Liquid Chemicals North America TC Chapter

Meeting Summary and Minutes

SEMICON West Standards Meetings 2025
Tuesday, October 7, 13:00 – 16:00 Mountain
Phoenix Convention Center, Phoenix, Arizona/USA, and via Official Virtual TC Chapter Meeting (OVTCCM)

TC Chapter Announcements

Next TC Chapter Meeting

NA Winter Meetings 2026

February TBD

Virtual

Table 1 Meeting Attendees

Italics indicate virtual participants

Co-Chairs: Don E. Hadder (Intel), David Kandiyeli (KESG), Laura Ledenbach (Evonik), Per Nelson (Daikin America)
SEMI Staff: Laura Nguyen

Company	*Last*	*First*	*Company*	*Last*	*First*
Air Liquide	*Mey-Ami*	*Lisa*	Kanomax FMT	Oberreit	Derek
Air Liquide	*Li*	*Fang*	KESG	Kandiyeli	David
Air Liquide	Sparks	Chris	Knight Material Technologies	Krauss	Michael
AOC	Widger	Bill	Mettler Toledo Thornton	Cannon	Jim
Atlas Technologies	Bothell	Jed	*NAURA*	*Cao*	*Clark*
Camenzind Solutions	*Camenzind*	*Mark*	Nippon Steel	Tanaka	Kevin
Chemours	*McCall*	*Jenelle*	Pall Corporation	Ruth	Jochen
CT Associates, Inc	Schooneveld	Gary van	Parker Hannifin	Hansen	Glade
Daikin America, Inc	Nelson	Per	Self	Rogers	Steve
Elemental Scientific, Inc	Ketkar	Suhas	*TSI Incorporated*	*Tiwari*	*Andrea*
Engineered Machinery Inc	*Pedersen*	*Jim*	ULVAC	Coppa	Brian
Evonik	Ledenbach	Laura	Veridian Engineering	Cooper	Cass
FTD Solutions LLC	*Sullivan*	*Lindsey*	Veridian Engineering	Sanders	Chris
Georg Fischer Piping Systems	McIntosh	Bob	Veolia Water	Dale	Chuck
Georg Fischer Piping Systems	Allebes	Soren	Watts Water Technologies	Woodworth	Ashley
Honeywell (Solstice Adv. Materials)	Clark	Doreen	*Wolfspeed*	*Paramasivam*	*Diwakar*
Honeywell (Solstice Adv. Materials)	Tan	Sam	Xylem	Knapp	Alan
Intel	David	Amanda			
Intel	Hadder	Don E.	SEMI	Nguyen	Laura

Table 2 Leadership Changes

None

Table 3 TC Chapter Structure Changes

Previous WG/TF/SC Name	*New WG/TF/SC Name or Status Change*
Statistical Methods Task Force	Dormant

Table 4 Ballot Results

Document #	*Document Title*	*Committee Action*
7367	New Auxiliary Document: Using Machine Learning Image Processing Algorithms to Characterize Multimodal Particle Size Distributions of Chemical Mechanical Planarization Slurries	**Passed**, will be forwarded to GCS for approval, then the ISC A&R SC for procedural review.
7386	Reapproval of SEMI C1-0310 (Reapproved 0618), Guide for the Analysis of Liquid Chemicals	**Failed**
7387	Reapproval of SEMI C10-1109 (Reapproved 1114), Guide for Determination of Method Detection Limits	**Failed**
7389	Reapproval of SEMI C100-1120, Guide for Reporting Chemical Mechanical Planarization (CMP) Polishing Pads Hardness Used in Semiconductor Manufacturing	**Failed**

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

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

Table 5 Ratification Ballot Results

Document #	*Document Title*	*Committee Action*
R6601B	New Standard: Guide for Meeting IRDS Yield Table Recommendations for High Purity Polymer Materials and Components Used in Ultrapure Water	**Passed**, will be forwarded ISC A&R SC for procedural review.

#1 **Passed** Ratification ballots will be submitted to SEMI publication for final processing.

#2 **Failed** Ratification ballots were returned to the originating task forces for re-work and re-balloting or abandoning.

