

Foundation for Cross-Connection Control and Hydraulic Research
University of Southern California
Manual of Cross-Connection Control
10th Edition

Manual Review Committee

4 February 2003

PHCC Training Facility
2869 Glenview Ave.
LA, CA 90039

Meeting Synopsis

Dr J. J. Lee, Director, welcomed all members of Manual Review Committee (MRC) and visitors. Committee roster distributed. Those in attendance:

MRC:

Mike Ahlee	Marty Friebert	Brad Noll - BPMA
Ken Anderson	Ernest Havlina	Robert Purzycki
Richard Bird	Sam Johnson	Paul Schwartz
Dick Carlson	J.J. Lee	Patrick Sylvester
Henry Chang	Mike McKibben	

Guests:

Rand Ackroyd, Watts/Ames	Kelly Gilfoy, Spec Sales/Conbraco
Pat Ahearn, Conbraco	Mike Lueck, Midwest Instrument
Bill Dunmire, SPX Valves, FEBCO	Jim Purzycki, BAVCO
Bob Funderburk, Conbraco	George Swenson, Flomatic

- Paul Schwartz updated MRC with current EPA activity. Distribution system White Papers, including Cross-Connection Control, have been published on the EPA web page, and stakeholders meeting was conducted in Seattle on 14 November 2002. Jim Purzycki attended this meeting and provided an update. Of the nine white papers presented, the cross-connection control issue was voted by the attendees as the highest priority. An announcement was distributed for the next stakeholders meeting in Washington DC on 18 April 2003.
- Patrick Sylvester updated MRC regarding the Foundation's AWWARF Project #2611, which is undergoing final editing at AWWARF.
- Patrick Sylvester updated MRC regarding the Foundation's ongoing residential survey project in Davenport, Iowa. One hundred eighty-eight of the surveys have been completed, and this data will be provided to UC Berkeley as part of their WET study.

- California Recycled Water Task Force – Dick Carlson provided an update of activities at the recent meetings. Two more meetings of the Task Force are scheduled with a final report scheduled for 1 July 03.
- Motion to accept minutes as submitted from 14 November meeting was passed.

Old Business

Incident Report Form – Draft prepared by subcommittee, Ahlee and Bird, had been previously distributed to MRC. Recommendation to change degree of hazard designation on page two from “High/Low” to “Health/Non-Health” to be consistent with other portions of Manual. Mike McKibben had been requested at last meeting to provide an update on a possible incident report form being developed by the CA DOHS, however, no draft is available.

Action Item: Motion to accept the draft Incident Report Form, as modified above, was passed unanimously.

Item #970506 – Field Evaluation Failure Rates - Staff prepared handout at the last meeting which updated data from Field Evaluations conducted under the 9th Edition. Data indicates that 65% of the failures occur in the final four (4) months of the Field Evaluation, therefore, the Staff recommended that the twelve (12) month Field Evaluation be maintained in the 10th Edition. Staff had been requested to review the Field Evaluation data to determine if there was a difference in the results for products in the horizontal and vertical flowing up orientations. Preliminary review did not indicate a different failure mode between the two orientations. It was explained that almost all the vertical comparisons were under the vertical flowing up orientation. There is currently very little data for the vertical flowing down orientation.

Action Item: Staff to prepare a detailed report comparing the data between horizontal and vertical flowing up Field Evaluation failures (BPMA Item #15).

RP Field Test Procedure – At the last MRC meeting Mike Ahlee supplied two modified options to better address the possible effects from disc compression when closing the No. 2 SOV. Staff has not completed the review of the two options and their effect on the diagnostics.

Item #20000201 - DC Bleed Valve Arrangement - Staff report was distributed which detailed some lab tests to determine what flow rates could be achieved while maintaining an error of no more than 0.2 psid. Staff has not completed the additional tests which had been requested at the last meeting.

BPMA Item List – It was requested that Staff review some of the remaining issues on the proposed BPMA Item list.

Item #10 – Size of Testcocks- Staff had demonstrated at meeting on 2/29/00 that leakage in shutoff valves requires the current test sizing. It was requested that this data be provided for review.

