

C. STANDARDS FORMAT AND CONTENT

C1 POLICY FOR SPECIFYING REQUIREMENTS, RECOMMENDATIONS, AND PERMISSIONS IN A STANDARD ("SHALL," "SHOULD," AND "MAY")

1 PURPOSE

The purpose of this policy statement is to explicitly define the words "shall," "should," and "may" and to specify their use in ANS Voluntary Consensus Standards (VCS). It is of utmost importance that personnel who develop or maintain ANS standards fully understand and comply with the requirements of this policy.

2 POLICY

2.1 *General Requirements*

VCS prepared under the cognizance of the ANS Standards Committee shall be clear and concise, avoiding ambiguity. It must be very clear that when a standards user claims that actions are in accordance with the requirements of an ANS standard, the meaning of such a claim is well understood by all parties and can be verified by an independent second party. Standards writers and reviewers shall recognize that they are not directly setting requirements for the industry because all VCS are intended for voluntary use, and it is the prerogative of the user to determine its level of implementation. Standards provide a balanced, consensus-based approach that, if followed, provides acceptable means to implement the scope of the standard. It is the responsibility of the users to determine whether or not they apply all, some, or none of the criteria of a VCS.

2.2 *Detailed Requirements*

The following criteria and constraints shall be applied to the use of "shall," "should," and "may" in ANS standards:

- A. The American Nuclear Society Standards Board approved a motion in June 2008 that directs each ANS consensus committee to adopt and implement the American National Standards Institute-accepted definitions of "shall," "should," and "may" for all new and revised standards and to include these definitions in each standard. The following definitions shall be used in all ANS standards and shall be placed as the first definition in the standard as follows:

shall, should, and may. The word "shall" is used to denote a requirement; the word "should" to denote a recommendation; and the word "may" to denote permission, neither a requirement nor a recommendation

- B. The words "shall," "should," and "may" as indicated in Table 1 shall be used in ANS standards as noted. No other use of the words is allowed. Examples of words or phrases that shall not be used as a substitute for these words are provided in the right-hand column of Table 1.

- C. The words “shall,” “should,” and “may” shall **not** be used other than as defined by this policy. One of the standards preparer’s objectives is to maximize the clarity of requirements by using definitive “shall” statements in the body of standards.
 - Modification of a direct quotation is not permitted even if the direct quotation uses “shall,” “should,” or “may,” but if so, a footnote or other comment needs to be added to note this and to clarify the intent.
 - These words shall not be used in a statement of fact; e.g., “If this approach is followed, it should result in...” is not an acceptable use of the word “should.” In almost all cases alternate words are readily available. “Will,” “might,” “could,” “can be expected to” are some examples, depending on the situation.
 - It is not sufficient to simply use a “shall” statement to specify a requirement. Each requirement shall be specific, unambiguous, measurable, and within the ability of a qualified peer reviewer to determine whether the requirement has been met.
 - Phrases such as “shall consider”; “shall explore”; “shall, if possible”; and similar phrases that are not specific, unambiguous, or measurable shall be avoided.
 - Terms like “shall/should evaluate” and “shall/should demonstrate” if found to be necessary, shall be supported with clear guidance and supporting requirements for documentation.
 - A “shall” statement shall not be used to amplify the requirements of a “should” or “may” statement in such a way that it changes the “should” or “may” statement into a requirement.
- D. “Should” statements, if effectively implemented, provide acceptable results; however, “should” statements should be used very sparingly as they compromise the specificity of a standard. This word denotes that the recommended action is one of two or more acceptable actions that describe some but not all of the acceptable actions. If the standard describes all known acceptable actions, then “shall” shall be used (in the context of “one of the following shall be done”) instead of “should.” “Should” statements shall not be used to avoid those cases where the working group is unable to provide the needed clarity.
- E. The word “may” shall be used to specifically allow an action or approach that is not a requirement or a recommendation in a standard and that are acceptable in the context of the requirements of the standard.
- F. There shall not be any requirements written in the foreword, introduction, scope, terms and definitions, informative annexes, notes, examples, footnotes to text, notes to figures, and notes to tables. Therefore, as a matter of ANS Standards Committee policy, the word “shall” shall not be used in these sections of the standard.
- G. When it is absolutely necessary to include two or more recommendations or options, these recommendations or options shall be clearly stated and defined as such in the body of the standard.
- H. The number of appendices should be kept to a minimum and used to either illustrate possible approaches or to discuss known problems when clearly acceptable practices have not been widely adopted or defined.

- I. The words “shall,” “should,” and “may,” should be avoided in Project Initiation Notification System forms.

Table 1 below provides guidance on expressing requirements, recommendations, and permissions.

Table 1
Acceptable and Unacceptable Wording
of Requirements, Recommendations, and Permissions in ANS Standards

EXPRESSING REQUIREMENTS	
Correct Form	Do Not Use Other Wording to Express Requirements (Note 1) such as:
shall	<ul style="list-style-type: none"> • is to • is required to • it is required that • has to • Only ... is permitted • it is necessary • must • will • is acceptable • shall consider
shall not	<ul style="list-style-type: none"> • is not allowed • is not permitted • is not acceptable • is required to be not • must not • will not
EXPRESSING RECOMMENDATIONS	
Correct Form	Do Not Use Other Wording to Express Recommendations such as:
Should	<ul style="list-style-type: none"> • it is recommended that • ought to • shall consider
should not	<ul style="list-style-type: none"> • it is not recommended that • ought not to be
EXPRESSING PERMISSIONS	
Correct Form	Do Not Use Other Wording to Express Recommendations such as:
May	<ul style="list-style-type: none"> • is permitted • is allowed • is permissible • is acceptable

Note: It may be acceptable to use some of these words to express statements of fact.