



## North America EHS Committee Meeting Summary and Minutes

**NA Standards Fall 2014 Meetings**  
 6 November 2014, 0905– 1515 Pacific Time  
 SEMI Headquarters in San Jose, California

**Next Committee Meeting**

North America Standards Spring 2015 Meetings  
 Thursday 2 April 2015, 0900 – 1600 Pacific Time  
 SEMI Headquarters in San Jose, California

**Table 1 Meeting Attendees**

*Italics indicate virtual participants*

**Co-Chairs:** Chris Evanston (Salus Engineering), Sean Larsen (Lam Research), Bert Planting (ASML)

**SEMI Staff:** Paul Trio

<i>Company</i>	<i>Last</i>	<i>First</i>	<i>Company</i>	<i>Last</i>	<i>First</i>
Applied Materials	Karl	Edward	Safety Guru, LLC	Sklar	Eric
ASML	Planting	Bert	Salus Engineering	Evanston	Chris
Brooks Automation	Sleiman	Samir	Salus Engineering	Visty	John
DECON Environmental Services	Belk	William	Seagate	Layman	Curt
ESTEC Solutions	Mills	Ken	Tokyo Electron	Mashiro	Supika
<i>IBM</i>	<i>Petry</i>	<i>Bill</i>	Tokyo Electron	Nambu	Mitsuju
Intertek	Rai	Sunny	Tokyo Electron	Fessler	Mark
KLA-Tencor	Crane	Lauren	TUV Rheinland NA	Pochon	Stephan
Lam Research	Claes	Brian	TUV SUD America	Derbyshire	Pauline
Lam Research	Larsen	Sean	TUV SUD America	Faust	Bruce
Nikon Precision	Greenberg	Cliff	SEMI	Baliga	Sanjay
Product EHS Consulting	Brody	Steven	SEMI	Trio	Paul

**Table 2 Leadership Changes**

<i>Group</i>	<i>Previous Leader</i>	<i>New Leader</i>
Global S23 Task Force		Lauren Crane (KLA-Tencor) was appointed as global TF co-leader.
The S2 to Machinery Directive Mapping Task Force has been disbanded.	Lauren Crane (KLA-Tencor) stepped down as TF leader.	

### Table 3 Ballot Results

**Passed** ballots and line items will be submitted to the ISC Audit & Review Subcommittee for procedural review.

**Failed** ballots and line items were returned to the originating task forces for re-work and re-balloting.

Document #	Document Title	Committee Action
	<i>Cycle 5, 2014 Ballots</i>	
<b>5623</b>	Line Item Revisions to SEMI S1-0708E, Safety Guideline for Equipment Safety Labels	
Line Item 1	Clarifying the Purpose Statement in Section 1.1	<b>Passed</b> as balloted
Line Item 2	Adding "NOTICE" to Note 4 of the Scope Section	<b>Passed</b> as balloted
Line Item 3	Revising Related Information 1 – Letter Height of Text in Message Panel	<b>Failed</b> , to be reballoted
Line Item 4	Adding Test Method for Determining "Durability"	<b>Failed</b> , to be reballoted
Line Item 5	Addition of NOTICE to Allow for Italics or Non-italicized Letters	<b>Passed</b> as balloted
Line Item 6	Changing Reference to Appendix 1 from Within Note 12 to a New Section 9.6	<b>Failed</b> , to be reballoted
Line Item 7	Adding Tolerance to the Nominal Dimensions for Surround Shapes in Section 9.10	<b>Passed</b> as balloted
Line Item 8	Adding New Symbol and Updating Sources in Appendix 1	<b>Failed</b> , to be reballoted
Line Item 9	Correcting the Arabic and Farsi Translations in Table A2-1	<b>Passed</b> with editorial changes
<b>5760</b>	Line Item Revisions to SEMI S7-0310, Safety Guideline for Evaluation Personnel and Evaluating Company Qualifications	
Line Item 1	Change to make qualifications statement available when work starts	<b>Passed</b> with editorial changes
Line Item 2	Add document retention criteria	<b>Passed</b> as balloted
	<i>Cycle 6, 2014 Ballots</i>	
<b>4683D</b>	Line Item Revisions to SEMI S2-0712b, Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment. Delayed Revisions Related to Chemical Exposure	
Line Item 1	Add explanatory materials for valid air sampling and measurement methods and accredited laboratories	<b>Failed</b> , to be reballoted
Line Item 2	Clarify the reporting criteria	<b>Passed</b> with editorial changes
<b>5591A</b>	Line Item Revisions to SEMI S2-0712b, Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment. Delayed revisions related to fire protection	
Line Item 1	Audibility and visibility of annunciators of fire detection systems	<b>Passed</b> with editorial changes
Line Item 2	Audibility and visibility of annunciators of fire suppression systems	<b>Passed</b> with editorial changes
<b>5718A</b>	Line Item Revisions to SEMI S10-0307E, Safety Guideline for Risk Assessment and Risk Evaluation Process	
Line Item 1	Modify Note 3 and 4 in definitions section	<b>Passed</b> as balloted
Line Item 2	Clarification section 6.5 on risk estimation, remove the term benchmarking. Multiple changes in the section	<b>Failed</b> , to be reballoted
Line Item 3	Update standards (remove years and add note to latest version). Line item 3 is to bring standards references in line with other SEMI S standards (like SEMI S2, S22, ..)	<b>Passed</b> with editorial changes
Line Item 4	Correct pointer to ISO 12100 in Appendix 1	<b>Passed</b> with editorial changes

**Table 4 Authorized Activities**

#	Type	SC/TF/WG	Details
5825 <sup>1</sup>	SNARF	NA EHS Committee, 5-Year Review	Reapproval for SEMI E34-1110, Safety Guideline for Mass Flow Device Removal and Shipment View SNARF # 5825
5827 <sup>2</sup>	SNARF	NA EHS Committee, 5-Year Review	Reapproval for SEMI S5-0310, Safety Guideline for Sizing and Identifying Flow Limiting Devices for Gas Cylinder Valves View SNARF # 5827
5826 <sup>3</sup>	SNARF	NA EHS Committee, 5-Year Review	Reapproval for SEMI S27-0310, Safety Guideline for the Contents of Environmental, Safety, and Health (ESH) Evaluation Reports View SNARF # 5826

Note: SNARFs and TFOFs are available for review on the SEMI Web site at:  
<http://downloads.semi.org/web/wstdsbal.nsf/TFOFSNARF>

**Table 5 Authorized Ballots**

#	When	SC/TF/WG	Details
4316L	Cycle 2, 2015 or earlier	S22 TF	Line Item Revisions to SEMI S2, <i>Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment</i> , and SEMI S22, <i>Safety Guideline for the Electrical Design of Semiconductor Manufacturing Equipment</i>
4449E	Cycle 2, 2015 or earlier	S2 Ladders & Steps TF	Delayed Line Item Revision to SEMI S2-0712, <i>Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment</i> . Line Item Revisions related to Work at Elevated Locations and Design Criteria for Platforms, Steps, and Ladders
4683E	Cycle 2, 2015 or earlier	S2 Chemical Exposure TF	Line Item Revisions to SEMI S2, <i>Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment</i> Delayed Revisions related to Chemical Exposure
5009D	Cycle 2, 2015 or earlier	S8 Ergonomics TF	Line Item Revisions to SEMI S8-0712, <i>Safety Guidelines for Ergonomics Engineering of Semiconductor Manufacturing Equipment</i> . Delayed Revisions on Multiple Topics
5625	Cycle 2, 2015 or earlier	S2 Non-ionizing Radiation TF	Line Item Revisions to SEMI S2, <i>Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment</i> Delayed Revisions related to non-ionizing radiation
5718B	Cycle 2, 2015 or earlier	S10 TF	Line Item Revisions to SEMI S10-0307E, <i>Safety Guideline for Risk Assessment and Risk Evaluation Process</i>
5825	Cycle 8, 2014	NA EHS Committee, 5-Year Review	Reapproval for SEMI E34-1110, Safety Guideline for Mass Flow Device Removal and Shipment
5827	Cycle 8, 2014	NA EHS Committee, 5-Year Review	Reapproval for SEMI S5-0310, Safety Guideline for Sizing and Identifying Flow Limiting Devices for Gas Cylinder Valves
5826	Cycle 8, 2014	NA EHS Committee, 5-Year Review	Reapproval for SEMI S27-0310, Safety Guideline for the Contents of Environmental, Safety, and Health (ESH) Evaluation Reports

<sup>1</sup> SNARF # 5825 is available at:  
<http://downloads.semi.org/web/wstdsbal.nsf/b8865fa87d9e7b57882579fb005c3cd7/5b21ec02db9d312d88257d9a0070dc97!OpenDocument>

<sup>2</sup> SNARF # 5827 is available at:  
<http://downloads.semi.org/web/wstdsbal.nsf/b8865fa87d9e7b57882579fb005c3cd7/9e01da0d0bc8134488257d9a0071443e!OpenDocument>

<sup>3</sup> SNARF # 5826 is available at:  
<http://downloads.semi.org/web/wstdsbal.nsf/b8865fa87d9e7b57882579fb005c3cd7/f203d93d5cc2fede88257d9a00718e17!OpenDocument>



**1 Welcome, Reminders, and Introductions**

Sean Larsen called the meeting to order at 9:05 AM. Attendees introduced themselves. The SEMI meeting reminders on Standards membership requirement, antitrust issues, intellectual property issues, and effective meeting guidelines were presented. Finally, the agenda was reviewed.

**Attachment:** 01, SEMI Standards Required Meeting Elements

**2 Review of Previous Meeting Minutes**

The committee reviewed the minutes of the previous meeting held July 10 in conjunction with SEMICON West 2014. The following amendments were made:

- In Table 4 (Authorized Activities), remove the first two rows since these TFOFs were not approved during the NA EHS meeting at SEMICON West 2014 and should not be included in the minutes.

**Table 4 Authorized Activities**

#	Type	SC/TF/WG	Details
—	TFOF	Energetic Materials EHS TF	<del>Charter: Develop EHS guidance for the entire supply chain to assist in timely and accurate characterization of energetic processing materials. Propose design considerations for equipment, delivery system, pump and abatement manufacturers. Identify handling, use and disposal best practices, as well as, operation, maintenance and emergency response criteria for end users. Approved by the EHS Global Coordinating Subcommittee (GCS) in June 2014.</del>
—	TFOF	S7 TF	<del>Charter: The purpose of this task force is to support the five year revision of SEMI S7. The task force will obtain comments and suggestions from SEMI membership on suggested changes and take the document through the SEMI balloting process. Approved by the EHS Global Coordinating Subcommittee (GCS) in June 2014.</del>

- In section 3.3 (SEMI EHS Division/ICRC Report), add editor’s note:  
 Mark Frankfurth reported that the ICRC met on July 9 with about 40 attendees. There was a presentation on OSHA lockout limitations and how members can impact that change. The committee also discussed the radio equipment directive as well as OSHA certified equipment. With regard to OSHA certified equipment, the committee considered this to be a minor risk so no immediate action was taken at this time {Editor’s Note: OSHA does not certify equipment so during the meeting minutes review at the NA Standards Fall 2014 meetings (November 6), the North America EHS Committee was uncertain what was discussed at the ICRC}. The committee also reviewed the EHS Regulatory Dashboard which many found it to be overwhelming. The meeting also included ICRC WG updates on RoHS and REACH. Mark reported that, overall, the meeting was too short, but the discussions have value. Finally, Mark reported that the Sustainable Manufacturing Forum, scheduled July 7-10, provided 20 hours of content and had good representation.

**Motion:** NA EHS Committee approves to accept the NA EHS West 2014 Committee meeting minutes as amended.  
**By / 2<sup>nd</sup>:** Bert Planting (ASML) / John Visty (Salus Engineering)  
**Discussion:** None  
**Vote:** 8-0 in favor. Motion passed.

**Action Item:** 2014Nov #01, Paul Trio to post the amended SEMICON West 2014 meeting minutes to the SEMI website.

**Attachment:** 02, Amended NA EHS SEMICON West 2014 meeting (July 10) minutes

### 3 Leadership and Liaison Reports

#### 3.1 Japan EHS Committee

Supika Mashiro reported for the Japan EHS Committee.

- Next meeting: December 5 in conjunction with SEMICON Japan 2014 (Tokyo Big Sight, Tokyo)
- Ballot Results
  - Doc.#5719, Delayed Line Item Revision to SEMI S26-0811, *Environmental, Health, and Safety Guideline for FPD Manufacturing System* (Delayed Revisions Related to Limitations)
    - Line Item 1: Delayed Revision to §3 “Limitations”
      - Passed as balloted
    - Result of LI was forwarded to the ISC A&R SC and waiting for the result.
  - Doc.#5720, Line Item Revisions to SEMI S26-0811, *Environmental, Health, and Safety Guideline for FPD Manufacturing System*; Revisions Related to General Harmonization to SEMI S2
    - Line Item 1: Revision to “accredited testing laboratory” of § 5 “Terminology”
      - Passed as balloted
    - Line Item 2: Revision to §11 “Safety Interlock Systems”
      - Passed as balloted
    - Line Item 3 Revision to §13 “Electrical Design”
      - Part A Revision to “hazardous electrical power”
      - Part B Revision to “Electrical Design”
      - Part C Deletion of “Appendix2 Enclosure openings”
        - Passed as balloted
    - Line Item 4 Revision to §18 “Mechanical Design”
      - Passed as balloted (Super Clean)
    - Line Item 5 Revision to “§25 Non-Ionizing Radiation and Fields”
      - Part A Revision to “§25 Non-Ionizing Radiation and Fields”
      - Part B Revision to “Appendix 6 Exposure Criteria and Test Methods for Non-Ionizing Radiation (other than Laser) and Electromagnetic Fields”
      - Part C Add of “Related Information 3 Documentation of Non-Ionizing Radiation (§25 and Appendix 6) including Rationale for Changes”
        - Passed as balloted (Super Clean)
- Results of all line items were forwarded to the ISC A&R SC and waiting for the result.
- Upcoming Ballots
  - Seismic Protection Task Force - The earliest possible cycle
    - Doc. 5556, Line Item Revisions to SEMI S2-0712, *Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment*. Revisions Related to Section 19 Seismic Protection

- S23 Revision Task Force – temporarily suspended
  - Doc. 5513A, Line Item Revision to SEMI S23-0311, *Guide for Conservation of Energy, Utilities and Materials Used by Semiconductor Manufacturing Equipment*. (Line Item (1) only)
- S23 Revision TF
  - TF recognizes the needs for converting S23 Revision Task Force to a Global Task Force.
  - TFOF will be revised (i.e., convert to a global task force) and submitted to GCS via SEMI staff.
  - Submission of Line Item (1) of Doc. #5513A, Line Item Revision to SEMI S23-0311, *Guide for Conservation of Energy, Utilities and Materials Used by Semiconductor Manufacturing Equipment* is temporarily suspended.
- Greenhouse Gas (GHG) Emission Characterization Task Force
  - TF continuously checks compatibility of SEMI S29 with EPA
- FPD System Safety Task Force
  - The following 2 documents were reviewed at the committee meeting
    - Doc. 5719, Line Item Revision to SEMI S26-0811, *Environmental, Health, and Safety Guideline for FPD Manufacturing System*, Delayed Revisions Related to Limitations
    - Doc. 5720, Line Item Revisions to SEMI S26-0811, *Environmental, Health, and Safety Guideline for FPD Manufacturing System*, General Harmonization to SEMI S2
- Seismic Protection Task Force
  - TF has been working on Doc. 5556, Line Item Revisions to SEMI S2-0712, *Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment*, Revisions Related to Section 19 Seismic Protection
    - Discussing with NA Seismic Protection Liaison TF, it will be submitted for the earliest possible cycle.
- STEP Planning Working Group
  - STEP/ SEMI S2 was held on October 17, 2014, at the SEMI Japan, Tokyo, and successfully finished, attracted 81 attendees.
- Program for SEMICON Japan 2014
  - SEMI EHS Standard Energetics Workshop *Emerging Chemistries and their Combinations introducing Risks to Semiconductor Manufacturing Operations, Fab, Environment and Life*.
    - Date: 13:00-17:00, Wednesday, December 3, 2014
    - Program Chair: Supika Mashiro/ Tokyo Electron, Hidetoshi Sakura/ Intel, Moray Crawford/ Hatsuta Seisakusho
    - Registration fee: Until Nov. 21: JPY 16,000 / From Nov. 22: JPY 19,000 (Consumption tax [8%] not included)
    - Session Summary & Agenda: <https://semi-reg.smtkg.jp/public/session/view/24?lang=en>

Additional Discussion:

- Mark Fessler asked whether the S23 Revision TF will be the first global TF. Supika Mashiro responded that there are actually several global TFs in the program. Such TFs can be found in the Silicon Wafer and Physical Interfaces & Carriers (PIC) committees.
- With regard to the S2 STEP, Supika Mashiro pointed out that there were over 100 applicants but many were turned due to room capacity.

