

# Texas Commission on Environmental Quality

## Cross-Connection Control Subcommittee

December 4, 2013

### Meeting Summary

#### Introduction & Announcements

The meeting dates for 2014 will be March 5<sup>th</sup>, June 4<sup>th</sup>, September 3<sup>rd</sup>, and December 3<sup>rd</sup>. A motion was made to adopt the meeting summary from the previous, September 4 meeting. The meeting summary was voted on and adopted without comment.

#### New Lead Requirements

Mr. Al Fuentes, Texas Commission on Environmental Quality (TCEQ), led the discussion on the upcoming, new, EPA lead requirements. TCEQ is currently developing a rule package to modify regulations found in 290.44(b), 290.46(i), and 290.47(d) to reflect the changes made by the EPA regarding the new definition of "Lead Free."

In order to assist Texas Public Water Suppliers, information will soon be posted to TCEQ's Lead/Copper web page located at: [http://www.tceq.texas.gov/drinkingwater/chemicals/lead\\_copper](http://www.tceq.texas.gov/drinkingwater/chemicals/lead_copper)

Some of the questions from the Subcommittee were:

- Will existing plumbing, which complies with the former 8% lead requirement, be "Grandfathered?"
- Will the Customer Service Inspector (CSI) have to calculate the average lead content over the wetted surface of a pipe or pipe fitting?
- Will the Customer Service Inspection Certificate be changed?
- What happens when an existing backflow preventer is repaired?
- Will new pipes and fittings be labeled if they comply with the new lead requirement?

Possible answers to these questions will be obtained during subsequent meetings/discussion with TCEQ staff and management.

#### Rainwater Harvesting Rule Update

Ms. Cindy Haynie, TCEQ, provided a brief update on the TCEQ Rainwater Harvesting Rules. Of concern were the possible backflow requirements for rainwater harvesting systems with greater than 500 gallon capacity. Rainwater harvesting systems that are connected to a public drinking water system and have more than 500 gallons of storage capacity are required, in the new rules, to have backflow protection at the storage tank. This protection can be in the form of an air gap or a reduced pressure backflow prevention assembly.

If approved by the Commissioners, the rules that resulted from HB 2781 will be published in the Texas Register on February 14, 2014 and will become effective on February 20, 2014.

## **Special Cases For Health Hazard Classification**

Mr. Adam Smith, City of Austin, lead the discussion on the need to classify as a health hazard typical, non-health hazard substances such as coffee, in certain circumstances. An example given; a loss of pressure in the distribution system in a hospital caused coffee to backflow through a double-check valve assembly which had not been tested and did not function correctly to prevent backflow. Normally, coffee in the water would not be considered a health hazard requiring the use of a reduced pressure principle backflow prevention assembly (RP) or another assembly approved for use against a health hazard. In this case, however, the caffeine from the coffee in the water posed a health hazard and was potentially life-threatening should it cause a drug interaction during a procedure or it come in contact with a patient who was allergic.

At this point, addressing these special cases for health hazard classification is best done during a customer service inspection and communication with the appropriate facility personnel. This topic requires further discussion and exploration and will be included as an agenda topic for the next meeting of the TCEQ Cross-Connection Control Subcommittee.

## **Backflow Prevention Assembly Tester Exam Update**

Ms. Linda Saladino, TCEQ Occupational Licensing, provided an update on the development of a TCEQ-administered exam for Backflow Prevention Assembly Testers. Subjects discussed at the October 23, 2013 meeting with BPAT training providers and subject matter experts: proctor qualifications, practical skills test-- passing/proctoring criteria, exam question language review, exam categories, and implementation issues. The expected project implementation is in the first quarter of 2014.

Items discussed during the CCC meeting:

- Written and practical exam results should be consistent between providers;
- Points can be earned during the practical skills test; must pass the testing of all devices including one which is malfunctioning;
- If the student fails testing one device, then the student fails the practical test;
- Proctor qualifications should include completion of video training and qualified instructor status for at least X number of classes.
- Proctor vs Instructor. This may be the same person if properly qualified.
- TCEQ could recognize other organizations' qualified proctors, but they must have completed the minimum TCEQ training and must use TCEQ's criteria of grading and proctoring the practical skills.
- No actual performance test for the 8 hr. refresher; the student must demonstrate competency to the instructor to get credit for the course.

Implementation topics discussed:

- Passing a practical skills test is good for one year while, at the same time, trying to pass the TCEQ written test; likewise, the student will have one year to pass the practical skills test after having passed the written test. Failure to pass both tests within one year of each other will void the tests and the licensing application.
- The application process and exam reservation procedures may take place at TCEQ regional offices and computer-based testing sites.
- There is no waiting period to retest for the practical skills test, unlike the written exam. However, the student must earn enough "points" during a test to qualify for an immediate retest. If a critical item is missed, additional training will be needed to prepare for a retest.
- Records will be maintained by the training provider regarding practical skills test results.