Table 6 Activities Approved by the GCS between meetings of the TC Chapter

None

Table 7 Authorized Activities

None

Table 8 Authorized Ballots

#	*When*	*TF*	*Details*
7086A	Cycle 9, 2025, or 1-2026	Ultra Pure Water TF	Revision to SEMI F61–0521, Guide for Design and Operation of a Semiconductor Ultrapure Water System, with title change to: Guide for Design, Construction, Installation, and Operation of a Semiconductor Ultrapure Water System

Table 9 SNARF(s) Granted a One-Year Extension

None

Table 10 SNARF(s) Cancelled

#	*TF*	*Title*
7386	Liquid Chemicals TC	Revision to SEMI C1-0310 (Reapproved 0618), Guide for the Analysis of Liquid Chemicals
7387	Liquid Chemicals TC	Revision to SEMI C10-1109 (Reapproved 1114), Guide for Determination of Method Detection Limits
7388	Liquid Chemicals TC	Revision to SEMI C64-0308 (Reapproved 1214), SEMI Statistical Guidelines for Ship to Control, with title change
7389	Liquid Chemicals TC	Reapproval of SEMI C100-1120, Guide for Reporting Chemical Mechanical Planarization (CMP) Polishing Pads Hardness Used in Semiconductor Manufacturing

Table 11 Standard(s) to receive Inactive Status

Standard Designation	*Title*
SEMI F48-0600 (Reapproved 1214)	Test Method for Determining Trace Metals in Polymer Materials

#1 *Inactive, adj.* — Status of a Standard or Safety Guideline that is not currently supported by the GTC. [*Regulations* ¶ 4.2.19]

Table 12 New Action Items

Item #	*Assigned to*	*Details*
None		

Table 13 Previous Action Items

Item #	*Assigned to*	*Details*
2025June#01	SEMI Staff	Request to SEMI for an informal statement for guidance on what documents are valuable to the industry. (Why update it if it's not being used?)
2025June#02	SEMI Staff	When SEMI updates the Regs/PM, it makes it unfair for volunteers to update old documents, when SEMI is the one making the changes.

1 Welcome, Reminders, and Introductions

Don E. Hadder (Intel) called the meeting to order at 13:08. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

Attachment: SEMI Standards Required Meetings Elements

2 Review of Previous Meeting Minutes

The TC Chapter reviewed the minutes of the previous meeting.

Motion: To accept the previous meeting minutes as written.
By / 2nd: By: Gary Van Schooneveld / CT Associates, Inc
Second: David Kandiyeli / Kinetics Equipment Solutions Group (KESG)
Discussion: None
Vote: 17-0 in favor. Motion passed.

Attachment: [2025July] LChem NA TC Chapter Meeting Minutes

3 Liaison Reports

3.1 *Gases & Liquid Chemicals Europe TC Chapter*

No update since SEMICON Europa 2024.

3.2 *Liquid Chemicals Japan TC Chapter*

Laura Nguyen (SEMI) gave the Liaison Report. Refer to attachment for full details.

Last meeting

- Thursday September 4th, 2025, 3:00pm – 5:00pm [JST]
- SEMI Japan Office + OVTCCM [Hybrid]

Next meeting

- Thursday January 29th, 2026, 3:00pm - 5:30pm [JST]
- SEMI Japan Office + OVTCCM [Hybrid]

Leadership Changes

- Masaji Inoue / PILLAR Corporation was appointed as a leader of Valve & Fitting TF.

Organization Chart *{refer to attachment for details}*

Ballot Results: None

- 7267: Revision to C77-0818, Test Method for Determining the Counting Efficiency of Liquid-Borne Particle Counters for Which the Minimum Detectable Particle Size is Between 30 nm and 100 nm, with title change to: Test Method for Determining the Counting Efficiency of Liquid-Borne Particle Counters for Which the Minimum Detectable Particle Size is Between 20 nm and 100 nm
    - Failed and returned to TF for rework and reballot

Authorized Ballots **No updates to the information shared at NA Summer Meetings*

#	Type	SC/TF/WG	Details
7267	Cycle 8 or later, 2025	Liquid-borne Particle Counter Task Force	Revision to SEMI C77-0818, TEST METHOD FOR DETERMINING THE COUNTING EFFICIENCY OF LIQUID-BORNE PARTICLE COUNTERS FOR WHICH THE MINIMUM DETECTABLE PARTICLE SIZE IS BETWEEN 30 nm AND 100 nm, with title change to: TEST METHOD FOR DETERMINING THE COUNTING EFFICIENCY OF LIQUID-BORNE PARTICLE COUNTERS FOR WHICH THE MINIMUM DETECTABLE PARTICLE SIZE IS IN THE RANGE OF 20 nm TO 100 nm
7255	Cycle 9 or later, 2025	Liquid Filter TF	Revision of SEMI C89-0116: Test Method for Measuring Particle Removal Performance of Liquid Filters Rated Below 30 nm by Inductively Coupled Plasma - Mass Spectrometry
7254	Cycle 9 or later, 2025	Liquid Filter TF	Revision of SEMI F110-0712: Test Method for Mono-Dispersed Polystyrene Latex (PSL) Challenge of Liquid Filters

Five Year Review: *None*

Task Force Highlights

- Liquid Filter Task Force
    - Last Meeting: September 4, 2025 (Hybrid) / Next Meeting January 2025 (Hybrid
    - #7255 Revision of SEMI C89-0116: Test Method for Measuring Particle Removal Performance of Liquid Filters Rated Below 30 nm by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS)
        - Revised version for ballot re-submission followed by negative comments (by Eric Sklar) and advice (Inductively Coupled Plasma - Mass Spectroscopy -> Inductively Coupled Plasma - Mass Spectrometry, by Chris Sparks) is prepared by co-leader and shared to TF members.