**Attachment:** 03, Japan EHS Committee Report

### 3.2 SEMI Taiwan EHS Report

Paul Trio provided the Taiwan liaison report.

- EHS (Green Manufacturing)
  - Sustainable Manufacturing Forum at SEMICON Taiwan (completed)
    - Theme: *Realization of Sustainable Manufacturing Through SEMI Global Care Initiative*
    - Date: Wednesday, September 03, 2014
    - On-site attendees: >100
    - Speakers from: Air Liquide Electronics, AS, Air Products and Chemicals, BELFOR, Clinic of Hsinchu Science Park, DuPont Taiwan, Edwards, Siemens
  - Sustainable Manufacturing Gallery at SEMICON Taiwan (completed)
    - Date: September 03-05, 2014
    - Booth no. 234, 4F, TWTC Nangang Exhibition Hall
    - Presentation titles included:
      - “From Green Factory to Green Campus”
      - “Environmental Trends in Waste Gas Abatement”
      - “The Environmental Management Impact and Opportunity for the LED Industry”
      - “Environmental Trends in Waste Gas Abatement”
      - “The Sustainable Development for the PV Industry”
      - “The Environmental Management Impact and Opportunity for the LED Industry”
      - “The Sustainable Development for the PV Industry”
      - “Environmental Trends in Waste Gas Abatement”
  - SEMI Taiwan - Japan Green Manufacturing Committee F2F Meeting in conjunction with SEMICON Taiwan (completed)
  - SEMI Taiwan - Japan Green Manufacturing Committee F2F Meeting in conjunction with SEMICON Japan (planning)
- EHS Committee
  - Last meeting: October 20, 2014 (Hsinchu Science Park, Admin Building)
  - Next meeting: March 2015 [tentative] (Hsinchu Science Park, Admin Building)
- Regional Staff Contact: Andy Tuan (atuan@semi.org)

Additional Discussion:

- The committee requested additional information on the upcoming EHS Committee meeting in March 2015. For example, will standards be discussed? With the meeting date still tentative, the committee suggested that this meeting should not be scheduled during the NA Standards Spring 2015 meetings or SEMICON China.

**Action Item:** 2014Nov #02, Paul Trio to contact Andy Tuan for details on the next Taiwan EHS meeting stated as March 2015.

**Attachment:** 04, SEMI Taiwan EHS Report

### 3.3 SEMI Korea EHS Report

Paul Trio provided the Korea liaison report.

- Safety Standards Translation
  - Target: S2
  - Period: Sept 1 – Nov 1 (3 months), 2014
  - Target release date: Nov 24
- STEP: S2
  - Schedule: Nov 27, 2014
  - Speaker: TBD
  - Target Attendee: 50
- Regional Staff Contact: Natalie Shim (eshim@semi.org)

Additional Discussion:

- Supika Mashiro stated that the Japan EHS Committee serves as a reviewer for Japanese translations. However, she pointed out that for Korean translations, it is not clear whether there is oversight to ensure that the translations are accurate. She asked whether the EHS WG was doing the translations or some other group.

**Action Item:** 2014Nov #03, Paul Trio to look into Korea translation of S2 (e.g., process, oversight, who is involved).

**Action Item:** 2014Nov #04, Paul Trio to look into whether the S2 translations in Traditional Chinese and Simplified Chinese versions are being maintained (i.e., whenever S2 is being updated, the translated versions are updated as well).

**Attachment:** 05, SEMI Korea EHS Report

### 3.4 RSC / Committee Leadership Report

Sean Larsen provided the co-chairs report.

- Leadership Changes
  - The NA RSC voted to appoint Chris Evanston to be co-chair of the RSC.
    - Sean Larsen stepped down as NA RSC co-chair to avoid concerns of having two co-chairs from the same committee
    - This was done so that we can have NA RSC representation at the ISC meeting at SEMICON Japan as other chairs have been unable to support this meeting



- Regulations Changes
  - The ISC just completed a vote on regulations changes
    - 11 of the 12 proposed changes were passed
    - Procedure Guide changes are being drafted to support these changes
    - Plan is to have both the new regulations and the new PG published and in effect before the December SEMICON Japan meetings
    - The changes will be discussed in detail in new business

**Attachment:** 06, Leadership Report

### 3.5 SEMI EHS Division/ International Compliance and Regulatory Committee (ICRC) Report

Sanjay Baliga reported that the SEMI EHS Division and the SEMI China regional office are organizing a workshop during SEMICON China as a follow-up to discussions during the IC-China Forum that took place in Shanghai in October 2014. For the IC-China Forum, the Chinese Semiconductor Industry Association (CSIA) requested assistance from the SEMI EHS Division to understand how to apply various SEMI "S" series standards and also how to verify compliance to the standards (using self-administered check-lists or third party evaluations). Some Chinese semiconductor manufacturers are trying to understand the universe of compliance mechanisms and are seeking advice from others who may have significant experience and expertise.

Sanjay stated that there could be three possible scenarios for this workshop: 1) professional development course for compliance, 2) invite speakers to provide their perspective on how they comply, or 3) informal set of meetings for Third Parties, suppliers, and end users on how they do compliance. Sanjay also pointed out that the EHS Standards members can provide input/assistance on the professional development course. He is also looking for inputs for possible speakers.

**Action Item:** 2014Nov #05, Paul Trio/Sanjay Baliga to invite EHS Committee members to participate on EHS Division seminar in China on compliance.

### 3.6 SEMI Staff Report

Paul Trio gave the SEMI Staff Report.

- 2014 Global Calendar of Events
  - International Technology Partners Conference [ITPC] (November 9-12, Big Island, Hawaii)
  - Collaborative Alliance for Semiconductor Test [CAST] Workshop: Implementing Next Generation Data Logging (November 12-13, San Jose, California)
  - SEMI South America Semiconductor Strategy Summit (November 18-20, Buenos Aires, Argentina)
  - SEMICON Japan (December 3-5, Tokyo)
- 2015 Global Calendar of Events
  - Industry Strategy Symposium (January 11-14, Half Moon Bay, California)
  - European 3D TSV Summit (January 19-21, Grenoble, France)
  - SEMICON Korea / LED Korea (February 4-6, Seoul)
  - Industry Strategy Symposium [ISS] Europe (February 22-24, Amsterdam, Netherlands)
  - SEMICON China / FPD China (March 17-19, Shanghai)

- LED Taiwan (March 25-28, Taipei)
- SEMICON Southeast Asia (April 22-24, Penang, Malaysia)
- Advanced Semiconductor Manufacturing Conference [ASMC] (May 3-6, Saratoga Springs, New York)
- Intersolar Europe (June 10-12, Munich Germany)
- SEMICON Russia (June 17-18, Moscow)
- SEMICON West (July 14-16, San Francisco, California)
- SEMICON Taiwan (September 2-4, Taipei)
- European MEMS Summit (September 17-18, Milan, Italy)
- SEMICON Europa (October 6-8, Dresden, Germany)
- SEMICON Japan (December 16-18, Tokyo)
- NA Standards Fall 2014 Meetings (November 2-6)
  - Committees meeting at SEMI Headquarters (San Jose)
    - 3DS-IC | EHS | Facilities & Gases | HB-LED | Information & Control | Liquid Chemicals | MEMS/NEMS | Metrics | PV Materials
  - SEMI thanks Intel (Santa Clara) for hosting the Physical Interfaces & Carriers (PIC) and Silicon Wafer committees.

● Standards Publications Report

Cycle	New	Revised	Reapproved	Withdrawn
July 2014	1	6	0	1
August 2014	2	7	0	0
September 2014	2	7	1	1
October 2014	3	9	1	0

- Total in portfolio – 917 (includes 108 Inactive Standards)
- NA Standards Spring 2015 Meetings
  - March 30 – April 2 at SEMI Headquarters (San Jose, California)
  - Inviting local companies willing and able to host some of the meetings to help maintain one-week format.
- Upcoming North America Meetings (2015)
  - NA Standards Spring 2015 Meetings (March 30 – April 2, San Jose, California)
  - NA Compound Semiconductor Materials TC Chapter Meeting (May 20 in conjunction with CS MANTECH, Scottsdale, Arizona)
  - NA Standards Meetings at SEMICON West 2015 (July 13-16, San Francisco, California)
  - NA Standards Fall 2015 Meetings (November 2-5, San Jose, California)
- NA Standards Fall 2014 Meetings
  - November 3-6 at SEMI Headquarters (San Jose, California)



- Technical Ballot Critical Dates for NA Standards Fall 2014 Meetings
  - Cycle 5: due July 18 / Voting Period: July 25 – August 25
  - Cycle 6: due August 12 / Voting Period: August 26 – September 25
- Upcoming North America Meetings (2015)
  - NA Standards Spring 2015 Meetings (March 30 – April 2, San Jose, California)
  - NA Standards Meetings at SEMICON West 2015 (July 13-16, San Francisco, California)

**Attachment:** 07, SEMI Staff Report



## 4 Ballot Review

4.1 Document # 5623, *Line Item Revisions to SEMI S1-0708E, Safety Guideline for Equipment Safety Labels*

4.1.1 Line Item # 1 – *Clarifying the Purpose Statement in Section 1.1*

### Tallies at Close of Voting

Voting Return Data		Acceptance Rate Data	
Voting Interest Returns	53	Voting Interest Accept Votes (VIAccept)	32
Total Voting Interests	87	Interest Reject Votes (IReject)	0
Voting Interest Return %	<b>60.92%</b>	Approval % [VIAccept / (VIAccept + IReject)]	<b>100.00%</b>
Other Returns (Intercommittee, etc.)	29	# of Interest Rejects that Need to be not found Valid for	
Total Votes	82	Final Approval % >= 90%	<b>0</b>
Total Votes with Comments	1		
Total Reject Votes	0		

### Rejects/Negatives

There were no reject votes received for ballot 5623, line item 1.

### Comments

Summary: 1 Total Items Submitted

Company: Submitter	ID	#	Company: Submitter	ID	#
Safety Guru, LLC: Eric Sklar	SG	1			

#	Ref.	Comment	TF Response	Committee Action:
SG-1	1.1	<p><i>Comment:</i> This paragraph should be in Scope, not Purpose.</p> <p><i>Reason/Justification:</i> The paragraph describes what is in the document, not why the document is being developed or maintained.</p>	<p>There is little obvious differentiation between the statements in scope and purpose as the document is now. SEMI procedure guide guidance is not much help in explaining how the contents of scope and purpose should differ.</p> <p>TF could ballot a comprehensive adjustment to these sections once the differentiating concepts are understood better.</p> <p>TF agrees to refer to TF for further review.</p>	<p>X Refer to TF for further review</p> <p>By/2nd: Eric Sklar / Edward Karl</p> <p>Disc:</p> <p>Vote: 11-0. Motion <b>passed</b></p>

### TF: From Procedure Guide

A3-2	Purpose	<p>(1) Every Standard and Safety Guideline must have a Purpose section.</p> <p>(2) Provide a concise explanation of the significance and application of the Standard or Safety Guideline.</p> <p>(3) Indicate the intended user and the proper application of the Standard or Safety Guideline.</p> <p>(4) If appropriate, differentiate this Standard from other similar or related Standards or Safety Guidelines.</p>
A3-3	Scope	<p>(1) Every Standard and Safety Guideline must have a Scope section.</p> <p>(2) State the function and range of application of the Standard or Safety Guideline. Note any excluded functions or ranges, if appropriate.</p> <p>(3) List the materials, products, systems, or services covered by the Standard or Safety Guideline.</p> <p>(4) If any specific caution or warning Notices are included in the Standard or Safety Guideline, list the paragraph numbers where they occur in the last sentence of the appropriate paragraph (see <i>Style Manual</i> #1-9).</p> <p>(5) The Scope Notice is mandatory (see <i>Style Manual</i>, #8-2).</p>

### Summary of Editorial Changes

There were no editorial changes for ballot 5623, line item 1.

### Safety Check

Move to find that this document:

IS a safety document: when all safety-related information is removed, the document is not technically sound and complete.

The Safety Checklist (Regulations 13.3) for this document is complete and has accompanied the document through the balloting process.

*By/2nd:* Lauren Crane / Ed Karl

*Disc:* None

*Vote:* 8-0. Motion passed

### Intellectual Property Check

The meeting chair asked those present in person or by electronic link, if they were aware of any patented or copyrighted material in the Standard or Guideline.

(Note: Such material might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this ballot.)

Patented or copyrighted material is known to exist in the Standard or Guideline but release for some of the material(s) has NOT been obtained or presented to the committee. The committee moves to:

Wait for the release of the patented or copyrighted material.

*By/2nd:* Lauren Crane / Bert Planting

*Disc:* None

*Vote:* 9-0. Motion passed

### Final Action

Move to:

Pass this document as balloted.

*By/2nd:* Eric Sklar / Lauren Crane

*Disc:* None

*Vote:* 10-0. Motion passed

**Attachment:** 08, 5623-LI1 Compiled Responses



4.1.2 Line Item # 2 – Adding “NOTICE” to Note 4 of the Scope Section

**Tallies at Close of Voting**

Voting Return Data		Acceptance Rate Data	
Voting Interest Returns	53	Voting Interest Accept Votes (VIAccept)	35
Total Voting Interests	87	Interest Reject Votes (IReject)	0
Voting Interest Return %	60.92%	Approval % [VIAccept / (VIAccept + IReject)]	100.00%
Other Returns (Intercommittee, etc.)		# of Interest Rejects that Need to be not found Valid for	
	29	Final Approval % >= 90%	0
Total Votes	82		
Total Votes with Comments	0		
Total Reject Votes	0		

**Rejects/Negatives**

There were no reject votes received for ballot 5623, line item 2.

**Comments**

There were no comments received for ballot 5623, line item 2.

**Summary of Editorial Changes**

There were no editorial changes for ballot 5623, line item 2.

