



CEESP Goal 2.1: CQM Standard 180 User Manual Working Group Thursday October 27, 2015 Meeting Notes

Call to Order

The scheduled 60 minute meeting was called to order at 10:05 a.m. PDT by Dale Rossi, Chair of this working group and a representative of Field Diagnostic Services Inc (FDSI).

Roll Call

The Chair had not yet designated voting members for this new working group, He planned on working toward consensus on decisions and expected to name one active participant from each organization as a voting member. 8 of 17 initial members attended this meeting plus 2 WHPA staff for a total of 10 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 Maintenance Task Working Group Voting Members

ACCA (Air Conditioning Contractors of America)	Donald	Prather	Contractor Association	
AHRI	Warren	Lupson	HVAC Manufacturer Association	
Aire Rite AC & Refrigeration	Don	Langston	Contractor (Nonresidential)	P
BELIMO	Darryl	DeAngelis	Controls (Manufacturer or Distributor)	
BMI (BuildingMetrics, Inc.)	Pete	Jacobs	Energy Efficiency Program Consultant	P
CLEARresult (formerly PECD)	Michael	Blazey	Energy Efficiency Program Consultant	P
FDSI (Field Diagnostic Services Inc.)	Dale	Rossi	Third Party Quality Assurance Providers	P
GWP (Goodheart-Willcox Publisher)	Sandy	Clark	Educator, Trainer	P
Honeywell ECC, Commercial Buildings, Trade	Michael	Lawing	Controls (Manufacturer or Distributor)	P
HSGS (Honeywell Smart Grid Solutions)	Shayne	Holderby	Energy Efficiency Program Consultant	P
Marina Mechanical	Denny	Mann	Contractor (Nonresidential)	
National Comfort Institute	Jeff	Sturgeon	Educator, Trainer	
Richard Danks Consulting	Richard	Danks	Other Stakeholder	
SCE (Southern California Edison)	Steve	Clinton	California IOU	
Tre' Laine Associates	Pepper	Hunziker	Energy Efficiency Program Consultant	P
UC Davis EEC (Energy Efficiency Center)	Kristin	Heinemeier	Research Organization	

CQM Maintenance Task Working Group Non-Voting Members

Honeywell ECC, Commercial Buildings	Adrienne	Thomle	Controls (Manufacturer or Distributor)	

CQM Maintenance Task Working Group Guests

WHPA Staff (Non-Voting)

Better Buildings Inc. (BBI)/WHPA Executive Advisor	Dale	Gustavson	Energy Efficiency Program Consultant	P
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; ^(*) 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.

Welcoming and Member Introductions



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New members welcomed: none.

New Business

None.

Approve Previous Meeting Draft Notes

Draft meeting notes from the October 8 meeting were distributed October 19. No suggested revisions or corrections were received. Bob Sundberg would have the minutes finalized and posted to this working group's portion of the CQM Committee site.

ACTION Items

Oct. 8 ACTION: Dale Rossi would develop a more detailed flow chart outlining detailed processes within the second technician's box located on the Basic Process Flow Chart.

AGENDA

Topic	Discussion Leader	Desired Outcome
Welcome, Roll Call, Member Introduction, Past Meeting Notes, 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.
Review latest content outline and proposed table of contents	Dale Rossi	Gather member input on suggestion content areas/topics and review proposed table of contents.
Discuss and decide on a list of User Manual suggested scope, audience to be addressed with initial effort	Sandy Clark/Dale Rossi	Clearly identify the 1) scope (STD 180 Sections to be addressed & HVAC equipment types) and 2) audience (owner/responsible party, maintenance/service manager).
Final discuss and decisions regarding a table of contents & sequence of topics in TOC	Sandy Clark/Dale Rossi	Decide on the table of contents, sequence of topics and appendices to recommend.
Adjourn the working group	Chair, WHPA Staff	This was the last working group meeting.

Maintenance - Technician Detailed Flow Chart

Dale Rossi, FDSI and Chair, had decided that this flow chart was beyond the scope of this WG's first effort and it should be addressed if/when a working group was convened to continue work on the user manual.

Final Review of Draft User Manual Preliminary Prospectus

Dale Rossi, FDSI and Chair, proposed the group conduct a final review Sandy Clark's draft document. Once finalized, he proposed that they consider this document the output and work product for their group. Don Langston, Aire Rite AC and Refrigeration, and all other attendees agreed.

