

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

Manual Review Committee

15 November 2005

PHCC Training Facility
2869 Glenview Ave.
LA, CA 90039

Draft Meeting Synopsis

Dr J. J. Lee, Director, welcomed all members of Manual Review Committee (MRC) at 9:22am. Committee roster distributed. Those in attendance:

Mike Ahlee
Ken Anderson
Richard Bird
Carlos Borja
Richard Carlson
Henry Chang

Marty Friebert
Bill Gedney
Ernest Havlina
Daniel Jimenez
Sam Johnson
J.J. Lee

Grazyna Newton
Brad Noll
Bob Purzycki
Paul Schwartz
Patrick Sylvester

- Staff updated MRC regarding the Foundation's AWWARF Project #3022, Cross-Connection and Backflow Vulnerability: Monitoring and Detection. This project has just gotten underway, and is scheduled for completion in 2008.
- Motion to accept minutes from 19 June 2003 meeting was passed.
- Due to a lack of a quorum at the 19 June 2003 meeting, the minutes from the 15 April 2003 meeting could not be considered for approval. Motion to accept minutes from 15 April 2003 meeting was passed.

Old Business

Section 9 – Field Test Procedures – draft 11-15-05

Staff updated the draft field test procedures which had been forwarded to the MRC in April, and incorporated most of the comments received from the MRC.

SVB – Staff asked if there should be an additional field test to determine if the SVB is spill resistant. General discussion surrounded the difficulty in determining what is incidental splashing versus spillage/leakage. Primary

goal of field test procedure is to determine if the components prevent backflow, and that is adequately covered in the current draft. No additional language regarding a spill resistance test will be added to the draft.

Detector Assemblies – Staff asked if there should be an additional field test to determine if the bypass meter indicates flow. MRC felt that this information should be included in the appendix as a guidance document, rather than including it in the field test procedure.

Action Item: Staff to prepare revised language in guidance document which includes the detection of plugged piping, reading the water meter before and after field test, and recommendation for periodic activation of the water meter.

Abbreviated Procedures – Sam Johnson had recommended that the Manual include an abbreviated version of the field test procedures, to aid those initially learning the procedure. The FCCCHR has been utilizing similar format in their training programs for many years, and found it to be helpful for the students.

Action Item: Staff to prepare a draft of the abbreviated field test procedures, and flow chart format, to be included in the appendix as a *training aid*.

New Business

Air Valve Backflow Preventer - The Staff received a proposal from the Val-Matic Company to create a new Standard for a backflow preventer to be used on air valves. Since this proposal was received at the end of the manufacturer comment period, the MRC does not feel there is adequate time to fully research this issue for inclusion in the 10th Edition. Utilities would need to be surveyed to determine if this type of product provides protection commensurate with the degree of hazard.

Action item: Motion to reject the proposal was passed unanimously.

Section 10 - Standards

Detector Assemblies – No. 4 Test cock - One of the proposals (BPMA #22) from the BPMA requested a modification to the DCDA and RPDA standards. It was requested to eliminate the restriction for the location of the No. 4 test cock on the DCDA's and RPDA's. On 29 July 1997, the MRC approved a deletion of Section 10.2.6.1.f and 10.2.7.1.f. The Staff has received feedback from the field that the proper location of the No. 4 test cock on the DCDA's and RPDA's needs to be addressed. If the main-line No. 4 test cock is allowed to be installed on the bypass piping, then the proper operation of the bypass water meter may not be tested accurately. Blockage where the bypass piping attached to the main-line body will not be detected. Therefore, Staff

would recommend that the prior action be rescinded, and deleted Sections be reinstated in the Standards. If this action is taken, then the DCDA-II and RPDA-II would incorporate similar wording.

Action Item – Motion to reinstate Sections 10.2.6.1.f and 10.2.7.1.f passed unanimously.

Action Item – Staff to review the inclusion of a field test procedure for determining if the bypass piping is obstructed.

Field Test Kits – Several comments were received from the manufacturers regarding the 2 May 2005 Draft of Section 10. Specifically, the requirement for Section 10.4.2.2.6 Test Kit Flow Test and Section 10.4.2.2.7 Pressure Dissipation Test was being questioned. Comments were critical regarding the ability of Field Test Kits to pass these tests with inline filters. If the Field Test Kits could not utilize inline filters, this could compromise their long term operation due to debris becoming lodged in the operating components. In response to these comments, Staff performed additional research on existing Field Test Kits to determine if the requirements of the subject tests were reasonable. The result of this research was handed out to the MRC for review and consideration. Staff recommended the following alternate tests for Section 10.4.2.2.6:

Test A – Simulate condition from PVB or SVB field test – High side bleed needle valve open ¼ turn, apply 1 psi to end of high side hose, record flow from high side bleed needle valve. Recommended minimum flow rate of 0.040 gpm.

