

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING
ENGINEERS, INC.
1791 Tullie Circle, NE / 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.: **TC 1.12** _____

TC/TG/TRG TITLE: **Moisture Management in Buildings** _____

DATE OF MEETING: **January 23, 2010** LOCATION: **Rosen Shingle Creek Resort, Wekiwa 3 (2), Orlando, FL**

MEMBERS PRESENT	TERM EXPIRES 6-30	MEMBERS ABSENT	TERM EXPIRES 6-30	EX-OFFICIO MEMBERS
Raymond Patenaude	2011	Larry Elkin	2013	
Lew Harriman III	2012	Hugo Hens	2013	
Steve Cornick	2013	John Murphy	2011	
Holly Bailey	2011	Achilles Karagiozis	2013	
Neil Leslie	2010			
Jeff Traylor	2012			
Andreas Holm	2012			
Louis Kelter	2012			
Paul Schipp	2013			
Anton TenWolde	2012			
CORRESPONDING MEMBERS PRESENT		CORRESPONDING MEMBERS ABSENT		ADDITIONAL ATTENDANCE
Ron Bailey		Doug Abramson		Larry Lisenbee
Mark Anderson		Gil Avery		George Dubose
Marcus Bianchi		Chris Balbach		Mohd Zaidi
Stephen Barefoot		Doug Bibee		Larry Felker
Stan Gatland		Charles Culp		Lanchi Nguyen
Hartwig Kuenzel		Leonard Damiano		Ben Cross
Charlese Dorgan		Claudio Duras		Raoul Webb
Rodney Lewis		Andre Desjarlais		Dan Rau
Alex McGowan		Carl Lawson		Xia Fang
		Tom Ferdelman		Dan Christensen
		Julie Ferguson		Mike Schell
		Manfred Gerber		
		Sam Glass		
		Mark Lawton		
		Mark Lentz		
		Him Ly		
		Wahid Maref		
		Michael Matthews		
		Chris McDonald		
		Albert Pucino		
		Mika Salonvaara		
		Alberto Sanchez		
		Ella Sterling		
		Dave Warfield		
		Bede Wellford		
		Theresa Weston		

DISTRIBUTION

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

TAC Section Head:	Victor Penar
TAC Chair:	Donald Brundage
All Committee Liaisons As Shown On TC/TG/TRG Rosters:	
Manager of Standards	Stephanie Reiniche
Manager of Research & Technical Services	Mike Vaughn

TC 1.12 Moisture Management in Buildings

1 to 3pm, January 23rd 2010

Rosen Shingle Creek Resort, Wekiwa 3 (2), Orlando, FL

1. Call to order: Ray Patenaude – Chair

Chair Patenaude called the meeting to order at 13:03.

Introductions, signup sheets passed around, roll call and check for quorum. Quorum established; 10 members present; 4 absent.

2. Self introduction of members and guests – Lew Harriman

Introductions. No Liaisons present.

3. Approval of minutes from Louisville meeting – Steve Cornick

Motion: Jeff Traylor moved to accept the draft minutes from Louisville as is; Holly Bailey seconded. Motion carried (9,0,0,CNV).

4. Review and adjust agenda

Changes to the agenda; Chair Patenaude suggested that the meeting adjourn 10 minutes early, 14:50. Agenda approved (original Agenda attached).

5. Chairman's report – Ray Patenaude

Chair Patenaude would like the members to promote the committee; and moisture measurement in buildings. He suggested a communications portal for members and corresponding members to use between the meetings since most of the meeting is taken up with the business of the TC. Chair Patenaude also suggested that if the TC members approve, the committee would continue to make short (20 minute) presentations at the TC Annual and Winter meetings. He asked for any comments following this meetings presentation by Lew Harriman.

Action item: Chair Patenaude and Steve Cornick will investigate and endeavor to setup a communications portal for the committee (Google groups for example).

6. Research – Lew Harriman (Subcommittee report attached)

Lew Harriman gave a brief background to WS-1566 “Equations to Estimate Evaporation Rates from Wetted Surfaces in Natatoriums and Commercial/Industrial Buildings.” This is considered the final version of the work statement. PES person from TC 1.12 is either Harriman or John Murphy.

Action item: Harriman will take the following comments to TC 8.10 and the WS authors:

- There is concern re: the lack of consulting engineers on the PES/PMS.
- It was suggested a heat and mass transfer person be on the PES/PMS carried.

