



# Liquid Chemicals North America TC Chapter

## Meeting Summary and Minutes

SEMICON West 2016

July 12, 2016 14:00 – 17:00

San Francisco Marriott Marquis Hotel in San Francisco, California

### Next TC Chapter Meeting

Fall 2016 Meeting

Tuesday November 8, 2016 15:00 – 18:00

SEMI HQ, San Jose, California

### Table 1 Meeting Attendees

*Italics indicate virtual participants*

**Co-Chairs:** Frank Flowers (PeroxyChem)

**SEMI Staff:** Inna Skvortsova

<i>Company</i>	<i>Last</i>	<i>First</i>	<i>Company</i>	<i>Last</i>	<i>First</i>
PeroxyChem	Flowers	Frank	Pall Corp.	Connor	Patrick
Mega Fluid Systems	Murai	Koh	PeroxyChem	Hillebrand	Maria
GF Piping Systems	McIntosh	Bob	Air Liquide	Libnam	Slava
Mega Fluid Systems	Kandieli	David	Fujifilm	Tillotson	Bart
Solvay Chemicals	Terracina	Vincent	PeroxyChem	Ledenbach	Laura
Parker Hannifin	Conner	Darren	Karomax	Blackford	David
KMG	Rogers	Steven	Intel	Hadder	Don
Air Products	Ketkar	Suhas	SEMI	Amano	James
Samsung	Wilcox	Dan	SEMI	Skvortsova	Inna

### Table 2 Leadership Changes

<i>Group</i>	<i>Previous Leader</i>	<i>New Leader</i>
N.A. TC Chapter	none	Don Hadder (Intel) - TC Chapter Co-chair
Ultra Pure Water TF	none	Bob McIntosh (GF Piping); Slava Libman (Air Liquide)
High Purity Polymer Materials & Components TF	none	Bob McIntosh (GF Piping)
High Purity Liquid Assemblies & Systems TF	none	Koh Murai (Mega Fluid Systems)
Chemical Analytical Methods TF	none	Don Hadder (Intel); Frank Flowers (PeroxyChem)

### 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.

<i>Document #</i>	<i>Document Title</i>	<i>Committee Action</i>
5944A	Revision to SEMI F63-0213, GUIDE FOR ULTRAPURE WATER USED IN SEMICONDUCTOR PROCESSING	<b>passed</b>

**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
5992	Revision to SEMI F41-0699, GUIDE FOR QUALIFICATION OF A BULK CHEMICAL DISTRIBUTION SYSTEM USED IN SEMICONDUCTOR PROCESSING	passed

**Table 4 Authorized Activities**

#	Type	SC/TF/WG	Details
TBD	SNARF	UPW TF (former IX Resin TF)	Revision to SEMI C93-0216, GUIDE FOR DETERMINING ION EXCHANGE RESIN. To be distributed for 2-week TC Member review Ballot in cycle 7-16.
TBD	SNARF	High Purity Polymer Materials and Components TF	Revision to SEMI F57- 0314, SPECIFICATION FOR HIGH PURITY POLYMER MATERIALS AND COMPONENTS USES IN ULTRAPURE WATER AND LIQUID CHEMICAL DISTRIBUTION SYSTEMS. To be distributed for 2-week TC Member review.
TBD	SNARF	UPW TF	Revision to SEMI F75-1102, GUIDE FOR QUALITY MONITORING OF ULTRAPURE WATER USED IN SEMICONDUCTOR MANUFACTURING To be distributed for 2-week TC Member review; Ballot in cycle 9-16.
4957	SNARF	Analytical Methods Task Force	Revision to SEMI C41-0705, SPECIFICATIONS AND GUIDELINES FOR 2-PROPANOL, WITH TITLE CHANGE TO: SPECIFICATIONS FOR 2-PROPANOL SNARF Extended for 1 year
5642	SNARF	Analytical Methods Task Force	Revision to SEMI C35-0708, SPECIFICATIONS AND GUIDELINE FOR NITRIC ACID WITH TITLE CHANGE TO: SPECIFICATION AND GUIDE FOR NITRIC ACID SNARF extended for 1 year
5416	SNARF	SEMI F104 Rewrite TaskForce	Revision of SEMI F104-0312, PARTICLE TEST METHOD GUIDE FOR EVALUATION OF COMPONENTS USED IN ULTRAPURE WATER AND LIQUID CHEMICAL DISTRIBUTION SYSTEMS SNARF abolished
5527	SNARF	SEMI F40 Rewrite Task Force	Revision to SEMI F40-0699E, PRACTICE FOR PREPARING LIQUID CHEMICAL DISTRIBUTION COMPONENTS FOR CHEMICAL TESTING SNARF abolished
	TFOF	not specified	Revision to TFOF title (add Purity): <b>HIGH PURITY</b> POLYMER MATERIALS AND COMPONENTS TASK FORCE
	TFOF	UPW	Revision to TFOF (charter and scope change): ULTRAPURE WATER (UPW) TASK FORCE
	TFOF	High Purity Liquid Assemblies & Systems	Revision to TFOF (charter and scope change to include all E49.x): HIGH PURITY LIQUID ASSEMBLIES & SYSTEMS
	TFOF	Roughness of Polymer Surfaces TF	TF disbanded.
	TFOF	F40 TF	TF disbanded. Activities moved to High Purity Polymer Materials & Components
	TFOF	F63 TF	TF disbanded. Activities moved to UPW TF
	TFOF	Analytical Methods TF	Revision to TFOF (name, charter, and scope) to: <b>CHEMICAL ANALYTICAL METHODS TF</b>

