

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING
ENGINEERS, INC.
1791 Tullie Circle, N.E./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 3.6 DATE January 24, 2008

TC/TG/TRG TITLE Water Treatment

DATE OF MEETING January 22, 2008 LOCATION New York, NY, USA

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Bill Pearson, Chair	2006	Sig Ghelin, IVM	2005	Paul Lindahl
Michael Patton, Vice Chair / Sec	2006	Sarah Ferrari, Research	2006	Janet Stout
Michael Adams, Handbook	2005	Clive Broadbent, IVM	2004	Jon Cohen
Ron Wood	2006			Philip Yu
Frank Morrison	2007			Al Spence
Dick Miller	2005			John Lane
Bill McCoy	2004			Don Fenton, RAC
Mark Hodgeson	2004			Sidney Parsons
Scott Mayes	2007			
Chuck Sanderson	2007			
Pat Graef	2004			

Others present: Sang Lee, Phil Vella, Henry Becker, David McLaghlan,

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

TAC Section Head:	Wayne Reedy
TAC Chair:	Craig Wray
All Committee Liaisons As Shown On TC/TG/TRG Rosters:	Nancy Mitchell-Veeck, Randy Schrecengost, Piotr Domanski, Kenneth Fulk, Rex Noble, Sam Cummings
Manager Of Standards Manager Of Research & Technical Services	Claire Ramspeck Mike Vaughn



**Minutes of the New York, NY, USA
TC3.6 Water Treatment Meeting held on January 22, 2008**

Note: These draft minutes have not been approved and are not the official approved record until approved by this committee.

Meeting Location: Hilton, Morgan Suite

Scope: This technical Committee is concerned with water treatment for building water systems (except sewage drainage systems), and the impact of water treatment on building operations and maintenance, water and energy efficiency, human health and water resource conservation in the application of those systems.

Preliminaries [B. Pearson]

The Chairman, Bill Pearson, called the meeting to order at 1:12 PM.

Attendance was taken. Of the 13 voting members, nine were initially present, constituting a quorum. There were 12 other attendees at the meeting.

The Agenda was reviewed: *Motion by M Adams: Approve Agenda as presented.* Second by S Mayes. No discussion. **Motion carried 8-0-0 CNV** (chair not voting – Chair records vote only in case of desired emphasis or to break ties)

The minutes of the Long Beach meeting were presented for review.

Motion by M Patton: Approve the Long Beach Minutes as presented. Seconded by S Mayes. No discussion. **Motion carried 8-0-0 CNV.**

Pat Graef joined the meeting bringing the VM count to 10.

ASHRAE Liaison Reports

No Liaisons present to report.

Membership [B. Pearson for D. Geary]

The membership rolls required an emergency roster change/correction after the Long Beach meeting, C Sanderson and F Morrison were missing from the roster and added as VM effective immediately. Scott Mayes was added to replace Dave Geary, who has resigned due to his inability to attend recent and future meetings.

The changes to the roster for July 1, 2008 are as follows:

- Rolling off as VM are Graef, McCoy, Hodgson, Ferrari, Fields. All will be added as CM.

- Rolling off as IVM is Clive Broadbent
- Coming on as VM are T Keane, J Lane, J Stout, J Cohen, A Spence, P Lindahl, P Yu, L Shapiro
- Added to CM are H Becker, K Flamm, and Phil Vella.

This will give the committee 16VM, 1 IVM, 17 CM.

Members are requested to update bios on the ASHRAE website. Frank Morrison has agreed to become Membership sub chair to assist the Chair with the process of recruiting new members and the administration of the membership rolls.

Handbook [Mike Adams]

Handbook Chairs Meeting: Ongoing point of emphasis continues to stress that the HB needs to be readable and references need to be validated and current. Any changes to the CD/electronic version of the chapter must be in each year by Feb 1. More graphics, links, and tables in electronic form are recommended.

Much discussion was held about the process of HB revision. It was agreed that the HB should be continually updated each year making the print process revisions easier. The next print version release is 2011.

Links to HB text will be sent via email to those interested in participating in revisions and updates.

Research [M. Patton for S. Ferrari]

At the RAC Sub Chair meeting, the importance of having our Research Liaison, Piotr Domanski, review all RTARs or Work Statements will smooth the process and enhance potential for approval since the liaisons understand what the RAC is looking for and can help revise and edit in advance of submission.

1307 RP: Fill Removal and Disinfection for the control of legionella bacteria. This project is under the auspices of TC3.6, with TC 8.6 co-cognizant. The project has concluded without a final report.

1361 TRP: Biological control of non-chemical water treatment devices. Electronic ballot to recommend the research team from the University of Pittsburgh was sent out in November, and the results were 13-0-0, with two unresponsive. The TRP will be presented to RAC and TAC at this meeting for approval and funding.

