

Texas Commission on Environmental Quality
Cross-Connection Control Subcommittee

June 2, 2010

Meeting Summary

Welcome/Introductions/Announcements

1. The next meeting of the subcommittee will take place on Wednesday, September 1, 2010. The next meeting will be abbreviated since a workshop on the USC 10th edition backflow prevention assembly field test procedures will take place in the afternoon. Mr. Paul Schwartz, Chief Engineer for the University of Southern California's Foundation for Cross-Connection Control and Hydraulic Research, will be present at the workshop. Continuing education credits for licensed backflow prevention assembly testers will be offered for attending the workshop.
2. Ms. Amy Rivera, TCEQ Cross-Connection Control Program, has moved to another position within the agency. Her position will be posted and a replacement will be hired.
3. The TCEQ Public Drinking Water Conference will be held on August 10-11, 2010 at the Doubletree Hotel located at 6505 IH-35 in Austin. This conference is free and is focused on providing information and resources to individuals who work in the water utility field. Continuing education credits for licensed individuals are offered for those who attend the conference. More information is available at:
http://www.tceq.state.tx.us/permitting/water_supply/pdw/conference.html
4. TCEQ has recently published a brochure on cross-connection control and backflow prevention: "A Consumer's Guide to Backflow Prevention in Texas" (GI-411). The brochure is written in English and Spanish. Copies are available upon request.

Vote to adopt minutes from last meeting

Minutes were adopted following discussion of two items. A proposal was made to modify the minutes from the March 3, 2010 meeting to distinguish between "rainwater harvesting" and "rainwater collection." After discussion of this proposal, the consensus of the group was to leave the minutes unchanged. Another proposal was made to change the minutes to clarify that backflow prevention assembly tester (BPAT) training providers are not required to provide students in their classes with a USC cross-connection control manual. TCEQ's policy is that BPAT training providers must teach students the USC field test procedures, but may provide students of their classes with any approved cross-connection control manual. The March 3, 2010 meeting minutes were modified to clarify this policy.

Summary of Technical Session from ABPA Conference – Waterborne Disease Outbreaks

Joel Klumpp, TCEQ Cross-Connection Control Program, presented a summary of a technical session presented at the American Backflow Prevention Association's (ABPA) Annual Education Conference and Trade Show which took place in New Orleans, Louisiana, on May 17-19, 2010. The technical session was titled "Waterborne Disease Outbreaks and their Link to Distribution System Issues" and was presented by Joan

Brunkard, Ph.D., with the Centers for Disease Control and Prevention. Mr. Klumpp spoke about some of the highlights from this presentation, including observations made from a review of the data from the Waterborne Disease and Outbreak Surveillance System (WBDOS).

City of Corpus Christi CCC Program - Enforcement

Mr. James Pendleton, Backflow Prevention Inspector for the City of Corpus Christi's Development Services Department, and Ms. Lenora Herzer, City of Corpus Christi Development Services Department, spoke about the City's Cross-Connection Control Program.

The City of Corpus Christi started their "active" backflow prevention program in 1986. City staff are currently tracking over 9,000 backflow prevention assemblies. Backflow Prevention Inspectors for the City are trained in plumbing, cross connections, and irrigation. The City charges fees for the registration of licensed backflow prevention assembly testers and irrigators. The City also charges a filing fee for each backflow prevention assembly test and maintenance report form that is submitted by a licensed tester. The City has information on their website on backflow prevention and cross-connection control to educate the public and information for licensed testers. The City's enforcement program originally began by sending a series of three notices, and then tried to contact customers by phone. The City had a 75% compliance rate using that method. The City amended their adopted plumbing code to identify who was responsible (the property owner) for testing of backflow prevention assemblies. The code was also amended to include a penalty (\$200-\$2,000) for failure to test assemblies. The City now sends only one notice when an assembly is due for its annual test. If a customer does not respond, a notice of violation is sent and the customer is allowed seven days to contact the City. If the customer does not comply, the City takes them to Environmental Court (for misdemeanors of City ordinances). The customer typically faces a 90-day probation period, a fine of up to \$2,000, and is required to have their assembly tested. Extensions can be requested. If the reason the City did not receive the completed backflow prevention assembly test and maintenance report form is the fault of the licensed tester, charges against the customer are dropped and the tester is subject to fines (\$500 per test report). Drawbacks to this method of enforcement include the large amount of time required to complete paperwork. The City now has a 96.6% compliance rate. Currently, the City has a staff member who focuses strictly on surveys to identify residences with irrigation systems. From January 29, 2010 to the present, these surveys have identified over 700 residences with irrigation systems that are now included in the City's tracking system.

