Liquid Chemicals North America TC Chapter

Meeting Summary and Minutes

SEMI Standards NA Summer Meeting 2025

Tuesday, June 3–Wednesday, June 4, 13:00 – 16:00 Pacific

SEMI Global Headquarters, Milpitas, California, and via Official Virtual TC Chapter Meeting (OVTCCM)

TC Chapter Announcements

SEMI Standards NA July Meetings 2025

Day 1: Tuesday, July 29, 09:00 – 12:00 Noon Pacific

Day 2: Wednesday, July 30, 09:00 – 12:00 Noon Pacific

Official Virtual TC Chapter Meeting (OVTCCM)

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	*Chen*	*Allen*	*iii safety llc*	*Kennis*	*Ko*
Air Liquide	*Malibekova*	*Alma*	*Kanomax FMT*	*Oberreit*	*Derek*
Air Liquide	*Sparks*	*Chris*	*Kinetics Equipment Solutions Group*	*Kandiyeli*	*David*
ATPC	*Tregub*	*Alex*	*NAURA*	*Cao*	*Clark*
Camenzind Solutions	*Camenzind*	*Mark*	*NIST*	*Radney*	*Jimmy*
CT Associates, Inc	*Schooneveld*	*Gary van*	*Parker Hannifin*	*Hansen*	*Glade*
Daikin America, Inc.	*Nelson*	*Per*	*Sargento Lundy*	*Kerr*	*Paul*
Eastman Chemical Company	*Casey*	*John*	*ULVAC*	*Coppa*	*Brian*
Elemental Scientific, Inc.	*Ketkar*	*Suhas*	*Veolia Water*	*Dale*	*Chuck*
FTD Solutions LLC	*Sullivan*	*Lindsey*			
Georg Fischer Piping Systems	*McIntosh*	*Bob*	SEMI	Nguyen	Laura

Table 2 Leadership Changes

WG/TF/SC/TC Name	*Previous Leader(s)*	*New Leader(s)*
Liquid Chemicals North America Technical Committee	Steve Rogers (Fujifilm) ***[stepped down]*** Don Hadder (Intel) Laura Ledenbach (Evonik) David Kandiyeli (Kinetics)	Per Nelson (Daikin America) ***[New]*** Don Hadder (Intel) Laura Ledenbach (Evonik) David Kandiyeli (Kinetics)

Table 3 Committee Structure Changes

None

Table 4 Ballot Results

Document #	*Document Title*	*Committee Action*
6601B	New Standard: Guide to Meet IRDS Yield Table Recommendations for High Purity Polymer Materials and Components Used in Ultrapure Water	**Passed**, with technical changes and with or without editorial changes; Ratification Ballot to be issued.
7086	Revision to SEMI F61–0521, Guide for Design and Operation of a Semiconductor Ultrapure Water System, with title	**Failed**
7293	New Auxiliary Document: Report on Closing Metrologies Gaps for Wafer Measurements at Different Stages of CMP Process	**Passed**, will be forwarded to GCS for approval, then the ISC A&R SC for procedural review.

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

NOTE 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

None

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

#	*Type*	*SC/TF/WG*	*Details*
7285A	Ballot Authorization	Water Management TF	Line-Item Revision to SEMI F98-0923, Guide for Treatment of Reuse Water in Semiconductor Processing ***– Approved by GCS on 04/22/2025***

Table 7 Authorized Activities

Listing of all revised or new SNARF(s) approved by the Originating TC Chapter.

#	*Type*	*SC/TF/WG*	*Details*
7366	SNARF	Chemical Mechanical Planarization Consumables (CMP-C) TF	New Auxiliary Document: Report on Closing Metrologies Gaps for post-CMP Cleaning Chemistries
7367	SNARF	CMP-C TF	New Auxiliary Document: Using Machine Learning Image Processing Algorithms to Characterize Multimodal Particle Size Distributions of Chemical Mechanical Planarization Slurries

Table 8 Authorized Ballots

#	*When*	*TF*	*Details*
R6601B	Cycle 6, or 7-2025	High Purity Polymer Materials and Components	New Standard: Guide to Meet IRDS Yield Table Recommendations for High Purity Polymer Materials and Components Used in Ultrapure Water
7086A	Cycle 6, 7, or 8-2025	Ultra Pure Water	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) Canceled

None

Table 11 Standard(s) to receive Inactive Status

Standard Designation	*Title*
SEMI C87-0515	Test Method for Determining Roughness of Polymer Surfaces Used in Ultrapure Water and Liquid Chemical Distribution Systems by Contact Profilometry

NOTE 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*
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.