RTARs are due March 3, 2008 for consideration this spring.

RTAR on Impact of Supply Water Filtration on Building Water Systems may be resubmitted. RTAR was “returned” as being outside the scope of TC 3.6. The new TC scope approved by TAC at Long Beach now puts the subject of the RTAR within our scope. T Keane is champion of this RTAR.

RTAR on Zero Bleed technologies will be authored by C Sanderson.

Please see the attached research report for other details.

Programs [B. McCoy for T. Keane]

2008 Summer meeting in SLC. Program theme is “Building Performance.” The key date is Feb 8 for program submission.

SLC Programs are:

Motion by S Mayes: Resubmit Seminar titled “ASHRAE Guideline 12 becomes a Standard” – with joint sponsorship with EHC and Committee #1 seminar ranking. M Patton to chair. Second P Graef. Discussion: S Parsons suggested informing SPC188P of the seminar and avoid ANSI complications with perceived circumvention public comment procedures. **Motion Carried 10-0-0 CNV.**

Forum

Motion by M Patton: Submit a forum titled “Water reuse opportunities for sustainable buildings” to be moderated by J Cohen, rated #1 forum. Second by M Adams. **Motion Carried 10-0-0 CNV.**

Forum

Motion by S Mayes: Submit forum titled “Practicability for zero blowdown for cooling system water treatment” to be moderated by C Sanderson, rated #2. Second by F Morrison. **Motion Carried 10-0-0 CNV.**

Chicago, 2009:

January 2009 Chicago theme is “Sustainable Urban Design” the previously authorized transaction titled “Field Evaluations of Non-Chemical Water Treatment Devices” has a deadline of April 4 2008 for papers. M Patton reported for L Shapiro that progress toward the submissions is good with three or possibly more commitments for papers.

C Sanderson suggested that a potential seminar on Seminar on Zero Blowdown modeled after the Forum could present a good Seminar topic for Chicago.

See attached report from T Keane for further updates on program ideas.

WEB-Site [Frank Morrison]

Frank will inquire about a website tool for secure access to information such as Rosters and emails addresses in a member only section.

Web site is up to date. If members of sub-committee chairs have any materials they wish to include on the website, please either talk to Frank about posting options or get those materials to him for inclusion in website.

Morrison suggested that all interested parties on TC 3.6 activities register email notifications with the ListServe to automatically get updates.

Old Business:

None

New Business:

Motion by R Miller: That TC 3.6 establish a liaison to SPC191P: Efficient use of water in buildings” and further that the committee designate M Patton as Liaison. Second by M Hodgson Limited discussion. **Motion carried 10-0-1 CV (Chair Voting), Patton abstaining.**

Motion by C Sanderson: That TC 3.6 establish a liaison to SPC189.1P: High performance Green Buildings and further that the committee designate S Mayes as Liaison. Second by M Adams. Limited discussion. **Motion carried 10-0-1 CV, Mayes abstaining.**

The chair advised the next meeting would be in Salt Lake City, June 24, at 1:00pm. Room location to be determined.

Adjourn

Motion by M. Patton – Motion to adjourn. Second by B McCoy.
The meeting adjourned at 2:55 PM.
Respectfully submitted,

M. Patton, TC3.6 Vice Chair / Secretary

ASHRAE TC 3.6

Long Range Research Plan

MPP 1/30/08 **NYC Update of Research Subcommittee**

TC Rank	Status	Topic	Comments	Champion
1	RP	1361. "Biological Control in Cooling Water Systems using Non-Chemical Water Treatment Devices"	RAC to review TC recommendation in NYC.	PES
2	RTAR	Impact of Supply Water Filtration on Building Water Systems	In light of TC scope change, TK and SLF to work on resubmission.	Keane/Ferrari

Bring your ideas to the table... \$\$ Think Big \$\$... Pro-research environment right now.

Possible Future Topics				Champion
		On-line, Real-time Biological Monitoring	Was Forum topic for winter 2006 meeting: "Is real-time biological monitoring for cooling water systems feasible?" On hold for now-currently too \$\$.	Hodegeson
		Applications for Monochloramine in Cooling Water Systems	Barry withdrew RTAR since CDC funded this on their own Potential for future research	Fields

		How Does the Level of Suspended Solids Affect Fouling?	Effect on fill pack, enhanced condenser tubes...Address corrosion, scale, biological activity. Update - get info on studies done at Penn State by Ralph Webb	
		What are the increased microbiological risks associated with use of gray water in cooling water systems?	Developed after Forum on water reuse at Quebec City	
		Investigate Bio-active Filtration		
		Zero Bleed technologies	C Sanderson to champion RTAR	Sanderson
		Utilizing Reverse Osmosis on Bleed water for reuse in tower make-up as water conservation tactic	Coming need in Southeast due to severe regional drought	Adams
		Controls and Automation	More urgent given the status and direction of SPC188P	

