

VDH ODW Workgroup 3 Meeting

November 7, 2014 1:30 p.m. – 4 p.m.

Web Conference and Teleconference

Meeting Summary

RAP Members Present

Roger Cronin—American Council of Engineering Companies of VA, Greeley and Hanson

Skip Harper—Virginia Department of Housing and Community Development

Jamie Bain Hedges —Public Utility, Class 1, Fairfax

Jesse L. Royall, Jr. —Private Utility, Class 4-6, Sydnor Hydro Inc.

Steve Herzog—Public Utility, Class 1, Hanover Co.

Tom Faber—Public Utility, Class 3-6, James City

(Alt.) Alicia Connelly - Public Utility, Class 1, City of Norfolk

(Alt.) Bradley Campbell - Private Utility, Class 3-6, Aqua Virginia

ODW Staff Present

Angie McGarvey - Meeting Leader

Hugh Eggborn - ODW Field Director for Culpepper Field Office.

Other Participants

Kate Nixon, Virginia Beach

Emory Rogers, Virginia Department of Housing and Community Development

Vernon Hodge, Virginia Department of Housing and Community Development

Welcome/Introductions

Thirteen people met via web conference and teleconference services for the Workgroup 3 meeting. This workgroup was established to propose amendments to Sections 55, 360, and 580-630. This workgroup's focus is on cross connection control and backflow prevention programs.

Angie McGarvey, from the Virginia Department of Health Office of Drinking Water, was the meeting organizer and discussion leader. The agenda was shown to the participants at the start of the meeting. The goal of the meeting was to revise the Sections listed in the above paragraph to something that most members can agree on recognizing that there will be compromise by all members and the regulations must be worded appropriately to apply to all waterworks across the state.

ODW used the web conference service to show live on-line changes during the meeting. ODW received one member's specific comments ahead of the meeting and had already incorporated the changes into the online version, where appropriate.

Section 55 Relationship of chapter to the Virginia Uniform Statewide Building Code (USBC)

ODW –After further review by ODW and DHCD, we did not change this section very much since our last meeting.

Subsection A changes reflected from Steve's comments. Subsection B also modify to be more clear based on ODW's meeting with DHCD.

Panel member - If building a pump house structure and the purpose is for a waterworks facility, does the building structure and plumbing inside fall under USBC?

DHCD- Yes, it does. If plumbing is part of waterworks system, then plumbing is governed by the waterworks regulations. If you refer to Subsection C it discusses this situation.

Panel member - Is a lab sink that is part of the waterworks facility under the building code?

DHCD - it has to be treatment, storage, pumping, or water piping part of the waterworks - toilets and laboratories would be building code regulations. Only plumbing facilities that are part of a waterworks are regulated under the Waterworks Regulations. Everyday plumbing structures fall under the USBC.

Section 360 Responsibilities of the owner.

ODW - Subsection A - we removed "all" since this seems like an unachievable item by the owner. In Subsection B. We changed up this subsection to specifically address Jamie's concerns about not being responsible for maintenance for any portion of the service line. We understand that often waterworks and property owners enter into agreements that specify this responsibility.

Panel member - we use standard rules and regulations. We have no individual agreements for property owners. Proposed language covers the concerns.

ODW - Subsection C carries forward the same language for the property owner in this subsection, "This requirement does not limit or modify ownership of, or maintenance for, the service line, that may be specified by local agreements and conditions. This section is not limited to the cross connections regulations."

Section 630 Backflow prevention assemblies, devices and methods for containment.

ODW - There has been lots of interest in this section. We removed unnecessary text in Subsection B because POU isolation devices used in lieu of containment are covered in Section 610 B. These devices or method shall comply with the USBC (ASSE listed). The new Subsection B has retained assemblies used for containment to conform to the latest AWWA standards, hold the ASSE listing, and hold USC approval.

Panel member - We have concerns because of the way the cross connection program is organized into two separate groups. The new plumbing is managed by the building department and goes off of USBC. Member would like a minimum of USBC but waterworks owner could be more strict. Backflow policy requires either ASSE or USC, but not both together. Waterworks required to use ASSE and USC will need approval authority in the building department.

ODW - does your building department approve containment devices?

Panel member - Yes, they approve both types (containment and isolation).

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ODW - Under what authority do they approve the containment device?

Panel member - USBC is what they are using. Based on the programs structure. Waterworks can require something stronger and this regulation would require this on every case.

ODW - Building officials are not under the authority of the USBC to approve the containment devices. It comes from the waterworks.

Panel member - is it realistic to ask two departments to work together? Change is difficult.