Table 13 Previous Meeting Action Items

None

1 Welcome, Reminders, and Introductions

David Kandiyeli (Kinetics) called the meeting to order at 13:09. 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: Per Nelson / Daikin America, Inc.
Second: Bob McIntosh / GF Piping Systems

Discussion: None

Vote: 8-0 in favor. Motion passed.

Attachment: [2025Spring] Liquid Chemicals 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*

Last meeting

- Friday May 16th, 2025, 3:00pm – 5:00pm [JST]
- SEMI Japan Office + OVTCCM [Hybrid]

Next meeting

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

Organization Chart *{refer to attachment for details}*

Ballot Results

- 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

#	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

SNARFs Granted a One-year Extension

- Liquid Filter Task Force
    - 6911: New Standard, Test Method For Metal Removal Performance Of Liquid Filter
    - Expiration Date: March 17, 2026

Task Force Highlights

- Liquid Filter Task Force
    - Last Meeting: May 16, 2025 (Hybrid) / Next Meeting September 2025 (Hybrid)
    - Doc. 7255A: Revision of SEMI C89-0116, Test Method for Measuring Particle Removal Performance of Liquid Filters Rated Below 30 nm by Inductively Coupled Plasma – Mass
        - 2025/9 Document for re-submission to be confirmed
        - 2025/2H or later Document submitted to ballot
    - Doc. 7254: Revision of SEMI F110-0712, Test Method for Monodispersed Polystyrene Latex (PSL) Challenge of Liquid Filters
        - 2025/9 Document for re-submission to be confirmed
        - 2025/2H or later Document submitted to ballot
    - Doc. 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
        - 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: May 16, 2025 (Hybrid) / Next Meeting August 2025 (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.
    - Revised content
        - 5-year review.
        - Change the detectable particle size of the targeted LPC from 30-100 nm to 20-100 nm.
        - Corrective action for negative comments from previous ballot.
        - Reorganize sections to match the latest SEMI Procedure Manual.
        - Other minor editorial corrections.
- Trace Metal Analysis for High Pure IPA Task Force
    - None
- Valve & Fitting Task Force ***[New]***
    - Last Meeting: May 16, 2025 (Hybrid)
    - Review of the abolition and invalidation of existing standards
        - The standard is referenced according to customer requirements. Therefore, we proposed and received support for moving forward in a direction that would not abolish or invalidate them.
    - Regarding other standardization needs
        - Discuss surface roughness, evaluation using organic solvents, specifications, and electrostatics. The judgment that quantification is difficult.
        - There were opinions on the standards regarding the evaluation methods for recycled materials. We will discuss recycled materials next time.
    - Action item
        - 2025/6H Request the secretariat to list the standards of Liquid Chemical. (Including information on whether the standards are inactive or which region, Japan or North America, the person in charge is from.)
        - After being listed, the leader will communicate which standards to discuss by the next meeting.

Five-Year Review of Standards*: None*

Staff Contact: Takeaki Hirabara at thirabara@semi.org

Attachment: JA_LC_Liaison_2025_May_distr

3.3 *SEMI Staff Report*

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

SEMI Global 2025 Calendar of Events

- SEMICON India (Sept 1-3; New Delhi, India)
- SEMICON Taiwan (Sept 10-12; Taipei, Taiwan)
- SEMCON West (Oct 7-9; Phoenix, Arizona)
- SEMICON Europa (Nov 18-21; Munich, Germany)
- SEMICON Japan (December 17-19; Tokyo, Japan)

SEMICON West 2025-2030 ← **NEW!**

- **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

Upcoming NA Meetings 2025

- SEMICON West: Oct 6-9, 2025, at Phoenix Convention Center, Phoenix, Arizona/USA
- NA Standards Winter Meetings: Feb 23-26, 2026, at SEMI HQ, Milpitas, California/USA