NOTE 1: SNARFs and TFOFs are available for review on the SEMI Standards Web site at: <http://downloads.semi.org/web/wstdsbal.nsf/TFOFSNARF>

**Table 5 Authorized Ballots**

#	When	SC/TF/WG	Details
TBD	Cycle 7-16	UPW	Revision to SEMI C93-0216, GUIDE FOR DETERMINING ION EXCHANGE RESIN. TO BE DISTRIBUTED FOR 2-WEEK TC MEMBER REVIEW.
TBD	Cycle 9-16	UPW	Revision to SEMI F75-1102, GUIDE FOR QUALITY MONITORING OF ULTRAPURE WATER USED IN SEMICONDUCTOR MANUFACTURING

**Table 6 New Action Items**

Item #	Assigned to	Details
2016July#1	James Amano	Facilitate the survey/letter development for slurries activities targeting IDMs.
2016July#2	Inna Skvortsova, Don Hadder	New TF activity for slurries: gauge industry interest and recruit relevant TF member for document development.
2016July#3	James Amano	To collaborate with Bob McIntosh (GF Piping) and Thomas B. (Entegris) to align SNARF 104 problem statement and rationale to reflect joint work with SEMI SCIS Special Interest Groups.
2016July#4	Shannon A. (SEMI), Slava L.	For SEMI F61 need clarification on formatting options for the Table of Content (table of content vs abstract formatting guideline).

**Table 7 Previous Meeting Action Items**

Item #	Assigned to	Details
2016Apr#1	James Amano	Follow up on SNARF 5831A. <b>Closed.</b>
2016Apr#2	James Amano	Send presentations from the Europe meeting to Slava Libman. <b>Closed.</b>
2016Apr#3	James Amano	Follow up on listings of all the documents and origination committees for Facilities & Gases. <b>Ongoing.</b>
2016Apr#4	James Amano	Follow up – if a committee is identified as a recipient of an inter-committee at the SNARF level, staff to provide a report at the next committee meeting. <b>Ongoing.</b>
2016Apr#5	James Amano	Update the name of the TF in the database and on the org chart. <b>Closed.</b>
2016Apr#6	James Amano	Send F75 information to Bob McIntosh and Slava Libman. <b>Closed.</b>
2016Apr#7	James Amano	Give Lisa access to C62 and C63. <b>Closed.</b>
2016Apr#8	James Amano	Update Chuck Dale on status of 4957. <b>Closed.</b>
2016Apr#9	James Amano & Don Hadder	Compose information on publicizing slurry activities for SEMI newsletter. <b>OPEN.</b>
2016Apr#10	James Amano	Send Frank Flowers peroxide document and C29 & C49. <b>Closed.</b>
2016Apr#11	James Amano	Send SNARF information on F57 to Bob McIntosh and C93 SNARF information to Slava Libman. <b>Closed.</b>
2016Apr#12	James Amano	Issue ballots on 5992 nitric acid in cycle 4 or possibly cycle 5. <b>Open.</b>
2016Apr#13	James Amano	Investigate and send previous ballot results for hydrochloric acid to Frank Flowers. <b>Closed.</b>