**Safety Check**

Move to find that this document:

- IS a safety document: when all safety-related information is removed, the document is not technically sound and complete.
- The Safety Checklist (Regulations 13.3) for this document is complete and has accompanied the document through the balloting process.

By/2nd: Lauren Crane / Ed Karl

Disc: None

Vote: 8-0. Motion passed

**Intellectual Property Check**

The meeting chair asked those present in person or by electronic link, if they were aware of any patented or copyrighted material in the Standard or Guideline.

(Note: Such material might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this ballot.)

- Patented or copyrighted material is known to exist in the Standard or Guideline but release for some of the material(s) has NOT been obtained or presented to the committee. The committee moves to:
  - Wait for the release of the patented or copyrighted material.

By/2nd: Lauren Crane / Bert Planting

Disc: None

Vote: 9-0. Motion passed



**Final Action**

Move to:

  x   Pass this document as balloted.

*By/2nd:* Eric Sklar / Lauren Crane

*Disc:* None

*Vote:* 10-0. Motion passed

**Attachment:** 09, 5623-LI2 Compiled Responses

4.1.3 Line Item # 3 – *Revising Related Information 1 – Letter Height of Text in Message Panel*

**Tallies at Close of Voting**

Voting Return Data		Acceptance Rate Data	
Voting Interest Returns	53	Voting Interest Accept Votes (VIAccept)	30
Total Voting Interests	87	Interest Reject Votes (IReject)	3
Voting Interest Return %	60.92%	Approval % [VIAccept / (VIAccept + IReject)]	90.91%
Other Returns (Intercommittee, etc.)	29	# of Interest Rejects that Need to be not found Valid for	
Total Votes	82	Final Approval % >= 90%	0
Total Votes with Comments	0		
Total Reject Votes	3		

**Rejects/Negatives**

Summary: 4 Total Items Submitted

Company: Submitter	ID	Negs	Disp	Company: Submitter	ID	Negs	Disp
Lam Research: Brian Claes	LMRC	1		Green Safety: Tae Ho Kim	GS	1	
Safety Guru, LLC: Eric Sklar	SG	2					

**Negative from < Lam Research: Brian Claes >**

W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant					
#	Ref.	Negative <u>including Justification</u>	TF Finding <u>and Reason</u>	Motion <u>and Reason</u> in Committee:	Final
LMRC-1	LI3 2.2 10.7 R1-2	<p>Reject-Technical</p> <p>The proposed language in 10.7 deletes the NOTE referring to the RI and adds a normative requirement in the form of a recommendation to RI-1. However, R11 NOTICE states that the whole RI is not intended to modify or supersede the official guideline (normative sections). This creates a conflict as to whether and to what extent the guidelines in RI-1 are to be used to determine compliance.</p> <p><b>Suggestion / Justification</b>            Make up our mind. If RI-1 is meant as suggested criteria and not meant to modify or supersede then leave 10.7 and NOTE 17 as they're currently published. If RI-1 is meant be otherwise applied then be consistent in our treatment, even if it means moving the RI content to an Appendix.            I'm guessing the intent of the TF was the former so leave as currently published.</p>	<p><u>x</u> Related &amp; persuasive</p> <p><b>Reason:</b></p> <p>RP – 2-3</p>	<p><u>x</u> Related &amp; persuasive (<b>ballot fails</b>)</p> <p>By/2nd: Eric Sklar / Brian Claes            Disc: None            Vote: 7-2. <b>Motion passed</b></p>	

**Comments**

There were no comments received for ballot 5623, line item 3.

**Followup Activity Authorization**

Move to:

x Return ballot to the originating task force for rework

By/2nd: Cliff Greenberg / John Visty

Disc: None

Vote: 6-0. Motion **passed**

**Attachment:** 10, 5623-LI3 Compiled Responses





4.1.4 Line Item # 4 – Adding Test Method for Determining “Durability”

**Tallies at Close of Voting**

Voting Return Data		Acceptance Rate Data	
Voting Interest Returns	53	Voting Interest Accept Votes (VIAccept)	30
Total Voting Interests	87	Interest Reject Votes (IReject)	2
Voting Interest Return %	<b>60.92%</b>	Approval % [VIAccept / (VIAccept + IReject)]	<b>93.75%</b>
Other Returns (Intercommittee, etc.)	29	# of Interest Rejects that Need to be not found Valid for	
Total Votes	82	Final Approval % >= 90%	<b>0</b>
Total Votes with Comments	2		
Total Reject Votes	2		

**Rejects/Negatives**

Summary: 3 Total Items Submitted

Company: Submitter	ID	Negs	Disp	Company: Submitter	ID	Negs	Disp
Safety Guru, LLC: Eric Sklar	SG	2		Green Safety: Tae Ho Kim	GS	1	

**Negatives from < Safety Guru, LLC: Eric Sklar >**

W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant					
#	Ref.	Negative including Justification	TF Finding and Reason	Motion and Reason in Committee:	Final
SG-1	6.5.1	<p><b>Negative:</b> Clarify which test method(s) are acceptable</p> <p><b>Reason/Justification:</b> The proposed paragraph states that “Conformance... may be demonstrated...”. The use of “may”, rather than “should”, strongly implies that there are other acceptable methods of demonstrating conformance. The proposed NOTE 8 implies that the methods in those two standards are also acceptable means of demonstrating conformance, but a NOTE is not normative, so a NOTE can’t deem those external methods acceptable.</p>	<p>The submitter is correct. “may” was specifically selected to offer the method in 6.5.1 as one possibility. The TF writing the ballot wanted to present at least a few steps that could be considered sufficient for the sake of assessment.</p> <p>The note informs the reader of standards that address durability.</p> <p>The primary criterion remains what is stated in 6.5.</p> <p>RP – 1-5</p>	<p><b>x_Related &amp; persuasive (ballot fails)</b></p> <p>By/2nd: Eric Sklar / Pauline Derbyshire</p> <p>Disc: Bert Planting (ASML) commented that there should be some freedom on which method to choose. Eric Sklar pointed out that the text in section 6.5.1 is not considered burdensome. The issue is that there are no minimum criteria specified. Lauren Crane (KLA-Tencor) responded that the TF sees that there is enough flexibility as written in the ballot. Edward Karl (Applied Materials) further explained that the TF developed this line item to address a previous negative raised in the 5-year review ballot.</p> <p>With regard to the proposal itself, it was pointed out that the referenced ANSI/ISO documents also address temperature. Sean Larsen (Lam Research) commented that this should also be addressed in S2, but is a good starting point.</p> <p>Vote: 4-7. <b>Motion passed</b></p>	



**Comments**

Summary: 2 Total Items Submitted

<i>Company: Submitter</i>	<i>ID</i>	<i>#</i>	<i>Company: Submitter</i>	<i>ID</i>	<i>#</i>
Safety Guru, LLC: Eric Sklar	SG	1	Lam Research AG: Sean Larsen	LMAG	1

**Followup Activity Authorization**

Move to:

Return ballot to the originating task force for rework

*By/2nd:* Cliff Greenberg / John Visty

*Disc:* None

*Vote:* 6-0. Motion **passed**

**Attachment:** 11, 5623-LI4 Compiled Responses

4.1.5 Line Item # 5 – *Addition of NOTICE to Allow for Italics or Non-italicized Letters*

**Tallies at Close of Voting**

<b>Voting Return Data</b>		<b>Acceptance Rate Data</b>	
<i>Voting Interest Returns</i>	53	<i>Voting Interest Accept Votes (VIAccept)</i>	32
<i>Total Voting Interests</i>	87	<i>Interest Reject Votes (IReject)</i>	0
<i>Voting Interest Return %</i>	<b>60.92%</b>	<i>Approval % [VIAccept / (VIAccept + IReject)]</i>	<b>100.00%</b>
<i>Other Returns (Intercommittee, etc.)</i>	29	<i># of Interest Rejects that Need to be not found Valid for</i>	
		<i>Final Approval % &gt;= 90%</i>	<b>0</b>
<i>Total Votes</i>	82		
<i>Total Votes with Comments</i>	1		
<i>Total Reject Votes</i>	0		

**Rejects/Negatives**

There were no reject votes received for ballot 5623, line item 5.

**Comments**

Summary: 1 Total Items Submitted

<i>Company: Submitter</i>	<i>ID</i>	<i>#</i>	<i>Company: Submitter</i>	<i>ID</i>	<i>#</i>
Lam Research AG: Sean Larsen	LMAG	1			

#	Ref.	Comment	TF Response	Committee Action:
LMAG-1	LI5-A Figure 6	<p><b>COMMENT</b> Is it needed to add the second notice in the figure? I would suggest leaving the one that complies with ANSI and allow the non-ANSI compliant version.</p> <p><b>Suggestion / Justification</b> I don't see the reason for the additional notice label, it just seems to add confusion. The text provides adequate flexibility.</p>	<p>By "second notice" we think the submitter means the "additional 'notice'" ( because the ballot proposes to add the additional figure as the first 'notice' example. )</p> <p>The reason why it was important to add the additional NOTICE figure is that it is the explicit ANSI compliant method, and it is important to have both versions in the figure to underscore that both italics and non-italics are acceptable to S1.</p>	<p><input checked="" type="checkbox"/> Refer to TF for further review</p> <p>By/2nd: Eric Sklar / Bert Planting Disc: None Vote: 8-0. Motion <b>passed</b></p>

### Summary of Editorial Changes

There were no editorial changes for ballot 5623, line item 5.

### Safety Check

Move to find that this document:

IS a safety document: when all safety-related information is removed, the document is not technically sound and complete.

The Safety Checklist (Regulations 13.3) for this document is complete and has accompanied the document through the balloting process.

By/2nd: Lauren Crane / Ed Karl

Disc: None

Vote: 8-0. Motion passed

### Intellectual Property Check

The meeting chair asked those present in person or by electronic link, if they were aware of any patented or copyrighted material in the Standard or Guideline.

(Note: Such material might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this ballot.)

Patented or copyrighted material is known to exist in the Standard or Guideline but release for some of the material(s) has NOT been obtained or presented to the committee. The committee moves to:

Wait for the release of the patented or copyrighted material.

By/2nd: Lauren Crane / Bert Planting

Disc: None

Vote: 9-0. Motion passed

### Final Action

Move to:

Pass this document as balloted.

By/2nd: Eric Sklar / Lauren Crane

Disc: None

Vote: 10-0. Motion passed

**Attachment:** 12, 5623-LI5 Compiled Responses



4.1.6 Line Item # 6 – Changing Reference to Appendix 1 from Within Note 12 to a New Section 9.6

**Tallies at Close of Voting**

Voting Return Data		Acceptance Rate Data	
Voting Interest Returns	53	Voting Interest Accept Votes (VIAccept)	32
Total Voting Interests	87	Interest Reject Votes (IReject)	2
Voting Interest Return %	<b>60.92%</b>	Approval % [VIAccept / (VIAccept + IReject)]	<b>94.12%</b>
Other Returns (Intercommittee, etc.)		# of Interest Rejects that Need to be not found Valid for	
	29	Final Approval % >= 90%	<b>0</b>
Total Votes	82		
Total Votes with Comments	0		
Total Reject Votes	2		

**Rejects/Negatives**

Summary: 4 Total Items Submitted

Company: Submitter	ID	Negs	Disp	Company: Submitter	ID	Negs	Disp
Safety Guru, LLC: Eric Sklar	SG	2		Lam Research AG: Sean Larsen	LMAG	2	

**Negatives from < Safety Guru, LLC: Eric Sklar >**

W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant					
#	Ref.	Negative including Justification	TF Finding and Reason	Motion and Reason in Committee:	Final
SG-1	9.6	<p><b>Negative:</b> Change this to “If appropriate symbol(s) are shown in Appendix 1, they should be used.”</p> <p><b>Reason/Justification:</b> The current document, in A1-3, includes a conformance criterion that those symbols, where appropriate, be used. I see no reason to remove the conformance criterion, as the more consistent our industry’s hazard alert labels are, the more effective they are likely to be.</p>	<p>TF voting on Related &amp; persuasive: RP 1- 6</p>	<p><u>x</u> <b>Related &amp; persuasive (ballot fails)</b></p> <p>By/2nd: Eric Sklar / Bert Planting Disc: None Vote: 5-3. <b>Motion passed</b></p>	

**Comments**

There were no comments received for ballot 5623, line item 6.

**Followup Activity Authorization**

Move to:

x Return ballot to the originating task force for rework

By/2nd: Cliff Greenberg / John Visty

Disc: None

Vote: 6-0. Motion **passed**

**Attachment:** 13, 5623-LI6 Compiled Responses



4.1.7 Line Item # 7 – Adding Tolerance to the Nominal Dimensions for Surround Shapes in Section 9.10

**Tallies at Close of Voting**

Voting Return Data		Acceptance Rate Data	
Voting Interest Returns	53	Voting Interest Accept Votes (VIAccept)	33
Total Voting Interests	87	Interest Reject Votes (IReject)	0
Voting Interest Return %	60.92%	Approval % [VIAccept / (VIAccept + IReject)]	100.00%
Other Returns (Intercommittee, etc.)		# of Interest Rejects that Need to be not found Valid for	
	29	Final Approval % >= 90%	0
Total Votes	82		
Total Votes with Comments	0		
Total Reject Votes	0		

**Rejects/Negatives**

There were no reject votes received for ballot 5623, line item 7.

**Comments**

There were no comments received for ballot 5623, line item 7.

**Summary of Editorial Changes**

There were no editorial changes for ballot 5623, line item 7.

**Safety Check**

Move to find that this document:

IS a safety document: when all safety-related information is removed, the document is not technically sound and complete.

The Safety Checklist (Regulations 13.3) for this document is complete and has accompanied the document through the balloting process.

By/2nd: Lauren Crane / Ed Karl

Disc: None

Vote: 8-0. Motion passed

**Intellectual Property Check**

The meeting chair asked those present in person or by electronic link, if they were aware of any patented or copyrighted material in the Standard or Guideline.

(Note: Such material might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this ballot.)

Patented or copyrighted material is known to exist in the Standard or Guideline but release for some of the material(s) has NOT been obtained or presented to the committee. The committee moves to:

Wait for the release of the patented or copyrighted material.

By/2nd: Lauren Crane / Bert Planting

Disc: None

Vote: 9-0. Motion passed



**Final Action**

Move to:

x  Pass this document as balloted.

