



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. 3.6 DATE May 22, 2017

TC/TG/MTG/TRGTITLE Water Treatment

DATE OF MEETING January 31, 2017 LOCATION Las Vegas, Nevada

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Bill Pearson	2015	Bill McCoy	2014	Jon Cohen – CM
Todd Cornwell	2015	Dick Miller	2015	Clarissa Lucas - CM
Clive Ling	2014	Ron Wood	2016	Tim Keane - CM
Frank Morrison	2015			Dan Weimar - CM
Leon Shapiro	2014			Janet Stout - CM
Helen Cerra	2015			Michael Patton - CM
Henry Becker	2013			Ruffin Tyler - CM
Paul Lindahl	2013			Joshua Ince - CM
Sarah Ferrari	2015			Gary Harbison - PCM
Alain Trahan	2016			Mark Pfiefer
Allyn Troisi	2013			Kristy Vogt
Clive Broadbent	2016			Tyler Anderson
Patrick Racine	2016			Ken Mortensen
				Jay Kohler
				Tom Watson
				Daryn Cline
				Shauna Weis
				Ron George
				Clif McLellan
				Scott Shaffer - CM
				Richard Aykroyd- PCM
				Jeff Ramey - CM

Additional Guests
Joe Wallace
Andrew Ward
Allison Yee

TC 3.6 Management Team	
Chair	Sarah Ferrari
Vice Chair	Helen Cerra
Program	Jon Cohen
Handbook	Michael Patton
Research	Todd Cornwell
Membership	Bill Pearson
Webmaster	Joshua Ince

DISTRIBUTION: All Members of TC/TG/MTG/TRG plus the following:	
TAC Section Head: JayKohler	SH3@ashrae.net
CTTC Liaison: Tracey Jumper Research Liaison: Stephen Kujak Professional Dev. Liaison: JamesBochat Handbook Liaison: Harris Sheinman Standards Liaison: Niels Bidstrup	CTTC3@ashrae.net RL3@ashre.net PDCchair@ashrae.net hba5@ashrae.net SL3@ashrae.net
Mike Vaughn, Manager Of Research & Technical Services	MORTS@ashrae.net



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Sarah Ferrari
sferrari@evapco.com
Chair TC 3.6

Helen Cerra
HelenC@chemtreat.com
Vice Chair TC 3.6

ASHRAE TC3.6 Agenda - 2017 Winter Conference Las Vegas, Nevada USA

Main TC 3.6 Meeting

Tuesday, January 31, 1:00-3:30 PM, Caesars Palace, Forum 1 (Pool Level)

TC 3.6 Handbook / Program / Research

Sunday, January 29, 3:00-5:00 PM, Caesars Palace, Forum 22 (Pool Level)

TC 3.6 Sponsored Technical Program

*Seminar 31: Ref Cooling Water-Saturation Indices: Understanding the Water Balance
When Designing and Operating a HVAC System*

Monday, January 30, 11:00-12:00 PM, [Room TBA]

Scope:

Technical Committee 3.6 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 applications of these systems.



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Main TC 3.6 Meeting Minutes

1. CALL TO ORDER

The meeting was called to order at 1:02 by the Chair.

2. ROLL CALL & INTRODUCTIONS

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

3. REVIEW OF AGENDA

Note was made of typo – Seminar 31. No other changes were made to the agenda.

4. APPROVAL OF MINUTES (2016 Annual Meeting, St. Louis, MO)

P. Racine made a motion to accept minutes from annual meeting in St. Louis. F. Morrison second.

13-0-1 CNV

5. PRESENTATION of George B Hightower Technical Achievement Award –

With great pride Chair awarded George B Hightower award to Paul Lindahl.

6. REVIEW OF SECTION 3 BREAKFAST MEETING – Sarah Ferrari

Chair summarized the Section 3 meeting. Of note, it was emphasized that bias of the speaker will be presented as part of technical program presentations.

