



**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 3.6** DATE **January 21, 2013**

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

DATE OF MEETING **January 26, 2012**

LOCATION **San Antonio, Texas**

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Michael Adams (Chair)	2010	Ron Wood	2011	Claressa Lucas - CM
Paul Lindahl	2008	Tim Keane	2011	Frank Morrison (Vice Chair)
Alan Spence	2008	Barry Fields	2009	Alain Trahan
Dick Miller	2010 2009	Pat Graef	2009	Mike Trulear Henry Becker - CM
Jon Cohen	2009			Tim Keane - CM
Janet Stout	2008			Jeremy Stokes - CM
Sarah Ferrari	2010	Bob Walicki (WebMaster)	2011	Dan Weimar (CM - Handbook Chair)
Bill McCoy	2009			Michael McDonald Scott Mayes (Program Chair) Michael Patton (Research Chair)
Bill Pearson	2010 (Membership Chair)			
Leon Shapiro	2008			Scott Shaffer – CM Hal Roth Marshall Zabel Ben Dingel Chris Connolly Allyn Troisi Aaron Rosenblatt Xuan Le Chris Auth Clive Ling Diane Green Dick LeClaire Helen Cerra Dennis Lim

Others present: William Murphy (Section Head)

**DISTRIBUTION**

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

TAC Section Head: **William E. Murphy**

TAC Chair: **Bryan Becker**

All Committee Liaisons As Shown  
On TC/TG/TRG Rosters:  
Manager Of Standards  
Manager Of Research & Technical  
Services

**Nancy Mitchell-Veeck, , Piotr Domanski, Julia Keen, Rex  
Noble, Sam Cunningham, Tim McGinn,  
Claire Ramspeck  
Mike Vaughn**



**ASHRAE**

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**Minutes of the San Antonio, Texas TC3.6 Water Treatment  
Meeting held on June 26, 2012**

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

**Meeting Location:** Grand Hyatt,

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.

**1. Preliminaries**

- a. Call to order at 1:00 pm by Adams
- b. Introduction of members and guests
- c. Attendance list
  - i. Agenda was sent by email prior to the meeting.
  - ii. 10 voting members present, quorum achieved (14 VM total).
  - iii. Sign-in list distributed for the meeting.
- d. Additions to agenda
  - i. None.

**2. Approval of Minutes**

- a. Adams/Morrison sent out draft minutes of the Chicago Winter meeting prior to this meeting.
- b. Adams requested comments / corrections to the Chicago minutes; none received.
- c. Motion to approve minutes by Pearson; second by Mayes; motion passed 9-0-0 CNV.

**3. Review of Section 3 breakfast meeting**

- a. Adams updated the Committee on the Section 3 breakfast meeting.
  - i. Nominations are again being solicited for the Hightower Technical Achievement Award for next year.
  - ii. The registration fee for speakers will be \$95 rather than waived as it had in the past.
  - iii. ASHRAE is implementing a Google calendar.
  - iv. ASHRAE has created a Wiki page for definitions.

**4. Membership (Pearson)**

- a. There are currently fourteen (14) voting members; four (4) voting members will roll off in after this meeting (Lindahl, Shapiro, Spence, and Stout). Four (4) others will roll on to replace them (Rajan, Patton, Mayes, and Morrison)
- b. Pearson encouraged new members to join and for members to recruit other potential members.
- c. Provisional membership is open to anyone who has interest. You can roll on as a corresponding member (CM) after attending a few meetings and obtaining CM status with the current Chair.

## 5. ASHRAE Liaison Reports

- a. Bill Murphy, University of Kentucky, Section 3 Head, reported on ASHRAE activity and thanked the members for their efforts. Murphy also mentioned the nomination process for the Hightower Award.
- b. Pearson gave the AWT liaison report.
  - i. Next AWT conference will be held in Palm Springs in September 2012.
  - ii. AWT conferences strictly cover water treatment issues and membership is currently at 500 firms.
  - iii. AWT has a new guideline on white rust that will be published soon on their website and will be available as a free download.
- c. Lindahl gave the CTI liaison report.
  - i. Standard 159 passed in Committee and is now out for ad hoc (peer) review; the Committee will then need to work through comments and responses. Lindahl anticipates a vote by the CTI Board of Directors at their October 2012 meeting.
- d. Lindahl also reported on progress on ASHRAE Standard 191P – Water Efficiency. The Committee has met three times; SLPS has requested the Committee to complete the draft for public review. This will be a baseline standard; ASHRAE Standard 189.1 will be used for a more “aggressive” approach to water efficiency.

## 6. Handbook (Weimar)

- a. Weimar had to leave San Antonio early due to a hurricane; Adams and the TC wished him safe travels.
  - i. Pearson reported for Weimar
  - ii. Deadline for revisions is April 2014 for the next edition in 2015. Committee met on Sunday to discuss revisions to the corrosion (Patton) and microbiology and LD (Pearson) sections as well as a new section on aluminum boilers.
  - iii. Pearson encouraged members to volunteer to help write and edit the next edition. The ASHRAE Liaison suggested a total re-write of the Chapter but this was rejected by the Handbook Subcommittee.
  - iv. Weimar will put out sections as they are completed for Committee review.