2025 Critical Dates for SEMI Standards Ballots

- Cycle 5-2025: Ballot Submission Due: May 8/Voting Period: May 28 – June 27
- Cycle 6-2025: Ballot Submission Due: June 19/Voting Period: July 9 – Aug 8
- Cycle 7-2025: Ballot Submission Due: July 24/Voting Period: Aug 13 – Sep 12
- Cycle 8-2025: Ballot Submission Due: Sept 3/Voting Period: Sept 24 – Oct 24
- (Current) Cycle 9-2025: Ballot Submission Due: ~~Oct 1~~/Voting Period: ~~Oct 21 – Nov 20~~
- (Revised) Cycle 9-2025: Ballot Submission Due: Oct 14/Voting Period: Oct 29 – Nov 28

2026 Critical Dates for SEMI Standards Ballots

- 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*
February 2025	1	9	0	0
March 2025	2	11	6	0
April 2025	1	2	2	0

Total in portfolio – 1,101 (includes 356 Inactive Standards)

New Standards

Cycle	*Designation*	*Title*	*Committee*	*Region*
February 2025	SEMI F122	Guide for Facilities Data Package for Manufacturing Equipment Installation and Building Information Modeling	Facilities	NA
March 2025	SEMI D88	Specification for Electrostatic Properties of FPD Photomasks and Blanks Package	FPD - Materials & Components	JA
March 2025	SEMI MS15	Guide to MEMS Manufacturing Readiness Levels	MEMS/NEMS	NA
April 2025	SEMI E193	Specification for 300 mm Film Frame FOUP (FFF)	Physical Interfaces & Carriers	NA

Style Manual / Formatting Reminders

- Style Manual: Revision 10 (draft proposal) being reviewed with the Regs SC., Mid-End June estimated publishing timeframe.

- Formatting Reminders: Referenced Standards and Documents section: Refer to Procedure Manual A3-5 for content requirements, Terminology section: Refer to Procedure Manual A3-6 through A3-9 for content requirements.
- Formatting Questions? Contact your local staff coordinator or standardspublishing@semi.org for assistance.

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 (Sept 27, 2024): https://www.semi.org/sites/semi.org/files/2024-09/Procedure%20Manual%20September%2027%2C%202024.pdf

Connect@SEMI Communities for all SEMI Standards Task Forces

- All program members may log in at: https://connect.semi.org (username and password is same as program membership log-in)
- Training materials are available at: https://www.semi.org/standards
    - Under Standards Developer Resources → Collaboration Tools (scroll to the bottom)

Five-year Review

- *Refer to attachment*

Staff Contact: Laura Nguyen, Lnguyen@semi.org

Attachment: Staff Report June 2025 v4_LChem

4 Ballot Review

NOTE 3: 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 # 6601B, New Standard: Guide to Meet IRDS Yield Table Recommendations for High Purity Polymer Materials and Components Used in Ultrapure Water

- The ballot passed TC Chapter review with technical changes and with or without editorial changes. A Ratification Ballot to be issued to verify the technical changes.
- Refer to attachment for ballot adjudication.

Attachment: 6601B_ProceduralReview

4.2 Document # 7086, 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

- 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 SG032 is related and persuasive.
By / 2nd:	By: Lindsey Sullivan / FTD Solutions Second: Per Nelson / Daikin America, Inc.
Discussion:	LS: it is logistically impossible to review over 1700 changes, so bc of flaws in SEMI's procedure this is why we we ae failing the doc
Vote:	7-1 in favor. Motion passed.

Motion:	This Document failed TC Chapter review and will be returned to the TF for rework.
By / 2nd:	By: Bob McIntosh / GF Piping Systems Second: Gary Van Schooneveld / CT Associates, Inc
Discussion:	None
Vote:	10-0 in favor. Motion passed.

Attachment: 03-25-Liquid Chemicals Ballot Results

4.3 Document # 7293, New Auxiliary Document: Report on Closing Metrologies Gaps for Wafer Measurements at Different Stages of CMP Process

- 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: 7293_UnballotedProceduralReview

5 Subcommittee and Task Force Reports

5.1 *High Purity Polymer Materials & Components Task Force*

Per Nelson (Daikin America) reported on the High Purity Polymer Materials and Components Task Force. This report contained information on the below.

