

**Minutes of the  
Second Meeting, Rockville, Maryland September 14, 2007  
for  
ASC 136 Subcommittee 9  
American National Standard for the Safe Use of Lasers in a Manufacturing  
Environment**

Chair: Thomas J. Lieb

Vice-Chair: Randolph Paura, P.E.

Secretary: Candace Soles

To: LIA Secretariat; Chair Z 136 ASC; Members, Prospective Members, and Interested Observers

From: Candace Soles

Date: September 21, 2007

Subj: Minutes of the Second Meeting of the SSC 9, Lasers in a Manufacturing Environment, held 9:00 AM, September 14, 2007 at the Center for Devices and Radiological Health (CDRH), Rockville, Maryland

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**AGENDA**

1. Roll Call of those in attendance
  - The meeting was opened at 9:25 AM, 9/14/07. Jerry Dennis, CDRH host, delivers welcome speech.
  - Attendee introductions and attendance sheet was collected (attached). In addition to those committee members listed, we had one non-voting contributor, the Chair of SSC 10, J. Parkinson, was in attendance.
2. Acceptance of the Agenda as proposed
  - Chair (Lieb) reviews agenda, and Committee accepts agenda as proposed.
  - Vice-Chair (Paura) reviews agenda logistics and time allotted each agenda section - Committee accepts.
3. Discussion of Draft Sections (Led by Respective Section Project Leaders)  
*Teams were assigned to draft sections and present their material to the Committee using a split column table format – left column is text from ANSI 136.1 and right column for edited text, explanations and notes.*
  - a. Section 1: General (D. Seeley)
    - T. Lieb will 'rescramble'. Scope statement to match Scope statement developed at March 2006 meeting. (Action Complete, Scope in Draft)

- P. Daniel proposes using “nm” as the unit of measure for UV and IR wavelengths, not just visible wavelengths.
  - General discussion (J. Parkinson, D. Seeley, T. Hitchcock) to provide overview of laser class descriptions instead of enumerating them as in Z136.1. P. Daniel will send Vice-Chair (Paura) a table he uses to classify lasers, as an example.
- b. Section 2: Definitions (Committee reviewed as a group)
- Committee consensus is to avoid republishing all definitions found in Z136.1 but rather refer to Z136.1 for definitions.
- c. Section 3: Hazard Evaluations and Classifications (D. Sliney)
- D. Sliney will customize wording of sections 3.2.3.2 and 3.2.3.3 to be more industry-specific.
- d. Section 4: Control Measures (T. Hitchcock)
- T. Hitchcock proposes major rewrite of section with certain information relocated to the appendices. T. Hitchcock, W. Ertle, and T. Lieb to review section and expand/clarify where appropriate.
  - D. Sliney suggests enhancing section 4.3.1.2, *Walk-In Protective Housing*, to clarify treatment of laser classes (e.g., total enclosure should be treated as Class 1).
  - J. Parkinson proposes a review of section 4.3.1.2 against IEC standards and adding substantiating information in the appendices.
  - TSC 4 Control Measures and Training (includes member Ertle, Lieb, Hitchcock and Seeley) will meet in Ohio Oct 10 -11 with re-draft of this section on their agenda.

*Break: 10:50 am – 11:00 am*

- e. Section 5: Laser Safety Programs and Employee Training (D. Seeley)
- T. Hitchcock suggests section is ambiguous and needs clarification.
  - D. Seeley suggests excluding section from standard.
  - Committee agrees to review Section 5 and circulate comments amongst committee members.
- f. Section 6: Medical Surveillance (P. Daniel)
- Several Committee members at odds with this section. D. Sliney suggests it's unusual for a safety standard to recommend medical examinations. T. Hitchcock considers UV surveillance important as it is a known carcinogen to skin. T. Lieb suggests section to recommend medical surveillance only when exposure is outside of normal working conditions (e.g., above MPE), otherwise workers may not require medical surveillance.

- T. Lieb proposes to expand section to describe when surveillance is considered and when it is not considered; Committee to submit comments.
- Ask TSCI to contribute to this section?

g. Section 7: Non-Beam Hazards (T. Hitchcock)

- General Committee comments:
  - Section 7.2.6, *Noise*: Mention assist gases, laser knives, and other noise-generating items.
  - Section 7.4, *Biological Agents*: Add comment about food processing and animal tissue.
  - Section 7.5.2, *Limited Work Space*: Add generalized statement about importance of adequate space.

h. Section 8: Criteria for Exposures of Eye and Skin (R. Paura)

- T. Hitchcock proposes table like page 203 in Z136.1 (Table C3a and C3b) to indicate NHZ range with mention of fiber laser.
- D. Sliney in favor of describing when MPE would be used, and not in favor of reproducing MPE discussion in section.
- P. Daniel suggests minimizing information in Appendix B.

i. Section 9: Measurements (D. Sliney)

- D. Sliney will edit section in near future.

k. Section 10: Revision of Standards Referred to in this Document

- No discussion.

l. Appendices

**A** *Normative (?) Examples of Classification* (D. Seeley)

- D. Seeley recommends Z136.9 same as Z139.1.
- D. Sliney notes that A.1.2. (2) needs clarification.

