



1791 Tullie Circle, N.E./Atlanta, GA 30329

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DRAFT

TC/TG/MTG/TRG MINUTES COVER SHEET

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

TC/TG/MTG/TRG No. 3.2 DATE July 31, 2020

TC/TG/MTG/TRG TITLE Refrigerant System Chemistry

DATE OF MEETING June 15, 2020, 1-4 pm LOCATION Austin, TX – Virtual Meeting

MEMBERS PRESENT	YEAR APPTD ENDS	MEMBERS PRESENT	YEAR APPTD ENDS	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Ed Hessell - Chair	2020	Jian Sun-Blanks	2022	Brad Boggess (Programs)
Joe Karnaz – Vice Chair	2023	Danny Halel (joined late, 1:35pm)		Tom Leck (MTG Liaison)
Rob Yost - Standards	2021	Sarah Kim	2021	
Steven Baker - Secretary	2021	John Senediak	2022	
Julie Majurin	2023			
Dave Vincent - Webmaster	2021	MEMBERS ABSENT		EX-OFFICIO MEMBERS ABSENT
Casey Scruggs - Research	2023	Knut Petry (non-quorum)	2023	
Elyse Sorenson	2022			
Ngoc Dung (Rosine) Rohatgi	2022			

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

TAC Section Head: Barbara Minor	SH3@ashrae.net
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters (Research, Standards, ALI, etc.)	Steve Kujak – Research Don Fenton - Standards
Mike Vaughn, Manager of Research & Technical Services	MORTS@ashrae.net

Note: These draft minutes have not been approved and not the official, approved record until approved by the TC.

Minutes – TC 3.2 Refrigerant System Chemistry

1) Call to Order – Ed Hessel

Chair Ed Hessel called the meeting to order at 1:00 pm on Monday, June 15, 2020. In response to COVID 19 pandemic, ASHRAE exercised abundant caution and replaced “in-person meetings” with virtual meetings conducted online using the Zoom web application. Guests were recognized and welcomed. In lieu of self-introductions, a roll call of the voting members was taken and a quorum was confirmed with 12 of 13 voting members present.

ASHRAE Code of Ethics – A mention of the Code was made to remind all members and guests of the Code and that it is to be adhered to whenever at an ASHRAE meeting.

MOTION #1: to approve the Austin agenda was made by Julie Majurin and seconded by Rosine Rohatgi. Motion passed 11-0-0 CNV.

MOTION #2: to approve the Orlando minutes as written was made by Dave Vincent and seconded by Rob Yost. Motion passed 11-0-0 CNV.

2) Report on TC 3.0 Chair Breakfast Meeting – Ed Hessel

- Virtual TC Chair Breakfast meeting held May 27. TC Reorganization reviewed. TAC approved 4 TC mergers including the merger of 3.2 and 3.3. Seminar and forum proposals for 2021 ASHRAE Winter meeting in Chicago are due Monday, August 3, 2020.
More and more TCs and standing committees are using ASHRAE’s subscription to Basecamp3 to manage, organize, and store committee information files to support meetings. Additional information on Basecamp can be found at www.ashrae.org/communities/committees/standing-committees/electronic-communications-committee in the section titled Basecamp Guidance.
2019-2024 ASHRAE Strategic Plan Areas and Initiatives reviewed. ASHRAE’s Mission and Vision presented.
The Professional Development Committee (PDC) is seeking new ideas for ASHRAE Learning Institute (ALI). Need for practical courses of broad interest to be presented as face-to-face seminars or short courses, instructor-led online courses and self-paced courses. Contact Karen Murray (ASHRAE staff) at kmurray@ashrae.org for additional information.
ASHRAE created an Epidemic Task Force (ETF) to help deploy ASHRAE’s technical resources to address the challenges of the current pandemic and future pandemics as it relates to the effects of heating, ventilation, and air conditioning systems on virus or disease transmission in healthcare facilities, the workplace, home, public, and recreational environments.
2020 ASHRAE Virtual Conference reviewed and presented.

Liaison Comments:

- Barbara Minor (TAC Section 3 Chair) commented about the challenges and efforts involved in pulling together the virtual ASHRAE summer meeting. Barbara expressed her appreciation for the everyone’s efforts and patience to organize and participate in the virtual meetings. Barbara thanked everyone involved in making the merger of TC 3.2 and 3.3 happen. Barbara will be rolling off as the Section Chair and Ed Hessel thanked her for her support and efforts in this role.
- Steve Kujak (TAC Research) stated TAC Research had not yet met and had nothing to report.

Sub-Committee Reports

3) Programs – Brad Boggess

- Reviewed notes from the Orlando meeting for seminar session titled “Current Understanding & Gaps of Stability and Compatibility of Low GWP Refrigerants”. Following topics and speakers discussed
 - 1) Xudong Wang – AHRI MCLR White Paper literature survey and results: overview and gaps
 - 2) Rosine – materials compatibility literature information and gaps
 - 3) Karnaz – TBD
 - 4) Sorenson – Chemical stability literature information and gaps

MOTION #3: to propose a seminar for Chicago chaired by Brad Boggess titled “Current Understanding & Gaps of Stability and Compatibility of Low GWP Refrigerants” made by Danny Halel and seconded by Joe Karnaz. Motion passed 13-0-0.

