

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

**1791 Tullie Circle, N.E./Atlanta, GA 30329
404-636-8400**

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 TC 9.9 DATE 10/11/2012

TC/TG/TRG TITLE Mission Critical Facilities, Technology Spaces and Electronic Equipment

DATE OF MEETING 10/11/2012 LOCATION Phone Conference

Voting MEMBERS	YEAR APPTD	PRESENT ABSENT	Voting MEMBERS	YEAR APPTD	PRESENT ABSENT
Robin Steinbrecher - P	10	P	Ecton English - U	10	P
Terry Rodgers - G	09	P	Don Beaty - G	10	P
Nick Gangemi - G	11	P	Greg Jeffers - G	12	A
Roger Schmidt - P	09	A	John Bean - P	10	P
Mukesh Khattar - U	09	P	Joseph Gangemi	10	P
David Quirk - U	09	P	Rhonda Johnson - P	10	A
Chris Kurkjian - G	11	P	Herb Villa - G	10	P
David Moss - P	11	P	Francis Mills - G	09	A
Corresponding Members		Not Recorded			

DISTRIBUTION

<i>All Members of TC/TG/TRG plus the following:</i>	
TAC Section Head:	Dr. Tom Lawrence
TAC Chair:	William F McQuade, PE, LEED AP
Manager Of Standards	Stephanie C Reiniche
Manager Of Research & Technical Services	Mike Vaughn

These minutes have been approved and are the official, approved record by this committee.

Opening Remarks

The meeting was opened at 4:00 pm EDT. David Quirk introduced himself along with Vice Chair, Robin Steinbrecher.

Agenda:

Programs Subcommittee – Nick Gangemi, Chair

Recap San Antonio – 4 seminars, 1 forum, all well attended.

Dallas schedule – all submission dates closed at this point. 3 seminars, 1 technical paper session, 1 conference paper session. 6 seminars were submitted; only 2 were accepted. Number of seminars has gone way up; review the scores to see why your seminar may have been rejected.

Denver schedule – next summer meeting; we have at least 6 submissions at this point. Feb 11th is next deadline; seminars and forums. Any rejected submissions for Dallas can be resubmitted for Denver, but recommend that rejection comments are addressed.

Dates for submissions for conferences are posted on the TC 9.9 Website.

Research Subcommittee – Mike Patterson, Chair

- 1499-RP – ESD study – Missouri University. Scheduling team call for the review committee on Week of Oct 22nd. MU is finishing literature research, data analysis, and quantifying humidity on arc length, speed of approach on discharge, etc. Preliminary thoughts assembled on relative vs absolute humidity.
 - Possible seminar to be submitted for Denver
- DC energy modeling Work Statement for 90.4P – Tom Davidson leading efforts, how to build modeling tools/modules. Focusing on Energy Plus initially; feedback from national labs and DOE.
- 1675-RTAR - CFD Experimental Benchmark Data for Data Center Numerical Modeling. Joint effort with TC4.10. Vote forthcoming to TC9.9 within next month
- NFPA FPRF research project – Dave gave update on another industry research project; RFP will be issued Monday and will be forwarded to 9.9 membership who may be interested in sponsoring the project, which has to do with smoke detection in high airflow environments.

Handbook Subcommittee – Robert McFarlane, Chair

New outline developed and being worked on by a task group. Initial draft of the rewrite targeted for the new year.

Webmaster – Ecton English

Website updates; there was some downtime due to the hosting site getting malicious software. Downloads:

- Air-Cooled Thermal Guidelines – 552 in the past 6 months.
- Standard 90.1-2010 Applicability to Datacom – 415
- Liquid-Cooled Thermal Guidelines – 347 since June.

Website hits – 2600 unique visitors; 3500 visitors since June. Only 31% returning visitors.

Due to publication of the second edition of the Thermal Guidelines, the Air- and Liquid-Cooled Thermal Guidelines whitepapers will be removed from the website.

Standards Subcommittee - 90.1- Rick Pavlak, Formal Liaison

San Antonio update – 8 proposals put forth; only action taken on 1 proposal, the MSC did not act on the other 7 proposals.

DCWG activities and focus: 8 proposals.

Chicago update – proposals put forth; actions taken

Addendum AP – PUE, MSC and main committee voted to approve responses to comments.

Commenters can expect responses back within next couple weeks. There are 30 days to respond once you receive the responses.

New definitions – computer room and data centers; MSC motioned and voted 12-1-1. The main committee voted down 15-18-0.

LEED for Data Centers - Rick Pavlak

An ADDENDUM CJ was put together back in 2009 by 90.1 ECB subcommittee. Some TC9.9 members made public review comments previously; no changes were made based on those comments. This addenda was stalled and now being approved. This addendum includes rules for modeling data centers for appendix G used for LEED. TC9.9 members who have reviewed it and do not believe it properly characterizes data centers. The DCWG has action items: prepare CMP for Dallas or leave as is. Rick to follow up.

SPC127 - Rick Pavlak

AHRI section forming to address SPC127 rated equipment. Going to be testing using 2007 version of the Standard. Rick to follow up.

IT Subcommittee – Roger Schmidt, Chair (Dave Moss gave updates today)

- Update of Contamination Book - PJ Singh/D. Moore in progress
- Update of Liquid Book – no updates
- Update of Structural Book - B. Notohardjono – no updates
- IT Thermal Controls WP – Robin – out for review by voting members
- Networking Whitepaper including rate of change - J. Fitch
- Inclusion of Liquid Cooling in Thermal Guideline Flowchart- Mike P.
- Dave M. will lead a seminar in Dallas followed by a Whitepaper
 1. Delta T trends vs HPC/Volume/Utilization
 2. IT Equipment Requirements for Containment Solutions

Future Work items

- User manual of Environmental Envelopes Whitepaper
- Storage Whitepaper including rate of change
- x-factor for moisture
- IT equip. environmental measurements/reporting data to DC BMC

Publications Subcommittee – Don Beaty, Chair

- Power Trends 2nd edition published
- Thermal Guidelines 3rd edition published

- Agreement with TGG to jointly publish a book on PUE. A task group established and is reviewing. Committee vote forthcoming.
- Structural Book 2nd being updated. Committee vote forthcoming.

Membership Subcommittee – Jack Glass, Chair

- Membership updates
- 246 members per latest roster; many provisional corresponding members added

Standard 90.4P Chair – To Be Announced

Dave gave updates; the committee is awaiting ASHRAE selection of a chair. Questions on serving as a member should be directed to Stephanie Reiniche, Manager of Standards.

Open Discussions

**The call concluded at 4:50 pm EDT.
Members will be notified of the next Conference Call
The call in information will be distributed**