



WHPA Goal 2: CQM Standard 180 User Guide Working Group Thursday March 9, 2017 Meeting Notes

Call to Order

The meeting was called to order at 10:06 am PST by Dale Rossi, Chair of this working group and a representative of Field Diagnostic Services Inc. (FDSI).

Roll Call

The Chair considered one member of each organization to be a voting member for this working group. 9 of 16 voting members in attendance would constitute a quorum. 8 voting members, 0 non-voting members, 0 guests and 1 staff were present for a total of 9 attendees.

P = Present at meeting				
A = Absent from meeting; if proxy has been assigned it will be noted below.				
Although Voting Members have been designated by Staff, this group acts primarily by consensus.				
CQM User Guide Working Group Voting Members				
ACCA (Air Conditioning Contractors of America)	Donald	Prather	Contractor Association	P
Air Management Industries	April	Yungen	Contractor (Nonresidential)	
Aire Rite AC & Refrigeration	Don	Langston	Contractor (Nonresidential)	
AMS (American Mechanical Services)	Marc	Pickett	Contractor (Nonresidential)	P
Charles Segerstrom, Energy Efficiency Consulting	Charles	Segerstrom	Energy Efficiency Program Consultant	
CLEAResult (formerly PECEI)	Todd	Van Osdol	California IOU	
FDSI (Field Diagnostic Services Inc.)	Dale	Rossi	Third Party Quality Assurance Providers	P
GWP (Goodheart-Willcox Publisher)	Sandy	Clark	Educator, Trainer	P
Honeywell E&ES, Commercial Buildings, Trade	Michael	Lawing	Controls (Manufacturer or Distributor)	P
HSGS (Honeywell Smart Grid Solutions)	Shayne	Holderby	Energy Efficiency Program Consultant	
National Comfort Institute	Jeff	Sturgeon	Educator, Trainer	P
Richard Danks Consulting - FacilityPro	Rick	Danks	Other Stakeholder	P
SCE (Southern California Edison)	Scott	Higa	California IOU	
Tre' Laine Associates	Pepper	Hunziker	Energy Efficiency Program Consultant	P
Western Allied Corporation	Mike	Gallagher	Contractor (Nonresidential)	
Warren Lupson and Associates	Warren	Lupson	Other Stakeholder	
CQM User Guide Working Group Non-Voting Members				
BELIMO	Darryl	DeAngelis	Controls (Manufacturer or Distributor)	
BMI (BuildingMetrics, Inc.)	Pete	Jacobs	Energy Efficiency Program Consultant	
CLEAResult (formerly PECEI)	Michael	Blazey	Energy Efficiency Program Consultant	
HSGS (Honeywell Smart Grid Solutions)	Steve	Varnum	Energy Efficiency Program Consultant	
SCE (Southern California Edison)	Steve	Clinton	California IOU	
CQM User Guide Working Group Guests (Non-Voting)				
Adrienne Thomle, Consulting**	Adrienne	Thomle+		
Little Caesar's **	Wendy	Gallo+		
WHPA Staff (Non-Voting)				
BBI (Better Buildings Inc.)	Mark	Lowry	WHPA Executive Advisor/BBI COO	
BNB Consulting/WHPA Staff	Bob	Sundberg	Energy Efficiency Program Consultant	P (scribe)
Empowered Solutions/WHPA Staff (WHPA Co-Director)	Shea	Dibble	Energy Efficiency Organization	

** Organization is Not a Member of the WHPA; + Individual is NOT Registered with the WHPA; ^(P) after last name = Member/Registrant is Pending Approval from the WHPA Executive Committee

To avoid repetition, the name of the member organization will not be repeated in the body of the minutes past the first identification with the name of the representative participant.



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Welcoming and Member Introductions

No new members or guests.

Approve Previous Meeting Draft Notes

The March 2 meeting draft notes were distributed March 8. Members were asked to provide any additional suggested revisions or corrections by March 10 after which finalized meeting notes would be posted to the WHPA website by Bob Sundberg.