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

TF Meeting Summary

- C90: No meetings – Reviews passed – Currently in Publication's queue
- 6601: Multiple meetings to resolve Eric Sklar's negatives from 6601A ballot

SNARFs

- New SNARF Proposals: SEMI C78
    - SNARF seems ready with the exception of the IP question
    - Commentor found a web page that claims a patent on 'TappingModeTM'
    - Seeking guidance on the best way to move the SNARF forward
- Revised SNARF Proposals
    - SEMI F104 Passed at winter meeting, Task force commencement pending

Meeting Results & Upcoming Activities

- Ballot Adjudication
    - 6601A
- New ballots & ballot plans
    - 6601A Ratification Ballot

Next Task Force Meeting Schedule

- 6601: TBD
- SEMI F104: TBD
- Meeting 'as needed' only
- Location/teleconferencing information Teams mtg
- Contact: Per Nelson pnelson@daikin-america.com Bob McIntosh bob@enviro-e.com

Attachment: NALCC HPPMC TF 20250603

5.2 *Chemical Analytical Methods (CAM) Task Force*

David Kandiyeli (KESG) reported for the CAM Task Force. This report contained information on the below.

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

TF Meeting Summary

- 4/15/2025 CAM TF Meeting: Ballot 7146 (SEMI C41-IPA)
    - 4 attendees (Suhas Ketkar, David Kandiyeli, Chris Sparks, Alma Malibekova)
    - Addressed trademark issues with GC media
    - Addressed all line item rejections save reagent standard references
- 4/29/2025, CAM TF Meeting: Ballot 7149 (SEMI C63-Organosilicate Precursors)
    - 4 attendees (Suhas Ketkar, David Kandiyeli, Chris Sparks, Alma Malibekova)
    - Modified Table 5 content and formatting
- 5/13/2025 CAM TF Meeting: Ballot 7149 (SEMI C63-Organosilicate Precursors)
    - 4 attendees (Suhas Ketkar, David Kandiyeli, Chris Sparks, Alma Malibekova)
    - Added Notes in multiple document locations
    - Addressed differences in GCMS methods based on cyclic or linear characters
    - Corrected typographical errors
    - Changed scope language
    - Added SEMI F63 Reference
- 5/27/2025 CAM TF Meeting: Meeting cancelled

New SNARF Proposals

- None needed (Title changes to Ballots 7148 & 7149 do not change scope, so new SNARFs not required)

Ballot Activity Summary & Upcoming Activities

- Ballot Adjudication: None
- New Ballots and ballot plans :
    - Complete changes to Ballot 7148 and submit in 2025
    - Complete list of changes to Ballot 7146, and prepare ballot for submittal in 2025
    - Complete list of changes to Ballot 7149, and prepare ballot for submittal in 2025
    - Ballots 7141 (C21 –NH4OH), 7142 (C28 – HF), 7143 (C29 – 4.9% HF), 7144 (C35-Nitric Acid), 7145 (C40-45% KOH), and 7147 (C45 – TEOS) rendered inactive at April TC meeting

Next TF Meeting Schedule

- Next Meeting by Teams Web Conference; 6/10/2025 (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 Summer NALCC Meeting Report DDK 6-2-2025 REVP01

5.3 *High Purity Liquid Assemblies & Systems Task Force*

David Kandiyeli (Kinetics) reported for the High Purity Liquid Assemblies & Systems Task Force. This report contained information on the below.

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

TF Meeting Summary

- 4/4/2025 Task Force Meeting (Attendees: Jim Pedersen, David Kandiyeli)
  - Addressed definitions
- 4/18/2025 Task Force Meeting (Attendees: Jim Pedersen, David Kandiyeli)
  - Defined stakeholders
- 5/2/2025 Task Force Meeting (Attendees: Jim Pedersen, David Kandiyeli)
  - Defined stakeholder scope
- 5/30/2025 Task Force Meeting (Attendees: Jim Pedersen, David Kandiyeli)
  - Created *Minimization of Waste* section
  - Began development of *Water Rinse* section & considered reappearance of section at different positions of a typical phase gate qualification process

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; 6/13/2025 (8:00AM to 9:00AM PST) and Biweekly Thereafter
- Teleconferencing information – Teams Mtg.
- Contact – D. Kandiyeli

Attachment: HPLAS Summer 2025 NALCC Meeting Report DDK 6-2-2025 REVP01

5.4 *Ultrapure Water Task Force*

Lindsey Sullivan (FTD solutions) reported for the UPW Task Force. Of note:

