

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS,  
INC.**

**1791 Tullie Circle, N.E./Atlanta, GA 30329  
404-636-8400**

**TC/TG/TRG MINUTES COVER SHEET**

**(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 July 28, 2006

TC/TG/TRG TITLE System Chemistry

DATE OF MEETING June 26, 2006 LOCATION Quebec City

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Joe Karnaz	2004	Danny Hael	2002	Bob Doerr
Ken Lilje	2005	Cary Haramoto	2004	
Raymond Thomas	2004	Dave Vincent	2005	
Scott Gustafson	2003	Jay Field	2003	
Rob Yost	2002	Frank Nagy	2003	
Alice Riemer	2004			
Sonny Sundaresan	2004			

**DISTRIBUTION**

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

TAC Section Head:	<u>David Geary</u>
TAC Chair:	<u>Eckhard Groll</u>
TAC Vice-Chair:	<u>Patricia Graef</u>
All Committee Liaisons As Shown On TC/TG/TRG Rosters:	Don Fenton – RAC Rich Evans – Handbook Sam Cummings – Standards Kimball Ferguson – Special Pubs C Brian Wandling – Program Benjamin Crowley – CTTC
Manager Of Standards	Claire Ramspeck
Manager Of Research & Technical Services	Mike Vaughn
Admin Asst – Technical Services	Tara Thomas

Note: "These draft minutes have not been approved and are not the official, approved record until approved by this committee."

## 1) Call to Order

Joe Karnaz, Chair, called the meeting to order at 2:15 pm on Monday, June 26, 2006. The meeting was held in the Quebec City Convention Center in room 2000C. After the introduction of members and guests, a quorum was confirmed with 7 members present (including chair) with 5 members absent. A motion was made and seconded to approve the minutes from January's meeting in Chicago.

The motion passed 7-0-0

## Report on TC 3.0 Chair Breakfast Meeting

Chairs Breakfast Notes Sunday June 25, 2006

- Website
  - TC Chairs need to review their websites and make sure they are up to date with the current minutes, rosters and agendas.
  - ASHRAE would like all websites moved to the ASHRAE server
- Programs
  - With the recent format changes to programs ASHRAE was able to schedule 113 out of 160 request for this meeting. They typically deny about 100 requests and in Orlando it was 150.
  - New tracks will be put into place (Basic, Intermediate and Advanced) in order that people can see if it is worth viewing the program.
  - Asked that people limit the size and length of their presentations.
  - Session chairs are asked at future programs to announce the speaker's name both before and after the presentation.
  - Themes for upcoming meetings:
    - Dallas – Energy Efficient Strategies for Buildings
    - Long Beach – ASHRAE “The Natural Way”
    - New York – Safe and Healthy Buildings
    - Salt Lake City – Dry Climate Design
- Research
  - Projects are to align with the Strategic Research Plan (A section of this plan will be attached to the minutes)
- General
  - Volunteers are being sought from TCs and TGs to respond to technical questions from university students. Contact Mike Vaughn at [morts@ashrae.net](mailto:morts@ashrae.net) if interested.
  - Call for papers for 9<sup>th</sup> REHVA World Congress Clima 2007, June 10-14, 2007 in Helsinki, Finland.
  - Password protected links will be sent to each TC roster member. New software is about a year away.
  - The society has approved a new Strategic Plan. Should have received a small card at registration.

## 2) ASHRAE Liaison Comments

Don Fenton, RAC – Informed us that RTAR 1409 and RTAR 1410 have been approved. He also offered whatever assistance was needed for upcoming RTARs or work statements.

## Sub-Committee Reports

### 3) Program – Raymond Thomas

At the Quebec City meeting the following seminar was sponsored or cosponsored.

- Seminar 80 – Wednesday at 10:45 AM – System Chemistry with Alternative Refrigerants – Two speakers will present - Joe Karnaz and Alice Reimer

#### Future Meetings:

- Winter 2007 –Dallas – Motion made seconded and approved 7-0-0 for a forum to be titled – “Impact on Environmental Regulation of System Chemistry and Materials”. Rob Yost will moderate. A special request will be made for this forum not to be at the same time as the TC 3.1 forum.
- Summer 2007 – Long Beach – Motion was made for a seminar titled - “History of System Chemistry”. The motioned was seconded and approved 7-0-0. Sonny Sundaresan will chair the seminar. Tom Leck and Alice Reimer offered to present.

#### Past or Future Ideas:

- The following programs that had been discussed in the past and are found in the minutes and/or agenda were tabled for further discussion in Dallas or removed from the Idea list:
  - System Impurities - Do They Matter?
  - Iodine based refrigerants?
  - System Chemistry in Transport Refrigeration ( removed)

### 4) Handbook – Bob Doerr

Bob Doerr reports that the System Chemistry chapter rewrite is complete and has been properly submitted. Bob Doerr officially turned over responsibility for TC 3.2 Refrigeration Handbook Chapter 5 to Sonny Sundaresan. TC 3.2 would like to commend Bob for his excellent stewardship of the handbook committee and look forward to his future contributions to TC 3.2.