By/2nd: Eric Sklar / Lauren Crane

Disc: None

Vote: 10-0. Motion passed

**Attachment:** 14, 5623-LI7 Compiled Responses

4.1.8 Line Item # 8 – Adding New Symbol and Updating Sources in Appendix 1

**Tallies at Close of Voting**

Voting Return Data		Acceptance Rate Data	
Voting Interest Returns	53	Voting Interest Accept Votes (VIAccept)	29
Total Voting Interests	87	Interest Reject Votes (IReject)	3
Voting Interest Return %	<b>60.92%</b>	Approval % [VIAccept / (VIAccept + IReject)]	<b>90.63%</b>
Other Returns (Intercommittee, etc.)		# of Interest Rejects that Need to be not found Valid for	
	29	Final Approval % >= 90%	<b>0</b>
Total Votes	82		
Total Votes with Comments	1		
Total Reject Votes	3		

**Rejects/Negatives**

Summary: 6 Total Items Submitted

Company: Submitter	ID	Negs	Disp	Company: Submitter	ID	Negs	Disp
Lam Research: Stanley Hughes	LMRC	1		Lam Research AG: Sean Larsen	LMAG	3	
Safety Guru, LLC: Eric Sklar	SG	2					

**Negatives from < Lam Research AG: Sean Larsen >**

W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant					
#	Ref.	Negative including Justification	TF Finding and Reason	Motion and Reason in Committee:	Final
LMAG-2	A1-3	The changes Note 12 and 9.6 (indicated as LI 6) and A1-3 (indicated as LI8) cannot be separated as separate line items. The current NOTE 12 indicating a preference is not normative text, while the current A1-3, is normative text (although with the caveat of "When appropriate"). If line item 6 passes and 8 fails, we have conflicting text on whether or not the text indicated symbols are normative.  <b>Suggestion / Justification</b> Fail both line items and try again.	<u> x </u> Related & persuasive  <b>Reason:</b> { RP-3-0}	<u> X </u> Related & persuasive ( <b>ballot fails</b> )  By/2nd: Eric Sklar / Sean Larsen Disc: None Vote: 7-1. <b>Motion passed</b>	



**Comments**

Summary: 1 Total Items Submitted

<i>Company: Submitter</i>	<i>ID</i>	<i>#</i>	<i>Company: Submitter</i>	<i>ID</i>	<i>#</i>
Safety Guru, LLC: Eric Sklar	SG	1			

**Followup Activity Authorization**

Move to:

Return ballot to the originating task force for rework

*By/2nd:* Cliff Greenberg / John Visty

*Disc:* None

*Vote:* 6-0. Motion **passed**

**Attachment:** 15, 5623-LI8 Compiled Responses

4.1.9 Line Item # 9 – *Correcting the Arabic and Farsi Translations in Table A2-1*

**Tallies at Close of Voting**

**Voting Return Data**

**Acceptance Rate Data**

<i>Voting Interest Returns</i>	53	<i>Voting Interest Accept Votes (VIAccept)</i>	30
<i>Total Voting Interests</i>	87	<i>Interest Reject Votes (IReject)</i>	0
<i>Voting Interest Return %</i>	<b>60.92%</b>	<i>Approval % [VIAccept / (VIAccept + IReject)]</i>	<b>100.00%</b>
<i>Other Returns (Intercommittee, etc.)</i>	29	<i># of Interest Rejects that Need to be not found Valid for</i>	
		<i>Final Approval % &gt;= 90%</i>	<b>0</b>
<i>Total Votes</i>	82		
<i>Total Votes with Comments</i>	1		
<i>Total Reject Votes</i>	0		

**Rejects/Negatives**

There were no reject votes submitted for ballot 5623, line item 9.

**Comments**

Summary: 1 Total Items Submitted

<i>Company: Submitter</i>	<i>ID</i>	<i>#</i>	<i>Company: Submitter</i>	<i>ID</i>	<i>#</i>
Dainippon Screen: Naokatsu Nishiguchi	DNS	1			

#	Ref.	Comment	TF Response	Committee Action:																				
DNS-1	APPENDIX 2 TRANSLATIONS OF SIGNAL WORDS	In Thai Translation of Signal Words, the last one character is missed. Please correct it.  [SEMI Staff Note: See voter submitted table below]	TF would like to propose an editorial change. LC: Meaning of terms before and after correction according to Google translate: <table border="1" data-bbox="678 481 1101 1019"> <tr> <td rowspan="2">Danger</td> <td>อันตราย</td> <td>อันตราย</td> </tr> <tr> <td>liminal</td> <td>dangerous</td> </tr> <tr> <td rowspan="2">Warning</td> <td>คำเตือน</td> <td>คำเตือน</td> </tr> <tr> <td>WARNING</td> <td>Warning</td> </tr> <tr> <td rowspan="2">Caution</td> <td>ข้อควรระวัง</td> <td>ข้อควรระวัง</td> </tr> <tr> <td>Be the valley</td> <td>Caution</td> </tr> <tr> <td rowspan="2">Notice</td> <td>ประกาศ</td> <td>ประกาศ</td> </tr> <tr> <td>coral</td> <td>Many meanings such as “announce” when a verb, but “notice” as a noun.</td> </tr> </table> Because most of the meanings as currently written are so non-sensical, I think this is an editorial issue, correcting what are clearly typo's without risk of changing one possible technically valid meaning to another.	Danger	อันตราย	อันตราย	liminal	dangerous	Warning	คำเตือน	คำเตือน	WARNING	Warning	Caution	ข้อควรระวัง	ข้อควรระวัง	Be the valley	Caution	Notice	ประกาศ	ประกาศ	coral	Many meanings such as “announce” when a verb, but “notice” as a noun.	X Editorial Change: # 1 in ECs below
Danger	อันตราย	อันตราย																						
	liminal	dangerous																						
Warning	คำเตือน	คำเตือน																						
	WARNING	Warning																						
Caution	ข้อควรระวัง	ข้อควรระวัง																						
	Be the valley	Caution																						
Notice	ประกาศ	ประกาศ																						
	coral	Many meanings such as “announce” when a verb, but “notice” as a noun.																						

From submitter

Language	DANGER	WARNING	CAUTION [sic]	NOTICE
Current	อันตราย	คำเตือน	ข้อควรระวัง	ประกาศ
Correct	อันตราย	คำเตือน	ข้อควรระวัง	ประกาศ

**Summary of Editorial Changes**

#	Ref.	Before				After				Object? (Y/N)	Motion to Approve: (if necessary)
		DANGER	WARNING	CAUTION	NOTICE	DANGER	WARNING	CAUTION	NOTICE		
1	Translation Table A2-1	อันตราย	คำเตือน	ข้อควรระวัง	ประกาศ	อันตราย	คำเตือน	ข้อควรระวัง	ประกาศ		By/2nd: Lauren Crane / Bert Planting Disc: None Vote: 11-0. <b>Motion passed</b>





**Safety Check**

Move to find that this document:

- IS a safety document: when all safety-related information is removed, the document is not technically sound and complete.
- The Safety Checklist (Regulations 13.3) for this document is complete and has accompanied the document through the balloting process.

*By/2nd:* Lauren Crane / Ed Karl

*Disc:* None

*Vote:* 8-0. Motion passed

**Intellectual Property Check**

The meeting chair asked those present in person or by electronic link, if they were aware of any patented or copyrighted material in the Standard or Guideline.

(Note: Such material might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this ballot.)

- Patented or copyrighted material is known to exist in the Standard or Guideline but release for some of the material(s) has NOT been obtained or presented to the committee. The committee moves to:
  - Wait for the release of the patented or copyrighted material.

*By/2nd:* Lauren Crane / Bert Planting

*Disc:* None

*Vote:* 9-0. Motion passed

**Final Action**

Move to:

- Pass this document with editorial changes.

*By/2nd:* Eric Sklar / Lauren Crane

*Disc:* None

*Vote:* 10-0. Motion passed

**Attachment:** 16, 5623-LI9 Compiled Responses

<b>Motion:</b>	NA EHS Committee finds that portions of the Document came from copyrighted documents and are technically justified for the Document to be useful.
<b>By / 2<sup>nd</sup>:</b>	Lauren Crane (KLA-Tencor) / John Visty (Salus)
<b>Discussion:</b>	None
<b>Vote:</b>	11-1 in favor. Motion passed.

The figures in Table A1-1 that are attributed to other organizations came from those organizations' document.

**Action Item:** 2014Nov #06, Lauren Crane/Ed Karl to provide SEMI a list items in S1 believed to be reproduction of another organization's copyrighted material.



4.2 Document # 5760, Line Item Revisions to SEMI S7-0310, *Safety Guideline for Evaluation Personnel and Evaluating Company Qualifications*

4.2.1 Line Item # 1 – *Change to make qualifications statement available when work starts*

**Tallies at Close of Voting**

Voting Return Data		Acceptance Rate Data	
Voting Interest Returns	53	Voting Interest Accept Votes (VIAccept)	27
Total Voting Interests	87	Interest Reject Votes (IReject)	0
Voting Interest Return %	<b>60.92%</b>	Approval % [VIAccept / (VIAccept + IReject)]	<b>100.00%</b>
Other Returns (Intercommittee, etc.)		# of Interest Rejects that Need to be not found Valid for	
	29	Final Approval % >= 90%	<b>0</b>
Total Votes	82		
Total Votes with Comments	1		
Total Reject Votes	0		

**Rejects/Negatives**

There were no reject votes received for ballot 5760, line item 1.

**Comments**

Summary: 1 Total Items Submitted

Company: Submitter	ID	#	Company: Submitter	ID	#
KLA-Tencor: Lauren Crane	KT	1			

#	Ref.	Comment	TF Response	Committee Action:
KT-1		As an editorial change I suggest changing '...and to the end users...' to '...and to end users...' (deleting 'the'). a specific set of 'end users' have not yet been introduced prior to this phrase so using the definite article seems editorially inappropriate.	Submitter recommended no further action and TF agreed.	<input checked="" type="checkbox"/> No further action By/2nd: Lauren Crane / Steve Brody Disc: None Vote: 8-0. Motion <b>passed</b>

### Summary of Editorial Changes

#	Ref.	Before	After	Object? (Y/N)	Motion to Approve: (if necessary)
1	6.1	The evaluating company should provide to its customer a <b>statement</b> of the qualifications of the organization and its evaluation personnel as a part of, or an adjunct to, the evaluation report. <b>It is recommended that the statement of the evaluating company's qualifications be provided or made available to the assessment requester prior to the evaluation, and to the end users upon request.</b> This qualifications statement should address the qualifications for evaluating the equipment and for evaluating to the SEMI "S" document using the guidance of this document. The qualifications statement should include the qualifications (per the criteria of this document) of the organization and personnel at the time of the evaluation	The evaluating company should provide to its customer a <b>statement</b> of the qualifications of the organization and its evaluation personnel as a part of, or an adjunct to, the evaluation report. <b>It is recommended that the statement of the evaluating company's qualifications be provided or made available to the assessment evaluation requester prior to the evaluation, and to the end users upon request.</b> This qualifications statement should address the qualifications for evaluating the equipment and for evaluating to the SEMI "S" document using the guidance of this document. The qualifications statement should include the qualifications (per the criteria of this document) of the organization and personnel at the time of the evaluation		Justification for editorial change: Editorial change to align phrasing with rest of document.  <i>By/2nd:</i> Chris Evanston / Lauren Crane <i>Disc:</i> <i>Vote:</i> 7-0. <b>Motion passed</b>

### Safety Check

Move to find that this document:

IS a safety document: when all safety-related information is removed, the document is not technically sound and complete.

The Safety Checklist (Regulations 13.3) for this document is complete and has accompanied the document through the balloting process.

*By/2nd:* Chris Evanston / Bert Planting

*Disc:*

*Vote:* 5-1. **Motion passed**

### Intellectual Property Check

The meeting chair asked those present in person or by electronic link, if they were aware of any patented or copyrighted material in the Standard or Guideline.

(Note: Such material might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this ballot.)

No patented or copyrighted material is known to exist in the Standard or Guideline. (no motion needed)

### Final Action

Move to:

Pass this document with editorial changes and forward to the A&R for procedural review.

*By/2nd:* Chris Evanston / Bert Planting

*Disc:* None

*Vote:* 5-0. **Motion passed**

**Attachment:** 17, 5760-LI1 Compiled Responses



4.2.2 Line Item # 2 – Add document retention criteria

**Tallies at Close of Voting**

Voting Return Data		Acceptance Rate Data	
Voting Interest Returns	53	Voting Interest Accept Votes (VIAccept)	30
Total Voting Interests	87	Interest Reject Votes (IReject)	1
Voting Interest Return %	<b>60.92%</b>	Approval % [VIAccept / (VIAccept + IReject)]	<b>96.77%</b>
Other Returns (Intercommittee, etc.)		# of Interest Rejects that Need to be not found Valid for	
	29	Final Approval % >= 90%	<b>0</b>
Total Votes	82		
Total Votes with Comments	0		
Total Reject Votes	1		

**Rejects/Negatives**

Summary: 1 Total Items Submitted

Company: Submitter	ID	Negs	Disp	Company: Submitter	ID	Negs	Disp
Applied Materials: Edward Karl	AMAT	1					

**Negatives from < Applied Materials: Edward Karl >**

W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant					
#	Ref.	Negative including Justification	TF Finding and Reason	Motion and Reason in Committee:	Final
AMAT-1	Line Item 2a, Section 7.8	<p>Negative.</p> <p>The proposal does not address the handling of the documents when the evaluating company changes hands. The description for data retention should also include when the evaluating company changes hands (e.g. is sold off from parent company, spun off from parent company, dissolves or goes out of business). What happens to the files? Does the parent company retain the files and the new evaluating company no longer has access to them? Do files get returned to the customer or destroyed if a company goes out of business?</p> <p><u>Proposed Solution:</u></p> <p>The description should contain contingencies if 1) the evaluating company is sold or spun off from a parent company or 2) ceases to exist due to dissolution. Contingencies would include addressing:</p> <ol style="list-style-type: none"> <li>Retention of files (parent company or new company)</li> <li>Return of files to customer or destroyed (dissolution of evaluating company)</li> </ol>	<p>Submitter agrees to withdraw with item treated as new business by the TF.</p>	<p><b>X Withdrawn by Subm. (Date: November 3, 2014)</b></p>	



**Comments**

Summary: 1 Total Items Submitted

<i>Company: Submitter</i>	<i>ID</i>	<i>#</i>	<i>Company: Submitter</i>	<i>ID</i>	<i>#</i>
Applied Materials: Edward Karl	AMAT	1			

<i>#</i>	<i>Ref.</i>	<i>Comment</i>	<i>TF Response</i>	<i>Committee Action:</i>
AMAT-1	Line item 2a, Section 7.8	For consistency with proposed line item 1, change “... evaluation requestor ....” to “... assessment requestor ....” .	Task force decided to make change to the text of LI1 to make consistency.	<b>(Select one)</b> <input checked="" type="checkbox"/> No further action (addressed as an EC to LI1)  <i>By/2nd:</i> Lauren Crane / Bert Planting <i>Disc:</i> None <i>Vote:</i> 5-0. Motion <b>passed</b>

**Summary of Editorial Changes**

There were no editorial changes for ballot 5760, line item 2.

**Safety Check**

Move to find that this document:

IS a safety document: when all safety-related information is removed, the document is not technically sound and complete.

The Safety Checklist (Regulations 13.3) for this document is complete and has accompanied the document through the balloting process.

*By/2nd:* Chris Evanston / Bert Planting

*Disc:*

*Vote:* 5-1. Motion passed

**Intellectual Property Check**

The meeting chair asked those present in person or by electronic link, if they were aware of any patented or copyrighted material in the Standard or Guideline.

(Note: Such material might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this ballot.)

No patented or copyrighted material is known to exist in the Standard or Guideline. (no motion needed)

**Final Action**

Move to:

Pass this document as balloted and forward to the A&R for procedural review.

