

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, INC.
1791 Tullie Circle, NE, Atlanta, Georgia 30329
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TC/TG/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/TRG No. TC 4.2 DATE: May 5, 2002

TC/TG/TRG TITLE: Weather Information

DATE OF MEETING: Jan. 15, 2002 LOCATION: Atlantic City, NJ

MEMBERS PRESENT	MEMBERS ABSENT	EX/OFFICIO MEMBERS AND ADD'L ATTENDEES
Bob Morris (Chair) Joe Huang (Vice Chair) Chip Barnaby (Secretary) Dru Crawley (Res, Stds) Bill Bahnfleth (CM, Program) Hilda Snelling Jack Roberts Oscar Richard Ron Petersen	Larry Degelman Marc Plantico (Handbook) David Wood (IM) Gideon Rozen (IM) Ken Hubbard Don Colliver (CM, Webmaster) Geoff Levermore (CM) Henry Amistadi (CM) Achilles Karagiozis (CM) Mark Kramer (CM) Linda Lawrie (CM) David Menicucci (CM) Richard Perez (CM) Mike Squires (CM) Tom Stoffel (CM) Don Hadley (CM)	Reda Djebbar Laurier Nichols Tim Dwyer Pat Carpenter

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|-------------------------------|-----------------|
| TAC CHAIR | K. William Dean |
| TAC SECTION HEAD | Eckhard Groll |
| RAC RESEARCH LIAISON | Sheila Hayter |
| EDUCATION LIAISON | Alexander Boome |
| ENV HEALTH COMMITTEE LIAISON | William Fisk |
| JOURNAL/INSIGHTS LIAISON | Harvey Sachs |
| HANDBOOK LIAISON | David Claridge |
| PROGRAM LIAISON | Emil Friberg |
| REFRIGERATION LIAISON | Hugh Crowthers |
| SPECIAL PUBLICATIONS LIAISON | Joseph Driscoll |
| TEGA LIAISON | William Knight |
| STANDARDS LIAISON | David Knebel |
| STAFF LIAISON (RESEARCH) | William Seaton |
| STAFF LIAISON (STANDARDS) | Claire Ramspeck |
| STAFF LIAISON (TECH SERVICES) | Martin Weiland |

Abbreviations: CM = Corresponding Member, IM = International Member

***Meeting Minutes
ASHRAE Technical Committee 4.2
Weather Information
15 January 2002
Atlantic City, NJ***

Call to Order, Roll Call, and Approval of Minutes

TC 4.2 Chair Bob Morris called the meeting to order at 1:05 PM and roll call was taken. A quorum was established with 7 of 11 voting members present. The agenda is attached.

Approval of minutes. The minutes of the Cincinnati meeting were approved without correction on a motion by Ron Petersen, 2nd by Hilda Snelling, vote 6-0-0 CNV.

Handbook Staff Liaison

Handbook editor Mark Owen responded to questions about format changes planned for the Handbook.

Research –Dru Crawley

Dru Crawley reported on the Research Subcommittee meeting (full minutes attached). One item requiring full committee action was brought forward, as follows –

1226-TRP (Development of Procedures for Utilize Automated Surface Observing System (ASOS) Weather Data in Building Energy Calculations). Chip Barnaby reported that the single bidder had submitted additional information requested via Bill Seaton and that the PES was satisfied with the response. Chip Barnaby moved that TC 4.2 recommend that the contract for 1226-TRP be awarded to Northeast Regional Climate Center. Dru Crawley 2nd. Vote: 6-0-0 CNV. Bob Morris appointed the following PMS: Chip Barnaby (chair), Joe Huang, Marc Plantico, and Bob Morris.

Handbook – Bob Morris

Handbook questionnaire. Bill Fleming, Handbook Committee Liaison, was introduced. He discussed a questionnaire that is circulating that seeks information about the utility of the Handbook for design including any electronic enhancements such as animations, sound clips and interactive sessions that increase user-friendliness.

[Ron Petersen departs, leaving no quorum.]

Handbook electronic enhancements. Discussion turned to whether TC 4.2 could exploit planned electronic enhancements to Handbook in the weather data chapter. The consensus was that embedded database(s) might have some use, but multimedia enhancements would probably not add much. Bob Morris will transmit the committee's consensus to the Handbook committee.

2001 HOF errata. Dru Crawley has found one error in Chapter 27 Table 4. Any additional errata found should be sent to Marc Plantico by February 28, 2002.

