

# **Texas Commission on Environmental Quality**

## **Cross-Connection Control Subcommittee**

**September 4, 2013, Building F, Room 2210,**

### **Meeting Summary**

#### **Introductions & Announcements**

The meeting summary from the June meeting was voted on and adopted. It will soon be available on the TCEQ Website.

Mr. Kenny Dykes, TCEQ Cross-Connection Control Program, provided an update on the revisions of two regulatory guidance (RG) documents, RG-206 and RG-478. Some of the proposed changes are:

- Remove irrigation systems and swimming pools from the list of facilities that would not need a Customer Service Inspection (CSI).
- Include language requiring a CSI to be conducted for all new landscape irrigation systems and swimming pool installations. At the time a permit is obtained, a CSI would be required.
- Provide educating language of the hazards posed by RV owners cleaning out their blackwater tanks.
- Provide clarification on containment backflow prevention and internal backflow prevention.
- Provide language which supports regulatory authority in rural areas.

#### **Challenges Presented by the New EPA Lead Rule**

Effective January 4, 2014, the definition of “lead-free” will be reduced from 8% lead content to a weighted average of not more than 0.25% in the wetted surface material

In communications with the EPA, Mr. Kenny Dykes asked the following questions:

- Are backflow prevention assemblies installed on lines larger than 2 inches exempt from the new 0.25% lead content requirements?
- If a backflow prevention assembly containing 8% lead is installed for an end use that is not for human consumption and the source water is from potable water that will be used for human consumption, is the water downstream of the 8% lead content backflow prevention assembly considered to be a health hazard?
- Is a backflow prevention assembly containing 8% lead allowed for use against a health hazard?
- If the water downstream from a Double Check Valve Assembly (DCVA) containing 8% lead is considered a health hazard, is the DCVA still adequate protection.

- Would inspectors need to determine the use of the water and then determine if the appropriate backflow preventer is installed?
- Would internal inspections (customer side of the meter) need to be conducted to confirm that the appropriate backflow preventer is installed on water lines used for non-potable purposes and therefore likely to be a health hazard? Would those backflow preventers need to be tested for lead?
- If a backflow preventer which was installed before January 2014 fails a test, can it be repaired or does it have to be replaced with a 0.25% lead content backflow preventer?
- If a backflow preventer which was installed before January 2014 fails a test and cannot be repaired, does it need to be replaced with a 0.25% lead content backflow preventer?

To date, Mr. Dykes has not received any answers from the EPA.

On this same topic, Mr. Al Fuentes, TCEQ Cross-Connection Control Program, introduced Ms. Laurie Gehlson, TCEQ Lead/Copper Program and asked her to provide information as to what happens when CSI identifies lead/copper in the plumbing of an existing facility. Ms. Gehlson briefly outlined some of the steps she takes:

- She determines what sampling schedule a system is on. Sampling schedules for lead and copper consist of a 6 month monitoring schedule for brand new systems or systems that have exceeded the action levels in previous sampling. This routine sampling will show if the lead is reaching the potable water supply.
- Schedules for one year & three year sampling are dependent on previous results.
- Nine year sampling schedules are also dependent on previous results and whether a system has been granted a waiver by TCEQ. A PWS must maintain 90<sup>th</sup> percentile amounts under 0.005 mg/L for lead and under 0.65 mg/L for copper to remain on a nine-year schedule. If the 90<sup>th</sup> percentile is above those numbers, they are automatically re-scheduled on a 3 year schedule.
- If lead is detected in the distribution system then the source must be identified. This necessitates additional sampling and/or a desktop corrosion control study, to identify where it's coming from.
- If needed, the corrosion control study will show if the water is corrosive and leaching the lead from the plumbing and if the system should modify the water chemistry by adding corrosion control chemicals.

Question: When a faucet is repaired that doesn't meet the new definition of lead free, does it need to be replaced? It was determined in the general discussion that the faucet

did not need to be replaced, but the repair components need to meet the new definition of lead free.

The subcommittee could not come to a consensus on further actions to take when lead is detected in the plumbing of a facility. Two differing points of view were expressed:

- When unacceptable levels of lead are detected, a plan must be made to remove the lead containing plumbing and replace with a satisfactory alternative.
- When unacceptable levels of lead are detected, the Public Water Supplier (PWS) must be notified, the water must be sampled. If no lead or levels of lead below the maximum contaminant level are detected, then continued monitoring is needed. If the lead level is too high, then actions such as what Ms. Gehler listed above must be taken.

### **Department of Homeland Security and Our Water Supply**

Mr. Byron Hardin, Hardin & Associates, presented information on Backflow Prevention and Homeland Security concerns. Included among the many points made, were:

- TCEQ's reporting requirements as specified in Title 30 of the Texas Administrative Code Chapter 290.46(w) **Security** - *All systems shall maintain internal procedures to notify the executive director by a toll-free reporting phone number immediately of the following events, if the event may negatively impact the production or delivery of safe and adequate drinking water:*
  - (1) an unusual or unexplained unauthorized entry at property of the public water system;*
  - (2) an act of terrorism against the public water system;*
  - (3) an unauthorized attempt to probe for or gain access to proprietary information that supports the key activities of the public water system;*
  - (4) a theft of property that supports the key activities of the public water system; or*
  - (5) a natural disaster, accident, or act that results in damage to the public water system.*

The toll free reporting number at TCEQ is 1-800-832-8224

- The EPA developed an early warning detection system program that targeted top 10 cities. It is based on the "Black Box Theory," and is designed to monitor water quality parameters and generate an alert if there was a significant change in the water quality parameters.
- The EPA also has a Water Security Initiative which involves several agencies tracking backflow incidents. As an example, the Centers for Disease Control, (CDC) which receives reports from hospitals, knew about the 1993 Cryptosporidiosis outbreak in Milwaukee before the water system did.

