Public Input No. 4-NFPA 111-2016 [Section No. 1.1.4.1]

<table>
<thead>
<tr>
<th>1.1.4.1 *</th>
<th>This standard shall not cover the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Application of the SEPSS</td>
</tr>
<tr>
<td>(2)</td>
<td>Distribution wiring</td>
</tr>
<tr>
<td>(3)</td>
<td>Systems having total outputs less than 500 VA or less than 24 V or systems less than Class 0.033 in accordance with section 4.3.</td>
</tr>
<tr>
<td>(4)</td>
<td>Unit equipment</td>
</tr>
<tr>
<td>(5)</td>
<td>Nuclear sources, solar systems, and wind stored-energy systems</td>
</tr>
<tr>
<td>(6)</td>
<td>Uninterruptible power systems (UPS) supplied by an emergency power supply system (EPSS) or a UPS supplied by a SEPSS</td>
</tr>
<tr>
<td>(7)</td>
<td>Optional standby systems</td>
</tr>
</tbody>
</table>

Statement of Problem and Substantiation for Public Input

Item (3) references “Class 0.033” systems but there is nothing in the section to clarify what a Class 0.033 system is. There is nothing in the definitions or Annex to explain what a Class 0.033 system means. It is explained in Section 4.3, so would it be helpful to have a reference to section 4.3 in section 1.1.4.1, similar to the reference in 1.1.4.2 and other places. The reader may not know what a Class 0.033 system is. So this will direct them to the appropriate section to help identify the meaning.

Submitter Information Verification

Submitter Full Name: Jim Muir
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Affiliation: NFPA’s Building Code Development Committee (BCDC)
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Zip:  
Submittal Date: Tue May 24 17:24:28 EDT 2016

Committee Statement

Resolution: FR-1-NFPA 111-2016
Statement: Item (3) references Section 4.3 as the source of the term “Class 0.033.”
Public Input No. 2-NFPA 111-2016 [Section No. 4.2.2]

4.2.2*
The interruption times of the SEPSS types covered by this standard shall be as provided in Table 4.2.2.

Table 4.2.2 Types of SEPSS

<table>
<thead>
<tr>
<th>Type</th>
<th>Interruption Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type O</td>
<td>No interruptions — Type VFI, UPS carrying load, 0.0 sec</td>
</tr>
<tr>
<td>Type U</td>
<td>Type VFD or Type VI, UPS system with utility as preferred source</td>
</tr>
<tr>
<td>Type A</td>
<td>0.25 cycle: 0.0042 sec</td>
</tr>
<tr>
<td>Type B</td>
<td>1.0 cycle: 0.0167 sec</td>
</tr>
<tr>
<td>Type 10</td>
<td>10 sec</td>
</tr>
<tr>
<td>Type M</td>
<td>Manual stationary or nonautomatic — no time limit</td>
</tr>
</tbody>
</table>

Additional Proposed Changes

<table>
<thead>
<tr>
<th>File Name</th>
<th>Description</th>
<th>Approved</th>
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<tbody>
<tr>
<td>111_A2015_EPS-AAA_TIA_Log1175.pdf</td>
<td>NFPA 111 TIA 16-1 Log No. 1175</td>
<td></td>
</tr>
</tbody>
</table>

Statement of Problem and Substantiation for Public Input

NOTE: This public input originates from Tentative Interim Amendment No. 1175 issued by the Standards Council on August 19, 2015 and per the NFPA Regs., needs to be reconsidered by the Technical Committee for the next edition of the Document.

To safely and practically address a global marketplace the NFPA should strive to harmonize its codes and standards with accepted international standards. Technical Committee-approved changes to Table 4.2.2 in NFPA 111, Stored Electrical Energy Emergency and Standby Power Systems, 2016 Edition, elaborate definitions of terms used to identify UPS performance classification. The elaborated definitions disharmonize NFPA 111 with industry accepted international standard, IEC62040-3, Edition 2.0 2011-03, "Uninterruptible power systems (UPS) – Part 3: Method of specifying the performance and test requirements". Never does IEC62040-3 define performance classifications with respect to load interruption provided by UPS “Types”. Further, with respect to connected load interruption time, specifically zero interruption time, the addition of UPS “Type” terms VFI, VFD, and VI incorrectly associates those “Types” performance capabilities with their ability to protect the load with zero interruption time.