*By/2nd:* Chris Evanston / Bert Planting

*Disc:* None

*Vote:* 5-0. Motion passed

**Attachment:** 18, 5760-LI2 Compiled Responses



4.3 Document # 4683D, Line Item Revisions to SEMI S2-0712b, *Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment*. Delayed Revisions Related to Chemical Exposure

4.3.1 Line Item # 1 – *Add explanatory materials for valid air sampling and measurement methods and accredited laboratories*

**Tallies at Close of Voting**

Voting Return Data		Acceptance Rate Data	
Voting Interest Returns	54	Voting Interest Accept Votes (VIAccept)	31
Total Voting Interests	90	Interest Reject Votes (IReject)	4
Voting Interest Return %	<b>60.00%</b>	Approval % [VIAccept / (VIAccept + IReject)]	<b>88.57%</b>
Other Returns (Intercommittee, etc.)		# of Interest Rejects that Need to be not found Valid for	
	22	Final Approval % >= 90%	1
Total Votes	76		
Total Votes with Comments	3		
Total Reject Votes	4		

**Rejects/Negatives**

Summary: 16 Total Items Submitted

Company: Submitter	ID	Negs	Disp	Company: Submitter	ID	Negs	Disp
Tokyo Electron: Mitsuju Nambu	TEL	1		Safety Guru, LLC: Eric Sklar	SG	9	
KLA-Tencor: Lauren Crane	KT	5		Green Safety: Tae Ho Kim	GS	1	

**Negatives from < KLA-Tencor: Lauren Crane >**

W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant					
#	Ref.	Negative including Justification	TF Finding and Reason	Motion and Reason in Committee:	Final
KT-4	23.5.6	<p>Negative</p> <p>The exiting criteria only requires demonstrating a condition outside the enclosure during a realistic worst case system failure. The proposed change requires demonstrating(or showing) a condition on the exterior of the equipment and a potential ignition sources internal to the equipment {there could be hundreds of these}, during normal operation, maintenance and worst case system failures. I think there could be ways to provide sufficient testing that does require so much data.</p> <p>Proposed Solution:</p> <p>Propose criteria that require so much testing to demonstrate sufficient safety, or don't make the change. The current wording seems to have served the industry well enough.</p> <p>Technical</p>	<p><b>X</b> Related &amp; persuasive</p> <p>RP – Crane</p> <p>6-0</p> <p>Need to clarify the criteria</p>	<p><b>x</b> Related &amp; persuasive (<b>ballot fails</b>)</p> <p>By/2nd: John Visty / Lauren Crane</p> <p>Disc: None</p> <p>Vote: 10-0. <b>Motion passed</b></p>	



**Comments**

Summary: 4 Total Items Submitted

<i>Company: Submitter</i>	<i>ID</i>	<i>#</i>	<i>Company: Submitter</i>	<i>ID</i>	<i>#</i>
KLA-Tencor: Lauren Crane	KT	1	Tokyo Electron: Mitsuju Nambu	TEL	1
Safety Guru, LLC: Eric Sklar	SG	2			

**Followup Activity Authorization**

Move to:

Return ballot to the originating task force for rework

By/2nd: John Visty / Lauren Crane

Disc: None

Vote: 9-0. Motion **passed**

**Attachment:** 19, 4683D-LI1 Compiled Responses

4.3.2 Line Item # 2 – Clarify the reporting criteria

**Tallies at Close of Voting**

<b>Voting Return Data</b>		<b>Acceptance Rate Data</b>	
Voting Interest Returns	54	Voting Interest Accept Votes (VIAccept)	31
Total Voting Interests	90	Interest Reject Votes (IReject)	1
Voting Interest Return %	<b>60.00%</b>	Approval % [VIAccept / (VIAccept + IReject)]	<b>96.88%</b>
Other Returns (Intercommittee, etc.)	22	# of Interest Rejects that Need to be not found Valid for	
		Final Approval % >= 90%	<b>0</b>
Total Votes	76		
Total Votes with Comments	2		
Total Reject Votes	1		

**Rejects/Negatives**

Summary: 1 Total Items Submitted

<i>Company: Submitter</i>	<i>ID</i>	<i>Negs</i>	<i>Disp</i>	<i>Company: Submitter</i>	<i>ID</i>	<i>Negs</i>	<i>Disp</i>
KLA-Tencor: Lauren Crane	KT	1					

**Negatives from < KLA-Tencor: Lauren Crane >**

<i>W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant</i>					
#	Ref.	<u>Negative including Justification</u>	<u>TF Finding and Reason</u>	<u>Motion and Reason in Committee:</u>	<i>Final</i>
KT-1	23.5.x	<p>Negative</p> <p>Using "expectation" is very vague. It is not clear if the text following is a criterion for successful evaluation or just a dashed expectation.</p> <p>It is not clear what "in an attached report" is asking for.</p> <p>S2 has not set up a protocol of "paragraph responses". It is not clear what this is asking for.</p> <p>Proposed Solution:  <b>Change to the effect of</b>            "The details of any chemical emissions testing done to satisfy the criteria of section 23.5 should be included as a separate section of the evaluation report. Additionally, the supporting rationale for each relevant subsection of 23.5 should include the following information, as appropriate            [bulleted list of items]"</p> <p>Technical</p>	<p>RP – ES &amp;            If not accepted as editorial change, 4-0</p> <p>Submitter agreed to withdraw if editorial change is made</p> <p>Suggestion modified in TF meeting.</p>	<p><u>X</u> <b>Not persuasive (requires reason)</b></p> <p><b>Reason:</b>            The concern regarding the expectation addressing "in an attached report" and "paragraph responses" is no longer applicable to the text to be published.</p> <p><i>By/2nd:</i> John Visty / Steve Brody  <i>Disc:</i> None  <i>Vote:</i> 4-0. <b>Motion passed</b></p>	



**Comments**

Summary: 2 Total Items Submitted

<i>Company: Submitter</i>	<i>ID</i>	<i>#</i>	<i>Company: Submitter</i>	<i>ID</i>	<i>#</i>
Tokyo Electron: Mitsuju Nambu	TEL	1	Safety Guru, LLC: Eric Sklar	SG	1

<i>#</i>	<i>Ref.</i>	<i>Comment</i>	<i>TF Response</i>	<i>Committee Action:</i>
TEL-1	---	<p>LI-1&amp; 2: Comment/ Line Item should include, at minimum, the purpose, scope, limitations (if present), and terminology (if present) sections, along with the full text of any section to which revisions are being balloted. (PG 3.4.3.3.1)</p> <p>For voters to assess appropriateness of the proposed revision they need to see the proposal in context. Also any revision must be in alignment with the Purpose section and within the scope of the Document</p>	The ballot, as distributed, included the sections mentioned by the voter.	<p><input checked="" type="checkbox"/> No further action</p> <p><i>By/2nd:</i> John Visty / Cliff Greenberg <i>Disc:</i> None <i>Vote:</i> 7-0. Motion <b>passed</b></p>
SG-1	DY-1.1 23.5.X, last bullet	Comment: Please explain the perceived value of directing in what document this information is provided.		<p><input checked="" type="checkbox"/> No further action</p> <p><i>By/2nd:</i> Eric Sklar / Lauren Crane <i>Disc:</i> None <i>Vote:</i> 8-0. Motion <b>passed</b></p>

**Summary of Editorial Changes**

<i>#</i>	<i>Ref.</i>	<i>Before</i>	<i>After</i>	<i>Motion to Approve: (if necessary)</i>
1	23.5.x	<p>23.5.X While it is expected that the details of any chemical testing done as part of the evaluation will be addressed in an attached IH report, the following information should be included in the paragraph responses to the above paragraphs in § 23.5.</p> <ul style="list-style-type: none"> <li>• SOC(s) considered for the evaluation,</li> <li>• Rationale for the sampling method used,</li> <li>• The OEL, type of OEL (for example, TWA, STEL, ceiling) and source of the OEL (for example, ACGIH, German MAK, US OSHA) used in the evaluation,</li> <li>• Whether the testing used the SOC or a surrogate, and</li> <li>• The level of detection achieved during testing</li> </ul>	<p>23.5.X While it is expected that the details of any chemical testing done as part of the evaluation will be addressed in an attached IH report, the following information should be included in the paragraph responses supporting rationale to for the findings related to the above paragraphs in § 23.5</p> <ul style="list-style-type: none"> <li>• SOC(s) considered for the evaluation,</li> <li>• Rationale for the sampling method used,</li> <li>• The OEL, type of OEL (for example, TWA, STEL, ceiling) and source of the OEL (for example, ACGIH, German MAK, US OSHA) used in the evaluation,</li> <li>• Whether the testing used the SOC or a surrogate, and</li> <li>• The level of detection achieved during testing</li> </ul>	<p>Justification for editorial change: Editorial clarification. Removed clause does not add evaluation criteria.</p> <p><i>By/2nd:</i> John Visty / Chris Evanston <i>Disc:</i> None <i>Vote:</i> 2-1. <b>Motion passed</b></p> <p>TF 11 to 0 to recommend to TC as an editorial change.</p>

### Safety Check

Move to find that this document:

IS a safety document: when all safety-related information is removed, the document is not technically sound and complete.

The Safety Checklist (Regulations 13.3) for this document is complete and has accompanied the document through the balloting process.

*By/2nd:* John Visty / Bert Planting

*Disc:* None

*Vote:* 7-0. Motion passed

### Intellectual Property Check

The meeting chair asked those present in person or by electronic link, if they were aware of any patented or copyrighted material in the Standard or Guideline.

(Note: Such material might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this ballot.)

No patented or copyrighted material is known to exist in the Standard or Guideline. (no motion needed)

### Final Action

Move to:

Pass this document with editorial changes and forward to the A&R for procedural review.

*By/2nd:* John Visty / Lauren Crane

*Disc:* None

*Vote:* 9-0. Motion passed

**Attachment:** 20, 4683D-LI2 Compiled Responses

#### Committee Straw Poll:

Ask for feedback from TC for TF, if there is insufficient information in S14, to include normative text to confirm normal operations and maintenance are less than 25% LFL.

In favor: 5

Against: 1



4.4 Document # 5591A, Line Item Revisions to SEMI S2-0712b, *Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment*. Delayed revisions related to fire protection

4.4.1 Line Item # 1 – *Audibility and visibility of annunciators of fire detection systems*

**Tallies at Close of Voting**

Voting Return Data		Acceptance Rate Data	
Voting Interest Returns	54	Voting Interest Accept Votes (VIAccept)	33
Total Voting Interests	90	Interest Reject Votes (IReject)	1
Voting Interest Return %	<b>60.00%</b>	Approval % [VIAccept / (VIAccept + IReject)]	<b>97.06%</b>
Other Returns (Intercommittee, etc.)		# of Interest Rejects that Need to be not found Valid for	
	22	Final Approval % >= 90%	0
Total Votes	76		
Total Votes with Comments	1		
Total Reject Votes	1		

**Rejects/Negatives**

Summary: 1 Total Items Submitted

Company: Submitter	ID	Negs	Disp	Company: Submitter	ID	Negs	Disp
Applied Materials: Edward Karl	AMAT	1					

**Negatives from < Applied Materials: Edward Karl >**

W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant					
#	Ref.	Negative <u>including</u> <u>Justification</u>	TF Finding <u>and</u> Reason	Motion <u>and</u> Reason in Committee:	Final
AMAT-1	14.4.4-1 4.1.1	Negative. The audible alarm for fire detection specifies a minimum audible level only.  Proposed Solution: Applied Materials believes that the criteria should also include the maximum alarm audible level which is consistent with OSHA and/or NFPA.	<b>Straw Poll: "Is this worth fixing?"</b> Y: 4, N: 2 In the interest of getting the revisions published with no more delay and effort than necessary, the TF proposes to add, as an Editorial Change by the EHS Committee, the following NOTE immediately after 14.4.4.1.1:  NOTE xx: Upper limits for the sound levels from alarms are imposed by various standards and regulations. At the time of publication of this document, the lowest of which the originating Task Force was aware is 110 dBA, imposed by NFPA 72 – 2013, National Fire Alarm and Signaling Code, paragraph 18.4.1.2.  Choices: 1) Add NOTE above: 10 2) Add only first sentence of NOTE above: 2 3) Find NP: 1 4) Find P: 0  The submitter has agreed to withdraw the negative if a suitable NOTE has been added as an Editorial Change.  No objection to cloning for LI2.	<b>x</b> Withdrawn by Subm. (Date: November 6, 2014)	



**Comments**

Summary: 1 Total Items Submitted

<i>Company: Submitter</i>	<i>ID</i>	<i>#</i>	<i>Company: Submitter</i>	<i>ID</i>	<i>#</i>
Tokyo Electron: Mitsuju Nambu	TEL	1			

<i>#</i>	<i>Ref.</i>	<i>Comment</i>	<i>TF Response</i>	<i>Committee Action:</i>
TEL-1	---	<p>Comment: Line Item should include, at minimum, the purpose, scope, limitations (if present), and terminology (if present) sections, along with the full text of any section to which revisions are being balloted. (PG 3.4.3.3.1)</p> <p>For voters to assess appropriateness of the proposed revision they need to see the proposal in context. Also any revision must be in alignment with the Purpose section and within the scope of the Document</p>	<p>The material the Comment says should be included is in the published ballot, starting on page 7.</p> <p>The TF reviewed the Purpose and Scope and did not see any reason the balloted changes would not be comfortably within them. Therefore, the TF doesn't see any reason to take further action on this Comment.</p> <p>Concur: 8 Disagree: 0</p> <p>No objection to cloning for LI2.</p>	<p><b>(Select one)</b> <u>X</u> No further action</p> <p><i>By/2nd:</i> Eric Sklar / Lauren Crane <i>Disc:</i> None <i>Vote:</i> 6-0. Motion <b>passed</b></p>

**Summary of Editorial Changes**

<i>#</i>	<i>Ref.</i>	<i>After</i>	<i>Object? (Y/N)</i>	<i>Motion to Approve: (if necessary)</i>
1	14.4.4.4.1.1	<p>Add, as a NOTE immediately after 14.4.4.4.1.1: NOTE xx: Upper limits for the sound levels from alarms are imposed by various standards and regulations. At the time of publication of this document, the lowest of which the originating Task Force was aware is 110 dBA, imposed by NFPA 72 – 2013, National Fire Alarm and Signaling Code, paragraph 18.4.1.2.</p>		<p><i>By/2nd:</i> Eric Sklar / Lauren Crane</p> <p><i>Disc:</i> <i>Justification:</i> <i>Editorial note:</i> The original criterion is a minimum and the proposed Note is related to the maximum.</p> <p><i>Vote:</i> 12-0. Motion <b>passed</b></p>

**Safety Check**

Move to find that this document:

x  IS a safety document: when all safety-related information is removed, the document is not technically sound and complete.

x  The Safety Checklist (Regulations 13.3) for this document is complete and has accompanied the document through the balloting process.

*By/2nd:* Eric Sklar / Lauren Crane

*Disc:* None

*Vote:* 8-0. Motion passed



**Intellectual Property Check**

The meeting chair asked those present in person or by electronic link, if they were aware of any patented or copyrighted material in the Standard or Guideline.  
 (Note: Such material might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this ballot.)

No patented or copyrighted material is known to exist in the Standard or Guideline. (no motion needed)

**Final Action**

Move to:

Pass this document with editorial changes and forward to the A&R for procedural review.

