Texas Commission on Environmental Quality
Cross-Connection Control Subcommittee
June 1, 2017
Building F, Room 2210
Time: 9:00 – 3:00

Note: *This meeting summary is posted for review and comment by meeting attendees. It will be available for comment at the next meeting of the TCEQ Cross-Connection Control Subcommittee at which time it will be voted on for adoption.*

Commencement — Al Fuentes

The meeting commenced on time at 9:00 am. General announcements were made regarding the building facilities and the working lunch. Mr. Al Fuentes, TCEQ Cross-Connection Control Program, provided a brief update on the latest activities of the TCEQ Cross-Connection Control Program:

- The program is facilitating the 40-hour University of Southern California's Foundation for Cross-Connection Control, Cross-Connection Control Program Specialist Training here at the TCEQ Campus the week of June 12th.
- Program staff are providing a presentation and a field trip for the TCEQ Investigator training to be held June 6-8 in Georgetown, TX.
- Program staff continue working with the Texas Optimization Program in implementing the Revised Total Coliform Rule.

Comment was requested on the meeting summary for the March 3, 2017 meeting. There was a brief discussion on repairing or replacing backflow prevention assemblies in-line on irrigation systems as well as on "grandfathering" in cross-connection control and backflow prevention. After some clarifying discussion, the motion was made to adopt the meeting summary with one minor correction under the heading, "Update from the TCEQ Landscape Irrigation Program," provided by Ms. Melissa Keller. The word "replaced" will be changed to "repaired" in the second bullet in Mr. DeCell's discussion. The motion to adopt was seconded and the vote to adopt was unanimous.

Approved Forms and Changes to the Official Forms — Chirag Patel

Mr. Chirag Patel, TCEQ Cross-Connection Control Program, provided information regarding previously approved alternate forms. At issue was the updating of the current official forms which would then make the content different from previously approved alternate forms. The TCEQ regulations allow for the use of different or alternate forms as long as those forms receive TCEQ approval. During the approval process, the content of the alternate form is checked to determine that all items on the official forms are also covered on the alternate forms. It was determined that as long as a Public Water System which is using an alternate form has an approval letter from TCEQ, then that alternate form is valid as-is and does not need to be changed to match the updates on the official forms.

This, however, cannot apply to alternate Customer Service Inspection Certificates (CSI). This is due to the change in the rule regarding the Lead Ban. The lead ban changed from allowing 8% lead content in the plumbing of a water system to 0.25%. This rule change necessitates updating all previously approved alternate CSI forms. TCEQ Cross-Connection Control Program staff will develop a letter to be sent to all Public Water Systems using alternate CSI forms informing them that their form is no longer adequate and they must re-submit for approval of their alternate CSI form.

Mr. Byron Hardin, Hardin & Associates, led the discussion on changing the official Backflow Prevention Assembly Test & Maintenance Report form to include a location on the form where the tester could document where the assembly is installed. It would be beneficial for the Public Water System to know if the assembly is installed on the internal potable water plumbing, at the metered connection, on the irrigation system, or on the wet based fire suppression.

Mr. Hardin also provided information on a new type of Double Check Detector Assembly (DCDA), known as the DCDA-II, which may necessitate altering the official test report to accommodate the field testing of these assemblies. DCDAs are typically installed on fire suppression systems and two test reports are used when testing these, one for the main assembly and one for the assembly on the metered bypass. The way the DCDA-II is configured, a separate form could not be used on the bypass detector assembly as is currently done, since the bypass of the DCDA-II only contains a single check valve. Electronic mail communication from Mr. Paul Schwartz, University of Southern California Foundation for Cross-Connection Control and Hydraulic Research (USC), indicates that there are several sizes of the DCDA-II which are currently approved. An important factor with these assemblies is the possible lower pressure drop making them suitable for retrofit situations

During the general discussion, the following concerns regarding a variety of topics were aired:

- If the tested assembly was installed on a fire suppression system, it would be better for the test report to have a place where the tester could document if the fire suppression system was a wet based system, had chemical additives, or was a dry system.
- It was restated that a landscape irrigation system installed on a site that also has an On-Site Sewage Facility (OSSF) must have a reduced pressure zone backflow prevention assembly (RP).
- The annual testing requirement of backflow prevention assemblies (BPA) is dependent on the degree of hazard and not on the type of BPA. For example, if a pressure vacuum breaker is installed to protect against a hazard that is considered a "health hazard," then it must be tested annually. However, if the same pressure vacuum breaker is installed on a "non-health hazard," then, even though it is suitable for use against a health hazard, it does not need to be tested annually.
- The question was raised whether the American Society of Sanitary Engineers (ASSE) Standard 1055 satisfied TCEQ regulations and was allowed to be connected to the potable water supply without backflow prevention upstream of the connection. The ASSE 1055 standard addresses backflow prevention in chemical dispensing units such as those commonly found in mop sinks and on commercial kitchen sinks. These units mix water and the desired chemical for use in cleaning. At issue is the possibility of backflowing the chemical(s) into the potable water supply should a backsiphonage condition occur. The ASSE 1055 standard provides an "engineered air gap" to protect against backflow. It is important to note that an engineered air-gap does **not** meet the definition of an air-gap in TCEQ regulations:

  > *290.38(2) Air gap--The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet conveying water to a tank, fixture, receptor, sink, or other assembly and the flood level rim of the receptacle. The vertical, physical separation must be at least twice the diameter of the water supply outlet, but never less than 1.0 inch.*

  Although an engineered air gap is not a compliant means of backflow prevention, due to its necessity in situations such as chemical dispensing units and relief valves for backflow prevention assemblies, it may be acceptable if it is certified by a recognized organization [American Society of Sanitary Engineers (ASSE), International Association of Plumbing and Mechanical Officials (IAPMO), NSF International (NSF), etc.] as complying with applicable performance standards and Plumbing Codes and is installed per manufacturer's recommendations. The engineered air gap or the housing containing it must bear the stamp of the certifying organization.

- Mr. Bruce Rathburn, American Backflow H2O, provided information on the direct cross-connection formed when a service truck for portable toilets needs potable water during the routine maintenance.

Often, a common water hose is allowed to become submerged in the holding tank on the truck while it is filling.

The Cross-Connection Control Program Questionnaire — Shannon Frazier

Mr. Shannon Frazier, TCEQ Cross-Connection Control Program, provided a brief update on the TCEQ Cross-Connection Control Program Questionnaire. This questionnaire is used to bring awareness of the regulations governing cross-connection control and backflow prevention to public water systems. It is periodically mailed out. Some of the questions program staff receive regarding this questionnaire are:

- **Will I receive a violation for any information on the questionnaire that is deficient?** Violations are not cited based on this questionnaire. Deficiencies provide an opportunity for the water system to obtain the information it needs to address any shortfalls in its program.
- **Can you send me a copy of our last questionnaire so I can fill out this one?** One of the benefits of the questionnaire is that it provides a current snapshot of how the system's cross-connection control program is doing. Using old information to fill the questionnaire out would not be suitable.
- **Where can I find a copy of the questionnaire on the website?** The questionnaire is available at: https://www.tceq.texas.gov/drinkingwater/cross-connection/cc_control.html
- **Am I required to fill this out?** No. At this point, filling out the questionnaire is voluntary. The exercise of filling it out should provide the water system with an idea of how their program is doing and where improvements can be made.
- **We don't have any cross-connections, do we have to fill this out?** When asked this question, program staff take the opportunity to educate the water system on the cross-connection control, backflow prevention, and the TCEQ regulations.

Backflow Event Response Form Update — Richard Bosch

The backflow event response form developed for TCEQ staff to use during a backflow event is currently in management review and is expected to be available to TCEQ Central Office and Regional staff in the near future. The purpose of this form is to provide …..

Legislative update — Shannon Frazier

Mr. Shannon Frazier provided an update on legislation that might have an impact on cross-connection control and backflow prevention. Mr. Frazier covered the following three bills:

- HB 1927 – Relating to an alert system for notification of the release of toxic chemicals by a manufacturing plant.
- HB 0173 – Relating to the licensing and regulation of certain rainwater harvesting; providing administrative penalties; authorizing fees; requiring an occupational license.
- HB 484 – Relating to training required to qualify for or renew a license issued by the Texas Commission on Environmental Quality.

None of the proposed bills made it out of the Environmental Regulation House Committee for further action.

Landscape Irrigation Program Update — Melissa Keller

Ms. Melissa Keller, Work Leader TCEQ Program Support Section, provided an update on the Landscape Irrigation Program. Ms. Keller covered the following topics:

- The TCEQ public water system (PWS) regional investigator training will take place in Georgetown, TX June 6 – 8. Included in this training is a presentation on cross-connection control and a field trip to review a PWS cross-connection control program.
- There continues to be some misinformation by training providers regarding irrigation systems. Some training providers are informing their students that all irrigation systems have been or will soon be classified as health hazards which will mean changing all the double-check valve backflow prevention assemblies to ones appropriate for a health hazard and testing that assembly annually. It is important to note that, **there have been no such changes to the Landscape Irrigation rules**. An irrigation system continues to be considered a non-health hazard unless it has chemical additives, is on a site with an On-Site Sewage Facility, or a Customer Service Inspection documents a hazard imposed on the irrigation system which raises it to the health hazard status. A possible reason for this confusion is the intent of Irrigators Advisory Council (IAC) to submit a petition for a rule change of the Landscape Irrigation Rules. More information on the IAC can be found on their website at: https://www.tceq.texas.gov/drinkingwater/irrigation/irr_advisory.html
- The Occupational Licensing and Office of Compliance and Enforcement webpages are currently undergoing updates.

