

Texas Commission on Environmental Quality

Cross-Connection Control Subcommittee

March 5, 2014

Building F, Room 2210

Time: 9:00 – 3:00

Meeting Summary

Introduction

Mr. Al Fuentes

The remaining meeting dates for 2014 are: 06/04, 09/03, 12/03.

Comment was asked for on the meeting summary from the previous meeting of the Cross-Connection Control Subcommittee. No comment was received. A motion was made to adopt the meeting summary and, after voting, the meeting summary was adopted. It will be posted to the TCEQ Website in the near future.

Electronic Record Keeping and Test Results

Mr. Al Fuentes

Public water suppliers are allowed to change the official Backflow Prevention Assembly Test and Maintenance Report form (form) found in the state regulations with TCEQ approval. The evaluation for approval is especially important for requests to use electronic record keeping and data entry of these forms.

After some discussion, it was determined that, because training providers are required, per TCEQ's Curriculum Guidance, to teach the University of Southern California's (USC) testing procedures, it is strongly recommended that those wishing to develop an alternate form, address issues involving the USC test procedures such as:

- The USC test procedures do not allow for a numerical value to be entered when testing of the second check valve in a Reduced Pressure Principle Backflow Prevention Assembly (RP). Therefore, it should not be required during data entry of test results to provide a numerical value for the second check valve;
- There is no requirement for a "Buffer Zone" which is the difference in pressure between the relief valve opening and the static pressure drop across the first check valve. As before, there is no requirement for a numerical value for the Buffer Zone during data entry of the test results.

Often, local jurisdictions use the option of getting a TCEQ-approved alternate form to capture information which is not required on the official form. When doing this, it is recommended to identify this information and provide a comment stating that it is a local requirement and not a TCEQ requirement.

Irrigation Systems, OSSF, and Private Wells

Mr. Al Fuentes

It has proven challenging for Public Water Suppliers (PWS) to be aware of the cross-connection control and backflow prevention requirements for irrigation systems. These regulations are cited in 30 Texas Administrative Code Chapter 344.50. Chapter 344 is primarily aimed towards licensed irrigators and so, PWSs typically do not use these regulations in the normal course of business. The following two topics were discussed:

- Backflow requirements on irrigation system w/Chem. Additives and Private Well- TCEQ's Backflow regulations require that sites that are connected to the potable water supply and also have a private well have an air gap or an RP at the metered connection. Also, TCEQ's Landscape Irrigation regulations require an RP on an irrigation system which has any type of chemical additive. In this case, the site would be required to either:
 - Have two RPs and those would have to be tested annually or;
 - Have an RP on the irrigation system and an air gap separation between the potable water supply and the private well.
- Backflow requirements on an irrigation system at a site with an On-site Sewage System Facility (OSSF) - Prior to the adoption of the current **Landscape Irrigation Rules** in 2009, a Double-Check Valve Assembly (DCVA) was an acceptable form of backflow prevention for irrigation systems without chemical additives. After 2009, it was required that irrigation systems on the same property as an OSSF have a Reduced Pressure Principal Backflow Prevention Assembly (RP) installed. As a result, there are currently irrigation systems installed which do not have the appropriate, required backflow prevention. To address this, the adoption of the current version of the Landscape Irrigation Rules also contained the following:

344.52 (a) If an irrigation system is connected to a potable water supply and requires major maintenance, alteration, repair, or service, the system must be connected to the potable water supply through an approved, properly installed backflow prevention method as defined in this title before any major maintenance, alteration, repair, or service is performed.

Historically, and after consultation with the TCEQ Landscape Irrigation Program, this regulation was taken to mean that those systems which were installed **prior to 2009** were essentially "Grandfathered" until the system required "major maintenance, alteration, repair, or service."

Licensed irrigators installing irrigation systems on sites which also have an OSSF **after 2009** should be aware of the change in the required backflow prevention and install the RP.

Emphasizing the importance of backflow prevention on irrigation systems, the following incident was discussed: a licensed irrigator was performing maintenance on a spray-aerobic septic system without being aware that it was an OSSF. He accidentally connected the potable water supply to the OSSF. The pressure from the OSSF was greater than that in the potable water supply so the effluent from the OSSF could have readily backflowed into the residence should the backflow preventer not have been installed.

TOPS Presentation

Mr. Kenneth Dykes & Mrs. Alicia Diehl

Kenny and Alicia are members of the Texas Optimization Program (TOP) which helps public water systems do the best they can with what they have. Their presentation discussed:

- The barriers to pathogens for groundwater and distribution systems include source water protection, treatment (disinfection), and distribution. Cross connection control is part of the distribution system's final barrier ensuring end-users are not exposed to pathogens.
- EPA and TCEQ optimization programs historically focused on surface water treatment plants. More recently, the focus is including groundwater and distribution. The three main components of distribution optimization are:
 - Cross connection control program,
 - Dead end main flushing, and
 - Maintaining a disinfectant residual.
- In optimization, systems set goals to surpass the minimum requirements set by EPA and TCEQ.