- New Ideas
 - Brad Boggess mentioned a survey of Purdue Conference papers for possible presentation at ASHRAE.

5) Handbook – Greg Smith

- Meeting to be scheduled to begin review.
- Next publication scheduled for 2022.

6) Standards - Rob Yost

- GPC 38P – *Metal Pressure Vessel Method to Test Materials Used with Refrigeration Systems*
 - No action. Next revision due 2021.
- SPC 97-2007 – *Sealed Glass Tube Method to Test for Chemical Stability of Materials for Use Within Refrigerant Systems*
 - Chris Seeton – Chair. Appendix being amended with upcoming vote planned. Letter ballot anticipated in the next few weeks.
- New ideas
 - None.

7) Research – Casey Scruggs

RTAR Updates

- 1886 – “Kinetic and Mechanistic Studies of the Breakdown of HFO Refrigerants”, Elyse Sorenson. Meeting scheduled for this Friday to review and edit work statement.
- 1897 – “HFO Refrigerant Compatibility with Aged Lubricants and Contaminants” Joe Karnaz, Elyse Sorenson. Julie Majurin joined the work group. Comments received on work statement; edits to be made.
- No new research project proposals.

8) Webmaster – Dave Vincent

- No update.
- Ed Hessel reported the website is current.

9) Membership – Ed Hessel

- **TC 3.2/3.3 merger**
 - Ed reviewed the title, scope, and management team for the new, combined TC. Approved by advisory council.

Title: Refrigerant System Chemistry and Contaminant Control

Scope: TC 3.2 is concerned with all chemical reactions and contaminant control inside refrigerant systems. The primary focus includes effects of temperature, pressure, and materials on chemical reaction rates. It also includes sources, generation, as well as control of water and other contaminants, Materials of interest include refrigerants, lubricants, additives, manufacturing chemicals, and materials of construction. Scope includes identifying and quantifying contaminants that affect properties and performance of system components such as filters and driers. It is also concerned with contaminants during recovering, recycling, and reclaiming refrigerants.

Management Team	
Name	Position
Joseph Karnaz	Chair
Elyse Sorenson	Vice Chair
Steven Baker	Secretary
William (Brad) Boggess	Program Subcommittee Chair
Anthony Barthel	Research Subcommittee Chair
Gregory Smith	Handbook Subcommittee Chair
Ivan Rydkin	Handbook Subcommittee Chair
Robert Yost	Standards Subcommittee Chair
David Vincent	Webmaster
Chris Campo	Ali Coordinator
Marc Scancarello	MTG Low GWP Refrigerants
Jessica Jude	MTG Guide for RAC Plant Assessments

Voting Membership		
Name	Position	Term
Joseph Karnaz	Member	2023
Steven Baker	Member	2021
Casey Scruggs	Member	2023
Gregory Smith	Member	2024
Ivan Rydkin	Member	2024
Robert Yost	Member	2021
David Vincent	Member	2021
Elyse Sorenson	Member	2022
Justin Allemann	Member	2024
Julie Majurin	Member	2023
Jian Sun-Blanks	Member	2022
Danny Halel	Member	2021
Sarah Kim	Member	2021
Ngoc Dung (Rosine) Rohatgi	Member	2022
Valerie Lisi	Member	2022
John Senediak	Member	2022
Roberto Urrego	Member	2021
Knut Petry	Member Non Quorum	2023

- In the new TC, vice-chairs for subcommittees Programs, Research, and Standards to be considered. Terms for subcommittee chairs and vice-chairs will also be reviewed.
- The new TC is at the maximum number of voting members of 18. Going forward in 2021 when 6 voting members will roll off, all 6 will probably not be replaced to help with achieving a quorum.

10) MTG Updates – Tom Leck, Marc Scancarello, Ed Hessell

- Tom Leck is rolling off at Low GWP MTG. Marc Scancarello will be the MTG Low GWP for the new combined TC.
- Full committee has not met yet.
- Research MTG meeting held
 - RP1806 – *Flammable Refrigerants Post Ignition Simulation and Risk Assessment*
 - ORNL leading project is moving forward. Completion date TBD.
 - RP1855 – *Determination of the Impact of Combustion By-Products on the Safe Use of Low Flammable Refrigerants*
 - Steve Kujak reported the draft report received and in review by PMS members.
 - WS1884 – *Incorporation of Odorants in Flammable Refrigerants*
 - WS approved by TC 3.1. Anticipate the WS making to RAC for the August review cycle.
- Ed Hessell introduced new MTG titled, RAC Plant Assessments, and reviewed its scope. This MTG will coordinate and oversee the creation of an ASHRAE/UNEP Guide for Refrigeration and Air-Conditioning (RAC) Plant Assessments. A representative from this TC is needed; if interested, please contact Ed Hessell or Joe Karnaz.

11) Old Business – Ed Hessel

No old business was brought before the committee.

12) New Business – Ed Hessel

Danny Halel reported IAR (ammonia) has started a hydrocarbon safety team to work on application standard. Danny is on this committee.

13) Next Meeting

2020 ASHRAE Winter Meeting Chicago held as joint TC, TC 3.2. Meeting length will remain the same as currently, 2.5 hours.

14) Adjournment – Ed Hessel

The meeting was adjourned at 2:15 pm through a motion by Joe Karnaz.

Respectfully submitted,

Steven Baker – Secretary