**B** *Examples: for Hazard Evaluation and Classification* (R. Paura)

- No discussion, but is a priority to review.

**H** *Examples: Harmonization of International Standards* (D. Seeley)

- D. Seeley to exclude from Z136.9.

**Action Items for T. Hitchcock**

**C** Examples: Hazard Evaluation, Classification and Control Measures

**D** Examples: Guide for the Organization and Implementation of Laser Safety Programs and Employee Training Programs

**E** Examples: Medical Surveillance

**F** Examples: Non-beam Hazards

**G** Examples: Biological Effects of the Eye and Skin

General points made during Section reviews:

- *Highlight background of text to see changes made during the review*
- *Keep reference of text notations to upper levels, e.g., Section 4 versus 4.2*
- *Correlate main section numbers with other ANSI standards for ease of reference*

4. Progress on Publication Schedule (R. Paura)
  - T. Lieb reports that the Committee is currently behind schedule due to a late start. The Committee and Chair were selected after the PIN, but we should be on track just after the next SSC 9 Meeting in February 2008.
  - Standard Development Timeline completed 9/21/07 by R. Paura (attached).
5. Project Plan (Lieb, all)
  - Submit section rough drafts to R. Paura by October 12, 2007, to integrate into draft Standard. As of October 12, 2007, R. Paura will be gatekeeper of all text. Sections can be distributed separately to Committee members for review and comment before submitting to R. Paura.
  - Priorities are to review Appendix B and remove Appendix H.
6. New business, Schedule of next meeting (T. Lieb)
  - R. Paura, Vice Chair may hold a project meeting at ICALEO October 31 (plans to be announced, pending progress and attendance).
  - Next full SSC meeting proposed for February 7, 2008 in Orlando, Florida, to coincide with ASC meeting.
7. Adjourn
  - The meeting adjourned at 12:20 PM, September 14, 2007.

# SSC-9

## Safe Use of Lasers in Manufacturing Environments

Attendees, either initial your name or please add

Paul Daniel ✓	Jerry Dennis ✓	Mina Earnest
William Ertle ✓	Clifford Greenberg	Tim Hitchcock ✓
Peter Keller ✓	Don Lambert	Thomas Lieb ✓
David Marcotte	Randolph Paura ✓	Ron Petersen
Massimo Sardelli	Darrell Seeley ✓	David Sliney ✓
Candace Soles ✓	Tekla Staley ✓	Robert Thomas
Scott Wohlstein ✓	Jay Parkinson ✓	

**Standard Development Timeline  
for Revised Standards**

Tasks	%	5-year Plan by Quarters																				Timeline (duration)
		2006				2007				2008				2009				2010				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
PINS to ANSI (prior to SSC activity)																					Starting point 45 days	
Public review for project																					3-6 months	
SPIR to ADCOM (with outline/proposed draft)																					concurrent	
Distribute SPIR for coordination																					2 years	
Begin work SCD																					concurrent	
Periodic circulation of successive SCD's																					1 month	
SCDV - establishment of balloting group																					concurrent	
Distribute SCDV to cooperating TSC's																					4-6 weeks	
Subcommittee balloting																					2 months	
Ballot resolution																					2 wk minimum	
Ballot recirculation/default ballot																					3 months	
EWG first review																					1-2 months	
CDV - establishment of balloting group (CBBG)																					1-2 months	
Committee balloting																					60 days	
Public review																					3-6 months	
Ballot resolution																					2 wk minimum	
Ballot recirculation/default ballot																					1-2 months	
EWG final review																					1 month	
Changes approved by SSC Chair																					1-2 months	
Substantive changes recirculated to CBBG																					1-2 months	
Submit to ANSI for approval																					4-6 weeks	
Printing process																					Finished	
Published document available																						

- ANSI (American National Standards Institute)
- ADCOM (Administrative Committee of ASC Z136)
- PINS (Project Initiation Notification System)
- SPIR (Subcommittee Project Initiation Request)
- SCD (Subcommittee Draft - Working)
- SCDV (Sub-Committee Draft for Vote)
- TSC (Technical Sub-Committee)
- EWG (Editorial Working Group)
- CDV (Committee Draft for Vote)
- CBBG (Concensus Body Balloting Group)
- SSC (Standards Sub-Committee)

- Planned schedule.
- Completed
- Could start if previous work is completed early/on time
- Current status
- Current status, overdue

Priority tasks	%	Start	Deadline	Notes
Initial plan	100	March 22/07	April 30/07	Initial meeting held March 22/07
Dot 1 Distribution	100	April 15/07	April 30/07	Received Word document
Project Leaders Plan	100	March 22/07	May 01/07	Key team members assigned at initial planning session of March 22/07
Mid term status reporting	100		July 15/07	Delayed start but running.
Chair collect	25		Oct. 12/07	Delay in compiling. New deadline established as Oct. 12, 2007
Vice Chair compile	0		Dec. 31/07	Compile by year end
SCD	0		Feb. 04/08	Full review during ICALCO 2007 (Oct. 29 - Nov. 1)