- One tool to help systems is the Financial, Managerial, and Technical (FMT) assistance contract, which provides free, on-site assistance.
 - The contractor is currently Texas Rural Water Association.
 - FMT circuit riders can supply Directed Assistance Modules (DAMs) which are specialized training modules.
 - You can contact Stacy Foster 512-239-3105 for more information.
- Since the drought started, TCEQ has given exceptions to systems for DEM flushing that require additional sampling, but less water for flushing.

Updates to Customer Service Inspection Certificate (CSI) and the Customer Service Agreement (CSA) regarding new Lead requirements **Mr. Bruce Rathburn**

TCEQ is currently developing a rule package to modify regulations found in 290.44, 290.46, and 290.47 to reflect the changes made by the EPA regarding the new definition of “Lead Free.” At this point, only the numerical values will be changed (change 8% to 0.25%) while the language will remain the same. It is anticipated that the TCEQ regulations will be in line with the federal requirements.

Plastic Backflow Preventers **Mr. Al Fuentes**

The subject of backflow preventers was discussed. Due to the incidence of theft of backflow preventers for their worth in recycled metal, manufacturers have produced many backflow preventers in which the major component in their make-up is plastic while the check-valves can be made of either brass or plastic. Some concern was expressed about the effect of the weather (heating and cooling) on plastic backflow preventers. It was the general consensus that:

- During the approval process, the plastic backflow preventers are tested under extreme weather conditions;
- Approved plastic backflow preventers are currently being successfully used;
- Plastic backflow preventers are a good alternative to the standard metal backflow preventers.

Backflow Requirements for Connections to Reclaimed and Recycled Systems **Mr. Fred Baird**

In order to address the potential contamination hazard posed from cross-connections to re-used/recycled/reclaimed water systems, the need to clarify the definitions of these different types of water, the level of hazard they pose, and the necessary backflow prevention was discussed.

The definition for reclaimed water found in TCEQ regulations is:

210.3(24) Reclaimed water--Domestic or municipal wastewater which has been treated to a quality suitable for a beneficial use, pursuant to the provisions of this chapter and other applicable rules and permits.

TCEQ regulations found in Appendix I, 290.47(i), categorize reclaimed water systems as health hazards requiring any connection to them to have either an air gap or a Reduced Pressure Principle Backflow Prevention Assembly (RP) and requires annual testing of that assembly.

Rainwater Harvesting Rules **Mr. Al Fuentes**

The adopted Rainwater Harvesting Rules (RWH) rules were reviewed and discussed. During the general

discussion the following points were made:

- 290.44(j)(2) states: *At each residence or facility where water from a rainwater harvesting system is used for potable purposes and there is a connection to a public water system, the public water system shall ensure that the rainwater harvesting system is installed and maintained by a master plumber or journeyman plumber licensed by the Texas State Board of Plumbing Examiners and who holds an endorsement issued by the Texas State Board of Plumbing Examiners as a Water Supply Protection Specialist.*

This allows, for those systems used for non-potable purposes, to be installed by persons other than a licensed plumber with a Water Supply Protection Specialist endorsement.

- 290.44(j)(4) states: *The public water system used as a back-up supply for the rainwater harvesting system may be connected only to the water storage tank and may not be connected to the plumbing of a structure.*

This requires the back-up supply line to the RWH system to be connected only to the water storage tank but does not prohibit the connection of the potable water supply line to the structure itself.

- It was further determined that connecting to the potable water supply through an air gap or a backflow prevention assembly does **not** mean that the site is not connected to the potable water supply and therefore is not subject to the applicable rules and regulations.

BPAT Practical Exam Proctoring

Ms. Linda Saladino

A draft performance exam record sheet with a list of deductions for non-critical to critical mistakes was reviewed and considered by the BPAT exam work group. There was consensus on the degree of criticality assigned for the list of possible mistakes while performing a test. The proctor's record sheet reflects University of Southern California's Foundation for Cross-Connection Control & Hydraulic Research (USC-FCCC&HR) testing procedures. It was suggested the TCEQ test form be used as a template for the form filled in by applicants during the test. Most participants felt you should test only one applicant at a time. A final score with retest opportunities is still desired.

Discussion and consensus is still required for the number of assemblies to test with a malfunction/troubleshooting required, the final form, and how to provide proctor training. Current instructors with experience proctoring the performance exam will meet proctor qualifications, but may still need to "pass" the training to demonstrate proficiency with the TCEQ process.