

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

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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.

TC 2.9

DATE:

July 10, 2020

TC/TG/MTG/TRG

TITLE:

Ultraviolet Air and Surface Treatment

DATE OF
MEETING:

Friday, July 10, 2020

LOCATION:

Virtual

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
David Skelton	7-1-2018	Chang-Seo Lee	7-1-2016	
Steve Martin	7-1-2016	Richard Vincent	7-1-2017	
Jaak Geboers	7-1-2016	Aaron Engle	7-1-2018	
Henry Greist	7-1-2016			
Brian Hafendorfer	7-1-2018			
Kathleen Owen	7-1-2018			

DISTRIBUTION

<i>All Members of TC/TG/MTG/TRG plus the following:</i>	
TAC Section Head:	Jon Cohen
TAC Chair:	Dustin Meridith
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters:	William (Bill) Hutzel, Research Theresa Weston, Standard
Manager Of Standards Manager Of Research & Technical Services	Connor Barbaree Michael R. Vaughn, P.E.

ASHRAE Technical Committee 2.9 (TC 2.9)

Ultraviolet Air and Surface Treatment

Main Committee Meeting Minutes

MEETING AGENDA

Virtual 7-10-20

Friday July 10, 2020 at 2:00-4:00

These DRAFT minutes have not been approved and are not the official record until approved by the Technical Committee at the 2020 Austin, TX Winter Meeting

“TC 2.9 Scope – TC 2.9 is concerned with all aspects of equipment and systems that utilize ultraviolet radiation to destroy or de-activate chemical and/or biological air and surface contaminants in HVAC systems and indoor spaces, including, but not limited to, effectiveness, safety, maintenance, and economics.”

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Meeting came to order at 2:00 pm

Henry Geist opened the meeting

Introductions – Name and affiliation of participants

Meeting minutes were not updated for the last several meetings

Voting members Present:

Aaron Engle	Richard Vincent
Chang-Seo Lee	Kathleen Owen
Sam Guzman	Henry Geist
Ashish Mathur	

7 of 7 present (quorum is met)

Introductions made.

David Skelton discussed the merging of other TC's...Section has several air quality groups that may be able to merge. ASHRAE pushing online mtgs. Activity is the key to avoiding merger.

Meeting minutes from the Kansas City meeting were approved 9 for/ 0 against.

Brian Rogers of UL let the TC know that the new standard 60324-2-40 has been updated and the "Sunset" date for UL1995 is 1/1/24. Any lamps listed to current standards can keep the listing, Part 1 of annex T regarding the testing of materials is included.

Roll Call of Voting Members; Quorum Check **7 out of 7**

Review Agenda **All good**

Draft Minutes from 2020 Winter Meeting, Orlando, FL

Motion to approve the minutes by Richard 2nd by Ashish 7/7 approved

Review Action Items from TC Chair breakfast 5 minutes

TC Website Report, Bob Coleman, Webmaster 5 minutes

Website report – Bob Coleman Not on call but he has updated base camp and 2.9 website. Added historical list of TC programs, RTARS, etc.

Subcommittee Reports

Research- Richard Vincent – Chair

GPC37 update - 3 methods to dose the air. Target K values, use average intensities values in the space and new method uses minimum UV per volume. How is it effected by higher ceiling heights?

RTAR update; Upper air high-ceiling, UVC K-values – Ready to submit.

GPC-37-Upper Room UVC; Richard Vincent, Chair – This is a guideline committee not really under research but the guideline is “mature” and will be tightened up in Austin and ready soon after.

Also, discussed K value RTAR work statement under way trying to get it before August 15th.

Third research project is round robin testing for 185. Dean and liaison will answer questions just received and tighten up submission. May be funding concerns so sooner the later.

Possible future topics; LEDs, Far UV, and Bio studies.

GPC-37 Comments deadline has passed July 24th next meeting trying to publish by end of the year.

Standards – Steve Martin Chair

Working on updating 185.1 and 185.2

Found airflow discrepancy

Going to update them to include other methods of air disinfection.

We will be adding other methods into the testing standards.

Programs- Aaron Engel New Chair

Great seminar last week!

Lessons learned from COVID-19 for air in restaurants. 2.5 is looking for Co-Sponsorship.

Kathleen made a motion to co-sponsor with TC 2.5, Sam 2nd vote 6/6

Talked about (2) new submissions:

First one:

How much UVC to kill SARS- COVID-2?

HVAC application, Upper Air, and Surfaces, also K values

Second submission:

How does UVC compliment filtration?

