

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING
ENGINEERS, INC.
1791 Tullie Circle, N.E./Atlanta, GA 30329
404-636-8400**

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 5.9 DATE January 27, 2015

TC/TG/MTG/TRG TITLE Enclosed Vehicular Facilities
DATE OF MEETING January 27, 2015 LOCATION Chicago, IL

VOTING MEMBERS PRESENT	YEAR APPT'D - TERM ENDING	VOTING MEMBERS ABSENT	YEAR APPT'D - TERM ENDING	EX-OFFICIO (CM) MEMBERS AND ADDITIONAL GUEST (G) ATTENDANCE
Igor Maevski Robert Smith Bill Lampkin Ahmed Kashef Anthony York John Murphy	2011-2015 2008-2014 2011-2015 2012-2016 2011-2015 2014-2018	Jane Miller Nader Shacheraghi Andrew Louie	2014-2018 2014-2018 2014-2018	David Newman (CM) Kevin Chang (CM) Yuan Li (CM) Tony Moskalik (CM) Aresh Raychaudhuri (CM) Fred Shortts (CM) Mark Colino (CM) George Hadjisophocleous (CM) Jim McCarren (CM) Dean Geraci (G) Troy Goldschmidt (G) Tom O'Dwyer (CM) Jacob Carr (G) Donald Murray (G) Darby Benroth (G) Raymond Klein (G) Elias Papadopoulos (G)

DISTRIBUTION

<i>All Members of TC/TG/MTG/TRG plus the following:</i>	
TAC Section Head:	Walter Grondzik Kenneth Peet
TAC Chair:	
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters:	
Manager Of Standards Manager Of Research & Technical Services	Stephanie Reiniche Mike Vaughn

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, INC.
Technical Committee TC 5.9 – Enclosed Vehicular Facilities
Meeting Minutes – 1 July, 2014 – Seattle, WA

Igor Maevski called the meeting to order at 3:30 pm.

There were 6 out of 9 voting members present. The voting member attendance met requirements for a quorum.

Minutes of June meeting in Seattle were distributed and approved.

Section 5 report presented by Ken Peet. The report included the following Topics:

- Discussed the concept and requirements of "In meeting program presentations".
 - Presentations are reviewed for commercialism
 - Can be scheduled after rejection for Conference Program
 - Presentations will be included in Conference promotion
 - Presentations can be coordinated with other Technical Committees
 - Highlighted importance of timely submission of TC Roster and Activities Reports
- Igor attended the chair meeting Sunday morning. Igor presented the following points from the meeting:
- Discussed availability of ASHRAE resources for phone conference calls and Web Meetings between regular scheduled meetings.
 - Welcomed new committee members and guests.
 - Suggested everyone should keep their bio's updated on ASHRAE web site.
 - Suggested everyone should be careful with speaker evaluations. These are reviewed by ASHRAE. If the evaluation is lower than 3.5 – ASHRAE may require the speaker to complete some presentation training before presenting again at ASHRAE.

Program Sub-Committee Report: (Mark Colino)

2015 Winter Meeting – Chicago, IL (Conference Paper Abstracts were due Mar 24, 2014; Conference Paper Submittals were due Jul 7, 2014; Seminar & Forum Proposals were due Aug 11, 2014)

CH2 (Seminar) – "Computational Analysis for Fire-Life Safety"; commenced as Seminar #15 on Sunday, January 25 from 1:30 pm to 3:00 pm in the Honore Ballroom. Presenters were Raymond Klein, Yuan Li and David Newman. Chair Igor Maevski reported that session was interesting and well-attended. Session was co-sponsored by TC 5.6.

Chicago Conference Tracks: HVAC&R Fundamentals & Applications; Design of Energy & Water-Efficient Systems; HVAC&R Systems & Equipment; Large Buildings (Mission Critical Facilities); Industrial Facilities; Energy Efficiency; Life Safety; Hospital Design & Codes

2015 Annual Meeting – Atlanta, GA (Conference Paper Abstracts are due Sep 22, 2014; Conference Paper Submittals are due Jan 5, 2015; Seminar & Forum Proposals are due Feb 9, 2015)

AT1 (Seminar) – "Innovative Rail Station Ventilation"; Chair: Mark Colino; Presenters: Tom O'Dwyer, Jim McCarron; Co-sponsor: TC5.6

AT2 (Seminar) – "Indoor Air Quality in Road, Rail and Mass Transit Tunnels"; Chair: Igor Maevski; Presenters: Yuan Li, David Newman, Mark Colino, Robert Smith; Co-sponsor: TC 4.10