Panel member - We don't get the privilege to change waterworks very often. We need to put the best product out forward in the field - to me that would be the USC approved device. This is the opportunity to change something and make it right. USBC could follow.

DHCD - Building codes are based on international standards. DHCD is not going to comment on USC approved requirement since they are in control by the waterworks regulations. For point-of-use isolation devices, certainly we could include USC with ASSE at the next review cycle. We have always used ASSE standard and it is strongly supported by the plumbing and building officials. Coordination is needed when devices are in building and the ASSE listing apply for POU devices. Waterworks regulations cannot dictate POU devices have to meet USC.

Panel member - We are not asking that POU change from ASSE.

DHCD - Okay, if waterworks would like to add another standard for the containment devices, then it is up to the water control board and your users. In response to the two departments not working together - we have seen many larger municipalities in northern Virginia (independent and in-house) establish collaborative relationships with waterworks.

ODW - we believe that the waterworks regulations are clear and that we are not intruding where the USBC is the authority.

Panel member- Agree. It is very clear. I understand that USC has a strong field testing program and do not disagree with their program. It is going to be difficult.

ODW - Yes, we do not want to overlook that it will be difficult. But, we want to make the decision that is the most appropriate and with the greatest public health benefit from standpoint of the waterworks. Appreciate the concern. We need to have one set of cross connection regulations for everyone statewide.

Panel member - It sounds like we are adding an additional standard in requiring the USC standard in addition to the ASSE for our devices.

ODW - Only to the containment assemblies. Building official has no authority over the containment devices.

Panel member - Building officials that are involved, they only use ASSE listing.

ODW - Where the building officials are involved directly in the waterworks' CCCP, their authority is Waterworks CCCP. Not every waterworks has the local building officials involved in the CCCP. Where they are involved in the CCCP, they have an agreement/understanding with the waterworks. Building officials have no authority over the containment devices. The waterworks regulations have to be flexible to allow

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lots of arrangements at the local level for implementing the program which is what we have across the state.

Panel member - As a waterworks owner, I am responsible for the protection of the waterworks from contamination that requires the backflow devices at customer's connection. Is that what you are referring to as a "containment" device? Tested and reviewed properly.

ODW - Yes

Panel member - In addition to containment, building code officials are responsible for things are protecting the users inside the building especially in places like a multi-unit building where shops and stores in addition to apartments. The POU devices protect certain pieces of equipment to prevent backflow into the building water system.

ODW - Yes - essentially

Panel member - Does the USBC only use ASSE listing to determine if the device is acceptable to them?

ODW - Yes

Panel member - But a containment device must meet ASSE and USC. Correct?

ODW - yes and AWWA which is more of a design and performance standard. But yes.

Panel - why do waterworks want two standards while building officials only want one standard?

ODW - focus and purpose are different. A waterworks' focus is not transferring any contamination into a distribution system. Also, because of the field testing requirements that USC the devices through, the USC devices provide better protection than an ASSE only listed device.

Panel member- Agree. The Waterworks service affects more people. How does this affect the devices that are available? Do most of them meet the USC + ASSE standards? Or do only 5% meet the USC standard.

Panel member - If the device is USC approved, it is pretty much guaranteed that it will carry the ASSE listing. What comes into play is the acceptable orientation of devices. By using the USC standard, waterworks are trying to put a stricter standard to protect the water distribution system.

Panel member - Are lots of USC devices available within the industry? Are we narrowing it down to 2 devices? Is it hard to meet the USC standard without spending 10 times more for a device?

Panel member - The majority of the backflow assemblies manufacturers participate in the USC program. (Watts, Wilkins, Ames, Apollo, Febco, Cla-Valve). One complainant is that they do take a 3 year test period before they will add a new device to the list.

Panel member - Don't you have to be a member to look at their list?

Panel member - No.

ODW - 563 pages online of the approved devices. USC is an approved ASSE testing laboratory. ASSE testing is very consistent across all laboratories doing the testing.

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DHCD - the most common device installed vertically within a building is the 300-400 series by Wilson or Watts that do not carry the USC standard. This raises concerns because for the first containment devices that were previously installed vertically and now do not hold the USC standard, alterations of the interior room may have to be taken to fit a new device.

Panel member -- What problem are we trying to solve? Not aware that we have a problem to solve by introducing this other standard. By going down this path, it will force us to have another inspection program that is not necessary now. Since this is not a building code standard, the building code inspectors will not enforce this standard. Public utilities will have to have a duplicate inspection program for something that the building officials are already doing. Administratively that is very burdensome.