Motion: The Committee supports WS-1566 as written. Moved by Harriman; Seconded by Paul Schipp; Vote (10,0,0,0)

Other topics

- DOAS design guide waiting to go out to bid in the spring. PMS/PES will have either Harriman or Murphy as TC 1.12 representative for 1565-TRP.
- Alex McGowan went through the four ASHRAE Handbooks searching for moisture related items; he will circulate the list to the committee.
- Larry Elkin’s moisture management in Net Zero buildings/houses was deemed to be not ready for submission to RAC.
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7. Program – Neil Leslie (Subcommittee report attached)

- a. Proposed program for Orlando – The TC has three program items:
 - i. Seminar 28: Monday 9:45 – 10:45 in Panzacola F2 entitled “Operating Cost Implications In Humid Environments,” Chair: Chuck Dale-Derks (co-sponsored with TC 7.8),
 - ii. Forum 6: Monday 11:00 – 12:00 in Panzacola H1/2 entitled “Solving Moisture Problems Created By Energy Retrofits,” Chair: Alex McGowan (co-sponsored with TC 4.4 and 9.1),
 - iii. Seminar 72: Wednesday 11:00 – 12:30 in Panzacola F2 entitled “Lessons from the School of Hard Knocks: The Revised ASHRAE Guide for Buildings in Hot & Humid Climates,” Chair: Neil Leslie
- b. Proposed program for Albuquerque – Plan is to submit two program items;
 - i. Seminar: Odd moisture management issues in dry climates /Leslie
 - ii. Forum: Moisture Management Problems in High and Dry Climates: What Are They and How Can ASHRAE Help /HarrimanProgram items must be submitted by Feb 12th.
- c. Proposed program for Las Vegas – tentative programs
 - i. Seminar: Update on ASHRAE’s Position Document on Mold / Ron Bailey/Rodney Lewis and others?
 - ii. Seminar : New U.S. EPA Guidance for Moisture Control in Buildings / Eric Werling
 - iii. Seminar: The Cool (and not so Cool) Tools for Investigating Moisture Problems in Buildings / Leslie
 - iv. Seminar: Impact of ASHRAE Guidance on Moisture Management in Buildings / Gil Avery

Seminars or forums not approved for the Albuquerque meeting will be re-visited for the Las Vegas meeting.

- d. Proposed program for Montreal
 - i. Moisture problems below grade/ Wahid Maref
- e. TC meeting presentation topics for Albuquerque – Moved from 10a – Chair reports – The current understanding of the CEC procedure for seminar/conferences papers is to develop a topic of regional interest, then to develop tracks under the topic, then to assign track chairs. Therefore it is key to get in touch with the track chairs regarding program items.

Action items: Chair Patenaude and Cornick (as TC 4.2 Chair) will seek clarification of the role of the program subcommittee at TC Chairs breakfast and will report back. Leslie will forward information to session chairs.

Motion: Leslie moves that the TC support the program as proposed; Harriman seconds; motion carried (9,0,0,CNV)

8. Publication and Communications

- a. Website – Regarding the TC web site it to be seems to be OK.
- b. Handbook – Holly Bailey lead a discussion as to whether TC 1.12 should be the cognizant committee for a new chapter or existing chapters or special publications. McGowan conducted a search of the four ASHRAE handbooks for moisture related issues. He will circulate the results to the TC. Participants were encouraged to contact Holly Bailey, if they are interested, to be put on the discussion list regarding a Handbook chapter for TC 1.12. It was suggested that entire committee, voting and non-voting be cognizant of this. Chair suggested that this might be a good use communications tool for working documents (e.g. Google groups).

9. Old Business

- a. ASHRAE's Mould position documents. Rodney Lewis gave a brief history of the current documents; a committee was established to re-up the document, every 2years. The new document has passed 7 to 1. The primary problem is the references and the secondary problem is the tone. Lewis recommended that the committee vote against it until it has been cleaned up. The impact in Lewis' opinion is that the document is adverse and will have negative impact on members. The document has left the project committee stage and has been submitted to Tech Council – if we are the cognizant committee, we need to be aware.
- b. Humidity control standard – Harriman reported that there was nothing to report.

Action item: Chair will track the mould position document and report back to the committee.

Action item: Lewis will give a mini-presentation to the committee on the mould position document in Albuquerque.