Bypass Arrangements at Critical Facilities

Bruce Rathburn, Backflow Prevention Supervisor for the San Antonio Water System, and Troy Baird, Bac-flo Unlimited®, spoke about the difficulties involved in shutting off the water to a critical facility during the test of the containment backflow prevention assembly if the facility has just one service connection and does not have a bypass arrangement for the backflow prevention assembly. When bypass arrangements are used, the backflow prevention assembly on the bypass must be the same type as the containment assembly. Fred Baird with Bac-flo Unlimited has developed a form for licensed testers to use when testing containment assemblies at critical facilities. The form is required to be signed by the responsible party at the facility, and explains that the water must be shut off during testing of the assembly. Discussion on this topic included the

need for multiple services or bypass arrangements at single services to be addressed during the design phase of facility construction. A recommendation was made for TCEQ staff to contact the Austin-area Council of Governments (COG) to begin a dialogue about this issue and the COG general design standards. Mr. Klumpp will contact the Austin-area COG and report back to the subcommittee in September.

A suggestion was made that a monetary value could be placed on having the water shut off at a critical facility (e.g. \$100,000/hour) to compare to the cost of running parallel lines or putting in a bypass arrangement.

When a Backflow Prevention Assembly Fails...

Joel Klumpp led discussion on what licensed backflow prevention assembly testers are required to do when an assembly they are testing does not pass its initial or annual test. One of the technical sessions at the ABPA Conference explored this issue. The presenter at the ABPA Conference stated that since backflow prevention assemblies include redundancy, a failed test does not necessarily mean that the assembly does not continue to provide a measure of backflow prevention. The ultimate question is whether the water can be turned back on to a facility if the containment backflow prevention assembly did not pass its test. The licensed tester should discuss this with the water provider, and allow the water provider to make this decision. Factors which will impact the decision include the actual results of the test (e.g. if the backflow prevention assembly is a double-check valve backflow prevention assembly, is the first check reading 0.9 psi? 0.5 psi? 0.0 psi?), whether the facility is a critical service facility, how long it will take to secure replacement parts for the assembly, and whether there is an adequate internal cross-connection control program in place at the facility.

Transition to USC 10th Edition Field Test Procedures

Bruce Rathburn discussed the impacts of changes to the USC field test procedures in the new 10th edition of the USC's cross-connection control manual. Test proctors must be aware of the changes as they are observing students testing for their backflow prevention assembly tester license. Discussion included water conservation concerns for discharges from reduced pressure principle backflow prevention assemblies that have less than a 3 psi buffer between check valve number one and the relief valve opening point.

Summary of Technical Session from ABPA Conference – Status of Federal CCC Regulations

Joel Klumpp presented a summary of the technical session given by Mr. Karl Anderson with the U.S.E.P.A. at the ABPA Conference. Mr. Anderson provided an update on changes occurring at the federal level which may impact cross-connection control programs. The draft revised Total Coliform Rule (TCR), to be published during this summer, includes a provision for reduced coliform monitoring if a public water system can demonstrate that it has an adequate cross-connection control program in place. Once the draft version of the revised TCR is published, there will be a 60-day comment period. Those wishing to comment on the inclusion of a cross-connection control component to this rule may do so. Mr. Klumpp will notify the subcommittee when the draft revisions are published and when the comment period begins. Additionally, Mr. Anderson stated that the EPA is tracking backflow incidents, and is encouraging the reporting of backflow incidents to the EPA. Backflow incidents in the state of Texas can be reported to Mr. Klumpp at (512) 239-4453 or jklumpp@tceq.state.tx.us, or directly to the EPA to Mr. Ken Rotert at Rotert.Kenneth@epamail.epa.gov.