Dale Rossi identified one issue which he thought was not yet resolved. What was the place for technician instructions in this proposed user manual? How should that subject be addressed? He summarized previous meeting agreements that the user manual would be focused mostly on how to use the standard. That Section 4 Implementation was really the core of the standard which needed quite a lot of work. He also thought that technicians really needed a resource.

Don Langston thought the user manual needed to provide an overview for what their importance was, what impact they should have on meeting the Standard 180 goals of indoor air quality, occupant comfort and HVAC system energy

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efficiency. There was enough coverage of technical detailing of maintenance tasks in previous Standard 180 working group reports.

Dale Rossi asked Sandy Clark, GWP, to walk the group through her final draft document.

Sandy Clark reviewed the introductory paragraph. She suggested they not spend time on the first section dealing with the AUDIENCE - responsible party (owner), manager, technician - as they'd discussed this section in detail at the previous meeting.

Standard 180 User Manual table of contents review

- Standard 180 Overview - intent and scope. The text was amended to say "packaged HVAC systems" and eliminate the reference to "smaller buildings"
- Benefits of the user manual
- How to use the user manual - use scenarios, tell stories to illustrate how implementing the standard facilitated gaining the benefits of the standard
- Implementing Standard 180
 - recap Sections 4.1 and 4.2 responsibilities for establishing a maintenance program
 - establishing a maintenance program - performance objectives, condition indicators
 - establishing inspection and maintenance task frequencies
 - inspection and maintenance task tools - task checklist and service/maintenance report documents
 - definitions and glossary
 - appendix or appendices

To Be Determined

Form/media. Probably delivered in digital form and printed media.

Dale Rossi asked Don Langston regarding Don's deliverables. Dale understood that the first was to deliver recommendations regarding a Standard 180 User Manual to the full Standard 180 Committee at their meetings in January 2016. He understood that the second was to seek more WHPA resource to have a working group continue their effort to fill out details of the proposed outline for a user manual. Dale asked Don Langston whether he now had what was needed for the Standard 180 Committee meeting.

- Don Langston responded that this work product was what he needed to deliver to the Standard 180 Committee. This had never been done before for commercial maintenance and would help keep a focus in the right direction.
- Pepper Hunziker, Tre' Laine Associates, said she was keying in on who the audiences were and how many manuals would be developed. She wondered about how this would or could support training of the workforce. It was her original understanding that this user manual would be a training aid for technicians participating in QM programs. She was not clear on what would be developed with the discussions about the manager and the responsible party audiences. Whether that meant that there would be three or more separate manuals. Her focus was whether what was developed would help operationalize Standard 180 from a workforce education and training (SE&T) perspective.

Dale Rossi responded to Pepper that the number and types of manuals was still an open question. He asked Don Langston for any comment he might have. But, that a previous CQM Maintenance Task Working Group had already addressed and delivered the type of technician details on delivering maintenance tasks that she seemed to be looking for when they completed their 2014 work product on Standard 180 Table 5-22 for rooftop units.

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Don Langston answered that the focus was on producing a Standard 180 user manual, not a document specifically for utility programs in California or elsewhere. He thought it was critical to have a technician section in the manual. The degree of detail was yet to be determined. He could picture an overview for the technician on the impact of delivering their maintenance service. Measuring performance and how it extended equipment life. Highlighting the benefits which technicians provided directly. An informational piece and then pointing to more technical references in the standard, in another manual or other industry resources and publications. Those could include documents and procedures from equipment manufacturers.

Shayne Holderby, HSGS, offered that from his experience managing the PG&E QM program, if they referred to 3rd party informational resources, it was unlikely that technicians would actually take time to go there. They would be looking for the information now while on a job. Also, that by referring technician's to those selected 3rd party resources, he thought they opened the door to a wide range of interpretations about what the "standard" really was. He thought that the technician would or should be the primary audience for a Standard 180 user manual. So far, it didn't sound like it contained a lot of detail for them.

Dale Rossi responded that he thought the consensus of the working group was that the primary audiences for the user manual were the manager and the responsible party/owner. He thought that technicians would be a secondary users of this product.

