent of the Standard • Incorporating advances in technology • Timely development of standards • Prompt responses to SIRs 		
10. Key Milestones: <i>(significant events and corresponding dates)</i>		
<ul style="list-style-type: none"> • Forming the Committee to have balanced representation • Completing the Interim Draft Standard • Forwarding the Interim Draft Standard to LASEC and the NELAP AC • Issuing the Final Standard 		

11. Considerations: *(assumptions/constraints/obstacles/risks)*

Committee members are volunteers; limited funding. Committee will need to be brought up to speed on the historical aspect of the current Module.

12. Available Resources:

- Volunteer committee members
- TNI Infrastructure
- Environmental technical community
- Teleconference services
- Administrative support
- Technical editor support

13. Additional Resources Required:

- Travel funding

14 Anticipated Meeting Schedule:

- Monthly teleconferences
- Face to Face meetings during the semiannual TNI Forums
- Additional teleconferences and/or face-to-face meetings as needed

BOARD/COMMITTEE CHARTER

1. Committee Name: Consensus Standards Development Executive Committee	2. Version: 5.0	3. Date: 11/08/2012
4. Mission Statement: To guide the Consensus Standards Development Program in the development and maintenance of standards		
5. Program Administrator: Ken Jackson		
6. Committee Members: <i>(indicate Chairperson, insert rows as necessary for additional members)</i>	7. Stakeholder Group: <i>(Accreditation body, accredited laboratory, other)</i>	
Joe Aiello; Chair Accreditation Body Expert Committee	Accreditation Body	
JoAnn Boyd; At-Large Member	Laboratory	
Maria Friedman; Chair SSAS Expert Committee	Laboratory	
Jane Wilson; At-Large Member	Other	
Richard Burrows; Chemistry Expert Committee	Laboratory	
Mitzi Miller; Chair PT Expert Committee	Other	
Justin Brown; Chair Field Activities Expert Committee	Other	
Paul Junio; Chair Quality Systems Expert Committee	Laboratory	
Bob Wyeth (CSDP EC Chair); At-Large Member	Laboratory	
Robin Cook; Chair Microbiology Expert Committee	Laboratory	
Bob Shannon; Chair Radiochemistry Expert Committee	Other	
8. Objectives: <i>(insert rows as necessary for additional objectives)</i>		
Develop policies and procedures that guide standards development		
Ensure consensus standards development is in conformance with applicable policies and procedures		
Provide oversight, guidance, and direction to the Expert Committees		
Ensure consistency and uniformity between the standards, including interaction with other boards, committees, and interested parties as required		
Evaluate the need for new standards		
9. Success Measures: <ul style="list-style-type: none"> • Timely development of standards • Development of standards consistent with relevant national and international standards and guidelines where appropriate • Adoption of the standards by TNI and/or other interested parties • Implementation of the standards 		

<p>10. Key Milestones: <i>(significant events and corresponding dates)</i></p> <ul style="list-style-type: none"> • Membership vote on adoption of Environmental Sector (ES) Final Standard (FS) modules – Spring 2007 • Adoption of FSMO Final Standard – May 2007 • Adoption of ES Vol 2, Mods 2 and 3 - May 2007 • Publication of remaining ES Draft Interim Standard (DIS) Modules – June , 2007 • Completed vote on ES DIS modules – July , 2007 • Adoption of remaining ES Final Standards – December 2007 • Membership vote on Stationary Source Audit Sample (SSAS) Voting Draft Standard – June 2009 • Completion of editorial changes/TIAs on ES Final standard – July 2009 • Adoption of SSAS Final Standard – September 2009 • Implementation of Environmental Sector standard by NELAP – July 2010 • Address Tentative Interim Amendments from Expert Committees to resolve issues regarding implementation of the TNI standard by 7/1/2011 – On-going • Review and approve annual charters for Expert Committee – March 2011 • Approve new Environmental Measurement Methods Expert Committee-January 2011; converted by name to Chemistry Expert Committee • Revise SOPs as necessary and appropriate – as required • Expansion to include new Microbiology and Radiochemistry Expert Committee (previously subcommittees of Quality Systems) • Redefine Quality Systems Expert Committee duties and responsibilities (Charter revision)
<p>11. Considerations: <i>(assumptions/constraints/obstacles/risks)</i></p> <p>Committee members are volunteers; limited funding. Committee consists of 3 at-large members and the Chairs of all Expert Committees. Balance is not a requirement of the Consensus Standards Development Executive Committee</p>
<p>12. Available Resources:</p> <ul style="list-style-type: none"> • Volunteer committee members • TNI Infrastructure • Environmental technical community • Expert committees and support • Teleconference services • Administrative support • Technical editor support
<p>14. Additional Resources Required:</p> <ul style="list-style-type: none"> • Travel funding
<p>14 Anticipated. Meeting Schedule:</p> <ul style="list-style-type: none"> • Monthly teleconferences • Face to Face meetings during the semiannual TNI Forums • Additional teleconferences and/or face-to-face meetings as needed

SCOPE

This TNI Guidance Document provides the framework for the structure and drafting of TNI Standards.