Scott Sherwood suggested combining both into one Sam, Scott, and Aaron will pull something together.

Jason would look to co-sponsor with 2.10 (?) resilience.

Handbook Subcommittee, Dean Saputa, Chair

Applications handbook submission due August 2022. We can update the electronic version anytime. Want to add 405nm, far UV , chart for K values, GPC37 updates as well.

Membership Subcommittee, Steve Martin new chair

Benoit has changed his profession and is back with ASHRAE

Steve will confirm 6 or 7 voting members.

Eric E from BR+A in Boston has comments on how to submit questions, send to Dean S.

UL-1995 / UL 60335-2-40 update, Brian Rogers

UL1995 1/1/24 Sunrise date 2-40 is the same thing after 1/24 date. Forth edition call for experts and proposals. Current standard covers 253.7nm and how do they incorporate LED and other wavelengths. What has to change?

US TAG for ISO/TC 142 Update, Dean Saputa

Benoit brought this up. What are we doing to comply? Did anyone know about this?

UNE-0068:2020 for air and surface disinfection Europe / Spain

Title: Safety requirements for UVC air and Surface disinfection.

[https://www.mscbs.gob.es/profesionales/saludPublica/ccayes/alertasActual/nCov-China/documentos/Especificacion UNE 0068-2020\(EN\).pdf](https://www.mscbs.gob.es/profesionales/saludPublica/ccayes/alertasActual/nCov-China/documentos/Especificacion UNE 0068-2020(EN).pdf)

No one has seen it and Benoit is the only one struggling with this.

Dean will get with Benoit to learn more.

Send notice to 62.1 for an update to improve or change the language – Brian H to look into it.

Old Business

Discussion: Create and publish an official TC2.9 position on ozone generation?
ASHRAE will not produce a position document on this.

Dead issue?

Hank was looking for interest and authors to write a whitepaper or article on it.

Benoit and Keith Jordan will look into this.

New Business

Discussion: IES working on ANSE standard with the International Ultraviolet Association, (IUVA) has formed a working group on UVC Disinfection Technologies for Healthcare. IES Standards and requirements that are backed by the US government, not suggestions or standards with no enforcement.

Looking at (2) standards one for measurement (12/20) and one for application.

Want to ask if we can have a vote on the standards as AHSRAE TC 2.9

Hank asked to see if anyone wants to reach out to 62.1 Do UV lights fall into this? Dean, Eric E, Erin, and Brian, Benoit, and Aaron volunteered to reach out and get an interpretation and how to test to 2998? Restrictions on O3 / ion generators / other devices with various claims were discussed. Mostly used for odor reduction.

UL1598 update by Brian Rogers; UL1598 out for public review and public comment still open. Approval pending and person in charge not available for comment.

Liaisons to other committees was discussed:

Which committees can be contacted / liaised with in the future?

Plan to include with the following liaison:

Here are my notes regarding the liaison volunteers from the TC 2.9 main meeting:

SSPC 62.1, Ventilation for Acceptable Indoor Air Quality, Brian Hafendorfer

SSPC 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings, Henry Greist

SSPC 145, Test Method for Assessing the Performance of Gas Phase Air Cleaning Equipment, Matt Middlebrooks

SSPC 161, Air Quality Within Commercial Aircraft, Aaron Engel

TC2.3, Gaseous Air Contaminants and Gas Contaminant Removal Equipment, Matt Middlebrooks

TC2.4, Particulate Air Contaminants and Particulate Contaminant Removal Equipment, Kathleen Owen

TC 9.6, Healthcare Facilities, Katja Auer

Brief discussion on emergency use document by

FDA – bottom line currently UVC devices as discussed in TC 2.9 are not considered Class II medical devices per FDA definition and do not fall under FDA; registered with EPA under pesticides.

The TC committee thanked David Skelton for an outstanding service done during his time as chair of the TC2.9.

**Motion to adjourn meeting by Hank Greist and second by Dean Saputa.
Meeting was adjourned at 4:30pm**

Meeting attendees are listed below

Meeting Attendees:

Vinoo Sharma vinoo.sharma@molekule.com

Keith Jordan kjordan@sanuvox.com - Sanuvox UV

Linda Lee Linda@lindadleehcllc.org

Kevin Kwong - kevin@lmstechnology.com

Kathleen Owen kathleenowen@att.net Owen AFC

Benoit Despatis-Paquette, Sanuvox, bdespatis@sanuvox.com

Sanjeev Hingorani SKH@lennoxind.com Lennox Industries

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