*By/2nd:* Eric Sklar / Lauren Crane

*Disc:* None

*Vote:* 9-0. **Motion passed**

**Attachment:** 21, 5591A-LI1 Compiled Responses

4.4.2 Line Item # 2 – *Audibility and visibility of annunciators of fire suppression systems*

**Tallies at Close of Voting**

Voting Return Data		Acceptance Rate Data	
Voting Interest Returns	54	Voting Interest Accept Votes (VIAccept)	34
Total Voting Interests	90	Interest Reject Votes (IReject)	1
Voting Interest Return %	<b>60.00%</b>	Approval % [VIAccept / (VIAccept + IReject)]	<b>97.14%</b>
Other Returns (Intercommittee, etc.)	22	# of Interest Rejects that Need to be not found Valid for	
		Final Approval % >= 90%	<b>0</b>
Total Votes	76		
Total Votes with Comments	1		
Total Reject Votes	1		

**Rejects/Negatives**

Summary: 1 Total Items Submitted

Company: Submitter	ID	Negs	Disp	Company: Submitter	ID	Negs	Disp
Applied Materials: Edward Karl	AMAT	1					

**Negatives from < Applied Materials: Edward Karl >**

W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant					
#	Ref.	Negative including Justification	TF Finding and Reason	Motion and Reason in Committee:	Final
AMAT-1	14.4.5.5.1.1	<p>Negative.</p> <p>The audible alarm for fire suppression specifies a minimum audible level only.</p> <p>Proposed Solution:</p> <p>Applied Materials believes that the criteria should also include the maximum alarm audible level which is consistent with OSHA and/or NFPA.</p>	<p><b>Straw Poll: "Is this worth fixing?"</b></p> <p><b>Y: 4, N: 2</b></p> <p>In the interest of getting the revisions published with no more delay and effort than necessary, the TF proposes to add, as an Editorial Change by the EHS Committee, the following NOTE immediately after 14.4.4.1.1:</p> <p>NOTE xx: Upper limits for the sound levels from alarms are imposed by various standards and regulations. At the time of publication of this document, the lowest of which the originating Task Force was aware is 110 dBA, imposed by NFPA 72 – 2013, National Fire Alarm and Signaling Code, paragraph 18.4.1.2.</p> <p>Choices:</p> <p>1) Add NOTE above: 10 2) Add only first sentence of NOTE above: 2 3) Find NP: 1 4) Find P: 0</p> <p>The submitter has agreed to withdraw the negative if a suitable NOTE has been added as an Editorial Change.</p> <p>{Cloned, with TF consensus, from LI 1.}</p>	<p><input checked="" type="checkbox"/> <b>Withdrawn by Subm.</b> <b>(Date: November 6, 2014)</b></p>	

**Comments**

Summary: 1 Total Items Submitted

Company: Submitter	ID	#	Company: Submitter	ID	#
Tokyo Electron: Mitsuju Nambu	TEL	1			

#	Ref.	Comment	TF Response	Committee Action:
TEL-1	---	<p>Comment/ Line Item should include, at minimum, the purpose, scope, limitations (if present), and terminology (if present) sections, along with the full text of any section to which revisions are being balloted. (PG 3.4.3.3.1)</p> <p>For voters to assess appropriateness of the proposed revision they need to see the proposal in context. Also any revision must be in alignment with the Purpose section and within the scope of the Document</p>	<p>The material the Comment says should be included is in the published ballot, starting on page 7.</p> <p>The TF reviewed the Purpose and Scope and did not see any reason the balloted changes would not be comfortably within them. Therefore, the TF doesn't see any reason to take further action on this Comment.</p> <p>Concur: 8 Disagree: 0</p> <p>{Cloned, with TF consensus, from LI 1.}</p>	<p><b>(Select one)</b></p> <p><input checked="" type="checkbox"/> No further action</p> <p>By/2nd: Eric Sklar / Lauren Crane Disc: None Vote: 9-0. Motion <b>passed</b></p>

**Summary of Editorial Changes**

#	Ref.	After	Object? (Y/N)	Motion to Approve: (if necessary)
1		Add, as a NOTE immediately after 14.4.5.5.1.1: NOTE xx: Upper limits for the sound levels from alarms are imposed by various standards and regulations. At the time of publication of this document, the lowest of which the originating Task Force was aware is 110 dBA, imposed by NFPA 72 – 2013, National Fire Alarm and Signaling Code, paragraph 18.4.1.2.		By/2nd: Eric Sklar / Edward Karl Disc: Justification: Editorial note. The original criterion is a minimum and the proposed Note is related to the maximum.  Vote: 11-0. <b>Motion passed</b>

**Safety Check**

Move to find that this document:

- IS a safety document: when all safety-related information is removed, the document is not technically sound and complete.
- The Safety Checklist (Regulations 13.3) for this document is complete and has accompanied the document through the balloting process.

By/2nd: Eric Sklar / Lauren Crane

Disc: None

Vote: 8-0. Motion passed

**Intellectual Property Check**

The meeting chair asked those present in person or by electronic link, if they were aware of any patented or copyrighted material in the Standard or Guideline.

(Note: Such material might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this ballot.)

- No patented or copyrighted material is known to exist in the Standard or Guideline. (no motion needed)

**Final Action**

Move to:

- Pass this document with editorial changes and forward to the A&R for procedural review.

By/2nd: Eric Sklar / Lauren Crane

Disc: None

Vote: 9-0. Motion passed

**Attachment:** 22, 5591A-LI2 Compiled Responses



4.5 Document # 5718A, Line Item Revisions to SEMI S10-0307E, *Safety Guideline for Risk Assessment and Risk Evaluation Process*

4.5.1 Line Item # 1 – *Modify Note 3 and 4 in definitions section*

**Tallies at Close of Voting**

Voting Return Data		Acceptance Rate Data	
Voting Interest Returns	54	Voting Interest Accept Votes (VIAccept)	32
Total Voting Interests	90	Interest Reject Votes (IReject)	2
Voting Interest Return %	<b>60.00%</b>	Approval % [VIAccept / (VIAccept + IReject)]	<b>94.12%</b>
Other Returns (Intercommittee, etc.)		# of Interest Rejects that Need to be not found Valid for	
	22	Final Approval % >= 90%	<b>0</b>
Total Votes	76		
Total Votes with Comments	0		
Total Reject Votes	2		

**Rejects/Negatives**

Summary: 3 Total Items Submitted

Company: Submitter	ID	Negs	Disp	Company: Submitter	ID	Negs	Disp
IBM: Ernest Timlin (Timlin@us.ibm.com)	IBM	1		Safety Guru, LLC: Eric Sklar	SG	2	

**Negatives from < IBM: Ernest Timlin >**

W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant					
#	Ref.	Negative including Justification	TF Finding and Reason	Motion and Reason in Committee:	Final
IBM-1	---	Can you tell me why we need (1A & 1B) 'preferred' Likelihood and severity groups, rather than the current 'dictated' groups? I am concerned that we could get some dilution or confusion on what is acceptable if we start using non-standard terminology and groupings. Would this change any of the resultant classifications or terminology (e.g. the distinction between low and very low versus the higher risk categories? If the effect is insignificant or non-existent and this is simply an editorial change I'd consider changing my vote. I was unable to obtain that clarification before time to vote, hence voted to reject.	<b>X</b> Not persuasive ( <b>assumes related</b> )  <b>Reason:</b> This was discussed at the first revision of the SEMI S10. Because it is a guideline preferred was used to allow more freedom in the risk assessment. In the assessment there are even link to 3 steps of determining likelihood (Occurrence of the hazard, exposure of a person to the hazard and avoidance)  Additional clarification from submitter: Submitter does not like that companies can divide from the tables  Voting related & Pers Pro: 1 Against 3  Non persuasive, because alignment to main body: Pro, 1, against 1	<b>X</b> Not persuasive ( <b>requires reason</b> )  <b>Reason:</b> Aligning the language of the note with section 6.5.1 does not have the effect foreseen by the submitter.  By/2nd: Lauren Crane / Bert Planting Disc: None Vote: 3-1. <b>Motion passed</b>	





**Negatives from < Safety Guru, LLC: Eric Sklar >**

<i>W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant</i>					
#	Ref.	Negative <u>including Justification</u>	TF Finding <u>and Reason</u>	Motion <u>and Reason</u> in Committee:	Final
SG-1	NOTE immediately following 5.1.7	<b>Negative:</b> Delete “preferred”.  <b>Reason/Justification:</b> The intent of S10, as discussed in numerous the TF meetings I attended, has been that the Severity, Likelihood, and Risk levels defined in Appendix 1 are normatively imposed as part of S10. Including “preferred” implies there is some acceptable alternative means of conforming with S10.	The wording preferred was added to be consistent with section 6.5.  Preferred was always in. For SEMI S10 only the final risk ranking counts. This issue has been discussed numerous times every time there is a SEMI S10 update.  This was a 45 minute discussion if the tables where mandatory or not because tables are mentioned in the Appendix  Decision to keep preferred: Leave to committee	<u>x</u> <b>Not persuasive (requires reason)</b>  <b>Reason:</b> Adding a “preferred” to these notes does not significantly change how the Appendix will be applied.  <i>By/2nd:</i> Lauren Crane / Bert Planting <i>Disc:</i> None <i>Vote:</i> 5-1. <b>Motion passed</b>	
SG-2	NOTE immediately following 5.1.17	<b>Negative:</b> Delete “preferred”.  <b>Reason/Justification:</b> The intent of S10, as discussed in numerous the TF meetings I attended, has been that the Severity, Likelihood, and Risk levels defined in Appendix 1 are normatively imposed as part of S10. Including “preferred” implies there is some acceptable alternative means of conforming with S10.	<b>X</b> <b>Not persuasive (assumes related)</b>  <b>Reason:</b> See SG 1	<u>x</u> <b>Not persuasive (requires reason)</b>  <b>Reason:</b> Adding a “preferred” to these notes does not significantly change how the Appendix will be applied.  <i>By/2nd:</i> Lauren Crane / Bert Planting <i>Disc:</i> None <i>Vote:</i> 3-1. <b>Motion passed</b>	

**Comments**

There were no comments received for ballot 5718A, line item 1.

**Summary of Editorial Changes**

There were no editorial changes for ballot 5718A, line item 1.

**Safety Check**

Move to find that this document:

x IS a safety document: when all safety-related information is removed, the document is not technically sound and complete.

x The Safety Checklist (Regulations 13.3) for this document is complete and has accompanied the document through the balloting process.

*By/2nd:* Bert Planting / Lauren Crane

*Disc:* None

*Vote:* 6-0. Motion passed



**Intellectual Property Check**

The meeting chair asked those present in person or by electronic link, if they were aware of any patented or copyrighted material in the Standard or Guideline.

(Note: Such material might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this ballot.)

Patented or copyrighted material is known to exist in the Standard or Guideline but release for such material has been obtained or presented to the committee. (no motion needed)

**Final Action**

Move to:

Pass this document as balloted and forward to the A&R for procedural review.

*By/2nd:* Bert Planting / John Visty

*Disc:* None

*Vote:* 7-0. Motion passed

**Attachment:** 23, 5718A-LI1 Compiled Responses

4.5.2 Line Item # 2 – Clarification section 6.5 on risk estimation, remove the term benchmarking. Multiple changes in the section

**Tallies at Close of Voting**

Voting Return Data		Acceptance Rate Data	
Voting Interest Returns	54	Voting Interest Accept Votes (VIAccept)	34
Total Voting Interests	90	Interest Reject Votes (IReject)	1
Voting Interest Return %	60.00%	Approval % [VIAccept / (VIAccept + IReject)]	97.14%
Other Returns (Intercommittee, etc.)	22	# of Interest Rejects that Need to be not found Valid for	
Total Votes	76	Final Approval % >= 90%	0
Total Votes with Comments	1		
Total Reject Votes	1		

**Rejects/Negatives**

Summary: 5 Total Items Submitted

Company: Submitter	ID	Negs	Disp	Company: Submitter	ID	Negs	Disp
Safety Guru, LLC: Eric Sklar	SG	5					

**Negatives from < Safety Guru, LLC: Eric Sklar >**

W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant					
#	Ref.	Negative <u>including Justification</u>	TF Finding <u>and Reason</u>	Motion <u>and Reason</u> in Committee:	Final
SG-3	6.5.2.2	<p><b>Negative:</b> Delete “preferred”.</p> <p><b>Reason/Justification:</b> The intent of S10, as discussed in numerous the TF meetings I attended, has been that the Severity, Likelihood, and Risk levels defined in Appendix 1 are normatively imposed as part of S10. Including “preferred” implies there is some acceptable alternative means of conforming with S10.</p>	<p>See line item 1</p> <p>[SEMI Staff Note: Below is the TF entry for L11]</p> <p>Need clarification.</p> <p>Is preferred is to open.</p> <p>6.5.1 There are numerous ways of estimating the risk associated with a hazard. Some risk estimates are based on identifying the observed and reasonably foreseeable outcomes from a hazard and assigning an expected frequency to each (see § 6.5.2). Other risk estimates are obtained by comparing the equipment qualitatively to similar equipment (<del>see § 6.5.3</del>).</p> <p><u>NOTE xx: A qualitative comparison with sufficient and reliable information about similar equipment or situations, and providing the basis of the finding of similarity between the different equipment and situations, is preferred to other qualitative methods.</u></p> <p>Add this as an editorial change #1 for clarification.</p> <p>Submitter will withdraw his negative if change is made</p>	<p><b>Move to find this negative: Related</b></p> <p>By/2nd: Eric Sklar / Sean Larsen</p> <p>Disc: The change in the preceding sentence affects the second sentence.</p> <p>Vote: 4-2 Motion passed.</p> <p><b>Move to find the negative: Persuasive</b></p> <p>By/2nd: Eric Sklar / Bert Planting</p> <p>Disc: None</p> <p>Vote: 3-3. <b>Motion passed</b></p>	

**Comments**

Summary: 1 Total Items Submitted

Company: Submitter	ID	#	Company: Submitter	ID	#
Tokyo Electron: Mitsuju Nambu	TEL	1			

**Followup Activity Authorization**

Move to:

Return ballot to the originating task force for rework

By/2nd: Bert Planting / Lauren Crane

Disc: None

Vote: 7-0. Motion **passed**

**Attachment:** 24, 5718A-LI2 Compiled Responses



4.5.3 Line Item # 3 – Update standards (remove years and add note to latest version). Line item 3 is to bring standards references in line with other SEMI S standards (like SEMI S2, S22, ..)

**Tallies at Close of Voting**

Voting Return Data		Acceptance Rate Data	
Voting Interest Returns	54	Voting Interest Accept Votes (VIAccept)	36
Total Voting Interests	90	Interest Reject Votes (IReject)	2
Voting Interest Return %	<b>60.00%</b>	Approval % [VIAccept / (VIAccept + IReject)]	<b>94.74%</b>
Other Returns (Intercommittee, etc.)		# of Interest Rejects that Need to be not found Valid for	
	24	Final Approval % >= 90%	0
Total Votes	78		
Total Votes with Comments	2		
Total Reject Votes	2		

**Rejects/Negatives**

Summary: 2 Total Items Submitted

Company: Submitter	ID	Negs	Disp	Company: Submitter	ID	Negs	Disp
Applied Materials: Edward Karl	AMAT	1		Tokyo Electron: Mitsuju Nambu	TEL	1	

**Negatives from < Applied Materials: Edward Karl >**

W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant						
#	Ref.	Negative including Justification	TF Finding and Reason	Motion and Reason in Committee:	Final	
AMAT-1	NOTICE	<p>Negative.</p> <p>The proposed NOTICE states, “Unless otherwise indicated, all document cited shall be the latest published versions.” Applied Materials has an issue with this NOTICE because this could result in products being evaluated in older version of SEMI S2 to be risk assessed to the latest referenced standards.</p> <p>Proposed Solution:</p> <p>Applied Materials recommends changing the NOTICE sentence to, “Unless otherwise indicated, all document cited shall be the version in effect at the time of the original design.”</p>	<p><b>X</b> Not related</p> <p><b>Reason:</b> No change, standard SEMI reference. Please take up with tech editor board See addition below</p>	<p><b>X</b> Not persuasive (<b>requires reason</b>)</p> <p><b>Reason:</b> The section in question is Related Documents, which has no normative effect.</p> <p>By/2nd: Lauren Crane / Eric Sklar Disc: None Vote: 8-1. <b>Motion passed</b></p>		
5-73	Referenced Standards and Documents	(1) Include the following notice at the end of the section: <b>NOTICE:</b> Unless otherwise indicated, all documents cited shall be the latest published versions.				