2005 HOF revisions. Bob Morris and Marc Plantico will prepare a work statement for data acquisition and table preparation. This must be submitted to Bill Seaton by May 15, 2002 for consideration by RAC at Honolulu (otherwise it will be difficult to meet the revision schedule).

[Joe Huang arrives, quorum restored.]

Goal of chapter. Chip Barnaby brought up possible goal for revised handbook chapter should be to provide all data for design. This would involve moving material from several other chapters into Chapter 27. Chip Barnaby and Dru Crawley will talk to Steve Bruning (TC 4.1) and attempt to identify additional data items required for design.

Use of 1171-RP. Exploiting the results of 1171-RP was discussed. It was noted that the research subcommittee had already decided to include use of 1171 methods in the WS being written re data preparation for the 2005 handbook (discussed just above).

Program – Bill Bahnfleth

Seminar. The joint TC 4.1/4.2 Atlantic City seminar “Design Application of Recent Weather Data” was well received. Chip Barnaby will work to get the speakers presentations onto the TC 4.2 web site.

Program plan. After some discussion, the following program plan was formulated –

- Honolulu 2002
 - Priority 1: Symposium: Recent developments in availability of international weather data.
Chair: Dru Crawley
- Chicago 2003
 - Priority 1: Forum: How can weather data be made more useful to ASHRAE members?
Chair: Chip Barnaby
 - Priority 2: Seminar: Use of weather data in building design and operation. Chair: Ron Petersen

Dru Crawley moved that this plan be approved, Joe Huang 2nd. Approved 6-0-0 CNV.

Revised commercialism policy. Bill Bahnfleth summarized recent changes to the ASHRAE commercialism policy. The essence of the modifications is that specific identification of test equipment, software, standards, and so forth is now permitted if such identification clarifies the presentation and allows others to reproduce the work. Endorsement, promotion, and implication of ASHRAE endorsement remain prohibited.

Membership – Bob Morris

Roster. Seven members roll off. Bob Morris will submit revised roster.

Tom Stoffel. Bob Morris will draft a letter to NREL management supporting Tom Stoffel’s involvement in TC 4.2. Tom currently has no funding or time authorized for ASHRAE-related work.

Standards – Dru Crawley

SSPC 169. The committee did not meet.

Standard 90.1. Dru Crawley met with members of the Standard 90.1 committee. Their new procedures will require annual precipitation data. DOE funded Batelle NW Laboratory to develop a comprehensive scheme to specify characterize climatic zones in the U.S. for use in energy efficiency standards, including but not limited to Standard 90.1. The method is based on traditional climate zones (Koppen) mapped with state and county borders as delimiters to ensure the system can be used by code makers at various governmental levels. Using the Koppen system as a basis provides a sound basis for adoption of the method in other countries. The authors have submitted a technical paper to ASHRAE to explain the approach.

Web Site

Webmaster. The question was raised, but not answered, as to whether Don Colliver will remain as web master during his term as Society president.

HQ support for TC web sites. It was reported that ASHRAE headquarters is contracting for a web server for all TC web sites.

Old Business

Benefits of research. Prior to Cincinnati (June 2001), TC 4.2 (along with many or all TCs) received a request to submit documentation showing the benefits of research initiated by the TC. We did not submit a response. However, there have been no follow-up requests, so it was agreed that no effort should be made at this time to respond.

New Business

Scope revision. HQ has queried whether we want to change our scope. Bob Morris to respond YES. Weather should be changed to climate and other wording refined. Bob Morris will prepare a draft for committee consideration.

Honolulu meeting. HQ query: Are we going to meet in Honolulu? Yes.

Technical Bulletins. TC 4.2 has been asked to prepare some FAQ responses. Bob Morris to draft these and circulate soon.

Code reference to Standards. Standard Committee is asking all TCs to identify known building code references to ASHRAE standards. SSPC 169 not complete, so not yet referenced in any codes. ICC code IECC (International Energy Conservation Code) does reference the weather data section of the Handbook of Fundamentals. Bob Morris to provide response to the question.

Hot/humid climates. Request that ASHRAE conduct research to provide additional information for hot humid climates (motion 43). Bob Morris to respond.

Adjourn

Meeting adjourned at 3:15 PM. Next meeting: Tuesday, June 25, 2002, Honolulu, HI.