    - Revised ballot draft prepared by TF co-leader was finally approved. We will submit this to ballot at Cycle 9 or after.
  - #7254 Revision of SEMI F110-0712: Test Method for Mono-Dispersed Polystyrene Latex (PSL) Challenge of Liquid Filters
    - Major change from previous version is the scope of particle size range:
      - This test method applies to filters rated to removed particles of nominal size between 30 50 and 200 nm from liquids.
    - Revised ballot draft prepared by TF co-leader was finally approved. We will submit this to ballot at Cycle 9 or after.
  - #6911 New Standard: Test Method for Metal Removal Performance of Liquid Filter
    - 2025/2H 1st Draft to be prepared followed by Draft review to global
      - Approved by TC for ballot submission
      - Initial draft was shared and discussed among TF members.
    - 2025/1H Ballot
  - Other topics
    - Timing of 5-year-review of C82 (Test Method for Particle Removal Performance of Liquid Filter Rated 20 to 50 nm with Liquid-Borne Particle Counter) was announced. We will keep discussion about the scope but prioritize other running items.
- Liquid-Borne Particle Counter Task Force
  - Last Meeting: September 4, 2025 (Hybrid) / Next Meeting late September to early October(Hybrid)
  - C77-0818 :Test Method for Determining the Counting Efficiency of Liquidborne Particle Counters for Which the Minimum Detectable Particle Size is Between 30 nm and 100 nm.
    - We are continuing to coordinate with the three submitters of negative comments regarding the responses to their comments.
    - We plan to proceed with submission in Ballot Cycle 9.
- Trace Metal Analysis for High Pure IPA Task Force
  - None
- Valve & Fitting Task Force ***[New]***
  - Last Meeting: May 16, 2025 (Hybrid) / Next Meeting January 2026
  - SEMI Staff submitted the standards list of Liquid Chemical. (Including information on whether the standards are inactive or which region, Japan or North America, the person in charge is from.)
  - Topics on the next meeting will be discussed about the standards list.

Staff Contact: Takeaki Hirabara at thirabara@semi.org

Attachment: JA_LC_Liaison_2025_Sep

3.3 *SEMI Staff Report*

Laura Nguyen (SEMI) gave the SEMI Staff Report. Of note:

SEMI Global 2025 & 2026 Calendar of Events

- SEMCON West (Oct 7-9; Phoenix, Arizona)
- SEMICON Europa (Nov 18-21; Munich, Germany)
- SEMICON Japan (December 17-19; Tokyo, Japan)
- SEMICON Korea (Feb 11-13; Seoul, Korea)
- SEMICON China (March 25-27; Shanghai, China)
- SEMICON Southeast Asia (May 5-7, 2026; Kuala Lumpur, Malaysia)

SEMICON West 2025-2030

- **2025—October 7-9 | Phoenix Convention Center | Phoenix, AZ**
- 2026—October 13-15 | Moscone Center | San Francisco, CA
- **2027—October 12-14 | Phoenix Convention Center | Phoenix, AZ**
- 2028—October 10-12 | Moscone Center | San Francisco, CA
- **2029—October 9-11 | Phoenix Convention Center | Phoenix, AZ**
- 2030—October 29-31 | Moscone Center | San Francisco, CA

Global Standards Summit (GSS) 2025 @ SEMICON West

- Date/Time: Tuesday, October 7 | 1:30 PM to 5:30 PM | North Building, 200 Level, Room 229A
- Theme: Future Standards for Connected & Sustainable Semiconductor Manufacturing
- Session Description: The Global Standards Summit is a strategic forum dedicated to identifying standards-critical areas and advancing an industry-wide standardization roadmap for the next 3- and 7-year horizons. Building on the momentum of the inaugural Summit—which spotlighted essential topics such as environmental sustainability—this year's gathering continues that dialogue while expanding focus to include emerging challenges like supply chain traceability.
- With increasing fragmentation across the global microelectronics supply chain driven by geopolitical and other disruptive forces, the need for unified standards is more critical than ever. This Summit provides a timely opportunity to convene, collaborate, and identify the standards that will address these challenges and foster greater industry alignment. We encourage you to join, engage, and help shape the future of standards.
- https://www.semiconwest.org/programs/global-standards-summit