Submitter Information Verification

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City: 
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Zip: 
Submittal Date: Wed Jan 06 15:54:13 EST 2016

Committee Statement

Resolution: FR-2-NFPA 111-2016
Statement: This revision incorporates TIA 1175.
1. Revise Table 4.2.2 to read as follows:

### Table 4.2.2 Types of SEPSS

<table>
<thead>
<tr>
<th>Type</th>
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<tbody>
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</tr>
</tbody>
</table>

**Substantiation:**

To safely and practically address a global marketplace the NFPA should strive to harmonize its codes and standards with accepted international standards. Technical Committee-approved changes to Table 4.2.2 in NFPA 111, Stored Electrical Energy Emergency and Standby Power Systems, 2016 Edition, elaborate definitions of terms used to identify UPS performance classification. The elaborated definitions disharmonize NFPA 111 with industry accepted international standard, IEC62040-3, Edition 2.0 2011-03, “Uninterruptible power systems (UPS) – Part 3: Method of specifying the performance and test requirements”. Never does IEC62040-3 define performance classifications with respect to load interruption provided by UPS “Types”. Further, with respect to connected load interruption time, specifically zero interruption time, the addition of UPS “Type” terms VFI, VFD, and VI incorrectly associates those “Types’ “ performance capabilities with their ability to protect the load with zero interruption time.

**Emergency Nature:**

This TIA modifies the incorrect and adverse correlation being made between UPS performance classification and load interruption provided by UPS “Types” by restoring Table 4.2.2 to its previous content. Leaving this error uncorrected would provide guidance to the market that is both incorrect and confusing when compared to the established definition provided by industry accepted international standard, IEC62040-3. As modified, the table provides to the marketplace a basis for an incorrectly applied definition indicating a VFI UPS is the only performance class that provides load protection with zero interruption. Several products defined by performance classification VI will provide load protection with zero load interruption upon primary power source loss. Prompt action described in this TIA will harmonize NFPA 111 to IEC62040-3 and maintain credibility of NFPA 111.
### Annex C  Informational References

#### C.1  Referenced Publications.

The documents or portions thereof listed in this annex are referenced within the informational sections of this standard and are not part of the requirements of this document unless also listed in Chapter 2 for other reasons.

#### C.1.1  NFPA Publications.

- **NFPA Publications, National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.**

#### C.1.2  Other Publications.

##### C.1.2.1  ANSI Publications.

- **American National Standards Institute, Inc., 25 West 43rd Street, 4th floor, New York, NY 10036.**

##### C.1.2.2  IEC Publications.

- **International Electrotechnical Commission, 3, rue de Varembé, P.O. Box 131, CH-1211 Geneva 20, Switzerland.**

##### C.1.2.3  IEEE Publications.

- **IEEE, Three Park Avenue, 17th Floor, New York, NY 10016-5997.**
  - **IEEE 1106, Recommended Practice for Maintenance, Testing, and Replacement of Vented Nickel-Cadmium Batteries for Stationary Applications,** 2005, **2015.**
  - **IEEE 1188, Recommended Practice for Maintenance, Testing and Replacement of Valve-Regulated Lead-Acid Batteries for Stationary Applications,** 2005, **Amendment 1, 2014.**
  - **IEEE 484, Recommended Practice for Installation Design and Installation of Vented Lead-Acid Batteries for Stationary Applications,** 2002, **2016.**
  - **IEEE 485, Recommended Practice for Sizing Lead-Acid Batteries for Stationary Applications,** 2010.

##### C.1.2.4  UL Publications.

- **Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.**

#### C.2  Informational References.

The following documents or portions thereof are listed here as informational resources only. They are not a part of the requirements of this document.

##### C.2.1  NFPA Publications.

- **National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.**

##### C.2.2  Other Publications.

- **IEEE, Three Park Avenue, 17th Floor, New York, NY 10016-5997.**

##### C.2.3  ANSI/UL Publications.


##### C.2.4  IEEE Publications.

- **IEEE 484, Recommended Practice for Installation Design and Installation of Vented Lead-Acid Batteries for Stationary Applications,** 2002, **2008.**

##### C.2.5  UL Publications.


#### C.3  References for Extracts in Informational Sections.


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**Statement of Problem and Substantiation for Public Input**

Referenced current editions.
**Submitter Information Verification**

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<th>Field</th>
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<tbody>
<tr>
<td>Submitter Full Name</td>
<td>Aaron Adamczyk</td>
</tr>
<tr>
<td>Organization</td>
<td>[ Not Specified ]</td>
</tr>
<tr>
<td>Street Address</td>
<td></td>
</tr>
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<tr>
<td>State</td>
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<td>Zip</td>
<td></td>
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<tr>
<td>Submittal Date</td>
<td>Thu Dec 24 23:07:22 EST 2015</td>
</tr>
</tbody>
</table>

**Committee Statement**

- **Resolution:** FR-3-NFPA 111-2016
- **Statement:** The references were updated to current editions.
Public Input No. 5-NFPA 111-2016 [ Section No. C.1.2.4 ]

C.1.2.4 UL Publications.
Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

Statement of Problem and Substantiation for Public Input

This proposal updates the referenced UL Standards to the current edition.

Submitter Information Verification

Submitter Full Name: Ronald Farr
Organization: UL LLC
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State:
Zip:
Submittal Date: Mon Jun 27 17:05:11 EDT 2016

Committee Statement

Resolution: FR-3-NFPA 111-2016
Statement: The references were updated to current editions.