Fire Licenses and Tests of Backflow Prevention Assemblies on Firelines

Charles Ansley, Metroplex Training, raised the issue of testing of backflow prevention assemblies on firelines by licensed backflow prevention assembly testers who also hold a license for work on the Underground Piping of firelines issues by the State Fire Marshal's Office. Mr. Mark Redlitz, Director of Licensing, Texas State Fire Marshal's Office, stated that individuals holding an Underground Piping license are only allowed to test the backflow prevention assemblies on the underground portion of the fireline. Violators can be fined. Questions regarding this can be directed to Mr. Redlitz at (512) 305-7927 or at mark.redlitz@tdi.state.tx.us.

TCEQ's regulations do not address this, stating only that "[licensed] backflow prevention assembly testers may test and repair assemblies on fireline only if they are permanently employed by an approved fireline contractor."

Standards for Accuracy Verification of Differential Pressure Gauges

Mr. Bill Hamrick, ATB Services, Inc., and Charles Ansley have developed a guidance document which provides additional information and guidance on the accuracy tests required for differential pressure gauges used by licensed testers for testing backflow prevention assemblies. TCEQ's regulations found in Title 30 of the Texas Administrative Code (TAC) Chapter 290, Section 290.44(h)(4)(B) require gauges used for the testing of backflow prevention assemblies to be checked annually for accuracy in accordance with the USC cross-connection control manual or the American Water Works Association's (AWWA) M14 manual. Mr. Hamrick stated that gauges should be checked in descending order for best results. The gauge or mechanism used to do the accuracy check must be at least 4 times more accurate than the gauge being checked and so must be NIST certified. The gauge or mechanism used to do the accuracy check should be certified annually. Mr. Hamrick stated that using water columns for gauge accuracy checks difficult due to the excessive height of the water column (27 plus feet) and the inability to have the water column NIST certified. There was a general discussion about a TCEQ regulatory guidance document on this topic, and the necessity for this document to be in accordance with the USC cross-connection control manual. A recommendation was made to present the draft guidance document to the Drinking Water Advisory Workgroup (DWAAG) for approval before beginning the publication process with TCEQ's Agency Communications group. Mr. Klumpp will present the draft guidance document to the DWAAG at the next scheduled meeting on August 3, 2010.

Color Coding/White Paper on Graywater

Bruce Rathburn led discussion of the White Paper on Graywater written by Bahman Sheikh, Ph.D., P.E., on behalf of the AWWA, Water Environment Federation, and the WaterReuse Association. The white paper was published earlier this year. The white paper was written in response to the change to the 2009 version of the Uniform Plumbing Code designating purple as the color for identification of pipes carrying all types of nonpotable water, including graywater. There is concern among the reclaimed/recycled water industry that cross-connections between reclaimed/recycled water and other nonpotable water supplies of lesser quality will negatively impact the use and public perception of reclaimed/recycled water.

There was a general discussion about color coding for auxiliary water supplies, and the consensus of the group was that the use of properly-labeled purple pipe to carry all types of nonpotable water is a good idea from the cross-connection control perspective.

Other Issues Stakeholders Would Like to Discuss

- Bruce Rathburn announced that the Assistance, Quality and Affordability Act of 2010 (H.R. 5320) includes a section which would amend existing provisions in the Safe Drinking Water Act related to lead fixtures. The act would change the legal definition of “lead-free” from 8% lead to 0.25% lead in wetted surfaces. The act has been ordered to be reported by the House of Representatives’ Committee on Energy and Commerce. Since backflow prevention assemblies qualify as plumbing fixtures, the new definition of lead-free would require manufacturers to change the way backflow prevention assemblies are made. One question discussed was whether there would be a “grandfather” provision for existing plumbing fixtures. Subcommittee members will continue to keep track of this bill in order to determine potential impacts to the backflow prevention industry.