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

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

SEMI UPW TF Roadmap *{refer to attachment for diagram}*

SNARFs

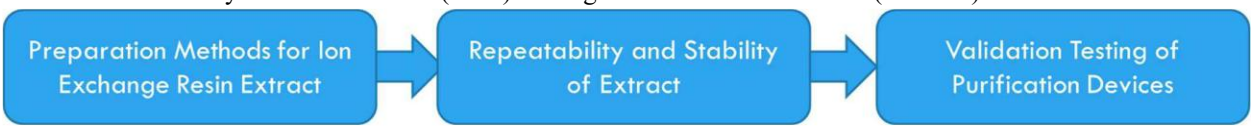
- Revisions to:
  - SEMI F61-0521 (UPW System Design & Operation) →Balloted Cycle 3
  - SEMI F75-0521 (UPW Metrology)
  - Particle precursor retention in UPW
- Rationale:
  - Alignment with UPW IRDS
  - 3-year revision cycle

UPW TF Ballot Activity Summary

- Ballot Plans:
  - Revisions to SEMI F61 – Balloted Cycle 3, 2025
  - Revisions to SEMI F75 – Targeting Cycle 6 or 7, 2025
  - New Standards Document: Guide to Evaluate the Efficacy of Particle Precursor Reduction Devices Used in Ultrapure Water (UPW) Systems – Goal – Cycle 9, 2025

Upcoming Activities

- Main themes:
    - Focus on Proactive Yield management from UPW IRDS to SEMI UPW TF
    - Measurement and management of particle precursors
    - Reclaiming water to UPW systems
- Revisions to F75 (2025)
- New Particle Precursor Retention Document (2025)
    - Creation of a new test method to evaluate retention of a particle precursor challenge material by "PP reduction devices"
    - Ion exchange resin extract used for the development work
    - Experimental work is completed
    - Gary Van Schooneveld (CTA) leading document creation effort (On-hold)



- Write new Auxiliary Information Document (2025)
    - Wilson Poon leading the effort to finalize the document
    - Goal: Explain the differences and applications of SEMI Standards or Guides on filter performance evaluation
        - SEMI C79, C82 and C89
- Plan for production of new UPW reclaim material (late 2025)
    - UPW IRDS is working toward publishing a white paper related to reclaiming water to a UPW system
        - SEMI UPW TF will incorporate this information into new material
    - After white paper is published, UPW TF will:
        - Determine what topics to cover and develop an outline
        - Determine where the information will be published (SEMI F61, SEMI F63, a new document, etc.)
        - Create the appropriate SNARF(s)

Task Force Meeting Schedule

- Date: Weekly meetings on Thursdays, alternating between Regular TF meeting and a Subgroup dedicated to new particle precursor retention document (on-hold)
- Next UPW TF meeting = June 12, 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: 20250603_SEMI Stds UPW TF Report

5.5 *Water Management Task Force*

No update since Document 7285A, Line-Item Revision to SEMI F98-0923, *Guide for Treatment of Reuse Water in Semiconductor Processing,* is out for voting in Cycle 5-2025.

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

Alex Tregub (ATPC) presented for the Chemical Mechanical Planarization Consumables (CMP-C) Task Force. Of note:

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

Agenda

- Membership: No changes since April report

Ongoing and Completed Activities

Report on Closing Metrologies Gaps for Wafer Measurements at Different Stages of CMP Process	Auxiliary document	Approved
Report on Closing Metrologies Gaps for CMP Pads	Auxiliary document	Approved
Report on closing Report on closing metrologies gaps for CMP slurries.	Auxiliary document	Submitted
Using Machine learning image processing algorithms to characterize multimodal Particle Size Distributions of Chemical Mechanical Planarization Slurries.	SNARF for Auxiliary document	Approved
Report on Closing Metrologies Gaps for post-CMP Cleaning Chemistries.	SNARF for Auxiliary document	Approved

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

- Generate a Standard and/or an Auxiliary document on reporting PSD for CMP slurries using machine learning capabilities.
- Submit SNARF and Prepare Report on New Auxiliary Document, Report on closing metrologies gaps for CMP brushes
- Prepare Report on New Auxiliary Document, Report on CMP cleans

Next TF Meeting Schedule

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

Attachment: CMP-C TF Leaders TF Report June 2025

5.7 *Statistical Methods Task Force (did not meet)*

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.

