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**  **June 10, 2013**

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

**DATE OF MEETING**  **January 29, 2013**  **LOCATION**  **Dallas, Texas**

<table>
<thead>
<tr>
<th>MEMBERS PRESENT</th>
<th>YEAR APPTD</th>
<th>MEMBERS ABSENT</th>
<th>YEAR APPTD</th>
<th>EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul Lindahl</td>
<td>2008</td>
<td>Tim Keane</td>
<td>2011</td>
<td>Frank Morrison (Vice Chair)</td>
</tr>
<tr>
<td>Alan Spence</td>
<td>2008</td>
<td>Barry Fields</td>
<td>2009</td>
<td>Alain Trahan</td>
</tr>
<tr>
<td>Dick Miller</td>
<td>2010</td>
<td>Pat Graef</td>
<td>2009</td>
<td>Mike Trulear</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Michael Adams</td>
<td>2010</td>
<td>Henry Becker - CM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Chair)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jon Cohen</td>
<td>2009</td>
<td></td>
<td></td>
<td>Tim Keane - CM</td>
</tr>
<tr>
<td>Janet Stout</td>
<td>2008</td>
<td></td>
<td></td>
<td>Jeremy Stokes - CM</td>
</tr>
<tr>
<td>Sarah Ferrari</td>
<td>2010</td>
<td>Bob Walicki</td>
<td>2011</td>
<td>Dan Weimar (CM - Handbook Chair)</td>
</tr>
<tr>
<td>Bill McCoy</td>
<td>2009</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bill Pearson</td>
<td>2010</td>
<td></td>
<td></td>
<td>Michael McDonald</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Membership Chair)</td>
<td></td>
<td>Scott Mayes (Program Chair)</td>
</tr>
<tr>
<td>Leon Shapiro</td>
<td>2008</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Claressa</td>
<td>2012</td>
<td></td>
<td></td>
<td>Scott Shaffer – CM</td>
</tr>
<tr>
<td>Lucas</td>
<td></td>
<td></td>
<td></td>
<td>Hal Roth</td>
</tr>
<tr>
<td>Michael Patton</td>
<td>2012</td>
<td></td>
<td></td>
<td>Marshall Zabel</td>
</tr>
<tr>
<td>(Research Chair)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others present:</td>
<td></td>
<td></td>
<td></td>
<td>Ben Dingel</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chris Connolly</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Allyn Troisi</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Aaron Rosenblatt</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Xuan Le</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chris Auth</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Clive Ling</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Diane Green</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dick LeClaire</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Helen Cerra</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dennis Lim</td>
</tr>
</tbody>
</table>

**William Murphy** (Section Head)
DISTRIBUTION

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

<table>
<thead>
<tr>
<th>Role</th>
<th>Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAC Section Head:</td>
<td>William E. Murphy</td>
</tr>
<tr>
<td>TAC Chair:</td>
<td>Bryan Becker</td>
</tr>
<tr>
<td>All Committee Liaisons As Shown On TC/TG/TRG Rosters:</td>
<td>Nancy Mitchell-Veeck, Piotr Domanski, Julia, Keen, Rex Noble, Sam Cunningham, Tim McGinn, Claire Ramspeck</td>
</tr>
<tr>
<td>Manager Of Standards</td>
<td>Mike Vaughn</td>
</tr>
<tr>
<td>Manager Of Research &amp; Technical Services</td>
<td></td>
</tr>
</tbody>
</table>
TC 3.6 MEETING Minutes

Date/Time: ASHRAE TC 3.6 Meeting, Tuesday, January 29, 2013, 1:00 PM - 3:30 PM

Room: City View 1, Sheraton Hotel, 4th floor

Note: TC3.6 Handbook / Program / Research Subcommittees
Date/Time: Sunday 3:00 PM to 5:00 PM
Room: Lone Star A4 (Sheraton Conference Center 2nd floor)

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
   1.1. By Morrison at 1:00 PM (filling in for Adams as Chair)

2. ROLL CALL & INTRODUCTIONS

3. REVIEW OF AGENDA
   3.1. No comments on agenda

4. APPROVAL OF MINUTES (Summer Meeting, San Antonio, TX)
   4.1. Motion to approve Cohen/Mayes Unanimous CNV
5. MEMBERSHIP REPORT – BILL PEARSON

