Meeting Minutes  
TC 9.9 Building Commissioning  
San Antonio Marriott  
23 June, 1996

The meeting was called to order at 1:07 P.M.

MOTION NO. 1

The minutes of the February 18, 1996 meeting were distributed by Christie Kjellman and unanimously approved with the following correction: Page 3, GPC-1 year 1996 rather than 1990.

COMMITTEE REPORTS

HANDBOOK CHAPTER - Dave Bevirt

Committee members include: David Butler, Walter Bishop, Luis Guerra, Carl Lawson, Bruce Jones, Bob Hadden, Janice Peterson, and Christie Kjellman. Dave will contact each member prior to the next meeting (Sunday at 11:00 a.m.). The revisions are due in 1999.

AI #1 Dave agreed to look into which chapter commissioning will be included in.

PROGRAMS - Carl Lawson

Carl Lawson has confirmed five speakers for the Boston Symposium on Commissioning and Performance Contracting. Four speakers are confirmed for the Boston Seminar on Implications of GPC-1.

A number of program suggestions were made.

AI #2 Elia Sterling and Carl Lawson will work on a program for Standards 62 and 90.1 as it relates to commissioning.

AI #3 A seminar on Commissioning Bio-Chem Facilities will be planned for Philadelphia; Lawson is looking for four speakers for Special Facility commissioning which could include hospitals, industrial, etc.

Dave Shipley suggested a Forum for discussing whether commissioning is cost effective and does ASHRAE have role in promoting it. (See Attachment A for the Program Plan.) (It was noted that a definition of commissioning should be on the front page of each research program.)

RESEARCH - Kathie Radke

Kathy Radke requested a Saturday subcommittee meeting. Those attending the subcommittee meeting were: Kathy Radke, Larry Fisher, Ralph Steele, Wayne Dunn, Dave Shipley, Kristin Heinemeier, Elia Sterling, and Christie Kjellman. (See Attachment B for the Research Subcommittee Report.)
Research Project #1 has been dropped because some of this work has already been done by a Japanese study.

AI #4 Wayne Dunn will contact Norm Maxwell to determine the status of Research Project #2.

AI #5 Kathy Radke will contact George Hightower to determine the status of Research Project #3.

AI #6 Research Project #4 is more specific about the application. Carl Lawson will write work statement for #4.

Christie Kjellman to report back to TC 1.8 on Research Projects #4 and 5. Research Project #5 needs to have commissioning added to its title and incorporated in its scope.

AI #7 Larry Fisher will prepare a research plan for #7.

A new item "Evaluation of Standards 90.1 and 62 Requirements and Development of Commissioning Techniques for Compliance" (Item #11) was added. Items #6 through #11 will be reviewed by the Programs Subcommittee for use as future program topics.

INTERNATIONAL

No report.

MEMBERSHIP

No report.

LIAISON REPORTS

SSPC 62R (Ventilation for Acceptable IAQ) - Elia Sterling

The SSPC committee met in Chicago and voted 13 to 2 in favor of recommending a public review. The draft was edited by society staff and sent to the Standards Liaison Committee. The draft was approved, but not unanimously. The review period will be for 120 days. The draft is a two-hundred page document. An ad hoc committee has been set up to review the complexity of the recent Standards. This Standard is very complex. Elia Sterling has prepared comments which are contained in Attachment C. Elia would like to arrange a meeting to discuss and solicit member’s comments. The August Journal will announce the public review which will close in December, so the results can be announced at the January meeting.

SSPC 90.1 (Energy Efficient Design of New Buildings)

Wayne Dunn volunteered to be liaison.

MOTION NO. 2

It was moved that Wayne Dunn be appointed liaison to SSPC 90.1; the motion passed with 5 in favor, 0 against, and 1 abstention.
David Butler will forward a letter to Standards recommending the appointment. It was noted that SSPC 90.2 also needs a liaison from TC 9.9.

**SPC 111 (Test and Balance for HVAC & R Systems)** - Gerry Kettler

Chapters 1-4 revisions have been completed. Chapters 5 through 8, including most standard air and hydronic measurements, were reviewed at the San Antonio meeting.

Chapters 9 on Air TAB, 10 on Water TAB, 11 on Chiller and terminal box testing are scheduled to be reviewed at Philadelphia.

Additional sections on measuring flow with Vane Anemometers, fume hood testing, commissioning and smoke control are under development.

The objective is to have the first draft completed at the end of the Philadelphia meeting.

**SPC 129P (Method of Testing Air Change Effectiveness)**

Ted Cohen will attend the meeting which is scheduled for June 24, 1996 and report back at our next committee meeting.

**G10P (Criteria For Achieving Acceptable Indoor Environments)** - Gerry Kettler

Their committee meeting lasted four hours. Several draft papers and potential sections were discussed. These were extensively revised from past issues and contains extensive technical data from research and papers done by the committee members. The complexity of this version will exceed that of Standard 62.

As at the last meeting, most of the discussion involved the perceived need for additional research and the interrelationship of dissatisfiers. There is basic disagreement between some committee members on the need for this proposed research or on quickly producing a simplified chart with references for use by designers and users. This would be immediately useful to the IAQ industry with later issues of the guideline including future research. All discussion was limited to committee members. Any comments from TC 9.9 wouldn’t be recognized by their committee because we only have liaison representation.

No schedule for public review was set.

