



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 **Sept 5, 2014**

TC/TG/TRG TITLE **Water Treatment**

DATE OF MEETING **July 1, 2014**

LOCATION **Seattle, Washington**

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Frank Morrison (Chair)	2013	Al Spence	2013	Jeremy Stokes – CM (Webmaster)
Sarah Ferrari (Vice Chair)	2013	Tim Keane	2012	Leon Shapiro -CM
Dan Weimar (Handbook Chair)	2012	Claressa Lucas	2012	Michael McDonald -CM
Bill Pearson (Membership Chair)	2010	Scott Mayes	2013	Alain Trahan -CM
Michael Patton (Research Chair)	2012			Patrick Racine -CM
Henry Becker	2013			Jon Cohen -CM
Helen Cerra	2013			Michael Schmeida -PCM
Allyn Troisi	2013			Ted Li
Paul Lindahl	2013			Dave White
Dick Miller	2010			Beth Schmidt
Janet Stout	2013			John Fordemwalt
Ron Wood	2011			Joe Hannigan
				Mark Pfeifer

DISTRIBUTION

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

TAC Section Head:	Jay Kohler
TAC Chair:	Eric Adams
All Committee Liaisons As Shown On TC/TG/TRG Rosters:	Stephen Piccolo, Mark Spatz, Francis Mills, Darin Nutter
Manager Of Standards	Malcolm D. Knight
Manager Of Research & Technical Services	Mike Vaughn

Reply To: Frank T. Morrison
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Chair TC 3.6

Or

Sarah Ferrari
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Vice Chair TC3.6

TC 3.6 MEETING Minutes

Date/Time: ASHRAE TC 3.6 Meeting, Tuesday July 1, 2014 1:00 p.m. – 3:30 p.m.

Room: University (4, Sheraton)

Note: *TC3.6 Handbook / Program / Research Subcommittees*

Date/Time: Sunday, June 29 3:00 p.m. – 5:00 p.m.

Room: Greenwood (3, Sheraton)

Scope:

Technical Committee 3.6 is concerned with water treatment for building water systems including scale, corrosion and microbiological control (except sewage drainage systems) and the impacts of water treatment on building operations, maintenance, sustainability, energy efficiency, human health, and water resource conservation.

Agenda:

1. CALL TO ORDER

At 1:03 PM by the Chair.

2. ROLL CALL & INTRODUCTIONS

Members and guests introduced themselves and their affiliations, signing in on the sign-in sheets provided.

3. REVIEW OF AGENDA

F. Morrison, Chair, recognized Tom Watson, Chair of SPC188P. Watson is hopeful that the 4th SPC188P Public Review Draft will be approved at this meeting. He encouraged interested parties to get involved by attending meetings or participating in the Public Review. He cautioned that Draft Standards are subject to change and are for Committee use only. Please decline requests to speak about Draft Standards.

No other agenda changes.



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4. APPROVAL OF MINUTES (*2014 Winter Meeting, New York City, NY*)

Corrections made to the New York Meeting minutes – May 6, 2014 was 2016 on the cover page.

Motion to approve minutes as corrected by Lindahl, 2nd by Troisi
Approved 10-0-0 CNV.

5. REVIEW OF SECTION 3 BREAKFAST – FRANK MORRISON

Key items of interest:

ASHRAE is presenting awards for outstanding TCs, one per section, to be awarded at the winter meetings.

Hightower award nominations are due September 1.

ASHRAE requests volunteers to review technical papers and conference papers;

Morrison distributed a sign-up sheet for those who wish to be contacted.

CEC is seeking program track ideas for future meetings.

F.Morrison welcomed new members and guests and encouraged all to please review the ASHRAE code of ethics, which can be found on the agenda.

6. SECTION 3 CHAIR REVIEW – *Dr. William Murphy PE PhD*

Dr. William Murphy, the outgoing Section 3 Chair, thanked TC 3.6 members for being active in working for the Committee and for ASHRAE. He encouraged recognition of exceptionally engaged members by nomination for the Hightower award.

The TC congratulated Dr. Murphy on his recent award as well as thanked him for his support of the Committee over the years.