- Some monitoring parameters that were mentioned are:
  - Customer Complaints
  - Health surveillance
  - Water quality
  - Sampling
  - Public Health Surveillance (911 calls, EMS Runs, PCC calls)
  
- Mr. Elston Johnson, TCEQ Water Supply Division, presented information on the TCEQ response process to an emergency. This process is not incident specific, that is, it is the same process regardless of the type of emergency.
  - It is important that the local authorities engage in the response process locally first. Once this is done, next level of assistance, the local coordinator with the Texas Department of Emergency Management (<http://www.txdps.state.tx.us/dem/>) becomes available which can provide further assistance.
  - EPA is a good resource (<http://www.epa.gov/nhsrc/aboutwater.html>) for water security
  - For afterhours calls, the regional offices are also available. For information regarding TCEQ Regional Offices go to:

<http://www.tceq.texas.gov/about/directory/region/reglist.html>

- Email notifications could also be sent to: [PDWS@tceq.texas.gov](mailto:PDWS@tceq.texas.gov)

### **CCC and Cruise Ships**

Mr. Hardin also provided information regarding a backflow prevention of cruise ships presentation provided by the CDC. The presentation covered topics such as:

- Ships can either obtain potable water while docked or make it out at sea using desalinating membrane technology;
- If a ship connects to a potable water supply while at dock, they need to connect through a backflow preventer;
- The internal potable water distribution system on a cruise ship must be properly coded/marked.

### **Swimming Pools and Spas**

During the general discussion of this topic, it was the consensus that public swimming pools and spas should be considered health hazards due to the inadequate maintenance of disinfection residuals and accumulation of hazardous substances/organisms in the filtering equipment.

### **Cross-Connections and Dialysis Machines**

Mr. Al Fuentes lead the discussion on backflow prevention at facilities that house dialysis machines. Many times, dialysis machines are connected in series. Of concern is the possibility of backflow from the dialysis machines to the potable water supply and the possibility of backflow from one machine to another. During the research of this topic and the following discussion, the following points were made:

- The fluids in dialysis machines pose a health hazard to the potable water supply.
- The connection to the potable water supply line must be made through a backflow preventer which will protect against a health hazard;
- Dialysis machines are currently made with internal backflow protection which will eliminate the potential for backflow from one machine to another.

### **Becoming a BPA Test Gauge Tester - Mr. Bill Hamrick**

Mr. Bill Hamrick, ATB Services Inc., presented information on who can test gauges used by licensed Backflow Prevention Assembly Testers. Mr. Hamrick referred to the following language in TCEQ's Regulatory Guidance Document No. 493:

“Gauges can be tested for accuracy by any individual or company using a standard gauge traceable to National Institute of Standards and Technology (NIST) that is at least four times more accurate than the required accuracy of the gauge being tested. The current error tolerance of gauges used for testing backflow-prevention assemblies is  $\pm 0.2$  psid.”

Mr. Hamrick went on to say that:

- Gauge accuracy tests may not be performed on one's own gauge or a gauge registered to the company employing the technician performing the test;
- It would be appropriate to have the local authority or organization such as a local chapter of the American Backflow Prevention Association conduct the testing;
- In order to properly test a backflow gauge, you have to test with a standard that can be certified. A gauge that is at least 4x more accurate than the gauge you are testing;
- The standard gauge used to conduct the testing is certified by the gauge manufacturer annually;
- Make sure to test at both the high end test points and the low end test points;
- Mr. Hamrick recommended that organizations should do the testing, as opposed to individuals, or a company that has factory trained staff.

### **Rainwater Harvesting Rules**

Mr. Al Fuentes led the discussion on the upcoming Rainwater Harvesting Rules (RWH). There are three main points to the new rules:

- Cross-connection Control safeguards must be in place;
- The local Public Water Supplier must be notified of the RWH system;
- RWH system must be installed and maintained by a master plumber.

Some issues that were raised during the general discussion were:

- How will RWH systems affect local Cross-Connection Control Programs? The local programs will have to assure that cross-connection safeguards are in place. This could be accomplished through Customer Service Inspections (CSI) conducted either by the local public water supplier or by asking the customer to have a CSI conducted.

- Education in the form of a Regulatory Guidance document or a pamphlet was strongly suggested.

### **Status of New BPAT Exam & Exam Procedures**

Ms. Barbara Mendieta, Occupational Licensing Section, provided an update on the status of the new Backflow Prevention Assembly Tester Exam and Exam Procedures.

Ms. Mendieta provided the following information:

- The question bank has been whittled down to 318 questions;
- There are 9 proposed exam categories;
  - Notify Identify Inspect Observe (NIIO) – *external components & conditions of assemblies*
  - Reporting, Record Keeping, & Coordinating Communications
  - Rules, Statutes, & Standards
  - Safety
  - Testing & Troubleshooting - *by type of assembly*
  - Non-Testable Backflow Prevention - *air gaps & AVBs*
  - Hydraulics & Backflow Principles
  - Maintenance & Repair – *internal components & operations of assemblies*
  - Cross-Connection Control - *degree of hazard & type of backflow prevention for specific hazards*

The next BPAT Exam Workgroup meeting is on Wednesday, Oct. 23. We will be working towards finalizing the 100-question multiple-choice exam and we will begin drafting guidance for training providers to administer, proctor, evaluate, and document the practical skills exam. **(We are encouraging training providers to submit their practical skills exam procedures to ensure we have the broadest input available).** Our goal is to have the new multiple-choice exam by Jan. 1, 2014.