Section 3 members will present a mini track at the Long Beach expo.

7. SECTION 3 CHAIR REVIEW – Jay Kohler

Section 3 chair commended the 3.6 committee on social night activities and recognized the quality of TC 3.6 submission work for Hightower award.

He discussed that the Section 3 technical committees would be meeting to try to coordinate activities and submissions.

8. MEMBERSHIP REPORT – Bill Pearson

B. Pearson reviewed membership process and the term of four years.

Stout, Lindahl, Troisi, Becker, and Ferrari are rolling off.

Committee members should inform him if they want to be back on as voting members.



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9 LIAISON REPORTS – ASHRAE / AWT / CTI / OTHERS

9.1 Relevant Codes and Standards Reports

- 9.1.1 ASHRAE Guideline 12 - H. Cerra gave update of progress being made for ASHRAE Guideline 12.
- 9.1.2 CTI Guideline 159 - H. Cerra gave update of the status of Guideline 159.
- 9.1.3 ASHRAE Standard 189P – D. Cline provided an update on the activity of the standard adding that the addendum for water conservation will be more robust and will add how to calculate Cycles of concentration.
- 9.1.4 ASHRAE Standard 191P – A. Troisi reported that there was quorum. It will go out for public review at summer meeting. It will include sections on cooling towers, facility equipment and water balance calculation. The committee discussed the fact that the scope of the standard might not be what it was originally proposed, a basic efficiency standard. D. Cline brought up to TC 8.6 a proposal to send a letter to the Fred Betz, chair of 191. TC 3.6 can cosign. Discussion – Morrison endorses sending letter.
- P. Lindahl made a motion to draft and send letter to chair and appropriate folks expressing TC concerns on 191 and will be sent to the committee for comment. Morrison second 14-0-0 CNV
- 9.1.5 ASHRAE Standard 90.1- P. Lindahl explained exemption for committee and use of CTs with waterside economizer efficiency (will be sent to 8.6).
- Cost model data came from Pac Northwest Labs. They will be coming to TC 3.6 again for water quality and treatment costs for target cities. Pearson can get info from AWT and will spearhead. CT cost side information is confidential. The following offered to help – B. Pearson, J. Ince, D. Weimar and R. Tyler.
- 9.1.6 CEC Title 24 – 2019 stakeholder code proposal includes doubling the minimum efficiency for CTs. The least efficient cooling tower is more efficient than air cooled systems. Proposal does not account for market shifts or consequences. Cooling tower manufacturers have shown good faith by adjusting 90.1 with incremental increases in efficiency requirements in each code cycle. Stakeholder meeting is March 15. Send comments into stakeholder process.
- Note: Subsequent to this meeting, objection letters were submitted by ASHRAE TC 8.6 and others. It is uncertain whether any changes were made to the proposal.
- 9.1.7 DOE proposed fan efficiency rules – The consensus decision of the working group established under ASRAC was that heat rejection equipment should be exempt in US. So far this exemption is holding.
- 9.2 ASHRAE Legionella Position Document Status (*Patton*)**
- Team of H. Becker, S. Ferrari, C. Lucas and B. Pearson are still working on this and hope to complete it in coming months.

10 HANDBOOK – Michael Patton

- 10.1 Handbook Subcommittee Update** –out of cycle revision will refer to 188. Patton's work was not part of online version. It is expected to be online soon.



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- 10.2** Goals for 2018 Edition – Get comments on structure. Those wishing to comment can access online. Becker was looking at structure and will compile an outline by March 1. B. Pearson will send Patton AWT calculator. Patton will lead effort to get pictures and make the content more interesting. Content is due May 2018 for hard copy publication in 2019.

11 RESEARCH – Todd Cornwell

- 11.1** S. Kujak is TC 3 RAC liaison and reported Section 3 is busy on research and all proposals are funded. There is opportunity for more projects. No prioritization. He discussed making all section 3 research projects visible to the section.