This document is intended to ensure that TNI Standards prepared by TNI Expert Committees are drafted in as uniform a manner as practicable, irrespective of the technical content.

This document provides guidance with regard to the presentation and the typography and layout of published TNI Standards documents.

TERMS AND DEFINITIONS

TNI Standard

A document, established by the TNI consensus process and approved by a TNI Expert Committee, that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of consistency in a given context.

2.2 Normative element

An essential item that describes the scope of the document or sets out provisions of the Standard.

2.3 Informative element

An item that provides additional information intended to assist the understanding or use of the Standard.

Provision

Requirement

An expression in the content of a TNI Standard conveying criteria to be fulfilled if compliance with the Standard is to be claimed and from which no deviation is permitted

Note 1: Table A.1 specifies the verbal forms for the expression of requirements.

Recommendation

An expression in the content of a TNI Standard conveying one of the following:

- among several possibilities one is recommended, without mentioning or excluding others, or
- a certain course of action is preferred but not necessarily required, or
- a certain possibility or course of action is less advantageous but not prohibited.

Note 1 to entry: Table A.2 specifies the verbal forms for the expression of recommendations.

Statement

An expression in the content of a TNI Standard conveying information.

Note 1 to entry: Table A.3 specifies the verbal forms for indicating a course of action permissible within the limits of the TNI Standard. Table A.4 specifies the verbal forms to be used for statements of possibility and capability.

GENERAL PRINCIPLES

Objective

The objective of a TNI Standard is to define clear and unambiguous provisions in order to facilitate accreditation of environmental laboratories and other related functions. To achieve this objective, the TNI Standards shall:

- be complete within the limits specified by its scope,

- be consistent, clear and accurate,
- take full account of the applicable state of the art,
- provide a framework for future analytical development,
- be comprehensible to qualified persons who have not participated in its preparation, and
- adhere to the process for the development of TNI Standards as defined in TNI SOP-2-100 Procedures Governing Standards Development.

Commented [jb1]: Should this have more information or define?

Performance Approach

Whenever possible, requirements should be expressed in terms of performance rather than design or descriptive characteristics.

Homogeneity

Uniformity of structure, of style, and of terminology, shall be maintained not only within each TNI Standard, but also within a series of associated Standards. To the extent possible, the structure of associated Standards and the numbering of their clauses shall be identical.

The same term shall be used throughout each TNI Standard or series of associated Standards to designate a given concept. To the extent possible, only one meaning shall be attributed to each term chosen.

Consistency of documents

In order to achieve the aim of consistency within the complete body of Standards published by TNI, the text of every Standard shall be in accordance with the relevant provisions of existing basic documents published by TNI. This relates particularly to:

- a) standardized terminology,
- b) quantities, units and their symbols,
- c) abbreviated terms,
- d) bibliographic references,
- e) technical drawings and diagrams, and
- f) technical documentation.

In addition, specific technical aspects shall be drafted in accordance with the provisions of any general documents published by TNI dealing with the following subjects:

- a) statistical methods,
- b) environmental conditions and associated tests,
- c) safety,
- d) analytical methods,
- e) conformity, and
- f) quality.

Fitness for implementation as an American National Standard

The content of a document published by TNI shall be developed in such a way as to facilitate its direct application and its adoption without change as an American National Standard

STRUCTURE

Subdivision of the Subject Matter

General

As a general rule, an individual TNI Standard shall be prepared for each Sector to be standardized and published as a complete entity. In specific cases and for practical reasons, the document may be split into separate Volumes and/or Modules under the same TNI designation, such as when:

- g) the document is likely to become too voluminous,
- h) subsequent portions of the content are interlinked,
- i) portions of the document could be referred to in regulations, or
- j) portions of the document are intended to be used for accreditation purposes.

This has the advantage that each Volume or Module can be changed separately when the need arises.

The terms which shall be used to designate the divisions and subdivisions that a document may take are shown in Table 1.

Table 1 — Names of divisions and subdivisions

Term	Example of numbering
Sector	Text descriptor
Volume 1	Volume 1
Module	Volume 1, Module 1
Clause	1
Sub clause	1.1
Sub clause	1.1.1
Paragraph	[no number]
Appendix	A

Subdivision of the Subject Matter within a Series of Parts

4.1.2.1 TNI Volumes

Each TNI Volume deals with a specific aspect of the Sector of TNI activity and can stand alone.