ACTION Items

Feb. 23 **Decision:** the WG decided to concentrate first on how to develop and produce annual reports and attempt work on recommendations for quarterly/periodic reports as time permitted.

Feb. 23 **ACTION:** the working group needed to decide whether they should change their concept of maintenance to include airside measurements or not. Also, whether they believed that airflow related measurement needed to be added to Standard 180 or not.

Dale Rossi, Chair – agreed that the second action item was an item discussed by the group at the previous meeting but he never intended that it would be a future action item. Dale didn't believe that was an issue that this group needed to address or decide. They would have to either seek to change the standard or have Don Langston change the objective of the working group to address that issue.

New Business – Dale Rossi and Bob Sundberg

Jeff Sturgeon, NCI – requested the WG address the issue of whether airside measurements (airflow, static pressure) should be considered and included in the user guide. A few minutes prior to the meeting he had forward two documents to Bob Sundberg, staff, which he hoped to share with the group. Jeff indicated that he'd spoken with Don Langston who had directed him to bring two documents before the WG for sharing and discussion. The first was a copy of Standard 180 Appendix A – Sources for Performance Objectives and B – Identifying Indicators of Unacceptable Conditions. The second document was a 2012 formal response from the Standard 180 Committee to questions raised by Mel Johnson related to standard practice for inspection and maintenance of commercial HVAC systems. The request and documents had not been provided to the WG Chair prior to the meeting.

Dale Rossi indicated that he didn't think that the issue of airside measurements was within the scope of work agreed to by this WG or as directed by Don Langston, CQM Committee Chair. Dale also did not think that airside measurements were supported as requirements by the current version of Standard 180. Several WG members differed with him on this interpretation of the standard. Dale informed the group that he intended to leave the meeting briefly and reach Don Langston to seek more detailed direction for the WG before he could lead the meeting.

While Dale Rossi was absent, Bob Sundberg, WHPA staff, completed the meeting roll call.

While waiting for Dale to return, Rick Danks, Richard Danks Consulting, requested making several remarks. He referred to Standard 180 Section 4.2.2.c Inspection and Maintenance Tasks.

4.2.2.c Inspection and Maintenance Tasks. *Inspection and maintenance tasks* for inventoried equipment and systems shall be established. *Inspection* shall include the condition assessment of systems and/or their components by observation and/or measurement of operating parameters and may include data provided by sensors or a *building management system (BMS)*. *Maintenance tasks* shall include adjustment, service, or replacement of inventoried equipment and systems. See Section 5 for tables of required *inspection and maintenance tasks* by equipment type.



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He specifically called out – “*Inspection* shall include the condition assessment of systems and/or their components by observation and/or measurement of operating parameters and may include data provided by sensors or a *building management system (BMS)*.” For discussion.

Rick Danks – in the broadest sense, airflow was an operating parameter. The system assessment could be made from observation or from measurements taken either manually or by building management system installed sensors. As a past contributor to the wording of the standard, it was his interpretation that the wording was selected to allow the smallest “mom and pop” buildings a way to comply with the standard as well as services provided by contractors who would use more contemporary and possibly more accurate methods. He saw nothing in the standard that would limit contractors from including airside measurements in their proposed maintenance practices. As an author of the standard at the time, he thought that he should be in a pretty good position to understand what it meant.

Bob Sundberg, WHPA staff, shared online the 2008 version of the standard which had been posted by ASHRAE for public comment which indicated to proposed revisions to the RTU Table 5-20 at that time. He noted that the original 2008 wording for the filter inspection task description had previously included “replace if accumulation results in pressure drop or airflow outside of established operating limits.”