## 7. Research (Patton)

- a. Patton reported that TC8.5, Liquid to Refrigerant Heat Exchangers, has completed a study of fouling in brazed plate heat exchangers. They would like to reach out to other TCs on a project to research fouling in enhanced tubes; a Work Statement has been submitted and approved. Ben Dingle, PMS Chair, is the contact for this study; Patton has Dingle’s contact information. AHRI is interested in this study for their Guideline “E” on fouling factors; Umair Surani is heading up a review of fouling factors in a variety of systems.
- b. RP 1341 RTAR on field study of LD in drift is back from RAC with comments. Many issues must be dealt with such as how to inform the building owner if LD is detected, what territories to cover, etc. In addition, the CDC cannot provide any direct funding for this effort – just training to the investigators on the equipment.
- c. Patton solicited other research ideas from the TC, as there is a low volume of proposals in the pipeline at the current time so chance of funding is above average:
  - i. Nanotechnology disruption of biofilm formation with Clemson University (Stoudt) – Richard Miller is going to work on an RTAR for this topic.

- ii. Lindahl mentioned a study on sessile bacteria count methods with a goal to develop an ASHRAE test standard. Miller and McCoy will assist Lindahl on this.
  - iii. Basin sweepers and LD (Mayes).
  - iv. Design guide on reused water streams – this could be an important resource for ASHRAE members (Ferrari). Keane mentioned other organizations with an interest in this subject – AWWA, Water Reuse Foundation, etc.
  - v. White rust study (Pearson).
  - vi. Field study or literature survey on water quality similar to Seminar 17 (Stoudt); would provide useful information for practitioners.
- d. Mark Spatz is the new Section 3 RAC liaison.

## 8. Programs (Mayes)

- a. Mayes recapped the programs from the past several meetings.
- b. A motion to sponsor a Seminar in Dallas entitled “The First Standards on LD – Why Cringe When You Can Be Prepared?” was made by Pearson and seconded by Cohen. Motion passed 9-0-0 CNV. Volunteers were Pearson for Standard 188P, Stoudt for Guideline 12, and Cerra (or Lindahl) for CTI-159. Deadline for submission of program is August 13, 2012.
- c. Cohen made a motion to co-sponsor a TC8.6 Seminar on Title 24, Standard 191P, Standard 189.1, and IgCC, Pearson seconded; motion passed 9-0-0CNV.
- d. Shapiro reported that two conference papers will be published in Dallas authored by Daryn Cline.
- e. Mayes reported that Seminar 17, *Practical Applications with Storage and Treatment with Using Reclaimed and Harvested Waters in Your Water Conservation Efforts*, was well attended. Mayes moderated and Adams and Weimar presented at the Seminar. However, Mayes reported that the third presenter did not show up for his presentation, which is a black mark on the TC. The Chair and Program Chair will investigate ASHRAE rules concerning this and advise if TC action is called for, such as a letter to the speaker who did not attend the Seminar. Cohen suggested to follow up with future presenters ahead of the meeting to make sure they submit their presentations and are planning on attending the meeting (and if not, suggest a substitute if possible). Mayes will make sure future presenters have back-up speakers.

## 9. Old Business

- a. Hightower Award
  - i. As requested at the previous meeting, Morrison reported that he spoke with Dave Geary (Geary is still on TC3.6 and SSPC 188P) and he is willing to accept a nomination for the Hightower Award.
  - ii. Pearson made a motion to co-nominate with TC8.6 Geary for the Hightower Award; Lindahl seconded; motion passed 9-0-0 CNV.
  - iii. Morrison will fill out the Hightower forms and send to the Chairs of TC3.6 and TC8.6 for submission to ASHRAE.

## 10. New Business

- a. **STD 90.1 and Title 24** (Lindahl)
  - i. Lindahl is TC8.6 liaison to SSPC 90.1. Lindahl provided an update on Standard 90.1 issues.
  - ii. Lindahl reported that AWT and Al Spence are assisting the Standard 90.1 Chiller Plant Working Group with water and water treatment costs which will be used in evaluating air cooled versus water cooled chiller performance. The

CPWG needs costs for water and water treatment in various target cities for the economic study.

- b. **IMC** – Morrison discussed a proposal by the NRDC to the International Mechanical Code (IMC) relative to cooling towers and water treatment. Morrison thanked the TC for their support for the modifications to this proposal.
- c. **Web Site** (Walicki)
  - i. No report as the WebMaster was not present and did not send in an update.
  - ii. The website was only partially updated for this meeting.
  - iii. Jeremy Stokes (Evapco) expressed interest in the WebMaster position.
- d. **Social Night**
  - i. The entire TC, led by the Chair, thanked Scott Shaffer for organizing Social Night in San Antonio with an attendance of 28 (!); a great time was had by all!
  - ii. Adams volunteered to be Social Night Chair for the Dallas meeting.
- e. Patton recommended a TED talk by Bonnie Baesler on bacteria for the TC:

[http://www.ted.com/talks/bonnie\\_bassler\\_on\\_how\\_bacteria\\_communicate.html](http://www.ted.com/talks/bonnie_bassler_on_how_bacteria_communicate.html)

- f. Next TC3.6 meeting will be in Dallas, Texas on January 29, 2012, 1:00 pm to 3:30 pm.

#### **11. Adjournment**

- a. Motion to adjourn by Al Spence, seconded by Stoudt, approved unanimously by voice vote. Adjournment at 3:12 pm.

**Respectfully submitted,**

**Frank T. Morrison**  
**Vice Chair TC3.6**