**Negatives from < Tokyo Electron: Mitsuju Nambu >**

W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant					
#	Ref.	Negative <u>including Justification</u>	TF Finding <u>and Reason</u>	Motion <u>and Reason in Committee:</u>	Final
TEL-1	---	Negative/ Delete entire section 8 and relocate the list in a new Related Information section.  As "Related Documents" are informational, it is more suitable to have this section in a form of Related Information section.	<b>X Not persuasive (assumes related)</b>  <b>Reason:</b> This was discussed several times during all S10 versions. Based on Technical Committee consensus it was placed in the main body. Most of the standards are guidelines how to perform the risk assessment and deal with the consequences it is essential input how to perform your risk assessment  Add an editorial 2 note that states: The documents listed below provides useful background material for carrying out this Safety Guideline but are not specifically cited in this document	<b>X Withdrawn by Subm. (Date: November 6, 2016)</b>	

**Comments**

Summary: 2 Total Items Submitted

Company: Submitter	ID	#	Company: Submitter	ID	#
Dainippon Screen: Naokatsu Nishiguchi	DNS	1	Safety Guru, LLC: Eric Sklar	SG	1

#	Ref.	Comment	TF Response	Committee Action:
DNS-1	8.5	Abstain with comment  8.5 ISO Standards ISO 14121 — Safety of Machinery — Risk assessment — Part 1 - Principles for Risk Assessment  Comment Please delete ISO14121. This standard was integrated into ISO 12100 in 2010.	Correct, 14121-1 is withdrawn Nov. 2010 Make note or let the ballot fail to remove this standard.  Latest version is included in ISO 12100 Checked with ISO site	<b>X</b> Editorial Change: # <u>1</u> in ECs below  By/2nd: Lauren Crane / Bert Planting Disc: None Vote: 8-0. Motion <b>passed</b>
SG-1	8.5	Comment: Should "14121" be "14121-1"? That document is "Part 1", the immediately following document is Part 2 and designated "14121-2". If this change is to be made, I believe it is "editorial".	Add -1 to the document	<b>X</b> Editorial Change: # <u>1</u> in ECs below  By/2nd: Bert Planting / Lauren Crane Disc: None Vote: 7-0. Motion <b>passed</b>

### Summary of Editorial Changes

#	Ref.	Before	After	Object? (Y/N)	Motion to Approve: (if necessary)
1	8.5	ISO 14121: <del>1999</del> — Safety of Machinery — <del>Risk assessment</del> — <u>Part 1</u> - Principles for Risk Assessment	ISO 14121-1: <del>1999</del> — Safety of Machinery — <del>Risk assessment</del> — <u>Part 1</u> - Principles for Risk Assessment  Note: ISO 14121-1 has been withdrawn by ISO and integrated in ISO 12100		By/2nd: Bert Planting / Lauren Crane Disc: None Vote: 10-0. <b>Motion passed</b>
2	8.5	<b>8. Related Documents</b>	<b>8. Related Documents</b>  Note xx: The documents listed below provide useful background material for carrying out this Safety Guideline but are not specifically cited in this document		By/2nd: Bert Planting / Lauren Crane Disc: None Vote: 10-0. <b>Motion passed</b>

### Safety Check

Move to find that this document:

IS a safety document: when all safety-related information is removed, the document is not technically sound and complete.

The Safety Checklist (Regulations 13.3) for this document is complete and has accompanied the document through the balloting process.

By/2nd: Bert Planting / Lauren Crane

Disc: None

Vote: 6-0. Motion passed

### Intellectual Property Check

The meeting chair asked those present in person or by electronic link, if they were aware of any patented or copyrighted material in the Standard or Guideline.

(Note: Such material might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this ballot.)

Patented or copyrighted material is known to exist in the Standard or Guideline but release for such material has been obtained or presented to the committee. (no motion needed)

### Final Action

Move to:

Pass this document with editorial changes and forward to the A&R for procedural review.

By/2nd: Bert Planting / John Visty

Disc: None

Vote: 7-0. Motion passed

**Attachment:** 25, 5718A-LI3 Compiled Responses



4.5.4 Line Item # 4 – Correct pointer to ISO 12100 in Appendix 1

**Tallies at Close of Voting**

Voting Return Data		Acceptance Rate Data	
Voting Interest Returns	54	Voting Interest Accept Votes (VIAccept)	37
Total Voting Interests	90	Interest Reject Votes (IReject)	1
Voting Interest Return %	<b>60.00%</b>	Approval % [VIAccept / (VIAccept + IReject)]	<b>97.37%</b>
Other Returns (Intercommittee, etc.)	22	# of Interest Rejects that Need to be not found Valid for	
Total Votes	76	Final Approval % >= 90%	<b>0</b>
Total Votes with Comments	0		
Total Reject Votes	1		

**Rejects/Negatives**

Summary: 2 Total Items Submitted

Company: Submitter	ID	Negs	Disp	Company: Submitter	ID	Negs	Disp
Safety Guru, LLC: Eric Sklar	SG	2					

**Negatives from < Safety Guru, LLC: Eric Sklar >**

W = Withdrawn, NR = Not Related, NP = Not Persuasive, RP = Related and Persuasive, NS = Not Significant, S = Significant					
#	Ref.	Negative <u>including</u> Justification	TF Finding <u>and</u> Reason	Motion <u>and</u> Reason in Committee:	Final
SG-1	NOTICE	<p><b>Negative:</b> Do not insert “originally” unless and until the table is changed.</p> <p><b>Reason/Justification:</b> Inserting “originally” implies that the table was created from EN1050 and other sources, but that is not, AFAIK, the current case.</p>	<p>Leave out original according style manual</p> <p>Should not be changed in the notice.</p> <p>Editorial change 1</p>	<p><b>X</b> Not persuasive (<b>requires reason</b>)</p> <p><b>Reason:</b> The change does not substantially impact the Document.</p> <p>By/2nd: Lauren Crane / Bert Planting Disc: None Vote: 7-1. <b>Motion passed failed</b></p>	
SG-2	NOTE 1	<p><b>Negative:</b> Do not insert this NOTE without including a representative sample of other useful documents.</p> <p><b>Reason/Justification:</b> I maintain my position that the TF should create a table from the present one, ISO12100, and whatever other sources the TF considers appropriate, including its own work. That would have the advantage of relieving SEMI from obtaining permission to reproduce a table from a single source.</p>	<p><b>X</b> Not persuasive (<b>assumes related</b>)</p> <p><b>Reason:</b> Understand the position, but because copyright reasons this is the best available solution at the moment</p> <p>Leaving the note in because 12100 is the latest standard 3 to 1</p>	<p><b>x</b> Not persuasive (<b>requires reason</b>)</p> <p><b>Reason:</b> The note is harmless.</p> <p>By/2nd: Lauren Crane / Bert Planting Disc: None Vote: 6-1. <b>Motion passed</b></p>	

**Comments**

There were no comments received for ballot 5718A, line item 1.

### Summary of Editorial Changes

#	Ref.	Before	After	Object? (Y/N)	Motion to Approve: (if necessary)
1	RI Notice	<b>NOTICE:</b> This Related Information is not an official part of SEMI S10 and was originally derived from EN 1050. Figure 1 from BS EN 1050: 1997 is reproduced with the permission of BSI under license number 2003DH0150. British Standards can be obtained from reproduced with the permission of BSI Customer Services, 389 Chiswick High Road, London, W4 4AL, United Kingdom, Tel + 44 (0)20 8996 9001	<b>NOTICE:</b> This Related Information is not an official part of SEMI S10 and was originally derived from EN 1050. Figure 1 from BS EN 1050: 1997 is reproduced with the permission of BSI under license number 2003DH0150. British Standards can be obtained from reproduced with the permission of BSI Customer Services, 389 Chiswick High Road, London, W4 4AL, United Kingdom, Tel + 44 (0)20 8996 9001		By/2nd: Eric Sklar / John Visty Disc: None Vote: 8-0. <b>Motion passed</b>  Justification: Leave Notice as is

### Safety Check

Move to find that this document:

IS a safety document: when all safety-related information is removed, the document is not technically sound and complete.

The Safety Checklist (Regulations 13.3) for this document is complete and has accompanied the document through the balloting process.

By/2nd: Bert Planting / Lauren Crane

Disc: None

Vote: 6-0. Motion passed

### Intellectual Property Check

The meeting chair asked those present in person or by electronic link, if they were aware of any patented or copyrighted material in the Standard or Guideline.

(Note: Such material might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this ballot.)

Patented or copyrighted material is known to exist in the Standard or Guideline but release for such material has been obtained or presented to the committee. (no motion needed)

### Final Action

Move to:

Pass this document with editorial changes and forward to the A&R for procedural review.

By/2nd: Bert Planting / John Visty

Disc: None

Vote: 7-0. Motion passed

**Attachment:** 26, 5718A-LI4 Compiled Responses



## 5 Subcommittee & Task Force Reports

### 5.1 Manufacturing Equipment Safety Subcommittee (MESSC)

Cliff Greenberg reported.

- Old and new business
  - Back-end tools and S2
  - End user topic: some S2 reports are not thorough, complete, etc..
  - How to move topics to a TF after MESSC discussion
- Presentation from Stefan Radloff (Intel) on “Equipment Safety for Non-fab Equipment

#### Background / Problem Statement

- SEMI S2/S8 is universally accepted for semiconductor/fab equipment safety. BUT: use / adoption limited in electronics assembly and PCB manufacturing.
- Equipment suppliers in the assembly / PCB supply are increasingly pushing back...
  - Not familiar with S2/S8
  - Cost: audit, changes
  - An S2/S8 compliant tool is “custom”
  - Perception
- Economic realities are changing
- Equipment suppliers impacted are typically not SEMI members (or even aware of SEMI).
- ► Believe that something “lighter” that better fits equipment in this space is needed.

#### IPC Engagement

- IPC: “The global trade association serving the printed board and electronics assembly industries, their customers and suppliers.” ([www.ipc.org](http://www.ipc.org))
  - Right supply chain
  - But - EHS committee focus is environmental regulations
- Equipment Safety TF formed under IPC EHS Committee
  - Charter = create an equipment safety standard
  - Equipment expertise is limited
  - Opportunity to improvement industry participation.
  - Draft / outline published. Approach = start from zero and build up.
- Opportunity exists for collaboration with SEMI
  - Conceptual support from SEMI exec staff
  - Exact nature of collaboration is TBD – joint standard? Info exchange?

#### Opens / Discussions

- Has this issue come up before?
  - “agree that this is a worthy cause and should be pursued”
  - Use S2, but “relax some of the criteria or rigorousness that is expected in the evaluation and reporting”

- “SEMI standards can accommodate all kinds of solutions”
  - IPC partnership?
    - “Partnering with IPC for a standard development effort would be interesting”
  - General comments:
    - “need to understand the problem before we start working on the solution”
- Back-end and S2 from Intel
  - What is current minimum
    - NFPA 79, OSHA,
    - Ergo may not be as important first
  - Risk assessment or performance based
  - The S2 slippery slope: S2 “lite”
    - Appendix or RI that highlights relevant sections, “ignores” other sections
  - ID typical hazards then pick and choose which sections are relevant, residual risk
  - Field Label required: Intel did their own audits for Field Label compliance, “hazard” analysis, then told suppliers to make changes
  - Supply chain redesign costs
  - Assembly, stuffing boards, ovens and pc board fabrication
    - Wet plating tools, room size
  - Need a safe tool
    - How much data is needed from supplier, how much reviewer info
- S2 Reports
  - End-user Intel PTD states that he receives reports that are not as rigorous as he expects, e.g.:
    - Some hazards or mitigations are not identified and assessed
    - Some ergo tasks are not specified or reviewed
  - He was necessarily vague about suppliers, Third Party names, etc., also about what he is requesting other than a general discussion
    - To Jeff van Heel: what can we do?
  - Proposed: A non-IP list of concerns we have seen from participants
    - Lack of documentation at assessment time is one common shortfall
    - Alpha tool is being audited, many procedures not documented yet
    - Template of S2 for final report (seen as Third Party competitive/proprietary design)
    - What should be in final report not followed too much
    - Reports standard that is not used much
    - E.g. IH and electrical don’t comprehend opposite specialties
- Issues for Committee
  - Ask Intel S2 “concern” person to attend MESSC West for more in-depth discussion

- Moving topics from MESSC to TF
  - MESSC could provide some hand-holding for newer members to help
    - “Just” ask TF Leader about taking the topic if topic is relevant to the TF TFOF, & MESSC reports to the Committee for minutes recording and tracking
    - Bring to ESH Committee for assignment if no one available to own it

**Attachment:** 27, MESSC Report

### 5.2 Energetic Materials EHS Task Force

Eric Sklar reported that the TF is meeting regularly and is in the process of conversion of the SEMATECH document into a Safety Guideline.

### 5.3 Fire Protection Task Force

Eric Sklar reported. Current activities:

- Ballot 5591A Adjudication
  - LI1 & LI2 each had one negative and one comment, but the same negative (on different paragraphs) and comment (general) on each of the two items.
  - TF and submitter of the negative negotiated addition of a NOTE to address the concern.
  - Submitter agreed to withdraw negatives if EHS Committee adds the NOTES
  - TF recommends that the EHS Committee add the NOTES to allow successful completion of 5591.
  - TF consensus is that ballot deficiency cited in Comments is not present, i.e., the required material was included in the ballot, and that the material being added is within the Scope and Purpose of SEMI S2.
- Future Plans / Timeline
  - Detailed Discussion
    - Tiered Approach for Fire Risk Assessment between S2 and S14.
    - Address Negatives from Document #5590.
      - S14 Re-Approval
    - Address Negatives from Document #4495B
      - Alignment of S14 with S10 Likelihood & Risk Tables
    - Move Fire Detection & Suppression Sections to S14 or Appendix
    - Intend to start conference calls to begin this work
  - Future Line Item Ballot or Major Revision
- For Committee Attention
  - Future: Ballots (date TBD, but after Spring 2015 meetings)

**Attachment:** 28, Fire Protection Task Force Report

#### 5.4 NA Seismic Liaison Task Force

Lauren Crane reported. TF discussions during NA Fall 2014 meeting:

- Concerns regarding values for seismic forces.
- Conducted survey of building codes and determined that it was not reasonable to develop something that accommodates all building codes.
- Working on survival criteria for equipment during seismic forces.
- Provide RI on what to expect from other regions.
- Reviewed/revised S2, section 19 proposed text in TF.
- Japan ballot

#### 5.5 S2 Ladders & Steps Task Force

The task force is reviewing criteria in S2 and is discussing at what level fall protection should be provided. The task force plans to submit S2 revision ballot (4449E) for the Cycle 1, 2015 voting period (or Cycle 2 at the latest).