Our new Section 3 liaison as of July 4, 2014 is Jay Kohler of Johnson Controls.

7. MEMBERSHIP REPORT – BILL PEARSON

As of July 4 2014, until July 1 2015, the TC has 17 VM.

Rolling off after the June Seattle meeting are:

Bill Pearson
Sarah Ferrari
Dick Miller

Rolling on after the June Seattle meeting are:

Todd Cornwell
Clive Ling
Bill McCoy

Leon Shapiro
Scott Mayes

Patrick Racine joined the committee as a CM. Michael Schmeida has joined as a PCM. Others interested in joining the committee should speak to Bill Pearson regarding being added as members.

8. LIAISON REPORTS – Relevant Codes and Standards Reports

8.1. ASHRAE Standard 188P

Report given by Tom Watson. See “Agenda” section above.

8.2. CTI Standard 159

P. Lindahl reported that during the last web meeting the Standard 159 Committee decided that consensus would not be forthcoming on key issues. The Committee acted to change the document format from a standard to a guideline. The intent is to meld the standards work with the existing guideline.

8.3. Standard 189P

M.Schmeida reported there was some work on the heat rejection equipment minimum efficiency table to bring it in line with the equivalent table in Standard 90.1 but no other significant changes to the working document of interest to the TC.

8.4. Standard 191P

A. Troisi reported that the last few comments (of 278) from the first Public Review are being addressed. The committee plans to submit a 2nd Public Review Draft for full review in September. The document is still on track to be a standard, with the expectation that Standard 189P will reference 191P and will include ‘stretch’ targets.

8.5. ASHRAE Standard 90.1

P. Lindahl reported that some of the target cities to be used by the Chiller Plant Working Group (CPWG) will be changing, but the list is not yet finalized. This will affect climate and cost data. Data provided to the working group by TC 3.6 and TC 8.6 must be revised, including equipment selections and water treatment costs.

The MSC is considering a maximum approach for cooling towers using the number of cooling degree days rather than using wet bulb directly per the formula currently listed in Appendix G of Standard 90.1. This issue will be discussed by the TC 8.6 Standards Committee.

The shift towards using a system approach for energy savings calculations and efficiency improvement is gaining momentum. This can range from evaluation of a subsystem to a whole building basis. As part of this effort, there is a need for a standard way to communicate cooling tower performance maps for use with water-cooled chillers.

8.6. CEC Title 24



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P. Lindahl reported that the CEC proposal for next cycle is modelled after Standard 90.1. The equipment efficiency requirements, including those for evaporative condensers, were adopted from 90.1 2013. The legislation is an ongoing process with regular stakeholder meetings. Interested persons can register online through the CEC website to receive notices on the Title 24 stakeholder process.

8.7 ASHRAE Legionellosis Position Document

This Position Document falls under the purview of the Environmental Health & Safety Committee and will expire in January 2015. Dick Miller was invited to form and chair a committee to update the document. Tech council has recommended some membership adjustments for balance and is expected to approve membership at this Seattle meeting. D. Miller expects to have a substantial draft prepared by the Chicago meeting. The final document must be approved by the ASHRAE Board.

9. The Chair took a moment to recognize Al Spence for his Distinguished Service Award. Congratulations and Thank You to Al!

10. HANDBOOK - DAN WEIMAR

D. Weimar thanked the Handbook Subcommittee for their hard work. Frank and the TC thanked Dan and the Handbook Subcommittee for their commitment to getting the revision accomplished!

The handbook chapter revision for 2015 was approved by the TC by letter ballot on April 21, 2014. 16-0-0 CNV. At this point there have been no comments received back from ASHRAE Staff. D. Weimar and M. Patton will review the proof prior to final release.

F. Morrison offered a TC 3.6 Handbook Sustainability Strategy for the 2019 edition and welcomes feedback. He recommends a solution-oriented approach to water treatment. TC 3.6 is seeking a new Handbook Subcommittee Chair for this draft which is due in 2018.

M. Patton, a member of the ASHRAE Handbook Committee, noted that the online version of the Handbook is a good value as it includes a 1-year license to all 4 volumes in their most current form, while the CD only includes one volume per year.