**GPC 11P (Testing Control Systems)** - Gerry Kettler

Discussions were held on guideline contents and several potential sections along with the intended use of the guideline. The major sections include: general format, device testing - water and air, controlled devices, system testing and documentation. The committee assignments were also adjusted. There was common agreement on the need for the guideline, and the need to coordinate with GPC-13 on specifying DDC Systems.
No schedule was set for guideline completion. Additional members are welcome.

**GPC 13P (Specifying Direct Digital Control Systems)** - Gerry Kettler

The committee met on Friday, June 21 and Saturday, June 22, 1996.

Discussions were held on final specification contents which will be the basis for the guideline text. The major guideline sections include: general format, design of systems, system functions, written and drawn specs., devices, quality control, testing, commissioning, and documentation. Testing and commissioning both have sections in the guideline and sample spec. at this time. An additional meeting was held in St. Paul, Minn. in September.

The committee expects to meet again for an extended time in Philadelphia.

**TC 1.7 (Operations & Maintenance Management)**

Kathy Radke was appointed as the liaison.

**TC 1.8 (Owning and Operating Costs)**

Barry Bridges was appointed as the liaison.

**TC 9.1 (Large Building Air Conditioning Systems)**

Joe Scolaro is looking for opportunities to co-sponsor programs. Their meetings spend 50 percent of time on Standard 62.

**TC 9.8 (Large Building Air Conditioning Applications)**

Joe Scolaro solicited co-sponsoring of seminars. He concurs with the suggestion for a separate commissioning chapter. Commissioning is now part of the Operation & Maintenance section.

**GPC-1 - Carl Lawson**

Guideline 1 was approved for publication and will hopefully be published by the Philadelphia meeting. New committee members are now being solicited. A round of applause was given to Ted Cohen and his committee for providing this new document. The new chair will be an ASHRAE member and the committee will include IES and AIA members.

**MOTION NO. 3**

It was moved that TC 9.9 review and comment on the Public Review Draft of Standard 62R.

**AI #10** A summary of comments and a ballot will be sent to each voting member.

**AI #11** The results will then be forwarded to ASHRAE.

A majority vote will be considered as a consensus.

A vote was in favor to accept 5, 0 against, and 2 abstentions.
NEW BUSINESS

CLIMA 2000 Report by Henry Roba: The CLIMA Program will have ten topics of continuous sessions. Three topics will be related to applications. 350 abstracts were received and 300 were accepted. Permanent poster sessions will be available. The target is for a world wide conference. ASHRAE can have parallel activities during the conference. (Reference Attachment D).

AI #12 A listing of the Chair, Vice-Chair, and members of TC 9.9 will be provided at the next meeting.

Dave Bevirt will be the TC 9.9 Vice-Chair and Handbook Chair. Kathy Radke will chair the Research Committee and Elia Sterling will serve as Vice-Chair. Wayne Dunn will chair Programs.

AI #13 Vice-Chair of Programs to be named by Butler.

Membership will be Chaired by Elia Sterling.

AI #14 Vice-Chair of Membership to be named by Butler.

Carl Lawson will Chair the Long-Range Planning Committee, with Bill Dillard as the Vice-Chair. Bob Hadden will Chair the Guideline for Total Building Commissioning; Mike King was suggested as the Vice-Chair.

AI #15 Butler is to contact King.

Christie Kjellman will be the TC 9.9 Secretary.

The meeting was adjourned at 3:03 P.M.

AI Status for open projects:

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Responsible Party</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI #1</td>
<td>David Bevirt</td>
<td>Open</td>
</tr>
<tr>
<td>AI #2</td>
<td>Elia Sterling and Carl Lawson</td>
<td>Open</td>
</tr>
<tr>
<td>AI #3</td>
<td>Carl Lawson</td>
<td>Open</td>
</tr>
<tr>
<td>AI #4</td>
<td>Wayne Dunn</td>
<td>Open</td>
</tr>
<tr>
<td>AI #5</td>
<td>Kathy Radke</td>
<td>Open</td>
</tr>
<tr>
<td>AI #6</td>
<td>Carl Lawson</td>
<td>Open</td>
</tr>
<tr>
<td>AI #7</td>
<td>Larry Fisher</td>
<td>Open</td>
</tr>
<tr>
<td>AI #8</td>
<td>David Butler</td>
<td>Open</td>
</tr>
<tr>
<td>AI #9</td>
<td>Ted Cohen</td>
<td>Open</td>
</tr>
<tr>
<td>AI #10</td>
<td>David Butler and Elia Sterling</td>
<td>Closed</td>
</tr>
<tr>
<td>AI #11</td>
<td>Elia Sterling</td>
<td>Closed</td>
</tr>
<tr>
<td>AI #12</td>
<td>David Butler</td>
<td>Open</td>
</tr>
<tr>
<td>AI #13</td>
<td>David Butler</td>
<td>Open</td>
</tr>
<tr>
<td>-------</td>
<td>--------------</td>
<td>------</td>
</tr>
<tr>
<td>AI #14</td>
<td>David Butler</td>
<td>Open</td>
</tr>
<tr>
<td>AI #15</td>
<td>David Butler</td>
<td>Open</td>
</tr>
</tbody>
</table>

By: Christie R. Kjellman, CEM, CDSM
Secretary to TC 9.9

Attachments not provided as links were distributed to committee members in hard copy form by ASHRAE.