Table 5-20 5-17-PTAC/PTHP (Package Terminal Air Conditioners or Heat Pumps)

Inspection/Maintenance Task	Frequency ^a
Check for particulate accumulation on filters. Clean or replace if accumulation results in pressure drop or airflow outside of established operating limits. <u>as necessary to ensure proper operation.</u>	<u>Quarterly</u> <u>Monthly</u>
Check air filter <u>fit</u> and housing <u>seal</u> integrity. Correct as needed.	<u>Annually</u> <u>Monthly</u>
Check UV Lamp. Clean or replace as needed to ensure proper operation.	<u>Quarterly</u>
Check control system and devices for evidence of improper operation. <u>Clean, lubricate, Repair, adjust or replace components as needed</u> to ensure proper operation.	Semi-annually
Check condensate drain path and remove debris as needed to assure it is free flowing.	Semi-annually
Check for proper operation of cooling or heating coil. <u>Clean, restore or replace as required.</u>	Semi-annually

Bob asked Rick Danks whether Rick had an explanation for why the more detailed task description which referred to pressure and airflow measurements was stricken from the task description. Why those more specific instructions for “how” to meet the required maintenance task was replaced with very generic language – “clean and replace as necessary to ensure proper operation.”

Rick Danks – he recalled that there had been a pretty rigorous discussion of how detailed the description should be for a minimum standard and what wasn’t suitable. He thought the group had concluded that the greater detail would be more limiting than enabling. He also remembered that the sections 1 through 5 were addressed by one group and the maintenance task tables addressed by another group. The revision team’s goal was to provide more generic descriptions which would still comply with the intent of Section 4.2.2.c.

Standard 180 Section 4.2.2.c. stated, in part:

“*Inspection* shall include the condition assessment of systems and/or their components **by observation and/or measurement of operating parameters** and may include data provided by sensors or a *building management system (BMS)*.”

At this point in the meeting, Dale Rossi rejoined the group.



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Dale Rossi – Dale and Don Langston needed to talk further and come to agreement on its direction, focus and scope before WG meetings could continue.

Bob Sundberg, WHPA staff, suggested they set up the next meeting for March 16 but wait to hear back from either Dale or Don before they held another meeting.

Dale Rossi agreed and adjourned the formal meeting.

AGENDA		
Topic	Discussion Leader	Desired Outcome
Welcome, Roll Call, Member Introduction, Approve Past Meeting Notes, Review Action Items, New Business, Meeting Agenda	Chair, WHPA Staff	Record attendees, welcome any new members, approve previous meeting minutes, review status of any open Action items, planned agenda and bring up any new business items for the WG to consider addressing.
Revise Detailed Plan for Meetings Through June 2017	Dale Rossi	WG allocation extended from 14 back to 18 meetings. Agree on topics to be worked at all remaining meetings through June 2017.
Review of March 2 discussion and revisions to draft report	Dale Rossi	Members understand and agree with draft report revisions and WG decisions.
Develop Tasks for each Topic	Dale Rossi	Tasks listed for next topics discussed.
Discuss Categorizing Data Types for Performance Objectives	Dale Rossi	Agree on how they would approach this topic in development of the user guide.
Confirm last meeting date/time, assign actions and proposed agenda and adjourn.	Dale Rossi, WHPA Staff	Clear understanding of member responsibilities for the next meeting. Next meeting date/time established.

Review of Feb. 23 meeting draft report – Dale Rossi

Categorizing Data Types for Performance Objectives of Customer Facing Reporting – Dale Rossi

User Guide Working Group Planning – Dale Rossi

Roadmap/calendar - Decided at March 2 meeting

Feb 23 – Finalize work plan and roadmap – stay at higher level and concentrate on “what” rather than “how”

- 1 - Mar 2 – defining performance objectives for customer facing reporting
- 2 - Mar 9 – categorize data types
- 3 - Mar 16 – categorize data collection methods
- 4 - Mar 23 – categorize useful calculations
- 5 - Mar 30 – categorize useful outputs and descriptions



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- 6 - Apr 6 – categorize useful comparisons and conclusions
- 7 - Apr 13 – Write introduction
- 8 - Apr 20 – Write conclusion
- 9 - Apr 27 – Final document review and debate
- 10 - May 4 – Final document review and vote

Closing Comments/Adjournment

The next meeting was scheduled for Thursday March 16 at 10:00 am PDT.

The March 16 meeting agenda and topics were yet to be determined.

The formal meeting was adjourned at 11:17 am PST. Several working group members remained on the call after the meeting was formally ended to share their opinions and past contracting and industry experience and QM program needs.

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Action Items and Key Decisions

None.