## **Backflow Prevention at Fire Hydrants**

Mr. Al Fuentes lead the discussion on backflow prevention at construction sites which are provided water from a fire hydrant. Often times, the backflow preventer at these sites is susceptible to theft which requires added security measures such as using a chain or an enclosure. When these security measures are not sufficient, the backflow preventer will be disconnected at the end of the day and reinstalled the next day. At issue is TCEQ's requirement that a backflow preventer must be "tested upon installation." This practice will require daily testing of the backflow preventer, which will create a large financial and administrative burden on the party responsible for the backflow preventer. It was the general consensus of the subcommittee that it was not necessary to re-test the backflow preventer in this situation if the following precautions were taken:

- The backflow preventer was tested and passed the test when originally installed.
- The public water supplier is aware of the use of the backflow preventer.
- The backflow preventer is tested and used at only one site.
- If the backflow preventer is in-place at one site for longer than one year (unlikely), then the backflow preventer must be tested annually.
- The backflow preventer must be re-tested when moved to another site.
- The backflow preventer must be protected from damage during transport and storage.

## **General Discussion During the Working Lunch**

Two Backflow Events: Mr. Al Fuentes described two backflow events which were reported to him. The first was a backflow event that took place at a manufacturing plant. An individual was priming a sewage pump with a water hose connection. When the pump turned on, it pumped sewage into an administration building through the cross-connected water hose. Fortunately, the individual became aware of the backflow and notified management who, in turn, alerted the people in the building. The water coming out of the faucets was a very dark color. The plumbing was flushed and disinfected with highly chlorinated water. Subsequent sampling showed no positive results and there were no water complaints.

The second occurred at a city park irrigation system. The required reduced pressure zone backflow prevention assembly (RPZ) was installed but, had not been tested. The nearby residents started complaining of small worms in their water. The investigation identified the backflow through the RPZ from the irrigation system and zero chlorine residual. The RPZ was replaced and the new one was tested. The area water mains were flushed and an adequate chlorine residual was attained. This removed the small worms from the plumbing and there were no illness complaints.

Watts 9BD Backflow Preventer: There is still some confusion regarding the required backflow prevention on carbonated beverage dispensers. Per TCEQ's regulation 290.47(i), a carbonated beverage dispenser, listed as Vending Machine, is categorized as a health hazard and requires a backflow preventer allowed for use against a health hazard. Typically, this is a reduced pressure principle backflow prevention assembly (RP). The hazard is the risk of copper poisoning from the leaching of copper in the plumbing by the carbon dioxide/water combination. The question was posed via a phone conversation prior to the meeting about the use of the Watts brand 9BD backflow preventer pictured here:



The confusion stems from the Plumbing Code allowing this type of backflow preventer for use on a carbonated beverage dispenser. It should be noted that the TCEQ has testing requirements for backflow preventers installed to provide protection from a health hazard. It is critical that the backflow preventer function correctly and this can only be determined by a licensed Backflow Prevention Assembly Tester (BPAT).

The Watts 9BD backflow preventer is not a testable assembly. In addition, the relief port, through which fluid is allowed to exit in the case of backflow, is threaded and is often intentionally plugged to prevent fluid from leaking onto the area where it is installed. This circumvents the function of the relief port and will allow backflow should the check valves within the body of the backflow preventer be fouled.

In this case, the TCEQ requirement is more stringent, and better protective of the public health therefore, the appropriate backflow preventer is one which is allowed, by TCEQ, for use against a health hazard.

“Legal” Test Kits in Texas: The question of “legal” test kits was briefly discussed. Currently, TCEQ regulations only require that the test gauges used by Backflow Assembly Testers be checked for accuracy annually. If this date is current, then the test kit is allowed for use in testing backflow prevention assemblies.

### **The Neutral Output – Discharge Elimination System (NO-DES)**

A general discussion was held regarding a system for capturing water from dead-end main flushing. This system uses a portable filtration unit mounted on a flat-bed truck or a trailer which filters the water from dead-end main flushing, rechlorinates it, and then reintroduces it into the potable water supply. Of concern was the potential for backflow as well as the sanitary quality of the water being reintroduced into the potable water supply. The NO-DES system is currently submitted for TCEQ approval.

### **Revisions to Regulatory Guidance Document Number 478 (RG-478), “Establishing and Managing an Effective Cross-Connection Control Program.”**

TCEQ’s Plumbing Ordinance Requirement [290.46(i)] requires that a public water supplier adopt an adequate plumbing ordinance, regulations or customer service agreements. These are used to provide the public water supplier with the authority to implement a Cross-Connection Control Program and must include provisions for enforcement in order to prohibit cross-connections and other unacceptable plumbing practices. Historically, the adoption of a Plumbing Code was interpreted to mean compliance with this requirement. Recently, it has been determined that the Plumbing Code does not sufficiently provide authority for a Cross-Connection Control Program therefore, a public water supplier must adopt a Plumbing Ordinance in addition to a Plumbing Code. This new interpretation will be reflected in the revision of RG-478.