

Date: 20 July 2023
Memo to: Z136.1 Standards Subcommittee (SSC-1)
From: Dale Payne, Secretary SSC-1
Subject: Minutes of the SSC-1 Meeting, 14 July 2023

ADMINISTRATIVE

1. The meeting was held by video conference using Zoom.
2. The slides presented at the meeting will be uploaded to the Z136.lia.org Web site.
3. The following members attended the meeting:
Ritchie Buschow, Adam Carlisle, Joanna Casson, Edward Early, Joshua Hadler, Dale Payne, Benjamin Rockwell, Denny Rossbach, David Sliney, Gary Spichiger, Christine Stanley (guest), Bruce Stuck, Wendy Terrenoire, Robert Thomas, Greta Toncheva, and Sheldon Zimmerman.
4. Ben Rockwell, Chair of the SSC-1, called the meeting to order.
 - a. An agenda was presented and confirmed.
 - b. All committee members were contacted to reaffirm their participation on the subcommittee. 66 responded that they wished to maintain membership, six did not respond (Scott Benjamin, William Burgess, Matthew Carey, Jerry Dennis, Matthew Harrison, Jennifer Hunter), four terminated their membership (Brian Lund, John O'Hagan, Emily Purcell, Carol Tomczyk). Three new member applications were approved: Colin Brander, Hayden Johnson, and Karisa Yang. **Action item: E. Early indicated that William Burgess has retired, and the committee approved Mr. Burgess being removed from the membership roster.**
 - c. Jeff Pfoutz was recognized for his years of services as prior secretary of the Z136.1.
 - d. Christine Stanley, Edward Early, and Garry Spichiger were welcomed to their first SSC-1 meeting. **Action item: Confirm Christine Stanley's membership on SSC-1 once requested.**
5. The rationale for the Project Initiation Notification System (PINS)/Subcommittee Project Initiation Request (SPIR) was presented by the Chair. Historical context was provided by sharing an excerpt from the ASC Z136 Annual Meeting from 2006. "...The Committee's approach would be to make a very fundamental dot 1 horizontal standard with additional vertical standards to address specific user controls in their contexts." "...add simplification of dot 1 by the dot 1 subcommittee..." "...reduce most application-oriented requirements of ANSI Z136.1 and approve in principle the recommendations of the Ad Hoc Committee to establish at least three new subcommittees (R&D, Manufacturing, and Entertainment)..."

- a. The PINS form and SPIR form, which are available upon request, were approved as written.
 - b. Key dates are 1 October 2025 for the subcommittee draft for vote (SCDV) and 1 October 2026 for the committee draft for vote (CDV).
 - c. The focus of SSC-1 will be to push any content that has different requirements depending upon application or core content of another Z136 standard to those other standards (the “should” and “shall” requirements).
6. SSC-1 is expected to receive updated information about maximum permissible exposure (MPE) limits. The TSC-1: Bioeffects Technical Subcommittee has been working on multiple pulse correction factors and will provide guidance on how this effects retinal damage thresholds.
7. B. Rockwell proposed moving the classification procedures from the dot 1 “Safe Use of Lasers” to dot 4 “Measurement”. He proposed the various laser classes not be removed from dot 1, but the methodology of classifying a laser or laser system should be migrated to dot 4. The proposed change is expected to significantly impact SSC-4, TSC-2: Hazard Evaluation Subcommittee, and TSC-7: Analysis and Applications.
 - a. To foster discussion S. Zimmerman made an argument for keeping classification procedures in the dot 1. MPEs are in the dot 1 and hazard evaluation is a user-based function. Part of performing the hazard evaluation is confirming the class of the laser, which necessitates access to the classification procedures.
 - b. B. Rockwell prefaced his counterpoint by stating that the overall committee membership does not represent the average user. Most members are in fields where they know the minutiae of laser safety and its many facets. The average user typically does not classify any laser, but rather seeks guidance from the dot 1 on types of control measures to implement based on the laser classification and hazard distance. All manufacturers in the United States must abide by the Food and Drug Administration (FDA) requirements or procedures for classifying a laser. Restricting the dot 1 to the essentials of a laser safety program will facilitate transitioning the dot 1 to a true horizontal standard.
 - c. J. Hadler indicated that classifying a laser is a requirement, and the dot 4 focuses on recommended practices. If the classification procedure material is moved to the dot 4, it could lead to a reconsideration of how the dot 4 is applied. R. Thomas stated that the dot 4 might need to be promoted to a standard if it becomes the source for classification procedures. C. Stanley mentioned that some military-based laser safety programs use an ANSI driven classification rather than the classification provided by a manufacturer. The reclassification process is conducted because lasers purchased from overseas have been known to be mislabeled.
 - d. R. Thomas mentioned that the dot 4 does a sufficient job of handling measurements. E. Early said that the SSC-4 is looking at making minor

