

# Texas Commission on Environmental Quality

## Cross-Connection Control Subcommittee

March 3, 2016

### Meeting Summary

#### Announcements

Mr. Al Fuentes

The meeting was begun with the introduction of Mr. Chirag Patel, Contractor TCEQ Cross-Connection Control Program.

A request for comments was made on the meeting summary from the September 2, 2015 meeting of this subcommittee. Mr. Randy Holland, Safe-T-Cover, requested that the following language in red be added to bullet number 3 under the Backflow Prevention Assemblies Practices Presentation heading:

Above Ground Enclosures: **On their own**, these types of enclosures are susceptible to many hazards such as freezing, durability, drain capacity, accessibility, and security. **For that reason, ASSE has established a quality and safety standard known as ASSE-1060 that addresses these vulnerabilities in a meaningful way and provides guidance to building authorities on an appropriate level of quality and instead, simply require that this standard be met.** Mr. Holland highlighted several major cities in the United States with vastly different policies regarding the regulation of above ground enclosures.

Mr. Al Fuentes, TCEQ Cross-Connection Control Program, requested the changes in blue. A motion was made to adopt the meeting summary and the motion was seconded. The vote to adopt the meeting summary with the requested changes was unanimous.

#### Update on the Revised Total Coliform Rule

Mr. Joaquin Montes

Mr. James Beauchamp, TCEQ Public Drinking Water Section, was originally slated to provide a summary on the Revised Total Coliform Rule (RTCR), but due to other high priority projects, was unavailable to attend this meeting. Fortunately, Mr. Joaquin Montes, TCEQ Drinking Water Quality Team, was able to step in and provide a brief update on RTCR. Mr. Montes stated that RTCR establishes a maximum contaminant level (MCL) for E-Coli. The presence of E-Coli indicates fecal contamination of the water. This rule will use a “find and fix” approach where, exceedance of this MCL will trigger an Assessment of the system (Level I and Level II Assessments) to identify any sanitary defects and correct them. Mr. Montes stated that there are other triggers for a Level I Assessment such as a non-acute MCL violation.

RTCR recognizes Cross-Connection Control and Backflow Prevention as the final barrier to the entry of pathogens and/or contaminants into the potable water supply. A Public Water System’s (PWS) Cross-Connection Control Program will be evaluated during the Assessment to determine its adequacy. This rule will take effect April 1, 2016.

Mr. Kenneth Dykes, TCEQ Response and Capacity Development Team, provided information on Directed Assistance Modules (DAM) which are being developed by the Texas Optimization Program (TOP), a program in his team. DAMs are currently being developed to assist public water systems with Level I Assessments, Level II Assessments, and Cross-Connection Control Programs. The aim is to have these DAMs ready by April 1, 2016.

**Revisions to Regulatory Guidance Document No. 206, “A Public Water System Guide to Customer Service Inspections (CSI).”** **Mr. Al Fuentes**

Mr. Al Fuentes spoke on the revisions to Regulatory Guidance Document No. 206 (RG-206), “A Public Water System Guide to Customer Service Inspections (CSI).” RG-206 has a section titled, “When are Customer Service Inspections not required?” Originally, this section included irrigation systems. When verifying the revisions to RG-206, it was determined that exempting irrigation systems from the need for a CSI was in direct conflict with the regulation which requires CSIs. This regulation states:

**290.46(j) Customer service inspections.** *A customer service inspection certificate shall be completed prior to providing continuous water service to new construction, on any existing service either when the water purveyor has reason to believe that cross-connections or other potential contaminant hazards exist, or after any material improvement, correction, or addition to the private water distribution facilities. Any customer service inspection certificate form which varies from the format found in commission Form 20699 must be approved by the executive director prior to being placed in use.*

This information was presented to the Irrigator’s Advisory Council (IAC). Some concerns that were expressed by the council were:

1. The CSI would impinge on the Landscape Irrigation Inspector’s duties making that license unnecessary;
2. The CSI would be a hardship to the customer;
3. The CSI is not necessary as the Licensed Irrigator can assess the site for any hazards; and,
4. The CSI is not required because installing an irrigation system is not considered plumbing.

After carefully considering the regulation and the concerns from the IAC, it was determined that the TCEQ could not have a regulatory guidance document that directly contradicts a regulation. The revised RG-206 will be posted to the agency website in the near future.

The concerns from the IAC were addressed:

1. The CSI would **not** look at the irrigation system itself, but would focus on determining if cross-connections, actual or potential contamination hazards, and lead in the plumbing exist on the entire site. The irrigator would then use this information to determine which backflow preventer to install.
2. The Licensed Irrigation Inspector could also obtain the CSI license and conduct both inspections for the site. This would minimize the impact on the public water system, the customer, and the inspector.
3. The licensed irrigator is not qualified to conduct a CSI and cannot fill-out and sign the CSI Certificate. Only an individual who took the training, past the test, and was granted the CSI license can conduct the CSI inspection and test the plumbing of the site for lead.
4. As shown by the highlighted above, even though the installation of an irrigation system is not plumbing, it is still subject to 290.46(j), the CSI Regulation. There are many circumstances that a CSI can bring to light which will be critical to the irrigator when he decides which type of backflow prevention assembly to use such as: an On-Site Sewage Facility, Home Businesses (auto shop, welding shop, extensive gardening, dog kennels, etc.), Alternative Water Sources (private wells, rainwater harvesting systems, watering troughs, pump in a lake, etc.), Fecal Material (livestock, farm animals, rodents, dogs, cats).

