(Minutes of all TC/TG/TRG Meetings are to be distributed to all persons listed below within 60 days following the meeting.)

TC/TG/TRG NO 3.2 DATE JANUARY 28, 2013

TC/TG/TRG TITLE System Chemistry

DATE OF MEETING January 28, 2013 LOCATION Dallas, TX

<table>
<thead>
<tr>
<th>MEMBERS PRESENT</th>
<th>STATUS</th>
<th>MEMBERS ABSENT</th>
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<th>EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE</th>
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<tbody>
<tr>
<td>Raymond Thomas</td>
<td>Chair/VM</td>
<td>Kirsten Ahrenstorf</td>
<td>VC/NQM</td>
<td>Mark Spatz</td>
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<td>Danny Halel</td>
<td>Sec/NVM</td>
<td>Liz Dixon</td>
<td>RSC/CM</td>
<td>Brad Boggess</td>
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<td>Alan Cohen</td>
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<td>Ken Lilje</td>
<td>PSC/VM</td>
<td>Karim Amrane</td>
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<td>Yongming Niu</td>
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<td>Dave Vincent</td>
<td>Web/VM</td>
<td>Tony Min</td>
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<td>Rob Yost</td>
<td>SSC/VM</td>
<td>Charlie Butler</td>
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<td>Sonny Sundaresan</td>
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<td>Scott Gustafson</td>
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<td>Warren Clough</td>
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<td>Stephen Kujak</td>
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DISTRIBUTION

All Members of TC/TG/TRG plus the following:

TAC Section Head: Bill Murphy
TAC Chair: Charles Culp
All Committee Liaisons As Shown On TC/TG/TRG Rosters:
Research Liaison – Mark Spatz
Manager Of Standards
Manager Of Research & Technical Services

Note: These draft minutes have not been approved and are not the official, approved record until approved by this committee.
Minutes – TC 3.2 System Chemistry

Call to Order

Chair Ray Thomas, called the meeting to order at 2:16 pm on Monday, January 28, 2013. The meeting was held in the Dallas Ballroom B of the Sheraton Hotel in Dallas, TX. After the introduction of members and guests, a quorum was confirmed with 10 members present (including chair) 0 International Members with 0 members absent.

The Agenda was approved as written.

MOTION #1 A motion was made by Sonny Sundaresan and seconded by Ken Lilje to approve the Minutes from San Antonio as submitted.
MOTION PASSED 10-0-0 CV

Report on TC 3.0 Chair Breakfast Meeting

Young Engineers in ASHRAE – we have two in attendance. There is a special meeting set at each ASHRAE meeting to introduce new Engineers to ASHRAE to its membership. ASHRAE asks that each TC have a representative come to this meeting and introduce their specific subject and invite them to their TC meeting.

A new section has been added to your ASHRAE Bio - Employment Discipline is now asking for more specific information about what each member does so that the TC’s can get a better understanding of the membership of the TC.

Please fill out as requested when doing your next update.

Online TC meeting is continuing to be experimented with, in the future we may be able to participate in this.

More discussions on why seminars, forums etc. are not accepted by Programs. Our programs need to meet the requirements of the Tracks set for each of the Meetings. Incomplete information seems to be the main reason for rejection.

TAC is looking to institute another award. Best TC of each Section. May be awarded at the Chairman’s Breakfast.

Upcoming meetings

- Denver June 22-26, 2013
- New York City January 18-22, 2014

Sub-Committee Reports

Program – Ken Lilje

There is a Forum sponsored by this TC on Tuesday at 9:45am in Lone star A2 of the Convention Center.

There was a suggestion made to sponsor a Forum on “What type of issues are users having with CO2 systems”!
It was suggested that this be an open forum at the meeting in New York City. An Agenda item needs to be added to the Denver meeting to discuss this.