Don Langston thought that the user manual had to start with the decision makers who had to be educated on what the impact would be by even supporting the delivery of a minimum level of maintenance which was what Standard 180 tried to provide. He supported Shayne's concern for the technician. But, he thought there were plenty of other resources available to bring some key information into the technician section. The technicians needed to have a better understanding of what their role and responsibilities were and what impact they could have, their value to the business owner and decision maker. Defining that communications piece at all levels was clearly a critical part of the user manual. At least to give examples of that reporting and communicating responsibility. It would need to address in house as well as contracted out maintenance approaches. He expected the user manual would have tabbed sections for each of the key stakeholder groups and sections which would be common to all stakeholders but all combined into one document.

Don added that the working group might spend a year or more helping to flesh out just what content this manual would include. It had taken several years to develop the initial version of Standard 180 which was first published in 2008. The CQM Committee provided substantial new materials and suggested revisions which were finally included in the second version published in 2012. Now it was 2015 and a preliminary outline was being developed by another CQM Committee working group. That work would extend well into 2016 and probably beyond since it needed to include discussion with all key stakeholders.

Kristin Heinemeier, UC Davis EEC, joined the meeting and asked about the approach for content. She thought that multiple documents might be necessary. Also, that if the single document tabbed approach was used, that it would be important to try and provide a complete solution for each key stakeholder within the manual and limit the number of references to other standards and documents they'd have to go to for additional information. It was better to repeat information in each stakeholder section than to make the user jump around to other common sections, in her opinion.

Dale Rossi said that he could envision a responsible party/owner section that could address an in house crew approach and another section where he/they used contracted maintenance services for some or all of their maintenance. He thought the same approach could be used for the manager tab, first talk about the common information but then provide examples for the contracted services manager and another for the facility maintenance manager. He thought that the content for technicians would be about the same in each approach to maintenance.

Shayne Holderby, HSGS, commented back to the mention of the technicians section. First, there had been a brief mention of the in house technician vs. a contracted maintenance technician. He thought that distinction was not the



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case. That might lead to people thinking there was a different standard between the two where he thought the standard should remain the same regardless of the body or approach to delivering maintenance. Second, there had been a comment about the size of the final document, how big/thick it would be. That was the thought behind his earlier comments made about having different documents for each key stakeholder but it seemed that the group had moved away from that multiple document approach. For reference, the manual they'd developed for their PG&E program was 117 pages just for the technician segment and it was not all-inclusive. If the technician tab of this single document also needed to break out sections for in house as well as contracted services maintenance, he was concerned that it would get to be way too large.

Dale Rossi responded that he didn't think of the user manual as being as prescriptive and detailed as Shayne might have considered.

Kristin Heinemeier, UC Davis ECC, asked procedurally whether this document was going to be presented and approved by the WHPA Executive Committee prior to being delivered to the Standard 180 Committee?

Don Langston responded that he intended to have it reviewed and approved by the CQM Committee and then the Executive Committee prior to the Standard 180 Committee convening in January.

Closing Comments/Adjournment

Dale Rossi commented that this was their last scheduled meeting. Any further effort would need to wait for CQM Committee and Executive Committee support and direction. He especially wanted to thank Sandy Clark for joining the working group and for all of her assistance in helping the group work through the decision-making questions she'd developed which allowed them to address the audiences to be served, scope of the document and a preliminary table of contents outline.

Don Langston added that he thought the document they'd developed was a great foundation to build on. He hoped she'd be willing to continue working with them in the future.

The Chair adjourned the meeting at 11:52 am PDT.

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ACTION Items listed on following page.

Action Items and Key Decisions (not referenced above)

APPROVAL HISTORY

WORKING GROUP: WHPA CQM Standard 180 User Manual Working Group

BY CONSENSUS **BY EMAIL VOTE TALLY:** Nine of twelve voting members responded. Eight of nine organizations voted YES to approve the report and to escalate it to the Executive Committee for their consideration. One organization abstained. Organizations which voted to approve the report included: ACCA; CLEAResult; FDSI; Goodheart-Wilcox Publisher; Honeywell ECC; Honeywell Smart Grid Solutions (HSGS); Marina Mechanical; SCE. Tre' Laine Associates chose to abstain.

DATE: An email vote was conducted November 13 to December 1.