AT3 (Internal Forum) – "Discussion on Recent WMATA Fire Event"; Lead: David Newman

AT4 (Internal Presentation) – "Smoke Spread in Rail Cars"; Presenter: George Hadjisophocleous

Atlanta Conference Tracks: HVAC&R Fundamentals & Applications; HVAC&R Systems & Equipment; Research Summit; Refrigeration; Building Operation, Maintenance and Optimization/Commissioning; Indoor Air Quality; Modeling throughout the Building Life Cycle; High Performance Buildings; Moving Advanced Energy Design Guidance to the Mainstream

2016 Winter Meeting – Orlando, FL (Conference Paper Abstracts are due Mar 23, 2015; Conference Paper Submittals are due July 6, 2015; Seminar & Forum Proposals are due Aug 10, 2015)

OR1 (Seminar) – “Sustainable Environment for Enclosed Vehicular Facilities & Related Design Guidance”; Chair: Anthony York; Presenters: Mohammad Tabarra, TBD; Potential Co-sponsor: TC2.8

OR2 (Seminar) – “Ventilation Design for Road Tunnels Based on Risk Analyses”; Chair: Ahmed Kashef; Presenters: Alex Devs, TBD; Co-sponsor: TC5.1

OR3 (Seminar) – “Introduction to Enclosed Vehicular Facilities”; Chair: Tom O’Dwyer; Presenters: Tom O’Dwyer, Jim McCarron, David Newman; Co-sponsor: TBD

OR4 (Seminar) – “Perspectives on Design-Build Projects”; Chair: Mark Colino; Presenters: Owner (TBD), Engineer (TBD), Manufacturer (TBD); Co-sponsor: TBD

Orlando Conference Tracks: Fundamentals & Applications; Systems & Equipment; Design Build; International Design; Standards, Guidelines and Codes; Cutting-Edge Technologies; the Great Debate (divergent methods for accomplishing the same task); Modern Residential Systems

2016 Annual Meeting – St Louis, MO

At this time, no Program events are scheduled for this meeting.

St Louis Conference Tracks: TBD

Future Program Topics

Can Wireless Control Improve Ventilation Performance (Champion: Steve Presser)

Air Cleaning for Tunnels (Champion: Igor Maeovski)

Extreme Events Ventilation Requirements (Champion: Greg Sanchez)

Best Practices for Enclosed Vehicular Facilities (Champion: Tom O’Dwyer)

Tunnel Ventilation Velocity Profile on Egress Calculations (Champion: Ahmed Kashef)

Matrix Development to Achieve LEED Certification in Station Design (Champion: Mohammad Tabarra)

Platform Screen Doors (Champion: Greg Sanchez)

Natural Ventilation Applications in Enclosed Vehicular Facilities (Champion: Mark Colino)

BIM in Tunnel Ventilation Design (Champion: Igor Maeovski)

Parking Garage Ventilation (Champion: Troy Goldschmidt)

Special Ventilation Issues in High-Speed Rail Tunnels (Champion: Ian Ong)

Boundary Conditions for Tunnel Ventilation Modeling (Champion: Tom O’Dwyer)

Standards Sub-Committee Report: (Yuan Li)

The new standard project committee (SPC) 217 **Non-Emergency Ventilation in Enclosed Road, Rail and Mass Transit Facilities**, currently has 8 voting members, 2 non-voting member and 1 provisional member. The committee is seeking new members. Interested persons should contact Igor Maeovski, David Newman or Kevin Chang. Items of note:

- Six working groups have been established
- Committee has had two conference call working sessions in past 6 months
- Two conference calls are scheduled before Atlanta Conference Meeting
- A meeting is scheduled at the Atlanta Conference Meeting (tentatively Tuesday 9:00 AM to noon)
- Committee is seeking writers and reviewers
- A web site has established for SPC 217: <http://spc217.ashraepcs.org>

Handbook Sub-Committee Report: (Tom O’Dwyer for Andrew Louie)

No revisions will be made to 2015 Handbook

Next update is scheduled for 2019.:

Persons wanting to propose any changes for the 2019 update are requested to submit proposed changes before or at the June meeting in Atlanta.

The expected significant changes to the 2019 handbook will be related to Parking Garages and the addition of a section on Controls.

Research Sub-Committee Report (Ahmed Kashef)

Current RTARs – 1690, 1715 and the one in process were discussed. Work is required to move all of these forward:

1690-WS: INTERACTION OF TUNNEL VENTILATION PERFORMANCE WITH FIXED FIRE SUPPRESSION

RAC Decision: **RESUBMIT WORK STATEMENT OR DROP.** First submission of WS was returned with comments by RAC in June 2014. Second draft returned with comments in October 2014. WS must be submitted and approved for bid by July 1, 2017 or the topic will be dropped permanently by RAC. RAC conditionally approved RTAR at 2012 Winter Meeting.