Workshops @ SEMICON West 2025

- SEMI Liquid Chemicals Analytical Workshop
  - Description: Focusing on recent advances in analytical methodology and instrumentation
  - Wednesday, October 8, 09:00-11:30 (North Bldg | Room 229B)
- Enhancing Voltage Sag Immunity: SEMI F47 Standard Updates & Insights
  - Description: Delivering practical recommendations to enhance the SEMI F47 standard and increase tool resilience in future designs, with a focus on power quality conditions, equipment susceptibility, testing approaches, and mitigation strategies.
  - Wednesday, October 8, 14:30-16:30 (North Bldg | Room 229B)
- Semiconductor Device Manufacturing in a Cleanroom (Best Practices to Improve Product Reliability and Yield) [SEMIU]
  - Description: Provides the fundamentals and thought processes to improve your production reliability & yield.
  - Thursday, October 9, 8:00 AM - 4:00 PM (North Bldg | 200 Level)

Upcoming NA Meetings 2025 (Proposed)

- NA Standards Winter Meetings: Feb 23-26, 2026 (tentative), at SEMI HQ, Milpitas, California/USA
- NA Spring Meetings (in conjunction with ASMC): May 11-14, 2026, Hilton Albany, New York
  - *{refer to attachment for additional information on ASMC}*
- SEMICON West Meeting: Oct 12-15, 2026, at Moscone Center, San Francisco, CA/USA

2025 Critical Dates for SEMI Standards Ballots

- Cycle 8-2025: Ballot Submission Due: Sept 3/Voting Period: Sept 24 – Oct 24
- Cycle 9-2025: Ballot Submission Due: Oct 14/Voting Period: Oct 29 – Nov 28

2026 Critical Dates for SEMI Standards Ballots *(Tentative)*

- Cycle 1-2026: Ballot Submission Due: Dec 16/Voting Period: Jan 7 – Feb 6
- Cycle 2-2026: Ballot Submission Due: Jan 23/Voting Period: Feb 11 – Mar 13
- Cycle 3-2026: Ballot Submission Due: Mar 5/Voting Period: Mar 18 – Apr 17
- Cycle 4-2026: Ballot Submission Due: Mar 30/Voting Period: Apr 14 – May 14
- Cycle 5-2026: Ballot Submission Due: May 8/Voting Period: May 27 – June 26

https://www.semi.org/en/collaborate/standards/ballots

Standards Publications Report

Cycle	*New*	*Revised*	*Reapproved*	*Withdrawn*
May 2025	0	5	4	0
June 2025	1	0	0	0
July 2025	1	4	0	0
August 2025	0	1	0	0
September 2025	4	1	3	0

Total in portfolio – 1,107 (includes 373 Inactive Standards)

New Standards

Cycle	*Designation*	*Title*	*Committee*	*Region*
June 2025	SEMI M94	Specification for Silicon Carbide Engineered Substrates	Compound Semiconductor Materials	EU
July 2025	SEMI E194	Guide to Using a Liquid Particle Counter to Assess Particulate Surface Contamination on Critical Chamber Components and Coupons	Metrics	NA
September 2025	SEMI E195	Test Method Using Adhesive Replacement Substrates to Assess Particulate Surface Contamination on Critical Chamber Components	Metrics	NA
September 2025	SEMI E196	Guide for Equipment Edge Data Governance	Information & Control	TW
September 2025	SEMI M95	Test Method for Net Carrier Density and Resistivity of Silicon Epitaxial Layer by Capacitance-Voltage Measurements with an Evaporated Metal Schottky Diode	Silicon Wafer	JP
September 2025	SEMI T26	Specification for Electronic Supply Chain Traceability Using Distributed Ledger Technology	Traceability	NA

Educational Courses under Development

- {EDA} Everything You Need to Know about the SEMI Equipment Data Acquisition (EDA) Standards Suite
    - Objective: Introduce EDA standards, best practices for implementation, and addresses concerns about adoption through example use cases
    - Course Date: November 20, 2025, in conjunction with SEMICON Europa
    - Status: Confirmed, under development
- {Subfab} Intro to Sub-fab Course
    - Objective: Gain a comprehensive understanding of SubFAB operations, including system components, facility layouts, environmental and sustainability considerations, organizational structure, safety and maintenance best practices, and incident-response preparedness within the semiconductor manufacturing ecosystem.
    - Course Date: Early 2026 (2 sessions, EU & Asia friendly)
    - Status: Under development
- Other courses being considered: SECS/GEM, Seals, Cybersecurity
- *Interested in shaping future educational courses with us? Please reach out to SEMI staff.*