**ASHRAE TC 4.2 Weather Information
Agenda for the 2002 Winter Meeting
Atlantic City, NJ
Atlantic City Convention Center / 306
Tuesday, 15th January 2002
1:00 – 3:30 PM**

1:00 pm **Call to order and Roll Call** (Morris/Barnaby)

1:10 pm **Introduction of liaison representatives from standing committees**

1:15 pm **Approval of minutes from Cincinnati June 2001 meeting**

Subcommittee Reports:

1:20 pm **Research** (Crawley)

- **1171-RP** Sources of Uncertainty in the Calculation of Design Weather Conditions in the ASHRAE Handbook of Fundamentals
- **1226-WS** Development of Procedures to Utilize Automated Surface Observing System (ASOS) Weather Data in Building Energy Calculations
- Research Plan for 2002-2003
- Work Statements in Progress
- Development of a solar radiation model for tropical climates

2:00 pm **Handbook** (Plantico)

2:20 pm **Program** (Bahnfleth)

2:30 pm **Membership** (Richard)

2:40 pm **Standards** (Crawley)

- SSPC 169P Weather Data for Building Design Standards (Morris)

2:50 pm **TC Internet Site**

3:00 pm **Old Business**

- Benefits of research projects from the 1990-1995 period
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3:10 pm **New Business**

- ASHRAE Technical Bulletins to answer most frequently asked questions
- ASHRAE Standards referenced in Codes

3:25 pm **Announcements**

3:30 pm **Adjourn**

Next meeting: Honolulu, HI, 25 June 2002

**ASHRAE TC 4.2 Weather Information
Research Subcommittee Minutes
4:15-6:30 pm, Monday, January 14, 2002
Atlantic City, NJ**

Research Subcommittee Chair Crawley called the meeting to order at 4:20 PM.

In attendance were: Hilda Snelling, Oscar Richard, Joe Huang, Bob Morris, Chip Barnaby, and Nady Said.

1171-RP Sources of Uncertainty in the Calculation of Design Weather Conditions in the ASHRAE Handbook of Fundamentals

PMS Chair Bob Morris reported that the PI for this project, Ken Hubbard, was not able to make a presentation at the meeting due to a family emergency. The PMS will have a teleconference with the PI in a month or so to discuss progress. The project is scheduled to be completed before the Honolulu meeting.

1226-TRP - Development of procedures to utilize Automated Surface Observing System (ASOS) weather data in building energy calculations

Bob Morris reported that one proposal was received and reviewed by the PES at the last meeting. The PES had several questions to ask the proposer. These were sent to Bill Seaton and answers received this past fall. The PES then recommended that the TC recommend selection of Northeast Climate Center, Cornell University, for 1226-TRP. This recommendation to be made to TC 4.2 at their meeting on the following day.

Draft Work Statements

The discussion then focused on draft work statements in progress. Marc Plantico had looked into the cost of purchasing the weather data for updating the HOF—the total cost was significantly lower than in the past. Our second RTAR, Update Information for the 2005 ASHRAE Handbook of Fundamentals, has been approved and prioritized on the ASHRAE 2002-2003 research plan. Therefore, the group decided that a single work statement incorporating both acquiring the data (on ASHRAE's behalf) and updating the design conditions in the HOF. Bob Morris agreed to work with Marc Plantico to draft the work statement to be circulated for review and letter ballot for submission to RAC by May 15.

Chip Barnaby and Crawley agreed to work with Didier Thevenard on turning the approved RTAR on development of a solar radiation model for tropical climates into a draft work statement for review by the TC at the Honolulu meeting.

2002/2003 Research Plan

Crawley said both the RTARs that TC 4.2 submitted for the 2002-2003 Research Plan were accepted:

- Update Information for the 2005 ASHRAE Handbook of Fundamentals
- Development of a solar radiation model for tropical climates

The first RTAR was included on the priority list. The discussion then went on to potential new topics. New ideas suggested included: extending the IWEC and expanding the database on availability of weather information (expanding on 1170-RP).

New Business

TC Chair Morris described a letter he had received from Michael Vaughn with an action item from the Hong Kong ASHRAE chapter. After discussion, Morris agreed to draft a reply letter and circulate it.

Chip Barnaby distributed a copy of a draft Technical Bulletin that TC 4.7 was working on that included information about weather data availability. Joe Huang agreed to act as liaison between 4.2 and 4.7 on this Technical Bulletin.

The meeting was adjourned at 5:30 PM.

Next meeting, Monday, 24 June 2002, in Honolulu, Hawaii.