Technical Paper Abstracts are due prior to March 15 and the paper is due April 19 for a presentation at the next Winter conference in New York City. Rosine Rohatgi will attempt to meet these dates for the research she is working on.
Handbook – Rosine Rohatgi

Chapter 6 Refrigerant System Chemistry – Refrigeration Handbook. When the draft is complete the subcommittee will vote and send to the Chair for letter ballot.

Committee Members include – Rosine Rohatgi – Chair, Warren Clough, Joe Longo, Chris Seeton, Sonny Sundaresan, Ed Hessell, and Jay Field.

At the prior meeting Jay Field mentioned that there is a new Technical Committee 2.5 on Environmental Chemistry. The Handbook Committee needs to move this information to the proper TC.

- The Handbook Liaison Ramon Pons was at our meeting. He advised that the next rewrite for the 2014 Edition is due May 25, 2013. Rosine was given the checklist to complete before Chapter submittal.

Standards –Rob Yost

- SPC 175 – “Metal Pressure Vessel Method to Test Materials Used with Refrigeration Systems”
  - Joe Karnaz – Chair. Committee members are Joe Karnaz, Alan Cohen, Ed Hessell, Brad Boggess, Rosine Rohatgi and Chris Seeton, will not meet at 4:15 pm on Monday. The committee is very close to a final draft.

- SPC 97-2007 – Sealed Glass Tube Method to Test for Chemical Stability of Materials for Use Within Refrigerant Systems Chris Seeton is Chair. References are out of date. Meetings have just started.

Research – Scott Gustafson

Mark Spatz – Research Liaison was in attendance he advised:
He is ready and willing to work with the TC to help and encourage getting research submitted and approved. There are more dollars available than research projects submitted. The sooner RTAR’s and WS’s are submitted the earlier the work can start. There may be a RAC meeting in March if enough requests are submitted.

- RP 1410 – Effects of System Materials Towards the Breakdown of POE Lubricants and HFC Refrigerants Part 2 – The draft Final Report from Spaushus Associates will be ready in about 2 weeks. Project Monitoring Sub-Committee includes: Jay Field, Joe Karnaz, Mark Scancarello and Steve Kujak - Chair. When complete the report will go to the PMSC and then to the TC for acceptance.

- We are Co-Sponsoring RP-1665 “Reactivity of R-40” Bids have been received and we will go into Executive Session at the end of this meeting to choose the vendor and make the recommendation to ASHRAE RAC.

Research Breakfast Review:
1. The RAC Research Plan 2010 is still being used, a new plan for 2015 is being worked on.
2. A Forum for Denver is being considered by Mike Vaughn “How can I participate in ASHRAE research”.
3. 62 projects are presently on the RAC books totaling $12 million. More projects are being pursued.

Research Sub-committee met and generated some new possible research subjects including:
- Reactivity studies comparing HFC and Low GWP refrigerants in the presence of contaminants.
  The team assembled to help write the RTAR. Joe Karnaz, Alice Reimer, Tom Leck, and Warren Clough. Deadline March 15, 2013 for April Meeting; May 15 for June Meeting.

Webmaster – Dave Vincent

Dave Vincent reported that the website is up to date with the exception of the Agenda for this meeting.
Membership – Ken Lilje

The roster was reviewed and the Chair advised that if anyone in the room wanted to join this Committee please see the Chair or Membership Chair. The Chair asked for additional members if anyone was interested.

Voting Members – 10 International Members - 1 Corresponding Members – 40

Leadership of the committee as of July 1, 2012:
Raymond Thomas – Chair Kirsten Ahrenstorf – Vice Chair
Danny Halel – Secretary Ken Lilje – Program
Rob Yost – Standards Elizabeth Dixon – Research
David Vincent – Webmaster Scott Gustafson – ALI
Rosine Rohatgi - Handbook

Old Business

- No old business was brought forth to the committee.

New Business

The committee went into Executive Session.

Adjournment

After Executive Session, the meeting was adjourned at 3:54pm by Chair Raymond Thomas.

Respectfully submitted,

Danny Halel - Secretary