## 1 Welcome, Reminders, and Introductions

Frank Flowers (PeroxyChem) called the meeting to order at 14:03PM. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

### Attachment 01: SEMI Standards Required Meeting Elements

## 2 Review of Previous Meeting Minutes

The TC Chapter reviewed the minutes of the previous meeting.



**Motion:** To approve the previous meeting minutes from Spring 2016 TC Meeting  
**By / 2<sup>nd</sup>:** Koh Murai (Mega Fluid Systems )/Slava Libman (Air Liquide)  
**Discussion:** None  
**Vote:** 12-0. Motion passed.

### 3 Liaison Reports

#### 3.1 *Liquid Chemicals Japan TC Chapter*

James Amano (SEMI) reported for the Liquid Chemicals Japan TC Chapter. Of note:

- Leadership
  - Committee Co-chairs: Hiroshi Tomita (Toshiba); Hiroyuki Araki (SCREEN Semiconductor Solutions)
- Meeting Information
  - Last Meeting: May 13, 2016 during Japan Spring Meetings 2016 at SEMI Japan, Tokyo, Japan
  - Next Meeting: December, 2016 (TBD) during SEMICON Japan Meeting 2016 at SEMI Japan, Tokyo, Japan
- Ballot Results & Upcoming Ballots
  - None
- New TFOFs /SNARFs
  - None
- Task Force / Study Group Reports
  - Diaphragm Valve Task Force
    - No activities
  - Welding Fitting Task Force
    - No activities
  - Liquid Filter Task Force
    - Doc. 5421A, NEW STANDARD: TEST METHOD FOR PARTICLE REMOVAL PERFORMANCE OF LIQUID FILTER RATED BELOW 30 NM WITH ICP-MS was published as SEMI C89-0116.
  - Liquid-Borne Particle Counter (LPC) Task Force
    - No activities
  - Ultrapure Liquid Evaluation Study Group
    - Considering to standardize the particle measurement at POP in future.
    - Asking a cooperation by Interfacial Nano Electrochemistry for seeking the solution to the issues concerned to analyzing metals of organic solvent including IPA

#### Attachment 03: Japan Liquid Chemicals TC Report (July 2016)

#### 3.2 *Gas & Liquid Chemicals Europe TC Chapter*

James Amano (SEMI) reported for the Gas and Liquid Chemicals Europe TC Chapter. Of note:



- Leadership
  - Committee Co-Chairs: Jean-Marie Collard (Solvay Chemicals) ; Gordon Ferrier (Gordon F Consulting)
- Meeting Information
  - Last Meeting: October 8, 2015 at SEMICON Europa, Dresden, Germany
  - Next Meeting: October 2016 at SEMICON Europa, Grenoble, France
- Gasses and Liquid Chemicals Activities
  - Five ballots adjudicated at Europa 2015 meeting
    - Technical changes made to address negatives on three ballots, subsequently approved and published following new ratification ballot process
      - **C94-0516:** New Standard: Guide for CycloHexanone
      - **C95-0516:** New Standard: Guide for Pentakis(Dimethylamino) Tantalum (PDMAT)
      - **C15-0616:** Test Method for ppm and ppb Humidity Standards
    - Two other ballots failed and will be revised and reballoted for review at next TC Chapter meeting.
  - Presentations
    - ITRS Update
    - Andreas Neuber/AMAT
    - ElectroStatic Discharge : A Challenge in ultra high purity fluid handling
    - Jochen Ruth/PALL
  - Ballots to be issued for adjudication at SEMICON Europa 2016
    - Revision to SEMI C65-0308 : Guide for Trimethylsilane (3MS)
    - Revision to SEMI C66-0308: Guide for Trimethylaluminium (TMAI)
    - Reapproval Ballot: SEMI C72-0811, Guide for Propylene-Glycol-Mono-Methyl-Ether (PGME), Propylene-Glycol-Mono-Methyl-Ether-Acetate (PGMEA) and the Mixture 70wt% PGME/30wt% PGMEA
    - Reapproval Ballot: SEMI C67-0811, Guide for Hafnium Amides
    - Reapproval Ballot: SEMI C68-0811, Guide for Zirconium Amides
    - Reapproval Ballot: SEMI C73-0811, Guide for Hafnium Chloride
    - Reapproval Ballot: SEMI C74-0811, Guide for Hafnium Tert-Butoxide
    - Reapproval Ballot: SEMI C75-0811, Guide for Tetrakis(Dimethylamino)Titanium
    - Reapproval Ballot: SEMI C76-0811, Guide for Zirconium Tert-Butoxide

