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

Manual Review Committee
28 February 2006

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) and visitors at 9:34am. Those in attendance:

MRC:

Michael Ahlee
Ken Anderson
Richard Bird
Carlos Borja
Henry Chang
Dick Carlson
Marty Friebert
Ernest Havlina
Sam Johnson
J.J. Lee
Brad Noll
Paul Schwartz
Patrick Sylvester

Visitors:

Rand Ackroyd – Rand Engineering
Arthur Butters – Watts Regulator
Pete Chapman – Apollo Valves
John Higdon – Apollo Valves
Daniel Jimenez - FCCCHR
Mike Lueck - Midwest Inst.
Doug Powell – Ames Company
Jim Purzycki - BAVCO
Jeff Scilingo – Watts Regulator

- Paul Schwartz updated MRC regarding the Foundation's AWWARF Project #3022 – Cross-Connection and Backflow Vulnerability: Monitoring and Detection. Workshop will be conducted at USC campus on 13 March 2006.

- Motion to accept minutes from 15 November 2005 meeting as modified was passed. Page number correction offered by Henry Chang.

Old Business

Manufacturer's Comments on 1 December 2005 draft of Section 10

A handout of the manufacturer's comments received had previously been distributed to the MRC for review. Copies were distributed to all those in

attendance, and each comment was reviewed by the MRC. The comments were classified as being either clerical or technical, and can be found in the MRC's Responses to Comments on Section 10 Draft dated 1 December 2005.

Visitors in attendance were given the opportunity to address the MRC with additional information in support of their previously submitted written comments.

Midwest Instrument – Mr. Mike Lueck (3 Jan 2006 letter)

Item #3 – Orientation of field test kit in 10.4.2.2.1 will be corrected to the vertical position only. Clerical correction.

Item #2 – Section 10.4.2.2.1 - Accuracy Test. Mr. Lueck would like to see the accuracy test performed in the descending motion only, which relates to the way that readings are recorded in the field test procedures. If ascending points are to be tested, then they should be at critical points of failure (i.e., 1 psid, 2 psid, 5 psid) during the field test procedure.

MRC members detailed that field test results are routinely observed and recorded in both descending and ascending modes. Critical points are not only limited to those mentioned above, but at values throughout the full scale.

No action taken to modify this section, so wording in 1 December 2005 draft will remain. Accuracy test will require points taken on both ascending and descending modes.

Item #1 – Section 10.4.1.1 – During the evaluation program the University Counsel may sign a non-disclosure agreement with the manufacturer if so requested.

Apollo Valves (Conbraco) – Mr. Bob Funderburk (9 January 2006 email)

Item #1 – Section 10.2.2.3.8 Backsiphonage/Backpressure Test - Mr John Higdon detailed that the current draft of the test has created air and water flow rates which exceed those experienced from the current 9th Edition version of this laboratory test. Flow rates through the orifice plates (i.e., 10th Edition draft) are estimated to be in the magnitude of 5-10 times greater than the flow rates from the fouling wires (9th Edition test), and because of the higher flow rates, current 9th Edition approved product may not pass the test. This particularly applies to the larger (i.e., 2-1/2"-10") RP's.

Staff handed out a timeline of development for the new draft test. The timeline showed that the new draft test had been presented to the manufacturers in May 2000, and no negative comments received until June 2005. It was also pointed out that existing USC Approved

products (i.e., 9th Edition and earlier editions) are not required to comply with the 10th Edition. It only applies to new submittals after the 10th Edition is published.

It was suggested that additional laboratory comparison tests be performed to determine if any portion of the draft BP/BS test needs to be modified.

Action Item: Staff to solicit manufacturers to provide data on their own 9th Edition approved products. Manufacturers will be requested to perform flow rate tests with the appropriately sized fouling wire inserted per the current 9th Edition protocol. Perform air flow test at various vacuum levels, and perform water flow test at various backpressure levels. Due date of 1 April 2006.

Action Item: Staff to perform evaluation of 10th Edition draft protocol to determine what the critical parameters of the test are. Tests will primarily be done on 9th Edition Approved products, and tests performed at lower flow rates (water and/or air) may be investigated.

Action Item: Staff to review the data from the above two action items, then prepare a recommendation for MRC consideration.

Item #2 – Body and Cover material

Requested that the average depth penetration should be changed from200µm (micrometer) to 100µm.

Additional comments received from:
Febco – Mr. Bill Dunmire (9 January 2006 email)
Watts – Jeff Sclingo (6 January 2006 letter)
Rand Engineering – Rand Ackroyd (12 January 2006 letter)

Staff reviewed the timeline of this subject, identifying that the BPMA withdrew their BPMA Item #13 (May 1997) regarding a minimum 79% copper alloy bronze. Each manufacturer was then encouraged to provide a recommended modification. When the 5 May 2005 draft Section 10 was sent out for comment, Wilkins submitted a proposed change which was adopted by the MRC at the 15 November 2005 meeting. The 1 December 2005 draft Section 10 contained this modification which would allow dezincification resistant brass materials (DZR). When the 1 December 2005 draft Section 10 was submitted for comments, several negative comments were received.

Rand Ackroyd detailed that no data has been submitted that shows the depth of corrosion in the DZR material is comparable to the current

bronze alloys. There is little or no data from cross-connection control programs in other countries utilizing DZR materials in backflow preventers. Jeff Sclingo suggested that there is a need for some correlation between laboratory dezincification data and field evaluation experience. MRC members commented that relaxing the standard for materials may affect the longevity of the backflow prevention assemblies, and the end users of the products.

Action Item: Motion passed to modify Sections 10.1.3.4, 10.1.3.5, 10.1.3.6, 10.1.3.8, 10.1.3.10, 10.1.3.17, 10.1.3.18 of the 1 December 2005 draft Section 10 as follows:

> "…..which conforms to ASTM Designation: B61 or B62 or B584 UNS number C84400 or other ASTM Designated bronze alloys that contain as least 79% copper and less than 15% zinc ~~Alloy 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~~, or stainless steel……"

Meeting Schedule:

Tentative meeting dates
16th or 23rd May 2006 - General MRC meeting

Adjourned 2:45 pm