Volume 1: Management and technical requirements for Laboratories performing environmental analysis

Volume 2: General Requirements for Accreditation Bodies accrediting Environmental Laboratories

Volume 3: General Requirements for Environmental Proficiency Test Providers

Volume 4: General Requirements for An Accreditor of Environmental Proficiency Test Providers

Volume 5:....

4.1.2.2 TNI Modules

There are both common and specific aspects to the subject under the Volume. The common aspects shall be given in Module 1. Specific aspects (which may modify or supplement the common aspects and therefore cannot stand alone) shall be provided in individual Modules.

Module 1: General requirements

Module 2: Proficiency Testing

Module 3: On-Site Assessment

Module 4:

Review shall be performed so that references from one TNI Module to another are consistent.

Subdivision of the Subject Matter within an Individual TNI Standard

An example of a typical arrangement of the subdivision of the subject matter within an individual TNI Standard is given in Table 2. Table 2 also lists the permitted content of each of the elements constituting the arrangement.

Table 2 — Example of a typical arrangement of elements in a TNI Standard

Type of element	Arrangement of elements ^a in document	Permitted content ^a of element(s) in document
Preliminary informative	<i>Title page</i>	Title
	Preface	Text <i>Notes</i> <i>Footnotes</i>
	<i>Table of contents</i>	<i>Generated content</i>
	<i>Introduction</i>	<i>Text</i> <i>Figures</i> <i>Tables</i> <i>Notes</i> <i>Footnotes</i>
General normative	Title	Text
	Scope	Text <i>Figures</i> <i>Tables</i> <i>Notes</i> <i>Footnotes</i>
	Normative references	<i>References</i> <i>Footnotes</i>
Technical normative	Terms and definitions Symbols and abbreviated terms : Normative Appendix	<i>Text</i> <i>Figures</i> <i>Tables</i> <i>Notes</i> <i>Footnotes</i>
Supplementary informative	<i>Informative Appendix</i>	<i>Text</i> <i>Figures</i> <i>Tables</i> <i>Notes</i> <i>Footnotes</i>
Technical normative	Normative Appendix	<i>Text</i> <i>Figures</i> <i>Tables</i> <i>Notes</i> <i>Footnotes</i>
Supplementary informative	<i>Bibliography</i>	<i>References</i> <i>Footnotes</i>

^a **Bold type** = mandatory element; upright type = normative element; *italic type* = informative element.

Description and Numbering of Divisions and Subdivisions

TNI Volumes and Modules

4.2.1.1 The number of TNI Volumes and Modules shall be indicated by Arabic numerals, beginning with 1, for example, Volume 1, Volume 2, Module 3, etc.

4.2.1.2 All the individual titles in a series of TNI Modules shall contain the same introductory element (if present) and main element, while the complementary element shall be different in each case in order to distinguish the Modules from one another. The complementary element shall be preceded in each case by the designation "Module ...:", for example, Module 1 Proficiency testing.

Clause

A clause is the basic component in the subdivision of the content of a TNI Standard.

The clauses in each TNI Volume or Module shall be numbered with Arabic numerals, beginning with 1 for the "Scope" clause. The numbering shall be continuous up to but excluding any Appendices.

Each clause shall have a title, placed immediately after its number, on a line separate from the text that follows it.

Subclause

A subclause is a numbered subdivision of a clause. A primary subclause (e.g. 5.1, 5.2, etc.) may be subdivided into secondary subclauses (e.g. 5.1.1, 5.1.2, etc.), and this process of subdivision may be continued as far as the fifth level (e.g. 5.1.1.1.1.1, 5.1.1.1.1.2, etc.).

Subclauses shall be numbered with Arabic numerals (see Annex B for an example).

A subclause shall not be created unless there is at least one further subclause at the same level. For example, text in Clause 10 shall not be designated subclause "10.1" unless there is also a subclause "10.2".

Each primary subclause should preferably be given a title, which shall be placed immediately after its number, on a line separate from the text that follows it. Secondary subclauses may be treated in the same way. Within a clause or subclause, the use of titles shall be uniform for subclauses at the same level, e.g. if 10.1 has a title, 10.2 shall also have a title.

Paragraph

A paragraph is an unnumbered subdivision of a clause or subclause.

"Hanging paragraphs" such as those shown in Table 3 shall be avoided since reference to them is ambiguous.

Table 3 – Examples of Paragraph Construction

Correct Paragraph Construction
5 Designation
5.1 General
The quick brown fox jumps over the lazy dog.
The quick brown fox jumps over the lazy dog.
The quick brown fox jumps over the lazy dog.
5.2 XXXXXXXXXXXX
The quick brown fox jumps over the lazy dog.
5.3 XXXXXXXXXXXX
The quick brown fox jumps over the lazy dog.
The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.
6 Test report
Incorrect Paragraph Construction

Commented [jb2]: Does this fit the meaning or should it be hyphenated or separated?