#### **Attachment 04: EU Gas & Liq Chem TC Report (July 2016)**

##### *3.3 SEMI Staff Report*

James Amano (SEMI) gave the SEMI Staff Report. Of note:

##### *SEMI Global 2016 Calendar of Events*

- SEMICON West (July 12-14, San Francisco, California)
- SEMICON Taiwan (September 7-9, Taipei)
- SEMICON Europa (October 25-27, Grenoble, France)
- SEMICON Japan (December 14-16, Tokyo)



- SEMICON West (July 12-14, San Francisco, California)

*Upcoming North America Meetings (2016/2017)*

- NA Standards Fall 2016 Meetings (November 7-10, San Jose, California)
- NA Standards Spring 2017 Meetings (April 3-6, San Jose, California)
- SEMICON West 2017 Meetings (July 10-13, San Francisco, California)

*Letter Ballot Critical Dates for NA Standards Fall 2016 meetings*

- Cycle 6: due July 22 / Voting Period: August 1 – September 1
- Cycle 7: due August 17 / Voting Period: August 31 – September 30

<http://www.semi.org/en/Standards/Ballots>

- *SEMI Standards Publications*

- Publications Report

<i>Cycle</i>	<i>New</i>	<i>Revised</i>	<i>Reapproved</i>	<i>Withdrawn</i>
March 2016	2	20	4	0
April 2016	0	8	10	0
May 2016	2	3	0	0
June 2016	0	4	3	0

- Total in portfolio – 964 (includes 141 Inactive Standards)

*New Requirements/Process Reminders for TC Chapter Meetings*

- Standards Document Development Project Period
  - Project period shall not exceed 3 years (*Regulations* ¶ 8.3.2)
    - SNARF approval to TC Chapter approval
  - If Document development activity is found to be continuing, but cannot be completed within the project period, the TC Chapter may grant a one-year extension at a time, as many times as necessary.
  - The TC Chapter should review the expiration dates for all applicable SNARFs at each TC Chapter meeting. (*Procedure Manual* Note 10)
- SNARF Review Period
  - A submitted SNARF for a new, or for a major revision to an existing, Standard or Safety Guideline is made available to all members of a TC Chapter's parent global technical committee for two weeks for their review and comment. (*Regulations* ¶ 8.2.1)
    - If the SNARF is submitted at a TC Chapter meeting, the TC Chapter can review and approve it, but the SNARF will need to be distributed for two weeks, and then finally approved via GCS.
- New SNARF & TFOF forms.
- Procedures for Correcting Nonconforming Titles of Published Standards Document (*Procedure Manual* Appendix 4)
  - Some Standards qualify for a special procedure where a line item change can be used to correct the titles. Otherwise, the corrective action will likely require a major revision.



## Attachment 05: SEMI Staff Report Liq Chem (July 2016).ppt

### 4 Ballot Review

**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.

NOTE 2: 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 number for each balloted document is provided under each ballot review section below.

#### 4.1 The TC Chapter approved Document # 5994A Revision to SEMI F63-0213, GUIDE FOR ULTRAPURE WATER USED IN SEMICONDUCTOR PROCESSING

The ballot **passed** TC review. Details can be found in the attached Procedural Review file.