5.1. Traditional Roll Off after Annual Meeting
   5.1.1. Currently 15 voting members
   5.1.2. Rolling off members are
       5.1.2.1. Jon Cohen
       5.1.2.2. Pat Graef
       5.1.2.3. Bill McCoy
       5.1.2.4. Scott Mayes
   5.1.3. Rolling on
       5.1.3.1. Lindahl
       5.1.3.2. Stout
       5.1.3.3. Spence
       5.1.3.4. Cerra
       5.1.3.5. Troisi

6. LIAISON REPORTS – ASHRAE / AWT / CTI / OTHERS
   6.1. Research Liaison
       6.1.1. Not seeing many RTAR or Work Statements lately
           6.1.1.1. More money than projects to bid
           6.1.1.2. Soliciting more projects to RAC
       6.1.2. Status of RTAR 1643 on Drift Eliminators and Legionella
           6.1.2.1. Comments returned from RAC
           6.1.2.2. Please address comments and resubmit
           6.1.2.3. Submit by 3/15 for the April RAC meeting
   6.2. Section Head, Bill Murphy
       6.2.1. Thanked members for their efforts on the Committee
       6.2.2. TAC looking to initiate an outstanding TC within each section
           6.2.2.1. A way to recognize TC’s that are acting exemplary
           6.2.2.2. Based on a point system on activities
   6.3. CTI
       6.3.1. STD 159 status
           6.3.1.1. Still in ad hoc review process
           6.3.1.2. Gone through reviewers comments
           6.3.1.3. Working on modifications due to the ad hoc review
           6.3.1.4. May be approved in the Spring of this year
       6.3.2. Winter Conference is next week in Corpus Christie, TX
       6.3.3. Put on two programs at the AHRI show that were all successful
   6.4. AWT
       6.4.1. Annual convention in CT late October
       6.4.2. AWT has refined and developed their technical training seminars
           6.4.2.1. Done twice per year on each coast
           6.4.2.2. Information is available online at awt.org
       6.4.3. Talked to the AWT technical committee to work on RTAR generation and possible co-funding of projects
   6.5. SPC 191
       6.5.1. Comments from first public review are in
6.5.1.1. Working on responses
6.5.1.2. Trying for 2/15 for first round of responses
6.5.1.3. Targeting March for next final review

6.6. SPC 188
6.6.1. Seminar that was run was very successful and informative
6.6.2. Attendance was great

7. SECTION 3 CHAIR REVIEW
7.1. Additional Announcements/Reminders;
   1. 2012-2013 Hightower Award Recipient – Lucas Hyman, TC 1.10
   2. YEA/TC Mixer Sunday afternoon in Dallas
   3. 13-14 Roster update process & TC input deadline
   4. TC/TG/TRG Chair’s Training Workshop Reminder
   5. Meeting procedures updated in TC MOP
   6. Request for each TC to Review ASHRAE Code of Ethics
   7. New TAC Presentation for TC Members to Chapters
   8. Upcoming 50% Refrigeration Commissioning Guide Broad Peer Review (1/21 to 2/6)
   9. Employment Discipline added to ASHRAE BIO Online Input Form
   10. E&P Beta Test #3 TC meetings being Held in Dallas
   11. Opportunity to Comment on AIRAH’s Transition to Low Emission HVAC&R Issues and
       Solutions – Public Comment Draft (1/21 to 2/8)
   12. New TC Activity Form
   13. Location of Section Head Mailboxes at this Society meeting
   14. Useful TC/TG/TRG Chair Information on ASHRAE website
   15. TC Master Calendar – Now Available through Google
   16. New MTGs that have been formed – MTG.CCDG
   17. TC Volunteers willing to Support Content Development and Quality
       Control for Society
   18. CEC proposed or recently implemented technical program changes
   19. Report on TC/TG/TRG websites in Section (SHs need to report to TCs
       which sites are not up to date.)
   20. Special effort to welcome new members, and visitors (potential
       members), particularly
       International members, to TC meetings
   21. Option for TC Subcommittee Meetings via Conference Calls and Web
       Meetings
   22. Upcoming Program Submission Dates
   23. Upcoming Conferences
   24. ASHRAE Terminology Wiki
   25. Possibility to have a forum or seminar within the TC meeting
   26. CEC working to place as many programs as possible. Please make sure
       that the submissions are complete
8. HANDBOOK - DAN WEIMAR
8.1. Deadline for our chapter is 4/5/15
8.2. Moved to chapter 49
8.3. Hope to be closer in Denver to agree and finalize how we are going to proceed
8.4. Looking for volunteers to assist with chapter edits
   8.4.1. Volunteers: Patton, Cohen, Morrison, Pearson
8.5. Draft will be sent out
8.6. Looking for extra content to be added.
8.7. Make sure that Chuck Sanderson is on the email list for the handbook chapter
8.8. Chapter should be sent out to the committee ahead of time and the committee should be prepared to vote on changes.