5 Designation

The quick brown fox jumps over the lazy dog. }
The quick brown fox jumps over the lazy dog. } hanging
The quick brown fox jumps over the lazy dog. } paragraphs

5.1 XXXXXXXXXXXX

The quick brown fox jumps over the lazy dog.

5.2 XXXXXXXXXXXX

The quick brown fox jumps over the lazy dog.

The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

6 Test report

NOTE In Table 3, the hanging paragraphs indicated cannot be uniquely identified as being in "Clause 5" since strictly speaking the paragraphs in 5.1 and 5.2 are also in Clause 5. To avoid this problem it is necessary to identify the hanging paragraphs as subclause "5.1 General" (or other suitable title) and to renumber the existing 5.1 and 5.2 accordingly (as shown), to move the hanging paragraphs elsewhere, or to delete them.

Lists

Lists should be introduced by a sentence, a complete grammatical proposition followed by a colon, or by the first part of a proposition (without a colon), completed by the items in the list.

Each item in a list shall be preceded by a dash or a bullet or, if necessary for identification, by a lower case letter followed by a parenthesis. If it is necessary to subdivide further an item in the latter type of list, Arabic numerals followed by a parenthesis shall be used.

Appendix

Appendices shall appear and be numbered in the order in which they are cited in the text. Each Appendix shall be designated by a heading comprising the word "Appendix" followed by a capital letter designating its serial order, beginning with "A", e.g. "Appendix A". The Appendix heading shall be followed by the indication "(normative)" or "(informative)", and by the title, each on a separate line. Numbers given to the clauses, subclauses, tables, figures and other elements of an Appendix shall be preceded by the letter designating that Appendix followed by a full-stop. The numbering shall start afresh with each Appendix. A single Appendix shall be designated "Appendix A".

Appendices may be subdivided into clauses (see 4.2.2), subclauses (see 4.2.3), paragraphs (see 5.2.4) and lists (see 4.2.5). A clause shall not be created unless there is at least one further clause in the Appendix.

EXAMPLE Clauses in Appendix A are designated "A.1", "A.2", "A.3", etc. Subclauses in A.1 are designated "A.1.1", "A.1.2", "A.1.3", etc.

DRAFTING

Preliminary informative elements

Cover Page

Each document shall have a cover page consisting of the following elements:

- TNI organization logo,
- Applicable TNI Standard sector (Laboratory, Field Sampling, etc.),

- Alpha-numerical designation (Sector, Volume and Module, if applicable),
- Full title of document,
- TNI address, phone number and website URL, and
- TNI copyright notification.

5.1.2 Title page

The title page shall contain the title of the document.

The wording of the title shall be as concise as possible. It shall indicate, without ambiguity, the subject matter of the document in such a way as to distinguish it from that of other documents, without going into unnecessary detail. Any necessary additional particulars shall be given in the scope.

5.1.3 Preface

A preface shall appear in each document. It shall not contain requirements, recommendations, figures or tables.

It consists of information relating to the following:

- k) the designation and name of the committee that prepared the document,
- l) information regarding the approval of the document, and
- m) a statement of significant technical changes from any previous edition of the document and as many of the following as are appropriate:
 - n) an indication of any other organization that has contributed to the preparation of the document;
 - o) a statement that the document supersedes and replaces other documents in whole or in part;
 - p) the relationship of the document to other documents;

Commented [WJ3]: Some don't have it currently – should TNI do it consistently going forward?

5.1.4 Table of contents

The table of contents shall be entitled “Table of Contents” and shall list clauses and, if appropriate, subclauses with titles, appendices together with their status in parentheses, the bibliography, figures and tables. The order shall be as follows: clauses and subclauses with titles; appendices (including clauses and subclauses with titles if appropriate); the bibliography; figures; tables. All the elements listed shall be cited with their full titles. Terms in the “Terms and definitions” clause shall not be listed in the table of contents.

Commented [WJ4]: Which level to go to? Typical practice is main clause headings and first level of subclauses.

Commented [WJ5]: Are these included in TNI documents? Keep this reference for flexibility.

Commented [WJ6]: same

5.1.5 Introduction

The introduction is used to give specific information or commentary about the technical content of the document, and about the reasons prompting its preparation. It shall not contain requirements.

General normative elements

Scope

This element shall appear at the beginning of each document and define, without ambiguity, the subject of the document and the aspects covered. The Scope defines the limits of applicability of the document or particular parts of it. It shall not contain requirements.

In documents that are subdivided into Modules, the scope of each Module shall define the subject of that Module of the document only.

The scope shall be succinct so that it can be used as a summary for bibliographic purposes.