**Motion:** To move Document #5994A to the A&R review  
**By / 2<sup>nd</sup>:** Frank Flowers (PeroxyChem)/Patrick Connor (Pall Corp.)  
**Discussion:** None  
**Vote:** 12-0. Motion passed.

**Attachment:** **5994A\_Procedural Review**

#### 4.2 The TC Chapter reviewed and approved with editorial changes the Document # 5992 Revision to SEMI F41-0699, GUIDE FOR QUALIFICATION OF A BULK CHEMICAL DISTRIBUTION SYSTEM USED IN SEMICONDUCTOR PROCESSING

The ballot **passed** TC review. Details can be found in the attached Procedural Review file.

**Motion:** To move Document #5992 to the A&R review  
**By / 2<sup>nd</sup>:** Koh Murai (Mega Fluids Systems)/Don Hadder (Intel)  
**Discussion:** The document passed with editorial changes.  
**Vote:** 14-0. Motion passed.

**Attachment:** **5992\_Procedural Review**

### 5 Subcommittee and Task Force Reports

The TC Chapter reviewed active and inactive task force charter, scope and ongoing activities. Of note:

- Analytical Methods Task Force (TF)
  - TF title and scope change to “Chemical Analytical Methods”
  - Working on revision to SEMI C41-0705 (SNARF #4957)

**Motion:** To change the title and scope for the Analytical Methods TF  
**By / 2<sup>nd</sup>:** Don Hadder (Intel)/Koh Murai (Mega Fluids Systems)  
**Discussion:** None.  
**Vote:** 12-0. Motion passed.

- High Purity Liquid Assemblies & Systems TF
  - TF scope change to include all activities related to SEMI E49.X



**Motion:** Change TF scope to include all activities related to SEMI E49.X  
**By / 2<sup>nd</sup>:** Koh Murai (Mega Fluids Systems)/Don Hadder (Intel)  
**Discussion:** None.  
**Vote:** 12-0. Motion passed

- High Polymer Material & Components TF
  - TF title change to “High Purity Polymer Materials and Components”
  - Working on revision to SEMI F57-0314 (SNARF #TBD)

**Motion:** To change title for the High Purity Polymer Materials and Components TF  
**By / 2<sup>nd</sup>:** Don Hadder (Intel)/Koh Murai (Mega Fluids Systems)  
**Discussion:** None  
**Vote:** 12-0. Motion passed.

- UPW Filter Performance TF
  - TF title and scope change to Ultrapure Water TF
  - TF scope to include work on SEMI F61, F63, F75, F79, and C93

**Motion:** To change UPW Filter Performance TF title and scope  
**By / 2<sup>nd</sup>:** Koh Murai (Mega Fluids Systems)/Slava Libman (Air Liquide)  
**Discussion:** None  
**Vote:** 12 – 0. Motion passed.

- SEMI IX Resin TF
  - TF disbanded. Activities moved to Ultrapure Water TF

**Motion:** To disband the IX Resin TF and move open activities to the UPW TF  
**By / 2<sup>nd</sup>:** Koh Murai (Mega Fluids Systems)/Slava Libman (Air Liquide)  
**Discussion:** None.  
**Vote:** 12-0. Motion passed.

- SEMI F40 Rewrite TF
  - TF disbanded. Activities moved to the High Purity Polymer Materials and Components TF

**Motion:** To disband the SEMI F40 rewrite TF  
**By / 2<sup>nd</sup>:** Frank Flowers (PeroxyChem)/Slava Libman (Air Liquide)  
**Discussion:** None.  
**Vote:** 12-0. Motion passed.

- SEMI F63 Rewrite TF
  - TF disbanded. Activities moved to the Ultrapure Water TF

**Motion:** To disband SEMI F63 Rewrite TF. Activities moved to the UPW TF  
**By / 2<sup>nd</sup>:** Koh Murai (Mega Fluids Systems)/Slava Libman (Air Liquide)  
**Discussion:** None.  
**Vote:** 12-0. Motion passed.

- Roughness of Polymer Surfaces TF
  - TF disbanded. No open activities.