### 5) Standards –Rob Yost

- SPC 141P – “Method of Testing Fluorocarbon Refrigerants for Contaminants”
  - This standard is on semi permanent hold.
- SPC 175P – “Metal Pressure Vessel Method to Test Materials Used with Refrigeration Systems”
  - Joe Karnaz – Chair. Committee members are Alan Cohen, Ken Lilje, Rosine Rohatgi and Chris Seeton. The committee meets at 4:15 pm following the TC meeting and is working on a draft of the procedure. Do to the lack of committee members at this meeting the SPC will not meet and will meet again in Dallas.
- SPC 97 – “Sealed Glass Tube Method to Test the Chemical Stability of Materials for Use Within Refrigeration Systems”
  - This standard was voted to be reaffirmed at the 2006 winter meeting.

## 6) Research – Liz Dixon (Joe Karnaz substituting)

- Research Subcommittee met on Sunday afternoon to discuss current research projects and RTAR's and future research needs.
- A request was made for a volunteer for Research Subcommittee chair. No one volunteered however Chris Seeton will volunteer if he is in a position to continue to attend ASHRAE at the time of the Dallas meeting. Steve Kujak may also be another candidate if Chris is unable. Bob Doerr, Ken Lilje and Jay Field will continue to be part of the research subcommittee.
- WS 1249 – Determine the Mechanism for Copper Plating and Methods for its Elimination from HVAC Systems. The contract was awarded to the University of Dayton. Project monitors: Bob Doerr, Ken Lilje and Jay Field provided an update. One deliverable has been completed – the literature search. Initial experimental work has started in the form of sealed tube testing. University of Dayton has also asked if anyone has parts that are copper plated; they would like to receive to aid in the research. Updates to follow.
- RTAR 1410 – Effects of System Materials Towards the Breakdown of POE Lubricants and HFC Refrigerants Part 2 – This RTAR was accepted! Work statements are needed. RTAR 1410's committee includes: Jay Field, Joe Karnaz, and Steve Kujak. Ken Lilje as volunteered to be an additional technical resource. Bob Doerr will continue to prepare the work statement. An update on the work statement will be provided at the Dallas meeting.
- RTAR 1409 – Stability of Candidate Lubricants for CO<sub>2</sub> Refrigeration Systems – This RTAR was accepted! Work statements are needed. RTAR 1409's committee includes: Scott Gustafson, Chris Seeton, Liz Dixon and Sonny Sundaresan. Ken Lilje as volunteered to be an additional technical resource. An update on the work statement will be provided at the Dallas meeting.
- Future Direction
  - Think about work on system materials needed for CO<sub>2</sub> and CO<sub>2</sub> lubricants.
  - Longer-term; lets consider how to evaluate new refrigerants.

## 7) Webmaster – Dave Vincent

- No Update. Joe Karnaz will contact Dave Vincent and request him to move the TC 3.2 webpage to the ASHRAE server.

**8) Membership – Dave Vincent**

- The rollover roster is as shown below. A call was put out to anyone interesting in becoming a member or corresponding member to see the membership or committee chair after the meeting.

<u>Office</u>	<u>Person</u>
Chair	Ken Lilje
Vice-chair	Tom Leck
Secretary	Danny Halel
Program	Raymond Thomas
Standards	Rob Yost
Handbook	Sonny Sundaresan
Research	TBD (Maybe Chris Seeton)
Webmaster	Dave Vincent
ALI Coordinator	Scott Gustafson

Roll on as Voting Member (10)	Dave Vincent Ken Lilje Sonny Sundaresan Alice Riemer Raymond Thomas Jay Field Frank Nagy Scott Gustafson Tom Leck Mildred Alison
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Roll off as Voting Member	Danny Halel Rob Yost Joe Karnaz
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Delete	Cary Haramoto
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**9) Old Business**

- None

**10) New Business**

- None

**11) Adjournment**

- A motion was made and seconded. Meeting was adjourned at 4:00 pm.

Attachments:

1) TC 3.2 Attendance List

Name	Company
Joe Karnaz	Tecumseh
Ken Lilje	CPI Engineering
Rob Yost	Nation Refrigerants
Alice Riemer	Danfoss
Sonny Sundaresan	Copeland
Chris Seeton	UIUC
Joe Nigro	CPI Engineering
Raymond Thomas	Honeywell
Don Schuster	Carrier
Steve Kujak	Trane
Robert Doerr	Trane
Ray Schafer	Trane
Stephen Spletzer	Arkema
Hewitt Gaudin	IneosFluor
John Senediak	Intertek
Mildred Allison	IRCO
Joshua Hughes	Dupont
Curt Slayton	CSI
Thomas Leck	Dupont
Phil Beckler	Shrieve Chemical
Xiaomei Yu	UTC
Dale Carr	Hatco
Jorge Cabrera	Emerson Climate
Sunil Nanjundaran	ARI
Guido De Stefano	Shrieve Chemical
Scott Gustafson	Shrieve Chemical
Pat Gilbane	Sonneborn
Fred Polley	
Don Fenton	Kansas State Univ.