revisions to the dot 4. He also pointed out that the step-by-step methodology for classifying a laser is not contained in the dot 4 but is contained in the dot 1. The dot 4 only contains examples. D. Sliney suggested copying the classification process to the dot 4, but E. Early stated that would require modifying their PINS and create substantial work for SSC-4.

- e. D. Rossbach expressed concern over how many documents the average user would need to purchase. Financial constraints are a factor for some laser safety officers.
 - f. **Action item: Poll the SSC-1 membership for input on the proposed revision of moving the classification process out of the dot 1 and placing it in the dot 4.**
 - g. **Action item: Inform members that participation in subcommittee meetings is important and failure to participate in one of the next three meetings will place their membership in jeopardy.**
8. The topic of streamlining the control measures section was next on the agenda. D. Sliney lead the conversation by mentioning that the 2006 ad hoc committee's rationale for vertical standards was to allow for variances in control measures. Only broad information applicable to all lasers and their uses was to be included in the dot 1 (keep people out of the beam or the beam away from people was the philosophy). Including subtle nuances in control measures for every application expands and delays the dot 1 standard.
9. The normative appendices need reviewing. It was decided that the following distribution would be appropriate.
- a. Appendix A: TSC-4
 - b. Appendix B: TSC-7
 - c. Appendix C: TSC-2 or TSC-4
 - d. Appendix D: TSC-1
 - e. Appendix E: TSC-1
 - f. Appendix F: TSC-2 or SSC-1
- 10.B. Rockwell proposed that an ad hoc committee be formed to refresh the tables and figures in the dot 1. For example, current Table 7a should be returned to being Table 5. Also, Table 4 may no longer be applicable. R. Thomas expressed concern if all the tables and figures were correctly cross referenced in the text. Also, S. Zimmerman thought that renumbering the tables and figures could lead to discrepancies in already existing training programs. D. Sliney mentioned that renumbering or resequencing the tables and figures is premature because SSC-1 has yet to decide what is staying in the document. Action is deferred until a later date.
11. There was discussion on changes or additions to the content agenda. R. Thomas proposed review of examples with changes in content, i.e., if

classification procedure was removed. S. Zimmerman stated the need to emphasize the horizontal/vertical structure of the standards.

12. There was one new business item and that was to identify a platform for sharing documents and collaborative editing. D. Sliney mentioned that with such a large membership, allowing each member carte blanche editorial permission could lead to text changes that are inconsistent with the goal of the document. R. Thomas suggested a shared edit of a comment matrix instead of a shared edit of the full standard. **Action item: Contact C.D. Clark III for guidance on how he set up the SLACK board for concurrent editing of a document.**

13. The proposed timetable for the next edition of the Z136.1 was presented by B. Rockwell. The Gantt chart is included in the slides. Initially monthly meetings may be necessary because the document SSC-1 will produce could be significantly different than the current version. This will facilitate developing the SCDV by 1 October 2025. D. Sliney recommended alerting other subcommittees if SSC-1 moves material from the dot 1 to other documents. The meetings will be announced on the Z136.lia.org Web site along with instructions on how to join the virtual meeting. The tentative date for the next meeting is 25 August 2023. The goal is to limit the meetings to an hour. **Action item: Poll membership for best day and time (late morning or early afternoon) to participate in a meeting.** A working in-person meeting concurrent with the DOE/LSO Workshop (30 April 2024 – 2 May 2024) in Austin, TX was suggested.
 - a. Members should come to meetings with specific issues they want addressed in the standard. An outline of changes or edits would be an excellent start.
 - b. Ad hoc committees will be formed, and members should anticipate participating in at least one group.
 - c. SSC-1 officers will meet separately to determine workflow for the larger subcommittee.

The meeting was adjourned.

Minutes respectfully submitted by Dale Payne