Normative references

This conditional element shall give a list of the referenced documents, cited in the document, in such a way as to make them indispensable for the application of the document. For dated references, each shall be given with its year of publication or designated version. The year of publication or dash shall not be given for undated references. When an undated reference is to all parts of a document, the publication number shall be followed by the indication "(all parts)" and the general title of the series of parts.

The list shall be introduced by the following wording:

"The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies."

The above wording is also applicable to a part of a multipart document.

The list shall not include the following:

- referenced documents which are not publicly available;
- referenced documents which are only cited in an informative manner;
- referenced documents which have merely served as bibliographic or background material in the preparation of the document; such referenced documents may be listed in a bibliography.

Technical normative elements

Terms and definitions

This is a conditional element giving definitions necessary for the understanding of certain terms used in the document. The following introductory wording shall be used where all terms and definitions are given in the document itself:

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

In the case where terms defined in one or more other documents also apply (for example, for TNI standards that supplement ISO/IEC standards requirements), the following introductory wording shall be used or altered as necessary:

"The relevant definitions listed in the referenced ISO/IEC documents apply when using those documents. Definitions related to this document, which are used differently or do not exist in the above references are defined below.."

Requirements

This element is conditional. If present, it shall contain all characteristics relevant to the aspects of the products, processes, or services covered by the TNI Standard, either explicitly or by reference.

A clear distinction shall be made between requirements, statements, and recommendations (see Table A.1).

Other informative elements

Notes and examples integrated in the text

Notes and examples integrated in the text of a TNI Standard shall only be used for giving additional information intended to assist the understanding or use of the document. They shall not contain requirements ("shall"; see Table A.1) or any information considered indispensable for the use of the document, e.g. instructions (imperative; see Table A.1), recommendations

Commented [WJ7]: Does this apply to TNI – will any standards b developed that do not contain requirements?

Commented [WJ8]: need reference to B.1?

("should"; see Table A.2) or permission ("may"; see Table A.3). Notes may be written as a statement of fact.

Notes and examples should be placed after the paragraph to which they refer.

Notes and examples are not numbered unless more than one appears in the same clause, subclause, figure or table. When several notes occur within the same clause, subclause, figure or table, they shall be designated "NOTE 1", "NOTE 2", "NOTE 3", etc. When several examples occur within the same clause, subclause, figure or table, they shall be designated "EXAMPLE 1", "EXAMPLE 2", "EXAMPLE 3", etc.

Footnotes to the text

Footnotes to the text give additional information; their use shall be kept to a minimum. Footnotes shall not contain requirements or any information considered indispensable for the use of the document.

Footnotes to the text shall be placed at the foot of the relevant page and be separated from the text by a short thin horizontal line on the left of the page.

Footnotes to the text shall normally be distinguished by Arabic numerals, beginning with 1, followed by one parenthesis and forming a continuous numerical sequence throughout the document: 1), 2), 3), etc. The footnotes shall be referred to in the text by inserting the same numerals, as superscripts, after the word or sentence in question: ¹⁾ ²⁾ ³⁾ etc.

Common rules and elements

Verbal forms for the expression of provisions

In the first column of each table, Appendix B gives the verbal form that shall be used to express each kind of provision. The equivalent expressions given in the second column shall be used only in exceptional cases when the form given in the first column cannot be used for linguistic reasons.

Spelling and abbreviation of names of organizations, style, reference works and abbreviated terms

The spelling of the names of organizations, and their abbreviations, shall be as used by those organizations.

Abbreviated terms shall be used with care, and their use shall be limited to those cases where it is not likely to cause confusion.

If a list of abbreviated terms is not given in the TNI Standard, the first time that an abbreviated term is used, the full term shall be given with the abbreviated term following in parentheses.

An abbreviated term shall be specified only if used subsequently in the document.

Use of trade names and trademarks

Proprietary trade names or trademarks should be avoided, even if they are in common use.

EXAMPLE Instead of "Teflon®", write "polytetrafluoroethylene (PTFE)".

If trade names or trademarks cannot be avoided, their nature shall be indicated, e.g. by the symbol ® for a registered trademark and by the symbol ™ for a trademark.

Commented [WJ9]: Are TNI standards using this format?

Figures

Usage

Figures should be used when they are the most efficient means of presenting information in an easily comprehensible form. It shall be possible to refer to each figure explicitly within the text.

Form

Figures shall be in the form of line drawings. Photographs may be used only if it is not possible to convert them into line drawings.

Designation

Figures shall be designated "Figure" and numbered with Arabic numerals, beginning with 1. This numbering shall be independent of the numbering of the clauses and of any tables. A single figure shall be designated "Figure 1".

Layout of figure designation and title

The figure designation and title (if present) shall be centered horizontally above the figure and laid out as in the following example:

Figure # — Details of apparatus

The figure designation and title shall be separated by a dash (—).