Regulations & Procedure Manual

- Regulations (Feb 20, 2024): https://www.semi.org/sites/semi.org/files/2024-02/Standards%20Regulations%20February%2020%202024.pdf
- Procedure Manual (July 7, 2025)
    - https://www.semi.org/sites/semi.org/files/2025-07/Procedure%20Manual%20July%2007%2C%202025%20v1.pdf
    - Noticeable updates:
        - Major revision to multiple Standards
            - New SNARF Form (July 2025)
        - Ballot checklist requirement for Revision to Primary Standard

Staff Contact: Laura Nguyen, Lnguyen@semi.org

Attachment: Staff_HQ Report Oct 2025 v4_distr

4 Ballot Review

NOTE 1: TC Chapter adjudication on ballots reviewed is detailed in the Audits & Review (A&R) Subcommittee Forms for procedural review. The A&R forms are available as attachments to these minutes. The attachment file name for each balloted document is provided under each ballot review section below.

4.1 Document # 7367, New Auxiliary Document: Using Machine Learning Image Processing Algorithms to Characterize Multimodal Particle Size Distributions of Chemical Mechanical Planarization Slurries

- The Document passed TC Chapter review. There were no comments during review period. Submitted to GCS approval following ISC A&R for Procedural Review.
- Refer to attachment for ballot adjudication.

Attachment: 7367_UnballotedProceduralReview

4.2 Document # 7386, Reapproval of SEMI C1-0310 (Reapproved 0618), Guide for the Analysis of Liquid Chemicals

- The committee found the negative related and technically persuasive. The ballot failed and returned to the task force for re-work and re-ballot.

Motion: Negative SG022 is related and persuasive.
By / 2nd: By: Per Nelson / Daikin America, Inc.
Second: Bob McIntosh / GF Piping Systems
Discussion: None
Vote: 14-0 in favor. Motion passed.

Motion: This Document failed TC Chapter review and will be returned to the TF for rework.
By / 2nd: By: Chuck Dale / Veolia Water
Second: Per Nelson / Daikin America, Inc.
Discussion: None
Vote: 17-0 in favor. Motion passed.

Attachment: 07-25-Liquid Chemicals Ballot Results

4.3 Document # 7387, Reapproval of SEMI C10-1109 (Reapproved 1114), Guide for Determination of Method Detection Limits

- The committee found the negative related and technically persuasive. The ballot failed and returned to the task force for re-work and re-ballot.

Motion:	Negative SG03 is related and persuasive.
By / 2nd:	By: Per Nelson / Daikin America, Inc. Second: Bob McIntosh / GF Piping Systems
Discussion:	None
Vote:	14-0 in favor. Motion passed.

Motion:	This Document failed TC Chapter review and will be returned to the TF for rework.
By / 2nd:	By: Chuck Dale / Veolia Water Second: Per Nelson / Daikin America, Inc.
Discussion:	None
Vote:	17-0 in favor. Motion passed.

Attachment: 07-25-Liquid Chemicals Ballot Results

4.4 Document # 7389, Reapproval of SEMI C100-1120, Guide for Reporting Chemical Mechanical Planarization (CMP) Polishing Pads Hardness Used in Semiconductor Manufacturing

- The committee found the negative related and technically persuasive. The ballot failed and returned to the task force for re-work and re-ballot.

Motion:	Negative SG003 is related and persuasive.
By / 2nd:	By: Per Nelson / Daikin America, Inc. Second: Bob McIntosh / GF Piping Systems
Discussion:	None
Vote:	14-0 in favor. Motion passed.

Motion:	This Document failed TC Chapter review and will be returned to the TF for rework.
By / 2nd:	By: Chuck Dale / Veolia Water Second: Per Nelson / Daikin America, Inc.
Discussion:	None
Vote:	17-0 in favor. Motion passed.

Attachment: 07-25-Liquid Chemicals Ballot Results

5 Subcommittee and Task Force Reports

5.1 *Chemical Analytical Methods (CAM) Task Force*

David Kandiyeli (KESG) reported for the CAM Task Force. Refer to attachment for full details.

