

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

**1791 Tullie Circle, N.E./Atlanta, GA 30329  
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**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 3.3 DATE June 28, 2013

TC/TG/TRG TITLE Refrigerant Contaminant Control <http://tc33.ashraetcs.org/>

DATE OF MEETING June 25, 2013 LOCATION Denver, CO

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Rob Yost – Chair & Standards	VM	Joe Longo	VM	Joe Nigro – Program
Debra Kennoy	VM	Sonny Sundaresan	VM	Brad Boggess – Handbook
Scott Gustafson	VM	Alice Reimer - IM	VM	Chris Reeves, Mark Spatz
Joe Karnaz – Program	VM	Bob Woods	VM	Danny Halel, Jay Field
Julie Majurin – Vice Chair	VM			Maryline Rassi, Steve Kujak
Frank Nagy – Secretary & Membership	VM			Hewitt Gaudin, Amanda Hickman, Ed Hessel, Chris Seeton
Ray Thomas - Research	VM			Bianca Hydutsky, Ken Lilje
Glen Steinkoenig	VM			Roberto Urrego, Rosine Rohatgi
Marc Scancarello	VM			Ramon Pons, Knut Petry
				Warren Clough, Brett Van Horn
				Greg Smith, Scott Wujek,
				Bill Murphy

**DISTRIBUTION**

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

TAC Section Head:	<b><u>Bill Murphy</u></b>
TAC Chair: TAC Vice-Chair:	<b><u>Charles Culp</u></b>
All Committee Liaisons As Shown On TC/TG/TRG Rosters:	Raymond Cohen, Don Bivens – RAC Ramon Pons – Handbook Doug Abramson – Standards William Fleming – Special Pubs C Brian Wandling – Program Mark Tome – CTTC
Manager Of Standards Manager Of Research & Technical Services	Stephanie C Reiniche 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

Rob Yost (Chair), called the meeting to order at 3:30 pm on Tuesday, June 25, 2013. The meeting was held at the Sheraton Plaza Governor's Square Room 14, Denver, CO. After introduction of members and guests, a quorum was confirmed with 9 / 13 voting members present. There were no changes or additions to the minutes.

**MOTION #1:** to approve the minutes was made by Scott Gustafson & seconded by Ray Thomas. Motion passed 9-0-0.

### 2) Report on TC 3.0 Chair Breakfast Meeting – Rob Yost

Welcome to new and YEA members.

ASHRAE is providing a new "Professional Skills" Track for YEAs.

Please update your biography information; there are new categories and classifications.

There were 10 Hightower award nominations (for technical committee work); a new Research Award will be forthcoming.

Cold Climate Design is forming a new group.

Thank you letters are available from ASHRAE to employers via Tom Watson.

ASHRAE to provide a formal sign in sheet for TC's beginning with this meeting.

#### Upcoming meetings

- New York City January 2014
- Seattle June 2014

#### Liaison Comments:

Handbook-next revise was due this meeting; appreciate the group's efforts.

Section Head-appreciate all your work and efforts.

### Sub-Committee Reports

#### 3) Program – Joe Nigro

- There were no programs for Denver.
- Potential conference papers for New York were discussed (TRP 1495 report via John Senediak & TRP 1665 initial data). Potential conference papers for Seattle (Refrigeration Track) were also discussed (on contaminant control in CO<sub>2</sub> & HC refrigerants). Joe Nigro will send out an email to committee members by end of July for interest; abstracts are due late September.
- Seminar for New York – "Contaminant Control: Past, Present & Future"; presenters are Glen Steinkoenig (system chemistry / contaminant history); Rob Yost (retrofitting & contaminants) & Steve Kujak (contaminant control in the future). **MOTION #2:** Glen Steinkoenig proposed that Warren Clough Chair the Seminar and was seconded by Debra Kennoy. Motion passed 9-0-0.

#### 4) Handbook – Brad Boggess

- **MOTION #3:** to accept the revised Chapter 7 draft for publication was made by Joe Karnaz & seconded by Raymond Thomas. Motion passed 9-0-0.

- Special thanks to Subcommittee members: Danny Halel, Sonny Sundaresan, Alan Cohen, Bob Woods, Joe Longo, Amanda Hickman & Jay Field.