Continuation of figures

When a figure is continued over several pages, it may be useful to repeat the figure designation, followed by the title (optional) and by "(1 of #)", where # is the total number of pages on which the figure appears, as in the following example:

Figure # (1 of #)

Any statements concerning units shall be repeated on all pages after the first, where applicable.

Notes to figures

Notes to figures shall be located below the relevant figure and shall precede figure footnotes. A single note in a figure shall be preceded by "NOTE", placed at the beginning of the first line of the text of the note. When several notes occur in the same figure, they shall be designated "NOTE 1", "NOTE 2", "NOTE 3", etc. A separate numbering sequence shall be used for each figure.

Notes to figures shall not contain requirements or any information considered indispensable for the use of the document. Any requirements relating to the content of a figure shall be given in the text, in a footnote to the figure or as a paragraph between the figure and its title. It is not necessary that notes to figures be referred to.

Footnotes to figures

Footnotes to figures shall be located below the relevant figure.

Footnotes to figures shall be distinguished by superscript lower case letters, beginning with "a". The footnotes shall be referred to in the figure by inserting the same superscript lower case letter.

Footnotes to figures may contain requirements. As a consequence, it is particularly important when drafting the text of the figure footnote to distinguish clearly between different types of provision by using the appropriate verbal forms (see Appendix B).

Tables

Usage

Tables should be used when they are the most efficient means of presenting information in an easily comprehensible form. It shall be possible to refer to each table explicitly within the text.

A table within a table is not permitted.

Designation

Tables shall be designated "Table" and numbered with Arabic numerals, beginning with 1. This numbering shall be independent of the numbering of the clauses and of any figures. A single table shall be designated "Table 1".

Layout of table designation and title

The table designation and title (if present) shall be centred horizontally above the table and laid out as in the following example:

Table # — Accreditation process

The table designation and title shall be separated by a dash (–).

Headings

The first word in the heading of each column or row shall begin with a capital letter. The units used in a given column shall generally be indicated under the column heading.

EXAMPLE 1

Type	Linear density kg/m	Inside diameter mm	Outside diameter mm

As an exception to this rule, when all units are the same, a suitable statement (for example, "Dimensions in millimeters") shall instead be placed above the right-hand corner of the table.

EXAMPLE 2

Dimensions in millimeters

Type	Length	Inside diameter	Outside diameter

The presentation shown in Example 3 is not permitted and shall be altered as shown in Example 4.

EXAMPLE 3

Type	A	B	C
Dimension			

EXAMPLE 4

Dimension	Type

	A	B	C
--	---	---	---

Continuation of tables

When a table is continued over several pages, it may be useful to repeat the table designation, followed by the title (optional) and by "(1 of #)", where # is the total number of pages on which the table appears, as in the following example:

Table # (1 of #)

The column headings together with any statement concerning units shall be repeated on all pages after the first.

Notes to tables

Notes to tables shall be located within the frame of the relevant table and shall precede table footnotes (see the following Example). A single note in a table shall be preceded by "NOTE", placed at the beginning of the first line of the text of the note. When several notes occur in the same table, they shall be designated "NOTE 1", "NOTE 2", "NOTE 3", etc. A separate numbering sequence shall be used for each table.

Notes to tables shall not contain requirements or any information considered indispensable for the use of the document. Any requirements relating to the content of a table shall be given in the text, in a footnote to the table or as a paragraph within the table. It is not necessary that notes to tables are referred to.

EXAMPLE

Dimensions in millimeters

Type	Length	Inside diameter	Outside diameter
	l_1^a	d_1	
	l_2	$d_2^{b\ c}$	
A paragraph containing a requirement.			
NOTE 1 Table note.			
NOTE 2 Table note.			
^a Table footnote. ^b Table footnote. ^c Table footnote.			

Footnotes to tables

Footnotes to tables shall be located within the frame of the relevant table, and shall appear at the foot of the table.

Footnotes to tables shall be distinguished by superscript lower case letters, beginning with "a". The footnotes shall be referred to in the table by inserting the same superscript lower case letter.

Footnotes to tables may contain requirements. As a consequence, it is particularly important when drafting the text of the table footnote to distinguish clearly between different types of provision by using the appropriate verbal forms (see Appendix B).

Commented [WJ10]: Format question – consistency with regular footnotes.

References

General

As a general rule, references to particular pieces of text shall be used instead of repetition of the original source material, since such repetition involves the risk of error or inconsistency and increases the length of the document. However, if it is considered necessary to repeat such material, its source shall be identified precisely.

References shall not be made to page numbers.

References to the TNI Standard as a whole in its own text

For an individual document the form "this TNI Standard" shall be used, except in the introductory texts for the "Normative references" and the "Terms and definitions" clauses.

For a document published in separate Modules, the following forms shall be used:

- "this part of TNI Volume 1, Module 3" (reference to a Module only);
- "TNI Volume 2" (reference to a complete series of Modules).