Task Force Roster *{refer to attachment for full list}*

TF Meeting Summary

- 8/5/2025 CAM TF Meeting: Ballot 7148 (SEMI C62-Porogen Precursors)
  - 4 attendees (David Kandiyeli, Chris Sparks, Alma Malibekova)
  - Reviewed document received from Laura Nguyen’s team, scrub it to make sure we didn’t miss one of the rejections

- 8/19/2025 CAM TF Meeting: Ballot 7148 (SEMI C62-Porogen Precursors)
  - 4 attendees (David Kandiyeli, Chris Sparks, Alma Malibekova, Suhas Ketkar)
  - Continued review of ballot received by Laura's team and then sent the document to Eric to review
- 9/16/2025 CAM TF Meeting: Meeting aborted as Alex not available to cover C98 5-Year Review ➔ 9/28/2025 received ballot 7148 SEMI C62-Porogen Precursors feedback from Eric & the team will need to review and modify the ballot again before submittal for balloting
- 9/30/2025 CAM TF Meeting: SEMI C98 5-Year Review
  - 4 attendees (Alex Tregub, Suhas Ketkar, David Kandiyeli, Don Hadder)
  - Began reviewing SEMI C98 as a quorum to create scope for SNARF

New SNARF Proposals

- New SNARF Proposals
  - Generate SNARF for Title change to SEMI C64 -- *SEMI Statistical Guidelines for Ship to Control*
  - Generate SNARF for 5 year review of SEMI C98 – *Guide for Chemical Mechanical Planarization (CMP) Particle Size Distribution (PSD) Measurement and Reporting Used in Semiconductor Manufacturing* (Will not be presented in current Technical Committee meeting)
- SNARFs to Abolish
  - Reapproval ballot for SEMI C64 – *SEMI Statistical Guidelines for Ship to Control*

Ballot Activity Summary & Upcoming Activities

- Ballot Adjudication: None
- New Ballots and ballot plans
  - Ballot 7148 reviewed by Eric, incorporate second round of items, and submit in 2025
  - Ballot 7146 changes sent to Laura N. and her team. Then send modified ballot to Eric for review, make any necessary changes, and submit early in 2026
  - Ballot 7149 changes sent to Laura N. and her team. Then send modified ballot to Eric for review, make any necessary changes, and submit early in 2026
  - Submitted Reapproval ballots for SEMI C10 (7387), SEMI C100 (7389), SEMI C1 (7386)
  - Each ballot collected multiple rejections from a single reviewer in Cycle 7. Request to fail reapproval ballots in Technical Committee meeting.

Next TF Meeting Schedule

- Next Meeting by Teams Web Conference; 10/14/2025 (8:00AM to 9:00AM PST) and Biweekly Thereafter
- Currently scheduled meetings are established via Teams invitation. Notify David Kandiyeli at D.Kandiyeli@kinetics.net if you would like to join the meetings.

Attachment: CAM SEMICON West NALCC Meeting Report DDK 10-6-2025 REVP04

5.2 *High Purity Polymer Materials & Components Task Force*

Per Nelson (Daikin America) reported on the High Purity Polymer Materials and Components Task Force. Refer to attachment for full details.

Task Force Roster *{See attachment for full list}*

TF Meeting Summary

- C90: Published as SEMI C90-0725
- 6601: Passed ratification ballot and moved to publication.

SNARFs

- New SNARF Proposals
  - SEMI C78: SNARF passed at last meeting – taskforce activity has not begun

    - SEMI F48: After initial review it seems this needs review for methods, scope and detection limits.
- Revised SNARF Proposals
    - SEMI F104 Passed at winter meeting, Task force commencement pending

Meeting Results & Upcoming Activities

- Ballot Adjudication
    - None (6601A passed Ratification Ballot)
- New ballots & ballot plans
    - None

Next Task Force Meeting Schedule

- Currently no regular rhythm for Taskforce meetings.
- SEMI F104: TBD
- SEMI C78: TBD
- Location/teleconferencing information Teams mtg
- Contact: Per Nelson pnelson@daikin-america.com Bob McIntosh bob@enviro-e.com

Attachment: NALCC HPPMC Task Force 20251007bm.pn

5.3 *Ultrapure Water Task Force*

Gary Van Schooneveld (CT Associates) reported for the UPW Task Force. Refer to attachment for full details.

Task Force Roster *{refer to attachment for full list}*

Yield and Reliability Related SEMI Standards for UPW *{refer to attachment for diagram}*

UPW TF Publication Schedule *{refer to attachment for diagram}*

Task Force Meeting Schedule

- Date: Weekly meetings on Thursdays, alternating between Regular TF meeting and a Subgroup dedicated to specification updates
- Next UPW TF meeting = October 16, 2025, Time: 8am-9am PDT
- Location/teleconferencing information – Microsoft Teams link to be provided
- Contact: Lindsey Sullivan, lsullivan@ftdsolutions.net; Gary Van Schooneveld, gary@ctassociatesinc.com

Attachment: 20251007_SEMI Stds UPW TF Report_1

5.4 *High Purity Liquid Assemblies & Systems Task Force*

David Kandiyeli (Kinetics) reported for the High Purity Liquid Assemblies & Systems Task Force. Refer to attachment for full details.