9. New Business

- a. Mini-presentation – Harriman gave a short presentation of mould problem in health facilities in Malaysia.
- b. EPA Moisture control guidelines – EPA began trying to develop guidelines for moisture management in buildings about 4 years ago. Harriman was involved as editor on HVAC side. Don Gatley, plus many other ASHRAE people, has been involved. The document is almost ready for publication; it has been ready since Feb. 2008. It needs to be edited; there was a suggestion that ASHRAE could print it as joint publication as a possibility.
- c. A brief discussion was held on alternative meeting dates. Due to many conflicts consensus was to retain status quo.

Action item: Chair Patenaude will propose a forum on the EPA guidelines; Patenaude moderator.

10. Adjourn – Chair adjourns the meeting at 14:50

Next meeting Albuquerque New Mexico, Saturday June 26th

Action Items – January 2010

WHO	ITEM	STATUS
Lew Harriman	Send TC comments to TC 8.10 and the 1566-WS authors.	
Steve Cornick, Ray Patenaude	Investigate and endeavor to setup a communications portal for the committee.	
Steve Cornick, Ray Patenaude	Seek clarification of the role of the program subcommittee at TC Chairs breakfast and will report back.	Done. CEC has no clarification as to the role of the program subcommittees in the current situation. Continue with status quo. Communication with the track Chairs is key.
Neil Leslie	Forward information to proposed session chairs.	
Ray Patenaude	Track the mould position document and report back to the committee in Albuquerque NM.	
Ray Patenaude	Propose a forum on the EPA guidelines; Patenaude moderator.	
Rodney Lewis	Give a mini-presentation to the committee on the mould position document in Albuquerque.	
Alex McGowan	Circulate list of moisture related topics in the four ASHRAE Handbooks	
All TC 1.12	Check website	

Minutes prepared by S. Cornick

Agenda
TC 1.12 – Moisture Management in Buildings
Winter Meeting 2010 – Orlando

- 1. Call to order – Ray Patenaude – Chair**
- 2. Self-Introduction of members and guests**
- 3. Approval of minutes from Louisville meeting – Steve Cornick**
- 4. Review/adjust agenda – Ray Patenaude**
- 5. Chairman’s report – Ray Patenaude**
 - a. Communications from Chairman
- 6. Research – Larry Elkin**
 - a. Vote of support – Pool evaporation work statement (WS-1566, developed by TC 8.10)
 - b. Other research topics
- 7. Program – Neil Leslie**
 - a. Programs at the Orlando meeting
 - b. Proposed programs for Albuquerque
 - c. Proposed programs for Las Vegas
- 8. Publications and communications – Ray Patenaude**
 - a. Website – John Murphy
 - b. Handbook Holly Bailey
- 9. Old Business**
 - a. Status of mold position document – Rodney Lewis
 - b. Proposed ASHRAE standard for humidity control – Lew Harriman
- 10. New Business**
 - a. TC meeting presentation topics for Albuquerque – Ray Patenaude
 - b. Mini-presentation – Lew Harriman – Overcooled clinics in Malaysia
 - c. EPA Moisture Control Guidelines for Buildings – Lew Harriman
 - d. Alternative meeting times – Ray Patenaude
- 11. Adjourn**

TC 1.12
Research Subcommittee Report
2010 ASHRAE Winter Meetings (Orlando, FL)
Submitting by Lew Harriman for Larry Elkin (Chair)

Lew Harriman gave the research subcommittee report, in place of the Chair, Larry Elkin, who was unable to attend the winter meeting.

Two items of substance to report and discuss:

1. Status of 1565-TRP: Development of the ASHRAE Design Guide for Dedicated Outdoor-Air Systems

Sponsoring TC: 8.10 (Mechanical Dehumidification Equipment and Heat Pipes)

Co-sponsoring TCs: 1.12 (Managing Moisture in Buildings), 5.5 (Air-to-Air Energy Recovery), 8.12 (Desiccant Dehumidification Equipment and Components)

- As a reminder, each TC listed above voted to approve and co-sponsor this work statement at the June 2009 meetings in Louisville.
- In October 2009, the work statement was approved by the ASHRAE Research Administration Committee (RAC).
- However, due to limited funds available for ASHRAE Research at that time, it was *not* sent out for bid during the Fall 2009 bidding period.
- Hopefully, RAC will be able to send this project out for bid during the Spring 2010 bidding period (March 2010). If so, work on the project will likely begin in Fall 2010.