Test B – Simulate condition from RP field test – High side control needle valve open, low side control needle valve open ¼ turn, apply 1 psi to end of high side hose. Record flow from low side hose. Recommended minimum flow rate of 0.020 gpm.

The updated research was performed with and without in-line filters to determine their impact on the results. It was found that the in-line filters only reduced the flow rate in the order of 2% to 8%. What had a greater impact with the test results was the Schrader valve depressor inserted in the end(s) of the hoses. These reduced the flow rate up to ~30% in some of the tests. It would be recommended that the depressor insert be removed from the ends of the hoses, since it serves no purpose for this application.

Action Item: Motion to replace the existing Section 10.4.2.2.6 with the alternate Test A and Test B requirements passed unanimously.

Staff also reran the tests for Section 10.4.2.2.7 Pressure Dissipation Test on multiple Field Test Kits to determine if the five (5) second requirement in the draft standard is reasonable. Test results indicate that all but one product

passed the five second requirement. Tests were conducted with and without in-line filters, and Schrader valve depressors. The filters and Schrader inserts did not cause any of the products to fail the test, and the filters had a minor impact on this test. Based upon this second round of testing, the Staff recommended maintaining existing test criteria. MRC supports this position.

Manufacturer's Comments on 2 May 2005 Draft

A handout of the comments received was distributed, and each comment was reviewed by the MRC. The comments were shown as being either clerical or technical. Most of the clerical issues have been incorporated into the working draft of Section 10. The technical issues were either accepted as presented, rejected as being non-persuasive, or under review for MRC action.

Field Test Kits – Section 10.4.2.2.1 - Accuracy Test

Several of the comments received requested that this test be modified to require the accuracy to be verified in a descending mode only. MRC discussed this matter in detail, illustrating there are situations where the gage will encounter ascending motions. Conditions such as fluctuating line pressure will cause the reading on the field test kit to move upward; and the field test of a DC requires the field test kit to be lowered to centerline should the water in the sight tube recede, causing an upscale movement of the reading.

Additional comments were offered relative to the standard requiring water for the laboratory testing, rather than allowing either liquid or gas.

It was also stated that some state or local jurisdictions may interpret the Field Test Kit Standard as the requirement for the annual accuracy verifications, unless the recommendation for annual accuracy verification is identified separately in the Manual.

Action Item - The MRC agreed to address the above issues in the following manner:

The Field Test Kit Standard contained in Section 10 will maintain the requirement for the Accuracy Test in the ascending and descending modes with water. The Appendix will contain a guidance document for periodic accuracy verification in the descending mode only, utilizing either water or gas.

Action Item – Staff to prepare Appendix guidance documents.

Section 10.2.1.5 Approval

Clarification was requested regarding the requirement for a production assembly to be submitted for evaluation approximately six months into the one year field evaluation. This has been standard practice, per policy, for

several years under the 9th Edition. This helps the Foundation to confirm that the production assemblies are the same as the assemblies under active evaluation. Staff prepared proposed new language for Sections 10.2.1.2a and 10.2.1.5:

Following the successful completion of the Laboratory Evaluation and before the assembly(s) can be granted approval, a production quality assembly(s) shall be submitted for review and/or evaluation.

Section 10.1.3.4 Body and Cover

Proposal to modify Section 10.1.3.4 to include: "...or other bronze alloys containing a minimum of 79% copper and maximum of 15% zinc. Alloys containing less than 79% copper and/or more than 15% zinc shall be tested for dezincification resistance per ISO 6509 with a 200 micrometer maximum average depth penetration."

Action Item – Motion passed to accept the proposed language for Sections 10.1.3.4, 10.1.3.6, 10.1.3.8, 10.1.3.10, 10.1.3.16, 10.1.3.17 and 10.1.3.18

Action Item – Staff to prepare reply letters to each of those companies/individuals that provided comments on the 2 May 2005 Draft.

Meeting Schedule:

The following meeting date is being proposed:

17 January 2006 – General Meeting *at PHCC facility*

Adjourned 2:50 pm