Task Force Roster *{refer to attachment for full list}*

TF Meeting Summary

- 8/15/2025 Task Force Meeting
    - Attendees: Jim Pedersen, David Kandiyeli
    - Continued defining outstanding stakeholders
- 9/5/2025 Task Force Meeting
    - Attendees: Jim Pedersen, David Kandiyeli
    - Worked on pre-chemical qualification sections of qualification process
- 9/19/2025 Task Force Meeting

  - Attendees: Jim Pedersen, David Kandiyeli
  - Continued work developing pre-chemical qualification sections including particle monitoring

Ballot Activity Summary

- New Ballots and ballot plans
  - Rewrite of SEMI F41 (7214) Guide for Qualification of a Bulk Chemical Distribution System Used in Semiconductor Processing; time to completion TBD

Next TF Meeting Schedule

- Next Meeting by Web Conference; 10/17/2025 (8:00AM to 9:00AM PST) and Biweekly Thereafter
- Teleconferencing information – Teams Mtg.
- Contact – D. Kandiyeli

Attachment: HPLAS SEMICON West 2025 NALCC Meeting Report DDK 10-6-2025 REVP01

5.5 *Chemical Mechanical Planarization Consumables (CMP-C) Task Force*

Amanda David (Intel) presented for the Chemical Mechanical Planarization Consumables (CMP-C) Task Force. Refer to attachment for full details.

Task Force Roster *{See attachment for full list}*

Ongoing and Completed Activities

- 7366: New Auxiliary Document: Report on Closing Metrologies Gaps for post-CMP Cleaning Chemistries, SNARF approved
- 7367: New Auxiliary Document: Using Machine learning image processing algorithms to characterize multimodal Particle Size Distributions of Chemical Mechanical Planarization Slurries. Submitted for review on October 6-8, 2025. Refer to § 4 for ballot review.
- 6904, New Standard: Guide for Reporting Performance Parameters of the Retaining Rings for Chemical Mechanical Planarization (CMP) used in Semiconductor Manufacturing: Extension Approved
- SEMI C98-1219, Guide For Chemical Mechanical Planarization (Cmp) Particle Size Distribution (Psd) Measurement And Reporting Used In Semiconductor Manufacturing. Help CAM TF with updating Guide with new information related to ML.

Activities on Hold

- New Standard: Guide for Reporting Performance Parameters of Pressure Sensitive Adhesives (PSA) for Chemical Mechanical Planarization (CMP) pads used in Semiconductor Manufacturing

- New Standard 6904 for retaining rings: prepare for balloting on responses to the reviewer comments

Upcoming Activities

- Prepare Report on New Auxiliary Document, Report on CMP cleans
- Submit SNARF and Prepare Report on New Auxiliary Document, Report on closing metrologies gaps for CMP brushes

Next TF Meeting Schedule

- **Date**: recurring biweekly meetings of the TF members
- **Time**: Every Thursday of the even week time change, 10 to 11 am PST (may change from 10 am to 9 am)
- **Contact**: a.tregub@yahoo.com

Attachment: CMP-C TF Leaders TF Report October 2025_

5.6 *Water Management Task Force*

No update.

5.7 *Statistical Methods Task Force*

Tom Bzik is no longer with EMD Electronics and Meg Cromley is no longer with Intel, therefore both TF leaders have stepped back on SEMI Standards activities until further notice.

The TC Chapter is looking for new leadership. Anyone with statistician recommendations are encouraged to reach out to the co-chairs.

According to the *Procedure Manual* ¶ 6.4.5.10, *If future activity is anticipated, the TC Chapter may designate the TF as dormant instead of discharging it.*

The TC Chapter decided to send this TF to dormant status.

Motion: Send Statistical Methods Task Force to Dormant status
By / 2nd: By: Suhas Ketkar / Elemental Scientific, Inc.
Second: Bob McIntosh / GF Piping Systems
Discussion: None
Vote: 17-0 in favor. Motion passed.

6 Old Business

6.1 *Standards to go to Inactive Standards*

Motion: Send F48 to Inactive Status
By / 2nd: By: Bob McIntosh / GF Piping Systems
Second: Soren Allebes / Georg Fischer
Discussion: None
Vote: 19-0 in favor. Motion passed.