11.2 Research project update Work Statement –

11.2.1 Potable Hot Water Temperature research -

EH Council will provide comments and vote by email. EHC can either cosponsor or 3.6 will be responsible. TC6.6 service water heating will get cosponsor. TC6.6 and 188 provided comments to the Work Statement.

The Purpose statement will be enhanced. R. George commented that codes/research is available. ASPE has done research, as well as other organizations that have recommendations for temperature and time exposure data for avoiding scalding. Proposal - evaluation subcommittee include T. Keane, C. Lucas, A. Trahan, C. Ling, B. Pearson and R. George

11.2.2 Biofilm Research –

By June, Cornwell will have an update on definition of state of the art and if there still is a need for research. U of Montana and EPA working together with NSF on biofilm monitoring.

12 PROGRAM – JonCohen

- 12.1** Program at this meeting – Seminar 31, *Cooling Water-Saturation Indices: Understanding the Water Balance When Designing and Operating a HVAC System* was held on Monday, January 31 with presentations by J. Ince and J. Boldt

12.2 Programs for Upcoming Meetings

12.2.1 Program for Long beach, CA June 2017 -T.

Motion by Cornwell to submit an abstract for a seminar on concerns with water treatment when commissioning new buildings/equipment. B. Pearson second. 14-0-0 CNV. T. Cornwell, T. Keane and D. Weimar will present with H. Cerra as session chair.

12.2.2 Program for Chicago, IL January 2018 –

The committee discussed having a debate in Chicago taking the form of a court case dealing with legionellosis. Participants will include plaintiff and defense attorneys. Different options include presenting the case two ways and/or having the audience rule or having one person. J. Stout and T. Keane offered to be attorneys. J. Cohen volunteered to be session chair and could also be defendant. Details to be determined at next meeting.



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13 WEBSITE UPDATE – *Joshua Ince*

J. Ince will update the website with pictures taken at the dinner by B. Pearson.

14 SOCIAL NIGHT REPORT – *Leon Shapiro*

14.1 Many thanks to Leon Shapiro for organizing TC 3.6/8.6 dinner. The 41 people who attended had a very enjoyable time!

14.2 Allyn Troisi will lead social night for Long Beach.

15 OLD BUSINESS – no old business

16 NEW BUSINESS

American Chemistry Council is developing a biocide registration protocol. They are taking stakeholder comments and input for development of a method for approval and registration of biocides effective against *Legionella* bacteria. Anyone interested in being part of this ACC group should reach out to the Chair. Comment was made to review the Handbook to determine if it contains the term "disinfection".

17 DATE AND LOCATION FOR NEXT MEETING

Annual Meeting – Long Beach, CA USA – June 24-28, 2017

18 ADJOURNMENT

Meeting adjourned at 3:05 pm.



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ASHRAE Code of Ethics

(Approved by ASHRAE Board of Directors January 30, 2013)

1.140.001.1 As members of ASHRAE or participants in ASHRAE committees, we pledge to act with honesty, fairness, courtesy, competence, integrity and respect for others in our conduct.

- A. Efforts of the Society, its members, and its bodies shall be directed at all times to enhancing the public health, safety and welfare.
- B. Members and organized bodies of the Society shall be good stewards of the world's resources including energy, natural, human and financial resources.
- C. Our products and services shall be offered only in areas where our competence and expertise can satisfy the public need.
- D. We shall act with care and competence in all activities, using and developing up-to-date knowledge and skills.
- E. We shall avoid real or perceived conflicts of interest whenever possible, and disclose them to affected parties when they do exist.
- F. The confidentiality of business affairs, proprietary information, intellectual property, procedures, and restricted Society discussions and materials shall be respected.
- G. Each member is expected and encouraged to be committed to the code of ethics of his or her own professional or trade association in their nation and area of work.
- H. Activities crossing national and cultural boundaries shall respect the ethical codes of the seat of the principal activity.