ODW - Building officials are inspecting and overseeing your containment devices?

Panel member- As the waterworks owner, we require that it is installed. Building officials do the inspections to make sure it is installed properly.

DHCD - Building department can be delegated by another authority to do the inspections, they are not enforcing the USBC. If you leave the USC standard, plumbing inspectors doing the plan review and field inspections for the containment device will have to include the USC approval. Building owner would have to supply the USC approval paperwork.

Panel member - It is not that simple. We require the device be installed in the building inspector's area of enforcement. Once installed, it now falls under the building code. We don't have any special agreements for containment devices. There are situations where a backflow containment device is not required under the building code but we are requiring it. And there are containment devices that are required by the building code that we also require backflow devices (examples: sprinklers fire department connections). Fire marshals also require these devices.

DHCD - The focus of this discussion is to decide if waterworks need to add the USC standard. Manufacturers should be asked their option of the USC standard.

Panel members - The number one problem that this standard addresses is that RPZ do not work when the #1 check valve is located over the relief valve. 2-inch watts for example carry ASSE listing but USC proves it does not work in the vertical orientation. Also, we have been doing it for 6 years and have not had an issue with the building code officials.

ODW - Asked for clarification for why this standard would force an additional inspection program.

Panel member - If device is replaced, the waterworks would have to go out and check the device. Building inspector is not interested to enforce non USBC standards. That is the dual inspection problem.

Panel member - Does the building or plumbing code inspectors make sure that backflows are tested every year?

DHCD - Yes. The county building departments keeps testing and tracking.

Panel member -- Not everyone.

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Panel members - The code calls for annual testing and when it is installed or repaired but the waterworks tend to keep all of the records. I don't think it is too much to ask that the containment device meets USC standard.

DHCD - difficult when your new devices do not fit the existing conditions.

ODW - There are exception, variances, and waivers to not require mechanicals rooms to be totally reconfigured.

DHCD - So what standards are required when you have to replace a containment device?

ODW - If USC standard is added to regulations, we would want to know if it is feasible to replace with a USC approved device.

Panel Member - It is our understanding that the building official is not required to track annual testing of devices in the building.

DHCD - Part III code has annual testing requirement. Any time a building department does a testing, they will keep a record. If two departments need the assessment, they share the records.

ODW - Who is keeping records on the isolation devices?

Panel member - no one.

ODW - That is a problem. We require annual testing of POU in lieu of containment. If the waterworks is willing to use POU devices in lieu of a containment device, then testing and records are required.

Panel member - we track containment devices - the first device. No one is tracking the other dozen of isolations behind the containment device.

ODW – Do you have any facilities that do not have a containment device for any of the facilities that are included in our regulations since the 1970's list of 20 types of facilities that requires containment devices? For any of those facilities, have you accepted isolation in lieu of containment?

Panel member – Yes. We track all those for containment. Everything beyond the containment are still a requirement to be tracked and that is not happening.

ODW - It is up to county to adopt and designate Part III code officials. The program is voluntary. Localities that allow POU in lieu of containment are responsible to track. Does Part III require the officials to maintain the records of the annual tests?

DHCD - Yes, for 3 years.

Panel member - it is only a requirement if they receive them. There is no requirement for them to get documentation that it occurred.

ODW - It is not voluntary for the waterworks to track isolation devices used in lieu of containment. If the building owner will not do it, then that is when the containment device requirement kicks in. You give

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them a choice, which ones do they want to do. Given the choice, most owners will do the assessment and give the waterworks the records.

Panel member – Does an isolation device need to meet the USC approval if that is the device protecting the waterworks?

ODW – No.

Panel member – So we are going to have some devices protecting the waterworks that meet the USC standard and some that do not.

ODW – That is correct, but it is up to the waterworks to decide if they are willing to accept POU isolation devices in lieu of containment. You can always require a containment device. For locations where plumbing is not complex, we are willing to accept the POU devices. Because waterworks end up having to track all of the devices, we allow the waterworks to decide what they want to do.

Panel member – Is it within the waterworks to say that every device is an isolation device.

ODW – No

Panel member – How do we differentiate between them?

DHCD – based on the definitions of containment that says where it is and what it is.

ODW – for those items listed in Item E of Section 610, those types of facilities are requirement to have containment.

Panel member – For those on the list, we have some that have isolation. Mixed use served through master meter. 4 buildings, 4 backflow devices all tracked. Are we not in compliance because we have 4 devices instead of 1 containment device?

ODW – Without knowing more details, it sounds like it you are providing containment because those devices are before any takeoffs.