Such references are understood to include all amendments and revisions to the document, since they are undated.

References to elements of text

5.5.6.3.1 The following reference forms should be used:

- "in accordance with Clause 3";
- "according to 3.1";
- "as specified in 3.1 b);
- "details as given in 3.1.1";
- "see Appendix B";
- "the requirements given in B.2";
- "see the Note in Table 2";
- "see 6.6.3, Example 2";
- "see 3.1, Formula (3)".

It is unnecessary to use the term "subclause". Imprecise references such as "this Clause" and "This Appendix" shall not be used.

5.5.6.3.2 If there is a need to refer to an unordered list item in another document, the following formulation shall be used:

"as specified in TNI Volume 3:2009, 3.1, second list item".

References to figures and tables

Every figure and table included in the document shall normally be referred to in the text.

Use, for example, the following forms:

- "shown in Figure A.6";
- "(see Figure 3)";
- "given in Table 2";

- “(see Table A.2)”.

References to other documents

General

References to other documents may be undated or dated. All normative references, undated and dated, shall be given in the “Normative references” clause (see 5.2.2).

Undated references

Undated references may be made only to a complete document and only where at least one of the following cases applies:

- a) if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
- b) for informative references.

Undated references shall be understood to include all amendments to and revisions of the referenced document.

Use the following forms:

- “ ... as specified in TNI Volume 1, Module 1 ... ”;
- “ ... see TNI Volume 3 ... ”.

Dated references

Dated references are references to

- q) a specific edition, indicated by the date of publication, or
- r) a specific final draft, indicated by a dash.

The date of publication shall be indicated by the year or, for documents for which more than one edition of the document or an element within the document will be published in the same calendar year, the year of publication and the month (and where necessary the day).

Subsequent amendments to, or revisions of, dated references will need to be incorporated by amendment of the TNI Standard referring to them.

Within the text, references to specific divisions or subdivisions, tables and figures of another document shall always be dated.

Aspects of conformity assessment

Documents containing requirements for products, processes, services, persons, systems and bodies

TNI Standards containing requirements for products, processes, services, persons, systems and bodies shall be written in accordance with the “neutrality principle”, such that conformity can be assessed by a manufacturer or supplier (first party), a user or purchaser (second party), or an independent body (third party).

NOTE 1 First-party, second-party and third-party conformity assessment activities are defined in ISO/IEC 17000.

NOTE 2 The term “documents” is defined in Clause 1.

Such documents shall not include requirements related to conformity assessment other than requirements which are necessary to provide repeatable and reproducible conformity assessment results.

Commented [WJ11]: Do we want to include this?

Commented [WJ12]: Keep this as the main concept?

Appendix A

(normative)

Verbal forms for the expression of provisions

NOTE Only singular forms are shown.

The verbal forms shown in Table A.1 shall be used to indicate requirements strictly to be followed in order to conform to the document and from which no deviation is permitted.

Table A.1 — Requirement

Verbal form	Equivalent expressions for use in exceptional cases (see 5.6.1.3)
shall	is to is required to it is required that has to only ... is permitted it is necessary
shall not	is not allowed [permitted] [acceptable] [permissible] is required to be not is required that ... be not is not to be
Do not use "must" as an alternative for "shall". (This will avoid any confusion between the requirements of a document and external statutory obligations.) Do not use "may not" instead of "shall not" to express a prohibition. To express a direct instruction, for example referring to steps to be taken in a test method, use the imperative mood in English. EXAMPLE "Switch on the recorder."	

The verbal forms shown in Table A.2 shall be used to indicate that among several possibilities one is recommended as particularly suitable, without mentioning or excluding others, or that a certain course of action is preferred but not necessarily required, or that (in the negative form) a certain possibility or course of action is deprecated but not prohibited.

Table A.2 — Recommendation

Verbal form	Equivalent expressions for use in exceptional cases (see 5.6.1.3)
should	it is recommended that ought to
should not	it is not recommended that ought not to

The verbal forms shown in Table A.3 shall be used to indicate a course of action permissible within the limits of the document.

Table A.3 — Permission

Verbal form	Equivalent expressions for use in exceptional cases (see 5.6.1.3)
may	is permitted is allowed is permissible
need not	it is not required that no ... is required
Do not use "possible" or "impossible" in this context. Do not use "can" instead of "may" in this context. NOTE "May" signifies permission expressed by the document, whereas "can" refers to the ability of a user of the document or to a possibility open to him/her.	