**Motion:** To disband the Roughness of Polymer Surfaces TF  
**By / 2<sup>nd</sup>:** Frank Flowers (PeroxyChem)/Slava Libman (Air Liquide)  
**Discussion:** None  
**Vote:** 12-0. Motion passed.

**Action Item:** (James A.) Facilitate the survey/letter development for slurries activities targeting IDMs.  
(Don H., Inna S.) New TF activity for slurries: gauge industry interest and recruit relevant TF member for document development.

## 6 Old Business

### 6.1 Standards due for 5 Year Review

6.1.1 James Amano addressed the committee on this topic. Of note:

Name	*Due	Title	Status / Action required
SEMI F41-0699	6/1/2004	Guide for Qualification of a Bulk Chemical Distribution System Used in Semiconductor Processing	In ballot cycle 5-16 for revision. Approved.
SEMI F40-0699E	6/1/2010	Practice for Preparing Liquid Chemical Distribution Components for Chemical Testing	Document published as SEMI C90-1015. Steve Rogers to review.
SEMI C41-0705	7/1/2010	Specifications and Guidelines for 2-Propanol	Steve Rogers to review.
<b>**SEMI C35-0708</b>	7/1/2013	Specifications and Guideline for Nitric Acid	SNARF #5642A failed. Frank F. working on revision.
<b>**SEMI C21-0708</b>	7/1/2013	Specifications and Guideline for Ammonium Hydroxide	Jean-Marie Collard to review.
<b>**SEMI C27-0708</b>	7/1/2013	Specifications and Guidelines for Hydrochloric Acid	Frank F. to review.
SEMI C63-1108	11/1/2013	Specification for Organosilicate Precursors Used in Low K CVD Processes	Lisa to review.
<b>**SEMI C45-0309E</b>	3/1/2014	Specification and Guideline for Tetraethylorthosilicate (TEOS)	Suhas to review.
SEMI F61-0301 (Reapproved 0309)	3/1/2014	Guide for Ultrapure Water System Used in Semiconductor Processing	Slava Libman to review.
SEMI F75-1102 (Reapproved 0309)	3/1/2014	Guide for Quality Monitoring of Ultrapure Water Used in Semiconductor Manufacturing	Slava Libman, including SNARF from 7/12/16



SEMI C62-0309	3/1/2014	Specification for Progen Precursors Used in Low K CVD Processes	Lisa to review.
SEMI C1-0310	3/1/2015	Guide for the Analysis of Liquid Chemicals	Jean-Marie Collard to review.
<b>**SEMI C29-1110</b>	11/1/2015	Specifications and Guide for 4.9% Hydrofluoric Acid (10:1 v/v)	Steve Rogers to review
<b>**SEMI C30-1110</b>	11/1/2015	Specifications for Hydrogen Peroxide	Jean-Marie Collard to review.
SEMI C40-1110	11/1/2015	Specification for Potassium Hydroxide, 45% Solution	Steve Rogers to review.
SEMI F98-0305 (Reapproved 1111)	11/1/2016	Guide for Treatment of Reuse Water in Semiconductor Processing	Slava Libman to review.
SEMI C22-0212	2/1/2017	Guide for Boron Tribromide	TBD
SEMI C38-0212	2/1/2017	Guide for Phosphorus Oxychloride	TBD
SEMI C25-0312	3/1/2017	Specification for Dichloromethane (Methylene Chloride)	TBD
<b>**SEMI F104-0312</b>	3/1/2017	Particle Test Method Guide for Evaluation of Components Used in Ultrapure Water and Liquid Chemical Distribution Systems	F104 Rewrite TF. Part of SCIS special interest group.

\* Due for Reapproval within 6 years from publication date.