Deadlines for RTAR and WS submission are on May 15, Aug 15, Dec 15

Program Plan

Date	Winter	Annual
2007	Jan 27-31 Dallas	Jun 23-27, Long Beach, CA
2008	Jan 19-23 New York	Jun 21-25, Salt Lake City, UT
2009	Jan 24-28 Chicago	Jun 20-24, Louisville, KY
2010	Jan 23-27, Orlando, FL	
2011	Jan 29-Feb 2, Las Vegas	

2008 Winter New York Conference theme Safe and Healthy Buildings

Rank #1

- Seminar - ASHRAE Legionella guideline 12 becomes a Standard – what does it mean you
 - Joint Seminar TC 3.6 and EHC
 - Moderated by Mike Patton (3.6) and Bill McCoy (EHC)

Rank #2

- Forum - “Water Reuse Opportunities for Sustainable Buildings”
 - moderated by Jon Cohen
 - The only large constituency that uses a lot of alternative water is Asia where seawater is used on institutional cooling towers.
 - Grey water is used in Industrial
 - Tampa uses wastewater in cooling towers.
 - Institutional building can reuse boiler blowdown or condensing water.
 - Cogeneration might be interested as cosponsor.
 - Big deal in New York

Rank #3

- Forum – Practicability of Zero Blowdown for Cooling system water treatment
 - Moderated by Chuck Sanderson

2008 Summer Salt Lake

February 9, 2008 Program Submission Deadline
March 14, 2008 Notification of Decision on Proposed Program
May 7, 2008 Upload of Program Presentations Begin
June 11, 2008 Deadline for Uploading Program Presentations
June 21, 2008 Speaker's Lounge Opens On-site
June 22, 2008 Technical Program Begins

Seminar Water Reuse - Mike Adams Chair

- Rainwater recapture is in different category than grey water. Just call it water reuse.
- Risk Characterization
- Building water cooling towers.
- Grey water forum was done in Denver by Mark Hodgson
- Wayne Michellitti Case Studies
- Roof Top Gardens
- RO for water reuse (Mike Adams)
- Alternative Water Use – Green Water and LEED

Seminar moderated by Tim Keane on **Practical Approach to Green Water Systems**

- Tim Keane and Barry Fields to research on practical application for Bacteria monitoring in other industries. Research to gather data on whether a forum or seminar is justifiable at a future meeting.
- Suggestion and discussion for a Seminar on field testing for bacterial monitoring for system microbiological control and LB control as part of HAACP process. Barry Fields to/may chair such a seminar. Is there a place where we could get interest from another industry that is interested? NASA (Paul) Pharmaceutical Microelectronics. Food. Poultry Produce Future interest not near term planning. To try to draw out technology we should investigate places where we could pose the question.
 - Australia requires monthly Legionella testing for plate counts
 - Standard for measuring biofilm
 - Correlating ATP to Fouling Factors
 - ELISA binax
 - Real time PCR
 - Smart holograms
 - Is real time needed for process control? Simple daily ATP or other testing as part of process control.
 - Real time presently exists for ORP and oxidizers but not for non-oxidizers.

Seminar EHC wants to work with us on cosponsoring a seminar.

- Co-cognizant – Bill McCoy
- Legionella – Feedback from forum interests or issues items such as
 - Cost effective implementation of HAACP
 - Implementation of Standards
 - Risk characterization

Forum - Water Treatment Issues in Low Flow Chillers

Industry is pushing that way for variable primary which has big opportunity for energy savings.

Industry is all about energy savings.

1. issue in swedge units (Mike Adams)
2. longer tubes, lower flow rate.
3. Enhanced tubes and water treatment.

January 2009 Chicago Theme sustainable urban design

Deadline for papers is April 4, 2008

ASHRAE Topics for papers and programs include:

- Energy conservation
- Indoor environmental quality
- Application of ASHRAE guidelines to achieve high-performing sustainable results
- International sustainability efforts

Transaction on NCD's

Titles

Option 1 – A detailed technical review of Field Experiences of non-chemical water treatment methods (agreed as preferred title)

Option 2 - Technical review of Field evaluations with non chemical water treatment; impact on energy efficiency and water use.

Option 3 - A detailed technical review of NC water treatment applications

Option 4 - Impact of nonchemical water treatment on building sustainability – with a minimum of 2 papers or up to 3.

- Field experience with NCDs
- Peer reviewer transaction level event –

Forum – Practicability of Zero Blowdown for Cooling system water treatment