2.Status of 1566-TRP: Equations to Estimate Evaporation Rates from Wetted Surfaces in Natatoriums and Commercial/Institutional Buildings

Sponsoring TC: 8.10 (Mechanical Dehumidification Equipment and Heat Pipes)

Co-sponsoring TCs: 1.12 (Managing Moisture in Buildings), 8.12 (Desiccant Dehumidification Equipment and Components)

- As a reminder, each TC listed above voted to approve and co-sponsor this work statement at the June 2009 meetings in Louisville.
- The work statement has been extensive re-worked per the instructions and concerns of RAC. The PMS now requests that each co-sponsoring TC vote to approve the revisions, so that RAC will understand that their concerns have been addressed.
- The revised work statement was circulated to all voting members prior to the main meeting.

TC 1.12
Program Subcommittee Report
January 23, 2010
Submitted by: Neil P. Leslie, P.E. (Chair)

Orlando programs

Seminar 28 Monday 9:45 – 10:45 in Panzacola F2 entitled “Operating Cost Implications In Humid Environments,” Chair: Chuck Dale-Derks (co-sponsored with TC 7.8)

Forum 6 Monday 11:00 – 12:00 in Panzacola H1/2 entitled “Solving Moisture Problems Created By Energy Retrofits,” Chair: Alex McGowan (co-sponsored with TC 4.4 and 9.1)

Seminar 72 Wednesday 11:00 – 12:30 in Panzacola F2 entitled “Lessons from the School of Hard Knocks: The Revised ASHRAE Guide for Buildings in Hot & Humid Climates,” Chair: Neil Leslie

Program activities planned for Albuquerque, Las Vegas, and Montreal are as follows:

Albuquerque Summer 2010 (June 26-30) Theme: Energy Efficient System Design for High Elevations and Dry Climates

Seminar entitled “Odd Moisture Management Issues in Dry Climates”

Chair: Neil Leslie

Bill Rose – Roof Problems

Holly Bailey – Swamp Coolers

Andreas Holmes – Low Humidity Effect on Humans

Forum entitled “Moisture Management Problems in High and Dry Climates: What Are They and How Can ASHRAE Help?”

Chair: Lew Harriman

Idea from Chicago Meeting not further considered: Wahid Marif Seminar Suggestion: “Moisture Problems below Grade”

Due date for Seminar and Forum submissions for Albuquerque is February 12, 2010. Program tracks include

Track 1 What Is Sustainable Anyway?

Track 2 Energy Facts and Simulation
Track 3 Ventilation Systems
Track 4 Refrigeration for the Future
Track 5 Central Plant Systems
Track 6 BIM/CAD/Paper and Pencils
Track 7 Energy Conservation vs. New Generation
Track 8 Living with HVAC&R Systems
Track 9 High Efficiency HVAC Systems
Track 10 Professional Skills
Track 11 Data Center and High Density Cooling
Track 12 Unassigned

Track 8 is a possible fit for the proposed programs.

Las Vegas Winter 2011 (January 29–February 2) Theme: Zero Energy Design

Seminar entitled “Update on ASHRAE’s Position Document on Mold”

Chair: Ron Bailey

Rodney Lewis and others?

Seminar entitled “New U.S. EPA Guidance for Moisture Control in Buildings”

Chair: Eric Werling

Terry Brennan

Joe Lstiburek

Lew Harriman

Seminar entitled “The Cool (and not so Cool) Tools for Investigating Moisture Problems in Buildings”

Chair: Neil Leslie

Lew Harriman

Holly Bailey

Idea from Chicago meeting: Seminar entitled “Impact of ASHRAE Guidance on Moisture Management in Buildings”

Chair: Gil Avery

Seminars or forums not approved for the Albuquerque meeting will be re-visited for the Las Vegas meeting.

Due date for Seminar and Forum submissions is August 6, 2010. ASHRAE has a paper option entitled Conference Paper, a shorter, single-blind review paper. Unsolicited technical papers are still an option

for poster sessions. Due date for Conference Paper abstracts and Technical Papers for the poster session is April 9, 2010.

Montreal Summer 2011 (June 25 – 29)

Seminars or forums not approved for the Las Vegas meeting will be re-visited for the Montreal meeting.