Item #17 – RV Port Diameter – Recommendation to remove the port diameters from Table 10-4 had been previously investigated by the Staff. Diameters were originally based upon the size of the threaded RV port, however, the RV port can no longer be threaded. Staff will confirm that the diameters have been removed from the Table.

Item #19 – Backsiphonage Test - Draft of the proposed new test had been previously discussed. Staff explained how this test reduces the subjective placement of the fouling wire. Rand Ackroyd requested that a flow rate be specified rather than an orifice size, since flow rates through orifices may vary.

Item #20 & 21 – Cycle Test for DC and RP – Reviewed staff proposal that the cause of failure be a performance based criteria, rather than an assessment of damage. BPMA is concerned that the DC cycle test should not maintain the No. 3 testcock in the open position, since this induces a situation not encountered in the field. It was explained that the lab tests do not directly pattern themselves after normal field conditions, but may be strength or endurance tests. BPMA is concerned that the RP cycle test opens the relief valve unnecessarily with each cycle. Staff has experienced a small number (estimated <5%) of the cycle test failures attributed to relief valve component failures.

Material Discussion - Brad Noll reviewed the various issues surrounding the material requirements facing the manufacturers. MRC requested that BPMA provide recommendations regarding the material requirements. The original BPMA submittal had only suggested a minimum copper content of 79%. It is now being recommended that the main issue is zinc content and dezincification. Should an alloy contain less than 15% zinc, then it is being recommended that no additional testing should be required. If an alloy contains more than the 15% zinc, then additional dezincification tests may be prescribed. There is an ASTM standard for testing dezincification that Brad Noll will provide to the MRC for review. There is no one alloy that all manufacturers can utilize. There was a concern that having the zinc as the only criteria would make the material specification too open. Staff will look at ways to evaluate the equivalency of the materials in addition to performance evaluation of the backflow prevention assembly.

It was asked if requiring NSF 61 would be an acceptable alternative, however, it was expressed that not all applications may need NSF 61. There may be need for consideration of non-NSF 61 applications such as irrigation and fire systems.

MRC would still welcome additional input regarding internal and body materials.

Test Kit Standard – Draft dated 2/4/03 was handed out for discussion. General comments received and discussed.

10.3.1 – Recommended that a pressure gage be added to the general scope of the test kit. The draft standard would not preclude the addition of a pressure gage, however, the individual tests would need to exclude damage to the pressure gage as a cause for failure (other than leakage).

10.3.3.3 – Recommend using the term “resolving” rather than “reading.”

10.3.3.5 – Recommend using the language “tamper resistant” rather than describing a cover or shield, as well as defining the term “external adjustment.”

Mike Lueck suggested that the accuracy verification be based upon the recommended orientation submitted by the manufacturer. Similar to the submittal of backflow prevention assembly for evaluation, the test kits should have a designated orientation(s), and evaluated in that orientation(s).

Rand Ackroyd inquired about previous action items regarding installation heights for vacuum breakers, and backflow preventers for fire sprinkler systems. Staff to review prior action items and report findings.

New Business

Brad Noll brought up a new BPMA request regarding the cross-over flow rate for DCDA's and RPDA's. The 3 gpm cross-over requirement had been previously researched by Staff, and it was found to have been experimentally derived. Prior editions of the Standard had designated a value of 3 to 15 gpm. Representatives from BPMA recommended that the cross-over point be lowered to 2 gpm, this will allow for a lower loading on the mainline check valves, and in turn a lower overall head loss for the assembly. It was estimated that it takes an additional 2 psid total loading on the mainline check valves to go from 2 to 3 gpm cross-over.

Action Item: Motion to lower the cross-over flow rate for the DCDA (Section 10.2.6.1.b & 10.2.6.3.3) and RPDA (Section 10.2.7.1.b & 10.2.7.3.3) from three (3) gpm to two (2) gpm was passed unanimously.

Meeting Schedule:

The following meeting dates are being proposed:

15 April 2003 – General Meeting *location to be confirmed*

17 June 2003 – Open meeting – *tentative- this date may vary slightly depending when other meetings are scheduled (i.e., week of National AWWA AC&E in Anaheim, CA)*

Adjourned