

**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 July 12, 2016

TC/TG/TRG TITLE Refrigerant Contaminant Control <http://tc0303.ashraets.org/>

DATE OF MEETING June 28, 2016 LOCATION St. Louis, MO

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Julie Majurin – <b>Chair</b>	VM			Debra Kennoy, Mark Spatz,
Rob Yost – <b>Standards</b>	VM			Chris Reeves – <b>Handbook,</b>
	NQM	Alice Reimer – <b>IM</b>		Frank Nagy – <b>Secretary &amp; Membership,</b>
	VM	Ray Thomas – <b>Research</b>		Joe Karnaz, Stephen Spletzer,
Glen Steinkoenig	VM			Knut Petry, Hewitt Gaudin
Marc Scancarello	VM			Roberto Urrego, John Senediak, Sean Cunningham
Danny Halel	VM			Brad Boggess, John Witthouse
	VM	Bob Woods		Doug Gildehaus Steve Kujak,
	VM	Joe Longo		Scott Gustafson, Jay Kohler
Rosine Rohatgi	VM			Scott Wujek, Don Fenton,
Alan Cohen - <b>Webmaster</b>	VM			Ivan Rydkin, Elyse Sorenson
Joe Nigro – <b>Vice Chair &amp; Program</b>	VM			

**DISTRIBUTION**

<b><i>All Members of TC/TG/TRG plus the following:</i></b>	
TAC Section Head:	<b><u>Jay Kohler</u></b>
TAC Chair: TAC Vice-Chair:	<b><u>Eric Adams</u></b>
All Committee Liaisons As Shown On TC/TG/TRG Rosters:	Mark Spatz / Steve Kujak -- Research Ramon Pons / Don Fenton – Handbook Malcolm Knight – Standards William Fleming – Special Pubs C Brian Wandling – Program Stephen Piccolo – CTTC Darin Nutter – ALI/PDC
Manager Of Standards	Stephanie C Reiniche
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."

## Minutes – TC 3.3 Refrigerant Contaminant Control

### 1) Call to Order

Julie Majurin (Chair), called the meeting to order at 3:30 pm on Tuesday, June 28, 2016. The meeting was held at the America's Center Convention Complex, Room 122, in Saint Louis, MO. After introduction of members and guests, a quorum was confirmed with 8/ 11 voting members present. There was one change in the minutes: Standards Section under SPC 219, the scope was revised to state "exclude" inorganic acids vs error in original of "include." **MOTION #1:** to modify the change in minutes under Standards SPC 219 from "include" to "exclude" was made by Glen Steinkoenig & Marc Scancarello seconded. Motion passed 7-0-0 (CNV).

**MOTION #2:** to approve the minutes with the modified change made in Standards, under SPC 219 was made by Rob Yost & Glen Steinkoenig seconded. Motion passed 7-0-0 (CNV)

### 2) Report on TC 3.0 Chair Breakfast Meeting – Julie Majurin

- There is now an option for TC meetings to be conducted remotely (arranged ahead of time) for upcoming meetings especially when a future meeting quorum be in question.
- ASHRAE will also assist Sub-Committee chairs in arranging meetings ahead of time to better accommodate members.
- A volunteer as a CEC advocate for Section 3 Committees was discussed and why it is pertinent to add a refrigeration track for the winter meetings.
- Provisional Corresponding Member may join the TC via the website; afterwards, the TC Chair would move / recognize them as a Corresponding Member.

### Upcoming meetings

- Las Vegas – January 2017
- Long Beach – June 2017

### Liaison Comments:

- Research Liason, Mark Spatz, thanked the committee for all their efforts and introduced Steve Kujak as new liason.
- Section Head, Jay Kohler, congratulated Julie for her time and effort in chairing the committee; a certificate of appreciation was issued at the TC Chairs breakfast meeting.
- Handbook Liason, Don Fenton introduced himself and thanked the Handbook committee for their efforts.

### Sub-Committee Reports

### 3) Program – Joe Nigro

- Seminar 43 – "Lubrication Effect Beyond the Compressor" was well attended. Joe thanked Joe Karnaz (Chair) and speakers: Danny Halel, Scott Gustafson & Chris Reeves. Seminar was co-sponsored by TC 3.3 & TC 3.4

- Las Vegas Seminar – “Lower GWP Alternate Refrigerant Evaluations for Centrifugal Compressors” has (4) speakers to date and TC 3.3 was asked to co-sponsor with TC 3.4 & MTG LGWP; however, after some discussion, TC 3.3 decided not to co-sponsor since the topic was not entirely relevant to the scope of this committee.
- The idea of a refrigeration mini track was discussed at the Chairs breakfast. A mini track needs to be submitted 1.5 years in advance and contain at least six sections in the format of a seminar, workshop or forum. CEC will place the sections back to back in the program if accepted. The idea of TC 3.2, 3.4 and 3.3 working together to submit two tracks each was discussed. Other refrigeration compressor and system related TC’s could also be asked to contribute. A mini track or something smaller will require a unifying topic. If a mini track will not work out, the following topics would be great for a standalone seminar, workshop or forum:
  - Lubrication Considerations for Component Design
  - Lubes and Oil Separation / Heat Exchange
  - Retrofit: Line Sizing and Oil Return in R404a Retrofits
  - Why Lubrication, System Chemistry, and Contaminate Control is Important
- Deadlines are: August 8 for Las Vegas & February 6 for Long Beach.