**\*\* Subject for "Nonconforming Title" review as standards are due for 5 Year review/reapproval.**

6.1.2 The TC Chapter reviewed the following documents and made decision to change status of the following Standards from "Active" to "Inactive":

- SEMI F46-0999
- SEMI P11-0308
- SEMI C49-1110
- SEMI C50-1110
- SEMI C39-1110
- SEMI C42-1110
- SEMI C43-1110
- SEMI C32-0306 (Reapproved 0611)
- SEMI C37-0706 (Reapproved 0611)

**Motion:** Motion to move to "Inactive" SEMI F46, P11, C32, C37, C39, C42, C43, C49, C50 standards

**By / 2<sup>nd</sup>:** Koh Murai (Mega Fluids Systems) / Slava Libman (Air Liquide)

**Discussion:** None.

**Vote:** 12-0. Motion passed.



## 6.2 SNARFs Approaching 3-Year Review

The TC Chapter reviewed the below SNARFs, and recommended to granted a one-year extension:

- SNARF #4957 - Revision to SEMI C41-0705, SPECIFICATIONS AND GUIDELINES FOR 2-PROPANOL, WITH TITLE CHANGE TO: SPECIFICATIONS FOR 2-PROPANOL
- SNARF #5642 - Revision to SEMI C35-0708, SPECIFICATIONS AND GUIDELINE FOR NITRIC ACID WITH TITLE CHANGE TO: SPECIFICATION AND GUIDE FOR NITRIC ACID

**Motion:** To grant one-year extensions to SNARF# 4957 and SNARF# 5642  
**By / 2<sup>nd</sup>:** Don Hadder (Intel) / Koh Murai (Mega Fluid Systems)  
**Discussion:** None  
**Vote:** 12-0. Motion passed.

## 7 New Business

### 7.1 New TFOF(s) and SNARF(s)

- New SNARFs are created by TF leaders to address revisions to SEMI F57, SEMI F75, and SEMI C93.

**Motion:** Distribute SNARFs related to SEMI F57, SEMI F75, and SEMI C93 to the Global TC for 2-week review.  
**By / 2<sup>nd</sup>:** Don Hadder (Intel) / Koh Murai (Mega Fluid Systems)  
**Discussion:** None  
**Vote:** 12-0. Motion passed.

- Hold draft SNARF for SEMI F104 revision from distribution.

**Action Item:** (James Amano) To collaborate with Bob McIntosh (GF Piping) and Thomas B. (Entegris) to align SNARF 104 problem statement and rationale to reflect joined work with SEMI SCIS Special Interest Groups.

### 7.2 Ballot Authorization

**Motion:** Revision to SEMI C93-0216 to be balloted in cycle 7-2016  
**By / 2<sup>nd</sup>:** Koh Murai (Mega Fluid Systems) /Don Hadder (Intel)  
**Discussion:** None  
**Vote:** 14-0. Motion passed.

**Motion:** Revision to SEMI F57- 0314 to be balloted in cycle 9-2016  
**By / 2<sup>nd</sup>:** Don Hadder (Intel) / Koh Murai (Mega Fluid Systems)  
**Discussion:** None  
**Vote:** 14-0. Motion passed.

## 8 Next Meeting and Adjournment

The next meeting is scheduled for Tuesday November 8, 2016 at 15:00 – 18:00 during the NA Fall 2016 meetings. See <http://www.semi.org/en/events> for the current list of meeting schedules.



Having no further business, a motion was made to adjourn. Adjournment was at 16:55.

Respectfully submitted by:

Inna Skvortsova

Sr. Standards Coordinator

SEMI North America

Phone: 408-9436996

Email: iskvtsova@semi.org

Minutes approved by:

Frank Flowers (PeroxyChem), Co-Chair	9/6/2016
Don Hadder (Intel), Co-Chair	9/6/2016

**Table 8 Index of Available Attachments<sup>#1</sup>**

#	<i>Title</i>	#	<i>Title</i>
1	SEMI Standards Required Meeting Elements.ppt	5	SEMI Standards Staff Report Liq Chem.ppt
2	NA Liq Chem TC Meeting Minutes (July 2016).pdf	6	5944A_Procedural Review.pdf
3	Japan Liq Chem TC Report (July 2016).ppt	7	5992_Procedural Review.pdf
4	EU Gas & Liq Chem TC Report (July 2016).ppt		

<sup>#1</sup> 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](http://www.semi.org). For additional information or to obtain individual attachments, please contact Inna Skvortsova at the contact information above.