11. RESEARCH - MICHAEL PATTON

There are 63 active ASHRAE research projects totaling \$10.8 M. There are no projects on hold due to funding. New project start as others are completed.

RTAR request forms have been simplified. It is not difficult to get a project going. TC 3.6 has three proposed RTARs.

1. Biofilm study. The focus could be on health and safety, on corrosion and heat transfer efficiency, or on research leading to development of a standard monitoring method. Depending on the focus there is interest within CTI and AWT as potential co-sponsors. M. Patton will have something for review at the Chicago meeting.

2. Michael Cunningham proposal. This currently proprietary research must be made public to get funding.

3. Impact of nutrient load on biofilm. This topic requires refinement. The goal is to develop guidance for cooling tower operation. M. Patton, H. Becker, and T. Cornwell agreed to work on this.

An open item from the NYC meeting is the need to classify water, specifically recycled water, based on measurable criteria. M. Patton, H. Cerra, and M. Schmeida will discuss what form this work might take, possibly a program or an ASHRAE Journal article.

Todd Cornwell has volunteered to Chair the Research Subcommittee, beginning July 4 2014.

The TC also thanked Mike Patton for his active service as Research Chair. The TC also appreciates Mike's offer to provide support and advice to the new Research Chair.

12. PROGRAM – JON COHEN and LEON SHAPIRO for SCOTT MAYES

Chicago Seminar and Forum applications are due Aug 11.
Atlanta Conference Paper Abstracts are due Sept 22.

119 of 216 programs were accepted for the Seattle meeting. L. Shapiro commented that Conference Papers are much more likely to get accepted and are not much more effort, just more planning.

TC 8.6 requests that TC 3.6 co-sponsor two seminars:

1. *"Alternative sources of recycled water in evaporative cooling systems, practical considerations of what SHOULD be a good idea."* (8.6, 5.7, 3.6)
2. *"Effects of Codes and Standards on Cooling Tower Energy and Water Efficiency and System Operations."*

Motion to approve by Lindahl, 2nd by Spence
Approved 12-0-0 CNV

The proposed Workshop *"Variable Flow Condenser Systems, Variable Consequences"* was not accepted for Seattle. J. Cohen recommends resubmitting as a Seminar for Chicago. M. Patton and F. Morrison to present. B. Pearson to moderate.

Motion to approve by Weimar 2nd by Cerra
Approved 12-0-0 CNV

Tracks not set for Orlando yet. TCs can suggest tracks for future meetings. L. Shapiro suggests we work with 8.6 and 5.7, 6.9 (thermal storage), on common interests. Note that Track 7 for Chicago is *Design of Energy and Water Efficient Systems*. The complete list of Tracks for Chicago and Atlanta is posted on the TC website.

13. WEBSITE UPDATE – JEREMY STOKES

Stokes reminded the committee that the TC 3.6 Website continues to be a good source of current information including meeting schedules and locations, meeting minutes, and the current roster. Stokes requested that subcommittee chairs send him pertinent information for the website. <http://tc36.ashraetcs.org/>.



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F. Morrison to request an ASHRAE listserv for the TC.

14. SOCIAL NIGHT REPORT – BILL PEARSON

TC 3.6 Social night was held Monday June 30 at the Edgewater's SIX | SEVEN Restaurant at Pier 67 on Elliot Bay. Those attending enjoyed excellent food, spectacular views and, as always, engaging company. The TC thanked the Seattle Social Night Chair, Bill Pearson, for all of his efforts making this a memorable evening.

J. Cohen and H. Becker volunteered to coordinate a venue for the Chicago meeting.

15. OLD BUSINESS

None.

16. NEW BUSINESS

Morrison requested (and received) volunteer reviewers for his ASHRAE journal article, Water Use and Cooling Towers. Morrison will send the draft to the volunteers prior to submitting to ASHRAE.

17. DATE AND LOCATION FOR NEXT MEETING

*Winter Conference – Chicago, IL – January 24 to January 28 2015
TC 3.6 Meeting January 27*

18. ADJOURNMENT

A motion for adjournment was made by Pearson and seconded by Weimar.
Motion approved 13-0-0 CNV.