#### 4) Handbook – Chris Reeves

- Chapter 7 is on track (next publication is 2018) for vote in Long Beach. Draft to be completed by Las Vegas (January 2017). Draft will be on TC 3.3 website for voting members to pull up and comment. Chris appreciated the support of his group and the comments made from committee.

#### 5) Standards – Rob Yost

- SPC 35-2014 – “Method of Testing Desiccants for Refrigerant Drying” - was reaffirmed in Dallas (2013) / to re-authorize next year.
- SPC 63.1 – “Method of Testing Liquid Line Filter Driers” – is under revision; subcommittee met Sunday in St. Louis. Need (1) more member to balance sub-committee. Chris Reeves is Chair w/ members: Alan Cohen, Jorge Cabrera & John Senediak.
- SPC 63.2 – “Method of Testing Liquid Line Filter Drier Filtration Capacity” – per subcommittee chair, Glen Steinkoenig, the standard was revised and is on track to finalize by Las Vegas with a prior letter ballot to be issued in July.
- SPC 78 – “Method of Testing Flow Capacity of Suction Line Filters and Filter Driers” – per chair, Chris Reeves, the committee met and finalization to be completed next year.
- SPC 219 (has replaced SPC 63.3) -- “Method of Testing Acid Filters” -- John Senediak, chair met with members (having a balanced sub-committee now); title & scope will be revised with TC 3.3 vote by January of 2020.

#### 6) Research – Raymond Thomas (per Alan Cohen)

- RP 1641: “Effect of Unsaturated Fluorocarbon Contaminants on the Reliability and Performance of HVAC&R Equipment” – a conference paper was presented by Rosine Rohatgi of Spauschus on Monday.
- RP 1740: “Hydrogen Fluoride Capacity of Desiccants” – original contractor bid was rejected due to the bid not meeting the required minimum score. A request for a new bid went back to RAC. New bidder names were submitted. There was an Executive Session post meeting to address new bid. **Executive Session:** the only bidder was the previous one; however, a recommendation to rewrite the WS to change the solvent and procedure (for safer handling) was discussed and a **MOTION #3:** to agree with the recommendation of the PES to reject the bid and to rewrite the Work Statement and re-issue to PES was made by Danny Halal & Glen Steinkoenig seconded. Motion passed 7-0-0 (CNV).

- RP 1665 - “Reactivity of R-40” -- (There is a safety concern with the reactivity of R-40 contaminant in R-134a primarily with aluminum; data indicates reactivity from 100ppm to 5% levels.) A conference paper was presented by Steve Kujak of Ingersoll Rand (on behalf of the contractor Ed Hamilton of McCampbell Analytical) on Monday.
- WS 1790 - “Distribution of Water between Vapor and Liquid Phases of Low GWP Refrigerants ” – RTAR rejected initially (has merit but needed to be beefed up); Brad Boggess (author) will re-submit a new / expanded work statement to better justify (Glen Steinkoenig, Alan Cohen & Elyse Sorenson to assist).
- WS 1774 – “Effect of System Chemicals Towards the Breakdown of Lubricants and Lower GWP Refrigerants” – conditionally approved by RAC (Julie Majurin - author). The PES met and have selected a bidder; TC 3.3 to co-sponsor.
- Discussion was held on potential new RTAR – “CO2 Systems” to address right level of water in system with actual testing due to potential expansion valve issues (hydrate at 11C, acid problems). Ivan Rydkin will reach out to TC 10.1 to discuss possible RTAR or future Forum.
- Alan Cohen thanked Mark Spatz for all his years of service and support.
- Glen Steinkoenig will take over as Research Chair as Raymond Thomas has retired.

#### 7) Webmaster – Alan Cohen (& Elyse Sorenson)

- Website is in compliance; please note new web address: (<http://tc0303.ashraetcs.org>). Elyse Sorenson will be replacing Alan as Webmaster effective next society year. Alan stated that the newer / updated site is easier to navigate.

#### 8) Membership – Frank Nagy

- **Voting Members for next society year were reviewed (through June 30, 2017):**
  - **Continuing VM:** Danny Halel, Rosine Rohatgi, Julie Majurin, Ray Thomas, Alan Cohen, Joe Nigro, Rob Yost & Alice Reimer-NQM.
  - **New / Rolling-On VM:** Chris Reeves, Debra Kennoy, Brad Boggess & Ivan Rydkin.
  - **Rolling-Off VM:** Marc Scancarello, Glen Steinkoenig, Joe Longo & Bob Woods.
- **Committee positions for next society year were reviewed (through June 30, 2017):** Joe Nigro (Chair & Program), Rob Yost (Standards), Glen Steinkoenig (Research), Elyse Sorenson (Webmaster), Chris Reeves (Vice Chair & Handbook) & Frank Nagy (Secretary & Membership). We are looking for new Program & Handbook Sub-Committee Chair volunteers.

#### 9) Old Business

- None

#### 10) New Business

- Several committee members thanked Julie for a job well done as Chair.

#### 11) Adjournment-the meeting was adjourned at 4:32

Respectfully submitted,  
Frank Nagy, Secretary TC 3.3