Action Needed: Revised WS to be submitted to RAC before Atlanta meeting.
Igor Maevski to revise before spring meeting.

1715 RTAR: PRESSURE TRANSIENTS IN RAIL TUNNELS AND UNDERGROUND STATIONS

RAC Decision: **RESUBMIT RTAR OR DROP.** RAC rejected RTAR after 2014 Winter Meeting and 1st submission as RTAR to RAC. By rejecting this RTAR, RAC is strongly suggesting to the TC that this particular topic be dropped from the TC research plan based on the information that has been provided so far. Resubmit revised RTAR with letter explaining how RAC's comments were addressed in the revision with new TC vote if TC wishes to continue with this topic or notify RAC that the RTAR has been dropped for further consideration by the TC.

Action Needed: RTAR to be revised to address the following:

- Fast trains are already running in Japan, S. Korea and several countries in Europe. How did they solve these problems? Is the proposed research going to reproduce what already has been done?
- ASHRAE should not do this work alone. What about other supporting organizations?
- Why CFD is not involved in the projects?
- It appears doubtful that results of the project could have significant effect of the engineering practice (i.e., will have no impact).

David Newman to attempt to revise the RTAR before June meeting.

TOPIC: SUSTAINABILITY RATINGS OF SUBWAY STATIONS VENTILATION SYSTEMS DESIGN

Investigate the impact of subway station ventilation design on the environment in the pursuit of passenger comfort and indoor air quality.

Additional information required:

- information on project schedule/cost estimates (12 months & 100-120K)
- thermal comfort definition
- regional metrics (North American)
- consult LEED and other procedures
- transient environment conditions

Tom O'Dwyer to contact Andrew to finalize the RTAR.

Web Site: (David Newman)

David reviewed content updates related to the meeting.

David suggested adding Subcommittee Reports on the website.

Yuan is currently setting up a website for SPC 217. This website will include two areas: One for SPC committee members (only) to post working documents and drafts and a second area for general information and updates for interested persons.

ASHRAE Journal: (Tom O'Dwyer)

Tom suggested that the ASHRAE Journal Subcommittee be placed on hold until such time there are specific articles or papers presented for publication.

Membership

The following committee members were nominated to become voting members following the Annual Meeting in Atlanta: Kevin Chang, Aresh Raychaudhuri, David Newman. All were unanimously accepted by the committee.

Igor discussed current situation and Vice Chairman's attendance since 2012., He suggested that it would be in the interest of the committee to replace the Vice Chairman. Igor also reviewed the history of having committee leadership consisting of one member each from manufacturing, engineering/consulting and owner/operators. Igor suggested that Kevin Chang would be a good replacement and be consistent with the longstanding tradition of the committee. Kevin gave a brief history of his involvement with in the industry and TC 5.9. A voice vote was conducted and Kevin was selected to become the Vice Chairman effective following the June meeting.

Liaison Reports:

TC 5.1 (Aresh Raychaudhuri)

- Gave review of the two Seminars sponsored by TC 5.1 (and cosponsored by TC 5.9) at the Chicago meeting:
 - Fan and system integration, maximum energy efficiency
 - Fan inlet effects – system and fan performance
- No Seminars are planned for the Atlanta meeting.

TC 5.6 (Ahmed Kashef for Josiah Wiley)

One Seminar was sponsored by TC 5.6 for the Chicago Conference. George Hadjisophocleous gave short description of the Seminar

NFPA 130 (Tom O'Dwyer) no update

NFPA 502 (Igor Maevski) Discussed update of NFPA 502. The standard is currently in draft review. Igor gave short synopsis of changes that are being considered.

APTA (Greg Sanchez-absent) No Report

Mining Industry (George Gamble-absent) No Report

There was a short discussion that George may no longer be active following his planned retirement in March 2015.

New Business

- Igor expressed interest in trying to increase participation of international specialists in TC 5.9 Committee. David Newman discussed ways that the TC 5.9 website and electronic mailings might be used to reach out to individuals interested in ventilation of underground facilities.
- Igor gave short brief of upcoming BHR symposium in September, 2015 in Seattle

Adjournment Igor Maevski adjourned the meeting at 5:30 pm

Next Meeting scheduled for Atlanta, GA on June 30, 2015.

Recorded by Robert Smith for Jane Miller, TC 5.9 Secretary.