9. RESEARCH - MICHAEL PATTON
9.1. If anyone would like to replace Patton as research subcommittee chair, please volunteer.
9.2. At RAC breakfast
   9.2.1. 62 active projects, over $12MM
   9.2.2. Have been unsolicited proposals that have been accepted, but prefer to have TC involvement and approval
   9.2.3. 3 RTAR and 4 Work Statements, so encouraging the submission of RTAR's
   9.2.4. Looking to reduce paperwork for the RATAR
      9.2.4.1. Looking to increase the number of submissions
9.3. RP1643 Drift and Legionella
   9.3.1. Came up with many potential problems with the RTAR
   9.3.2. Laying dormant currently
   9.3.3. Clarissa will be instrumental in moving that forward
   9.3.4. Will discuss with CDC and may drop the topic
   9.3.5. Possible to conduct study without using Legionella, but use general bacteria distribution might be easier
9.4. Possible RTAR on quantifying biofilm proposed by Miller
   9.4.1. Possible problem is no standard for sessile bacteria
9.5. Draft of RTAR Evaluation of various water treatment technologies in hot water systems - Alain
   9.5.1. Potential for energy savings with system disinfection and the impact of material in a model hot water system device.
   9.5.2. Alain needs assistance in the development of RTAR
      9.5.2.1. Stout to assist.
      9.5.2.2. Looking to send out info so we can vote in the Annual Conference
9.6. Possible RTAR on making a decision for how to guide decisions based on organic carbon or COD or some other measure
   9.6.1. Make the point that the higher the source of contamination, the more likely to have increase operational issues or pathological problems.
   9.6.2. Becker to develop the RTAR to develop a project.
      9.6.2.1. Could be a survey, literature search or other project type.
9.7.
10. PROGRAM - SCOTT MAYES
Sunday, January 27, 2013 1:30 PM-3:00 PM
Room: Dallas B
10.1.1. Seminar was well attended with positive feedback
10.2. At 8.6 discussed a seminar on standards 191, 189.1 one other
10.2.1. Motion to cosponsor with 8.06 in Denver, title to come. Mayes/Pearson
10.2.1.1. Approved unanimous CNV
10.3. Possible Forum in NY on how natural disasters affect water industries
10.4. 8.6 is working on a conference paper session in NY that we should cosponsor
10.5. Possible seminar on electronic or web based controls and advanced equipment in water treatment for Denver
10.5.1. Motion Mayes/Cohen
10.5.2. Passed unanimous CNV
10.6. Track on Hydronic systems for NY and CP are being solicited
10.6.1. Motion to have a CP session in NY on potable water for Hydronic track - Keane
10.6.1.1. Pass unanimous CNV
11. WEBSITE
11.1. Current webmaster has not had corporate support
11.2. Jeremy will be new webmaster
12. SOCIAL NIGHT
12.1. Thank you to Patton for managing and setting up the dinner
12.2. Thank you to Weimar and ChemAqua for picking up part of the tab
12.3. Cohen to be social night chair in Denver
13. OLD BUSINESS
13.1. None
14. NEW BUSINESS
14.1. Relevant Codes and Standard Issues
14.1.1. Chiller plant working group
14.1.1.1. Have been developing a comparison of air cooled and evaporative cooled chillers using different climate zones to develop economic data
14.1.1.2. Able to get cooling water cost information with additional info, through a 3rd party
14.1.1.3. Pearson, Spence and Adams put together water treatment data as well
14.1.1.4. Model runs are in process with data this Spring

14.2. The Acting Chair thanked Jon Cohen for taking the minutes for this meeting as well as providing guidance on meeting protocols.

15. LOCATION AND DATE FOR NEXT MEETING

Denver
2013 Annual Conference
June 22-26, 2013

16. ADJOURNMENT

16.1. At 3:25 PM by the Acting Chair