Licensing Update — Linda Saladino

Ms. Linda Saladino, Manager Occupational Licensing, provided a brief update on the current licensing statistics for Backflow Prevention Assembly Testers (BPAT) and Customer Service Inspectors (CSI). She provided these current numbers:

License Type	Percent Passed	Total Number of Licenses
BPAT	47.6	5,991
CSI	55.0	1,989

Ms. Saladino also provided the following additional information:

- Occupational Licensing is receiving a higher number of BPAT applications this year;
- They are actively recruiting new computer based testing centers;
- The application for a license must be reviewed and approved prior to receiving a letter indicating the applicant is approved to register to take the test;
- Some common deficiencies on the applications include incomplete/inaccurate criminal history or leaving the application to use ePay and not returning to include the voucher number and submitting the application.
- House Bill 1508 – this bill will require training providers to notify applicants about the need to provide a criminal history along with the application.
- HB 1508, effective September 1, 2017, requires training providers preparing an individual for issuance of an initial occupational license to notify each applicant and enrollee regarding:
    - the potential of an individual's ineligibility for a license based on criminal history;
    - the TCEQ criminal history review guidelines (RG-521) and;
    - the right of an individual enrolled or planning to enroll in the educational program to request a criminal history evaluation from TCEQ.

If an individual was denied a license because they were not notified, the training provider will be required to refund the amount of any tuition paid and also pay to the individual an amount equal to any application and examination fees ($111). TCEQ will be providing outreach to approved training providers regarding this requirement as part of the implementation plan.

Updates to Regulatory Guidance Doc. No. 476 and 477 — General Discussion

Mr. Al Fuentes informed the subcommittee of the need to update Regulatory Guidance Document No. 476 (RG-476), "A Public Water System Guide to Preparing a Backflow-Incident Emergency-Response Plan," and RG-477, "A Public Water System Guide to Responding to a Backflow Incident." After some discussion, a small work group was formed to update these RGs. Several members volunteered: Mr. Byron Hardin, Hardin & Associates, Ms. Belinda Pattison, Benbrook Water Authority, Mr. Shawn O'Donnel, City of San Marcos. The work group will be headed by Mr. Bruce Rathburn, American Backflow H2O.

Update from the American Backflow Prevention Association Conference — Al Fuentes

Mr. Fuentes led the discussion on the recently held American Backflow Prevention Association Conference (ABPA) in San Antonio, TX. The general consensus from the subcommittee was that the conference was very good and benefited the attendees greatly. The exchange of knowledge and ideas greatly increased the awareness of the challenges faced in cross-connection control and backflow prevention. Some of the topics discussed were:

- Post Mix Beverage Units;
- Backflow in Fire Systems;
- Comparison of the Model Plumbing Codes (International and Uniform Plumbing Codes);
- The Cost of Not Having a Cross-Connection Control Program;
- The State of Cross-Connection Control Programs in Canada.

Update from the Small Business and Local Government Assistance (SBLG) — Jason Robinson

Mr. Jason Robinson, TCEQ Small Business and Local Government Assistance Program, provided a brief presentation on the SBLG. The SBLG provides a broad range of free and confidential assistance to water systems as well as programs dealing with air and wastewater regulations. More information can be found on the SBLG web page at: https://www.tceq.texas.gov/assistance

Coverage During a Customer Service Inspection — Al Fuentes

Mr. Al Fuentes led the discussion on how much a Customer Service Inspection (CSI) should cover when the trigger for it is limited to just a portion of a site. For example, if an addition is made to a house, should the CSI be limited to just the new construction or should it encompass the entire house? After some vigorous discussion, a consensus by the members of the subcommittee could not be reached. As stated in the previous meeting summary, the current recommendation is:

> *It is important for the water system to have the knowledge of any actual or potential hazards imposed on the potable water supply. The need for an all-encompassing CSI for material changes to the plumbing of a home/site would have to be evaluated on a case-by-case basis. If a CSI had previously been conducted, then it may not be necessary for a CSI to encompass the entire home/site. If a CSI had never been conducted, then it would be prudent for the CSI to take into account the entire home/site. In either case, education of the customer on the hazards of cross-connections and the importance of backflow prevention is critical.*

Challenges with Ice Machines — Richard Bosch

Mr. Richard Bosch, TCEQ Cross-Connection Control Program, provided a presentation on the hazards posed by ice machines. Typically, the drain line for an ice machine will drain into the sanitary sewer through an air gap. When the condensing unit fan turns on, it creates a siphon condition throughout the enclosure which includes the drain line. This means air is aspirated from a location close the floor and the sewer drain up the drain line and into the ice compartment. This creates an additional hazard that could potentially contaminate the potable water supply and must be considered when determining the need for backflow prevention on ice machines.