6 Old Business

6.1 *Standards Upcoming for Five-Year*

The Committee reviewed the current Five-year list. No additional actions were made at this time.

6.2 *Standards to go to Inactive Standards*

Motion:	Send to Inactive Status: SEMI C87, Test Method for Determining Roughness of Polymer Surfaces Used in Ultrapure Water and Liquid Chemical Distribution Systems by Contact Profilometry
By / 2nd:	By: David Kandiyeli / Kinetics Equipment Solutions Group (KESG) Second: Bob McIntosh / GF Piping Systems
Discussion:	None
Vote:	8-0 in favor. Motion passed.

7 New Business

7.1 *Authorized Activities*

Motion:	Approve the SNARF for a New Auxiliary Document: Using Machine Learning Image Processing Algorithms to Characterize Multimodal Particle Size Distributions of Chemical Mechanical Planarization Slurries
By / 2nd:	By: Alexander Tregub / ATPC Second: Per Nelson / Daikin America, Inc.
Discussion:	None
Vote:	8-0 in favor. Motion passed.

Attachment: SNARF_ML PSD (aux)_distr1

Motion:	Approve the SNARF for a New Auxiliary Document: Report on Closing Metrologies Gaps for post-CMP Cleaning Chemistries
By / 2nd:	By: Lindsey Sullivan / FTD Solutions Second: Alexander Tregub / ATPC
Discussion:	None
Vote:	9-0 in favor. Motion passed.

Attachment: SNARF_Auxiliary documents pCMP Cleaning Chemistries

7.2 *Ballot Authorization*

Motion:	Authorize the Document for Letter Ballot 7086, 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, in Cycle 6, 7, or 8, 2025.
By / 2nd:	By: Bob McIntosh / GF Piping Systems Second: Gary Van Schooneveld / CT Associates, Inc
Discussion:	None
Vote:	9-0 in favor. Motion passed.

7.3 *North America TC Chapter Chair Nomination*

Steve Rogers (Fujifilm) stepped down as chair and Bob McIntosh nominated Per Nelson (Daikin) to take his place. This was voted on at the Summer NARSC Meeting on Monday, June 2, 2025.

Motion:	Appoint Per Nelson as Liquid Chemicals NA TC Chapter co-chair.
By / 2nd:	By: Bob McIntosh / GF Piping Systems Second: Suhas Ketkar / Elemental Scientific, Inc.
Discussion:	None
Vote:	7-0 in favor. Motion passed.

7.4 *Proposal for Analytical workshop @ SEMICON West in AZ*

Suhas Ketkar (Elemental Scientific, Inc.) brought this topic to the committee. Of note:

- In the past, Gases and Liquid Chemicals used to hold workshops at SEMICON West
- Inquiring, should this be brought back?
- Ultra Facility may be another option – November
- Will reach out to potential members that are interested; finalize at the next meeting in July 2025.

8 Next Meeting and Adjournment

8.1 The next in-person meeting is tentatively scheduled for the week of October 6-9, in conjunction with SEMICON West 2025 in Phoenix, Arizona. Please check the SEMICON West website for updates: https://www.semiconwest.org/special-features/standards.

Adjournment: 16:19 – Day 1, 14:59 – Day 2.

Respectfully submitted by:

Laura Nguyen

Sr. Coordinator, International Standards

SEMI Global Headquarters

Phone: +1.408.943.7019

Email: lnguyen@semi.org

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 July 29, 2025.**

Table 14 Index of Available Attachments[#1]

Title	*Title*
SEMI Standards Required Meetings Elements	NALCC HPPMC TF 20250603
[2025Spring] LChem NA TC Chapter Meeting Minutes	HPLAS Summer 2025 NALCC Meeting Report DDK 6-2-2025 REVP01
JA_LC_Liaison_2025_May_distr	CAM Summer NALCC Meeting Report DDK 6-2-2025 REVP01
Staff Report June 2025 v4_LChem	20250603_SEMI Stds UPW TF Report
6601B_ProceduralReview	CMP-C TF Leaders TF Report June 2025
03-25-Liquid Chemicals	SNARF_ML PSD (aux)_distr1
7293_UnballotedProceduralReview	SNARF_Auxiliary documents pCMP Cleaning Chemistries

#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.