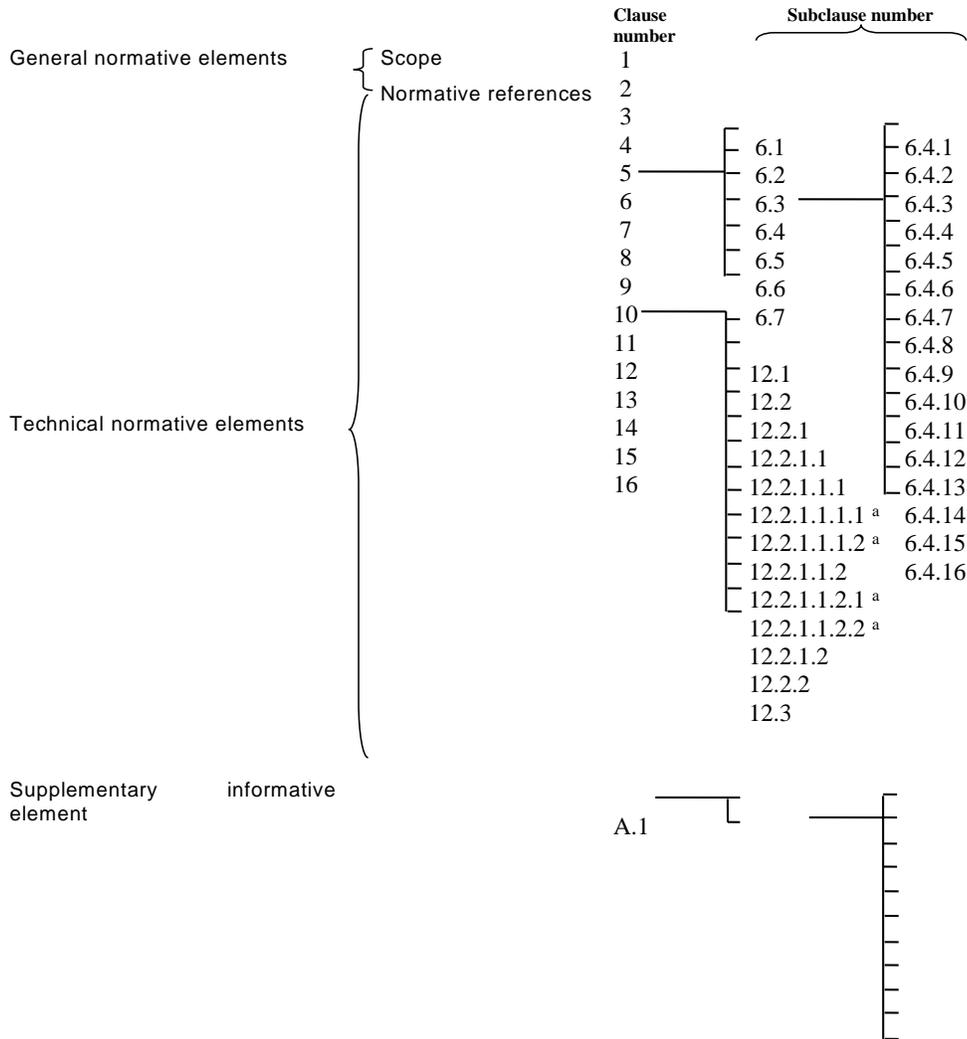
The verbal forms shown in Table A.4 shall be used for statements of possibility and capability, whether material, physical or causal.

Table A.4 — Possibility and capability

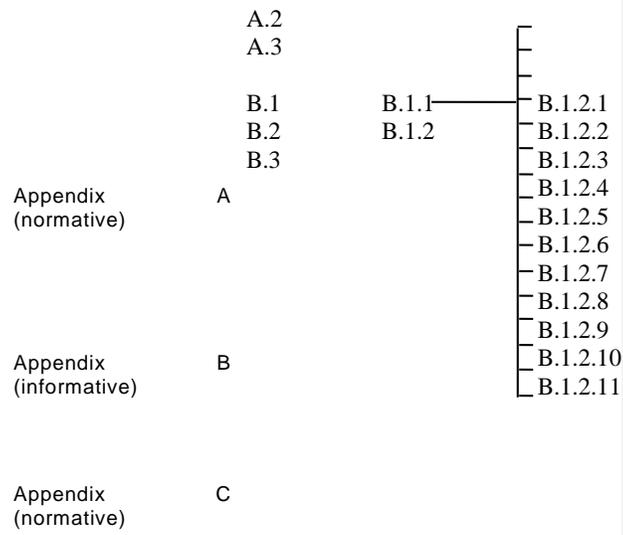
Verbal form	Equivalent expressions for use in exceptional cases (see 5.6.1.3)
can	be able to there is a possibility of it is possible to
cannot	be unable to there is no possibility of it is not possible to
NOTE See Note to Table A.3.	

**Appendix B
(informative)**

Example of numbering of divisions and subdivisions



Technical normative element



a Maximum of six levels, i.e. a clause and five levels of subclauses.