The timing of the CSI must be considered. For example, if an irrigator unknowingly installs a Double-Check Valve Assembly (DCVA) on an irrigation system and then he learns from the CSI that there is a health hazard imposing on the

system, changing the DCVA to the required Reduced Pressure Zone Backflow Prevention Assembly (RP) would alter the hydraulics which will result in additional time and expense to change the system so that it will function correctly.

During this discussion, several members raised the issue of the TCEQ classification of irrigation systems as non-health hazards unless they have chemical additives, in which case they would then be considered health hazards and would trigger the annual testing of the backflow prevention assembly. In order to support Public Water Systems who wish to classify irrigation systems as health hazards and require annual testing of the backflow prevention assemblies, members of the subcommittee will develop a document that will recommend that TCEQ regulations be in line with many of the accepted national standards (American Water Works Association, American Backflow Prevention Association), as well as the two plumbing codes (International Plumbing Code, Uniform Plumbing Code) allowed in Texas.

**Revisions to Regulatory Guidance Document No. 478, “Establishing and Managing an Effective Cross-Connection Control Program.”** **Mr. Al Fuentes**

Regulatory Guidance Document No. 478 (RG-478) titled, “Establishing and Managing an Effective Cross-Connection Control Program” has undergone extensive revision and will soon be published on the agency’s website. Much information was added regarding the authority of the Cross-Connection Control Program, Enforcement, Customer Service Inspections, Form Approvals, and Record Retention among others. RG-478 has expanded from 16 pages to 70 pages.

**The New Directed Assistance Module (DAM) from the Texas Optimization Program (TOP)** **Mr. Kenny Dykes**

Mr. Kenny Dykes, provided information on a DAM which is being created by TOP to assist public water systems with their Cross-Connection Control programs. This DAM will mirror the revised RG-478 and will be administered by the TCEQ’s Financial, Managerial, and Technical Assistance (FMT) program. Staff will travel to a public water system and present this DAM in a four to eight hour session. Mr. Dykes stated that other avenues for dissemination of this DAM were being explored.

**Backflow at Chemical Manufacturing Plant** **Mr. Richard Bosch**

Mr. Richard Bosch, TCEQ Cross-Connection Control Program, discussed the backflow incident which occurred at a large manufacturing facility in Freeport. He stressed the importance of having a Cross-Connection Control Program, particularly CSIs, which would have helped the facility to avoid the incident. He also discussed using prior data to set up chemistry profiles of a Public Water System’s (PWS) water so that ongoing testing would show any changes in the water which could be used to detect backflow and assess when the contaminant has been eliminated. He also reviewed the differences between a chemical and microbiological contaminants as they relate to a boil water notice (BWN) and how a BWN would not be appropriate for a chemical contaminant in the water. He noted that additional chemical testing was requested during this backflow event because the PWS had not performed sufficient testing to determine if the contaminant was absent.

**City of Ingleside** **Mr. Al Fuentes**

The City of Ingleside was recently struggling with microcystins in the potable water supply. Microcystin is a toxin produced by algae and can become widespread during algal blooms. At the time of this writing, the source of the microcystin had not been identified, but it is believed a cross-connection to a source of water (pond, lake, swamp, etc.) containing the algae is likely. The City has flushed the distribution system extensively and removed the toxin from the potable water supply.

**Program Surveys** **Mr. Richard Bosch**

Mr. Bosch informed the Subcommittee of four surveys which the TCEQ Cross-Connection Control (CCC) Program performed in February 2016. The TCEQ requires these surveys in order to get a snapshot of how PWS Cross-Connection

Control programs are doing and how this agency can assist them. Deficiencies in CCC Programs are documented in a letter sent to the PWS. Mr. Bosch also informed the group that surveys are used as a tool to determine how the TCEQ CCC program can best provide service to PWSs.

**Updates to the Customer Service Inspection Certificate (CSI) and the Backflow Prevention Assembly Test and Maintenance Report (BPAT)** **Mr. Richard Bosch**

Mr. Bosch reviewed the updated BPAT and CSI which are now available on the TCEQ website. Subcommittee members were solicited for input on the forms. Some of the changes recommended were:

- Clarify which mailing address was needed;
- Clarify that “location” means address; and
- Change “major renovation” to “material improvement.”

**Private Wells and Backflow Prevention** **Mr. Al Fuentes**

The TCEQ requirement for backflow prevention when a site has a private well was discussed. The rules for Public Water Systems (PWS) classify private/individual/unmonitored wells as a health hazard and requires the Reduced Pressure Zone Backflow Prevention Assembly (RP) or an air gap to be installed at the metered connection to the site. This is specified in 290.47(f) Appendix F. Historically, the TCEQ has waived this requirement if it could be documented in a Customer Service Inspection (CSI) that the plumbing of the private well is not connected to the plumbing of the potable water supply. It should be noted that a CSI includes testing the plumbing of the site for lead content which may necessitate entering the building (private residence, commercial, industrial, etc.) to get access to the plumbing. The typical places used for the lead test include the plumbing to the water heater and an outside hose bib. Citizens from the City of Llano voiced their strong concern of the need for an inspector to enter a private residence.

**Disinfect Backflow Prevention Assemblies After Repair?** **Mr. Richard Bosch**

The question was raised regarding the need to disinfect a backflow prevention assembly (BPA) and the water lines after testing and repairing the BPA. This question referred to TCEQ Regulatory Guidance Document No. 421 (RG-421) titled Coliform Sampling for Public Water Systems, where a directive is made that disinfection and coliform sampling be performed after a line is serviced. After some discussion, it was determined that this requirement applied to water mains in the distribution system and does not apply to service lines downstream of a meter or other incidental work that occurs, such as BPA maintenance or meter servicing.