#### 5.6 S2 to Machinery Directive Mapping Task Force

The task force has completed its work on Document 4966, New Auxiliary Information: *S2 Mapping into the Machinery Directive (2006/42/EC) Essential Health and Safety Requirements*.

**Motion:** NA EHS Committee approves to disband the S2 to Machinery Directive Mapping Task Force  
**By / 2<sup>nd</sup>:** Lauren Crane (KLA-Tencor) / Chris Evanston (Salus)  
**Discussion:** None  
**Vote:** 9-0 in favor.

#### 5.7 S2 Non-Ionizing Task Force

Sean Larsen reported.

- Current Activities
  - The TF leader/tech editor is still lagging in preparing the previously discussed line item to modify RI7
    - This is to get the graphs from the previous background statement and added to better explain how we set the previously completed limit values
  - Additionally, reviewing the relatively new EU Worker Protection directive for electromagnetic (EM) fields
- New EU EM Directive Summary
  - The new directive sets alarm levels and various exposure limit values
    - When the exposures are below the Action Levels, the employer is deemed to be in compliance
    - When the exposure levels are above the Alarm levels, the employer must either:
      - Complete an assessment with periodic reassessments, possibly including measurements and calculations, to demonstrate the exposure is below the exposure limit values (ELVs), or

- When the exposure levels exceed the ELVs, the employer must establish an action plan with technical or organizational measures to reduce the exposures below the ELVs
  - With this position, I am guessing the Alarm Levels will be more accepted to align with
- Future Plans / Timeline
  - The TF is looking to generate two line item changes to S2
    - The overdue one, to add the cleaned up tables to RI7 to demonstrate how we developed the existing published levels
    - A comparison to the new EU Worker Protection directive and 2014 version of ACGIH to demonstrate we have reviewed against the updated external requirements and are still good.
      - If the directive is found to have lower values, this will be brought back to the TF to discuss.

**Attachment:** 29, S2 Non-ionizing Task Force Report

#### 5.8 S6 Revision Task Force

John Visty reported. Current activities:

- Based on ballot results - Realistic worst case release scenarios and release rate calculations
  - TF evenly divided so decision made to look at design requirements that could be used reduce risk factors possibly leading to testing at a lower release rate for S6 validation.
  - Design criteria could be incorporated as line items, appendix or RI that would identify controls and risk reduction factors
- Other discussions
  - Representative sampling criteria
  - Gas detector approval/listing requirement
    - Criteria
- Future Plans / Timeline
  - Continue to develop potential ballot line item (Glenn Holbrook)
  - Submit gas sensor / detection criteria to key contacts in order to engage gas detection vendors (John Visty)

**Motion:** NA EHS Committee found that the Document development activity for S6 to be continuing.

**By / 2<sup>nd</sup>:** Lauren Crane (KLA-Tencor) / Bert Planting (ASML)

**Discussion:** None

**Vote:** 4-0 in favor.

**Attachment:** 30, S6 Revision Task Force Report

#### 5.9 S8 (Ergonomics) Task Force

The task force is continuing work on ballot 5009D (S8 revision). TF received input that the background information provided in the ballot should be added as a Related Information.

### 5.10 S10 Task Force

Bert Planting reported.

- TF Leaders: Bert Planting (ASML), Thomas Pilz (Pilz, GmbH); Tech Editor: Eric Sklar (Safety Guru)
- Planning
  - 5-year reapproval ballot was sent out and received several negatives
  - Action plan
    - First solve several small issues by using line item ballots
    - Major discussion on use of risk ranking tables
- Doc 5718A – four line items were balloted.
  - Several small issues and comments
  - One major issue (5 negatives)
    - Are the tables in S10 the only type of table the industry wants to use?
    - Preferred or Mandatory

**Attachment:** 31, S10 Task Force Report

### 5.11 S22 (Electrical Safety) Task Force

Sean Larsen reported. Current activities:

- The TF leaders/tech editor are lagging in preparing the line item ballot due to overly active day jobs
  - Three line items are being worked on
    - Clarification of FECS criteria
    - Adding flexibility to the UPS criteria
    - Allowing flexibility to the ground criteria
- Future Plans / Timeline
  - The TF is planning telecons to work on the line items with the goal of submitting in Cycle 1 or 2, 2015.

**Attachment:** 32, S22 Task Force Report

### 5.12 S23 Task Force

Lauren Crane reported.

- Background and Justification for Forming a Global TF
  - S23 is under constant need of updates
  - The TF responsible for S23 revision activities is S23 revision TF, which is local to the Japan TC Chapter (of EH&S global technical committee).
  - Significance of Energy/resource conservation in semiconductor and other related electronic device manufacturing industry makes it more appropriate to operate S23 revision activities under global TF as defined in section 6.4.5 of the Procedure Guide (PG).

- Under a Global TF, any document development including revision will require better global consensus making at their conceptual stage (e.g., SNARF).
- Ballot authorization/adjudication may happen any participating locale, which is beneficial for shorter time to Publication.
- Suggested Actions for Globalization
  - S23 TF leaders to propose revised TFOF, that redefine the TF Global TF
    - As there is an existing local (Japanese) TF that has activities in a different Locale (TF meetings have been held in NA in the past), those locales (regions) could collectively establish a global TF. (PG 6.4.5.1)
    - To prove global nature of current TF activity, it is recommended that Co-leaders (Joji /JA and Lauren/NA) jointly write a revised TFOF and submit the TFOF to SEMI staff for requesting GCS for the approval
    - In the revised TFOF, Joji and Lauren should be mentioned as suggested leaders for new Global TF.
    - After GCS approval, each TC Chapter (JA and NA, maybe TW as well) may reaffirm suggested leadership from the locale.

**Motion:** NA EHS Committee approves Lauren Crane as S23 Global TF leader.

**By / 2<sup>nd</sup>:** Lauren Crane (KLA-Tencor) / Chris Evanston (Salus)

**Discussion:** None

**Vote:** 9-0 in favor.

**Attachment:** 33, S23 Task Force Report

### 5.13 *Energy Saving Equipment Communication Task Force (under the NA Information & Control Committee)*

Paul Trio reported that the TF is now focusing on the energy savings mode communication between semiconductor equipment and auxiliary subsystems. SNARF #5821<sup>4</sup> (*New Standard: Specification for Energy Savings Mode Communication between Semiconductor Equipment and Sub-Systems*) was approved via I&C GCS in October 2014.

## 6 Old Business

None

## 7 New Business

### 7.1 *Notes in Documents & Referencing Appendices*

This topic will be addressed in the next EHS Process Meeting during the NA Standards Spring 2015 meetings (see section 7.4 for meeting details)

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<sup>4</sup> Link to SNARF # 5821:

<http://downloads.semi.org/web/wstdsbal.nsf/b8865fa87d9e7b57882579fb005c3cd7/e6493d1aaa56b68d88257d970007b23d!OpenDocument>

### 7.2 NA EHS Standards due for Five-Year Review

Paul Trio reported that the following EHS Standards are due for five year review:

- SEMI S5-0310, Safety Guideline for Sizing and Identifying Flow Limiting Devices for Gas Cylinder Valves
- SEMI S27-0310, Safety Guideline for the Contents of Environmental, Safety, and Health (ESH) Evaluation Reports
- SEMI E34-1110, Safety Guideline for Mass Flow Device Removal and Shipment

[SEMI Staff Note: SEMI E34 is not published under the EHS volume, but is considered a Safety Guideline. This Standard was previously revised under the NA EHS TC Chapter in October 2010.]

**Motion:** NA EHS Committee approves to send E34, S5, and S27 for reapproval for Cycle 8, 2014 voting period.  
**By / 2<sup>nd</sup>:** Eric Sklar / Bert Planting  
**Discussion:** None  
**Vote:** 5-1 in favor.

### 7.3 Ballot Authorization

#	When	SC/TF/WG	Details
4316L	Cycle 2, 2015 or earlier	S22 TF	Line Item Revisions to SEMI S2, <i>Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment</i> , and SEMI S22, <i>Safety Guideline for the Electrical Design of Semiconductor Manufacturing Equipment</i>
4449E	Cycle 2, 2015 or earlier	S2 Ladders & Steps TF	Delayed Line Item Revision to SEMI S2-0712, <i>Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment</i> . Line Item Revisions related to Work at Elevated Locations and Design Criteria for Platforms, Steps, and Ladders
4683E	Cycle 2, 2015 or earlier	S2 Chemical Exposure TF	Line Item Revisions to SEMI S2, <i>Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment</i> Delayed Revisions related to Chemical Exposure
5009D	Cycle 2, 2015 or earlier	S8 Ergonomics TF	Line Item Revisions to SEMI S8-0712, <i>Safety Guidelines for Ergonomics Engineering of Semiconductor Manufacturing Equipment</i> . Delayed Revisions on Multiple Topics
5625	Cycle 2, 2015 or earlier	S2 Non-ionizing Radiation TF	Line Item Revisions to SEMI S2, <i>Environmental, Health, and Safety Guideline for Semiconductor Manufacturing Equipment</i> Delayed Revisions related to non-ionizing radiation
5718B	Cycle 2, 2015 or earlier	S10 TF	Line Item Revisions to SEMI S10-0307E, <i>Safety Guideline for Risk Assessment and Risk Evaluation Process</i>
5825	Cycle 8, 2014	NA EHS Committee, 5-Year Review	Reapproval for SEMI E34-1110, Safety Guideline for Mass Flow Device Removal and Shipment
5827	Cycle 8, 2014	NA EHS Committee, 5-Year Review	Reapproval for SEMI S5-0310, Safety Guideline for Sizing and Identifying Flow Limiting Devices for Gas Cylinder Valves
5826	Cycle 8, 2014	NA EHS Committee, 5-Year Review	Reapproval for SEMI S27-0310, Safety Guideline for the Contents of Environmental, Safety, and Health (ESH) Evaluation Reports

**Motion:** NA EHS TC approves distribution of ballots as shown above  
**By / 2<sup>nd</sup>:** Eric Sklar / Cliff Greenberg  
**Discussion:** None  
**Vote:** 6-0. Motion passed.





#### 7.4 NA EHS Proposed Meeting Schedule at the NA Standards Spring 2015 Meetings

##### **North America Standards Spring 2015 Meetings**

March 30 – April 2, 2015

SEMI Headquarters

3081 Zanker Road

San Jose, California 95134

U.S.A.

Monday, March 30

- S22 (Electrical Safety) TF (9:00 AM to 10:30 AM)
- Review of SEMI E34, S5, and S27 Reapproval Ballots (10:30 AM to 12:00 Noon)
- EHS Process Meeting / Lunch Break (12:00 Noon to 1:00 PM)
- S2 Non-Ionizing Radiation TF (1:00 PM to 2:00 PM)
- S2 Chemical Exposure TF (2:00 PM to 3:30 PM)
- S6 Revision TF (3:30 PM to 5:00 PM)

Tuesday, March 31

- Fire Protection TF (9:00 AM to 10:00 AM)
- S10 TF (10:00 AM to 11:00 AM)
- NA Seismic Liaison TF (11:00 AM to 12:00 Noon)
- S7 Revision TF (1:00 PM to 2:00 PM)
- Energetic Materials EHS TF (2:00 PM to 3:30 PM)
- S8 Ergonomics TF (3:30 PM to 5:00 PM)
- S23 Revision Japan TF (5:00 PM to 6:00 PM)

Wednesday, April 1

- {International Compliance and Regulatory Committee [ICRC] (8:00 AM to 12:00 Noon)}
- EHS Leadership Meeting / Lunch Break (12:00 Noon to 1:00 PM)
- Hazardous Energy Control Isolation Devices TF (1:00 PM to 2:00 PM)
- Manufacturing Equipment Safety Subcommittee [MESSC] (2:00 PM to 4:00 PM)
- S2 Ladders & Steps TF (4:00 PM to 5:30 PM)

Thursday, April 2

- EHS Committee (9:00 AM to 6:00 PM)

For more information about the NA Standards Spring 2015 meetings, please visit: [semi.org/standards](http://semi.org/standards)

So that meeting attendees can plan their travel schedules accordingly, the committee agreed that the last day to make changes to the NA Standards Spring 2015 meetings is February 30, 2015.

### 7.5 New Action Items

<i>Item #</i>	<i>Assigned to</i>	<i>Details</i>
2014Nov #01	Paul Trio	Post amended SEMICON West 2014 meeting minutes to the SEMI website.
2014Nov #02	Paul Trio	Contact Andy Tuan for details on the next Taiwan EHS meeting stated as March 2015.
2014Nov #03	Paul Trio	Look into Korea translation of S2 (e.g., process, oversight, who is involved)
2014Nov #04	Paul Trio	Look into whether the S2 translations in Traditional Chinese and Simplified Chinese versions are being maintained (i.e., whenever S2 is being updated, the translated versions are updated as well).
2014Nov #05	Paul Trio, Sanjay Baliga	Invite committee members to participate on EHS Division seminar in China on compliance.
2014Nov #06	Lauren Crane/Ed Karl	Provide SEMI a list items in S1 believed to be reproduction of another organization's copyrighted material.

### 8 Next Meeting and Adjournment

The next meeting of the North America Environmental, Health, and Safety committee is scheduled for April 2 in conjunction with the NA Standards Spring 2015 meetings in San Jose, California. Adjournment was at 5:15 PM.

#### Respectfully submitted by:

Paul Trio  
 Senior Manager, Standards Operations  
 SEMI North America  
 Phone: +1.408.943.7041  
 Email: ptrio@semi.org

#### Minutes approved by:

Chris Evanston (Salus Engineering), Co-chair	
Sean Larsen (Lam Research), Co-chair	
Bert Planting (ASML), Co-chair	

**Table 6 Index of Available Attachments #1**

#	<i>Title</i>	#	<i>Title</i>
01	SEMI Standards Required Meeting Elements	18	5760-LI2 Compiled Responses
02	Amended NA EHS SEMICON West 2014 Meeting (July 10) Minutes	19	4683D-LI1 Compiled Responses
03	Japan EHS Committee Report	20	4683D-LI2 Compiled Responses
04	Taiwan EHS Report	21	5591A-LI2 Compiled Responses
05	Korea EHS Report	22	5591A-LI2 Compiled Responses
06	Leadership Report	23	5718A-LI1 Compiled Responses
07	SEMI Staff Report	24	5718A -LI2 Compiled Responses
08	5623-LI1 Compiled Responses	25	5718A -LI3 Compiled Responses
09	5623-LI2 Compiled Responses	26	5718A -LI4 Compiled Responses
10	5623-LI3 Compiled Responses	27	MESSC Report
11	5623-LI4 Compiled Responses	28	Fire Protection TF Report
12	5623-LI5 Compiled Responses	29	S2 Non-ionizing TF Report
13	5623-LI6 Compiled Responses	30	S6 Revision TF Report
14	5623-LI7 Compiled Responses	31	S10 TF Report
15	5623-LI8 Compiled Responses	32	S22 Electrical Safety TF Report
16	5623-LI9 Compiled Responses	33	S23 TF Report
17	5760-LI1 Compiled Responses		

#1 A .zip file containing all attachments for these minutes is available at:  
<http://downloads.semi.org/standards/minutes.nsf/91eeb64567db378c88256dcf006a4252/c4f8bd6f9d0cc35b88257e0300802d9c!OpenDocument>

For additional information or to obtain individual attachments, please contact Paul Trio at the contact information above.