## 5) Standards – Rob Yost

- SPC 35-2010 – “Method of Testing Desiccants for Refrigerant Drying”- was reaffirmed in Dallas.
- SPC 63.1 – “Method of Testing Liquid Line Filter Driers” - final revision comments were collected; Bob Woods, subcommittee chair to compile for New York; members are: Jorge Cabrera, Chris Reeves, Alan Cohen & Jay Field.
- SPC 63.2 – “Method of Testing Liquid Line Filter Drier Filtration Capacity” – revision to begin next meeting with Glen Steinkoenig as subcommittee chair.
- SPC 78 – “Method of Testing Flow Capacity of Suction Line Filters and Filter Driers” – revision to begin next meeting with Chris Reeves as subcommittee chair.
- “MOT for Expansion Device Clogging Method to Test the Effects of System Contamination” – was discussed and to be refined via author Marc Scancarello for review in New York. Subcommittee members are: Marc Scancarello, Chair; Sonny Sundaresan, Rob Yost, Julie Majurin, Brad Boggess & Warren Clough. Current TPS attached to Minutes.
- SPC 63.3 “Method of Testing Acid Filters” in limbo as a draft since 1989 was never approved. TRP- 1028 followed and a final report was issued in 2002 but was never approved as well. Glen Steinkoenig authored a TPS (attached to Minutes) “MOT the Ability of Liquid Line Filter Driers or Adsorbents to Remove Organic Acid” for Denver. **MOTION #4:** to spawn a standard on organic acid removal was made by Glen Steinkoenig and seconded by Debra Kenroy. Motion passed 9-0-0. Standards chair Rob Yost to begin paperwork. John Senediak is to chair the subcommittee.

## 6) Research – Raymond Thomas

- Raymond Thomas, Chair recommended authors of RTARs / Work Statements to coordinate with Mark Spatz to help push processing through ASHRAE.
- TRP 1495 – “Effect of Oil on Distribution of Moisture between Vapor and Liquid Phases of Refrigerants” (Authors: Alan Cohen, Raymond Thomas, Rob Yost, Liz Dixon): TC 3.2 and TC 3.4 are co-sponsors. This is an extension of Refrigeration Handbook Chapter 7, Table 2 data for pure refrigerants revised by Research Project 1239. TRP-1495 deals with the effect of oil. Final report was accepted in Dallas. (There is little effect noted with POE and MO with R-134a & R-22; whereas, PAG was more noticeable.) Phase 2 of TRP-1495 was deleted (no longer appropriate).
- TRP 1641 – “Effect of Unsaturated Fluorocarbon Contaminants on the Reliability and Performance of HVAC&R Equipment” – work statement approved and went out for bid with no bidder replies. Vote to modify the work statement to also include alternative means in addition to sealed glass tube testing was made in Dallas. Two contractors provided bids. An Executive Session will follow the meeting for contractor discussion and vote.
- RTAR / Work Statement – “Hydrogen Fluoride Capacity of Desiccants” – draft via Alan Cohen was submitted to voting members via email for comments prior to Denver. Mark Spatz recommended additional justification be given for the high cost. Final draft to be reviewed and submitted for email ballot or for vote in New York.
- RTAR: “Determine Maximum Allowable Level of Impurities in HC (non-fluorocarbon) Refrigerant Systems”- Rob Yost stated that a followed up / review will be conducted next meeting (New York) post the outcome of the AHRI-700 meeting in Denver (on June 25, 2013).
- TRP 1665 - “Reactivity of R-40” work statement to fast track research was approved. (There is a safety concern with the reactivity of R-40 contaminant in R-134a primarily with aluminum.) McCampbell Analytical was awarded the bid.

- RTAR - “Distribution of Water between Vapor and Liquid Phases of HFO Refrigerants ” to be re-written (original done on older form) by Amanda Hickman.
- New RTAR -“In Situ Identification of R-40 in Remediation and its Degradation Products” was championed by Glen Steinkoenig. Committee decided to await feedback first via TRP-1665 before pursuing.

7) **Webmaster – Frank Nagy for Alan Cohen**

- Website is in compliance (<http://tc33.ashraetcs.org>).

8) **Membership – Frank Nagy**

- As of July 1, 2013, new Voting Members will be: Danny Halel & Rosine Rohatgi; rolling off will be: Ray Thomas, Scott Gustafson & Sonny Sundaresan. (Voting Members continued: Rob Yost, Julie Majurin, Debra Kennoy, Joe Karnaz, Glen Steinkoenig, Marc Scancarello, Joe Longo, Bob Woods, Alice Reimer-IM, Frank Nagy.)
- Committee positions as of July 1, 2013: Rob Yost (Chair & Standards), Raymond Thomas (Research), Joe Nigro (Program), Alan Cohen (Webmaster), Brad Boggess (Handbook); Frank Nagy (Secretary & Membership); Julie Majurin (Vice Chair).

9) **Old Business**

- None

10) **New Business**

- Danny Halel will forward President Obama’s Climate Action Plan to be sent out with Minutes as well as attached to our website.

11) **Adjournment-** meeting was adjourned at 4:38PM; TC Executive Session followed.

12) **Executive Session-** bidders and ratings for TRP 1641 were discussed. **MOTION #5:** to select said contractor was made by Scott Gustafson and seconded by Glen Steinkoenig. Motion passed 9-0-0. Contractor to be disclosed at next meeting. Committee will consist of Steve Kujak (Chair), Julie Majurin, Bianca Hydutsky & Yanwei Cen.

Respectfully submitted,

Frank Nagy  
Secretary TC 3.3