6.2 *Cancel SNARF(s)*

Motion: Cancel SNARFs Document #:
7386 Reapproval of SEMI C1-0310 (Reapproved 0618), Guide for the Analysis of Liquid Chemicals
7387 Reapproval of SEMI C10-1109 (Reapproved 1114), Guide for Determination of Method Detection Limits
7388 Reapproval of SEMI C64-0308 (Reapproved 1214), SEMI Statistical Guidelines for Ship to Control
7389 Reapproval of SEMI C100-1120, Guide for Reporting Chemical Mechanical Planarization (CMP) Polishing Pads Hardness Used in Semiconductor Manufacturing
By / 2nd: By: Gary Van Schooneveld / CT Associates, Inc
Second: Jim Cannon / Mettler Toledo Thornton
Discussion: None
Vote: 19-0 in favor. Motion passed.

7 New Business

7.1 *Ballot Authorization*

Motion: Authorize the Document 7086A: Revision to SEMI F61–0521, *Guide for Design and Operation of a Semiconductor Ultrapure Water System…*, for Letter Ballot in Cycle 9, 2025, or 1-2026.
By / 2nd: By: Alan Knapp / Evoqua Water Technologies LLC / Xylem
Second: David Kandiyeli / Kinetics Equipment Solutions Group (KESG)
Discussion: None
Vote: 19-0 in favor. Motion passed.

7.2 *Topics brought up at the NARSC meeting*

Liquid Chemical Chairs brought this topic up to the Committee. Of note:

Five-Year Review

- Liquid Chemicals proposed to do away with the Five-Year Review or change the cadence.
  - Takes up a lot of volunteer hours to revise a document purely on procedural manual updates.

"Inactive" Standards Terminology Discussion

- Issue: The term "Inactive" on SEMI standards creates confusion; users assume the document is irrelevant.
- Discussion Points:
  - Alternative terms suggested: "Stabilized" (used by ISO), "Mature", or similar.
  - Changing terminology requires formal proposal and review by SEMI Regulations (Regs).
  - Publications team faces challenges updating thousands of documents retroactively.
- Consensus:
  - Open discussion for better wording to maintain relevance and clarity.
  - Concerns about the term 'inactive' for standards, as it implies irrelevance.
  - Proposal to use 'stabilized' instead of 'inactive,' similar to ISO terminology.
  - Challenges in updating terminology across all existing documents.

Proposal: Gas Quality documents into LC TC

- Move the Gas Chemical quality/purity standards into the Liquid Chemical TC. (AKA Fluids or just Chemical TC)
  - LC has UPW, all liquid chemical quality, polymer materials of construction, delivery systems.
- Gas (especially SPEC gases) should be governed by Ship To Control standard and therefore need to updated periodically.

8 Next Meeting and Adjournment

8.1 The SEMI Standards NA Winter Meetings 2026 are tentatively scheduled for the week of February 23-26, 2026, to be held virtually via OVTCCM. Schedule details TBD. https://www.semi.org/en/products-services/standards.

Tentative Schedule:

Task Forces will continue to meet on their weekly/bi-weekly cadence. Subject to change.

- Monday, February 23
  - (Open for meetings)
  - ???, NA LChem Leadership Meeting
- Tuesday, February 24
  - 13:00-16:00, Liquid Chemicals NA TC Chapter Meeting (Day 1)
- Wednesday, February 25 *(tentative)*
  - 13:00-16:00 Liquid Chemicals NA TC Chapter Meeting (Day 2)

Adjournment: 15:22.

Respectfully submitted by:

Laura Nguyen

Sr. Coordinator, International Standards

SEMI Global Headquarters

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Minutes tentatively approved by:

Don Hadder (Intel), Co-chair	<Date approved>
David Kandiyeli (KESG), Co-chair	<Date approved>
Laura Ledenbach (Evonik), Co-chair	<Date approved>

Minutes approved by: **LChem NA OVTCCM on February 10, 2026.**

Table 14 Index of Available Attachments[#1]

Title	*Title*
SEMI Standards Required Meetings Elements	NALCC HPPMC Task Force 20251007bm.pn
[2025July] LChem NA TC Chapter Meeting Minutes	CAM SEMICON West NALCC Meeting Report DDK 10-6-2025 REVP04
JA_LC_Liaison_2025_Sep	HPLAS SEMICON West 2025 NALCC Meeting Report DDK 10-6-2025 REVP01
Staff_HQ Report Oct 2025 v4_distr	20251007_SEMI Stds UPW TF Report_1
7367_UnballotedProceduralReview	CMP-C TF Leaders TF Report October 2025_
07-25-Liquid Chemicals Ballot Results	

#1 Due to file size and delivery issues, attachments must be downloaded separately. A .zip file containing all attachments for these minutes is available at www.semi.org. For additional information or to obtain individual attachments, please contact Laura Nguyen at the contact information above.