Panel member. Do the 4 devices need to meet the USC standard?

ODW - Let's ask DHDC to provide their response based on how the panel member is describing the scenario. Would separate device fall under USCB?

DHCD – There has been a lot of confusion on how the two regulations work together. Now that the waterworks regulations are being amended, we will try to amend the USBC to mirror the waterworks. Bldg code covers everything to the lot line typically. Anything outside the lot line is not covered by building code. If inside the building or lot line, then it was gray. Hence, we developed a Memo of Agreement. Section 55 is trying to clearly give authority to the waterworks if containment devices are used no matter where they are located. This is the way it was supposed to be implemented but most building officials read the plumbing code and memo of agreement and considered the containment devices inside the lot line to be part of the building code. In reality, we were trying to have the waterworks have responsibility of those devices.

Panel member – agree. That is why my waterworks needs our own inspection program which is why I object.

ODW – To answer the question about mixed use building served through a master meter. If the building inspector says the devices fall under the USBC, then that is fine. Willing to accept that situation.

Panel member – Almost every device for domestic service lines are inside the buildings. All those devices are inspected by the building officials. We take over annual inspections. Plumbing inspectors inspect new installations. If we introduce a different standard from the building code there are two choices: (1) county issues a separate program on containment devices which has traditionally been handled by the building inspector or (2) building inspector agrees to enforce the USC standard on containment devices. You have to be sure there is enough space for the device you want to use. We are not part of this process now and that is our biggest concern - creating administrative program difficult to implement. We would like to see waterworks regulations to work with the building code to continue to operate an efficient program.

ODW - A quick internet search found several states that use USC in their states cross connection regulations. Some require both (ASSE and USC) and some just require one or the other. New York state, Philadelphia, and Denver require only USC approved devices for containment. Not exhaustive search. There are many varieties of approaches that states and municipalities require.

Panel member- I support the stricter standard; provided it is clear that if the waterworks is not putting the device at the master meter and the building official is in charge, then only ASSE listing is required.

Panel member - The October 8 letter from the Virginia plumbing association and building code associations were negative about adding USC standards. Jurisdictions can have their own requirements for horizontal installations and not allow vertical installations for containment devices. Waterworks is containment and does not apply for the building code but it is a fine line when you get into buildings.

ODW - Take a vote to see who supports the USC approval.

Votes from non-state agency RAP members: 5-2 not in favor to support USC approvals. 1 additional guest also voted no.

ODW - we will take votes into account.

Section 580 - General requirements.

ODW - In subsections B&C, we took Steve's suggestion and removed "maintain". It is already stated in Section 600 5 b that an owner shall discontinue or refuse water service to the consumer that has identified deficiencies in their cross connection/backflow prevention devices. In subsection D, we removed general statement about cooperation with local building officials. It was just a FYI statement without enforceability behind it.

Panel member - In the existing regulations it states that if the owner allows a connection from an auxiliary water system, then the owner would have to approve and VDH would have to approve. The current version does not mention VDH approval. Currently, we have lots of private wells in the city and the waterworks is undertaking an extensive review to make sure that none of the wells are cross connected

to the city's water system. In the proposed regulations, it allows it for emergency and back-up use. Lots of residents have tried to use this clause to allow continued use of their private well. We have always said that they would have to get our approval, building official's approval and VDH approval which discourages this practice.

ODW - it is only allowed for a permitted waterworks or a permitted source.

Section 600 CCCP requirements

ODW - we revised this section to be clearer. We revised item 2 to be a less specific on who conducts the annual assessments. All that is required is that the waterworks establish appropriate procedures to complete the annual assessments- leaves it open so the waterworks can do the assessments or building inspectors can do it if there is some agreement between local governing bodies. Same for item #3, waterworks have to track the operational tests and make sure they are done.

DHCD - USC has their own tests kits and DPOR regulations say you test to ASSE standard.

ODW - We are not providing regulations on how you have to test. The regulations stop short to require USC approved devices to be tested with their kits. ODW will check to into USC approved devices testing requirements and report back to the group. A USC device can be tested exactly like an ASSE device is tested.

Panel member - Yes, the device can be tested using any of three procedures: ASSE, USC, and APA standards.

Panel member - Item 4 which states, "In lieu of annual assessments and operational tests, the owner may provide a public education program to residential customers, and commercial customers whose water supply system is similar in use, size..."- concern over the residential irrigation wells. We consider it a high hazard and everyone must have an annual test. Concern that as it is written, residents might think they are not required to do their annual tests.

ODW - There is an exception that requires residential irrigations with separate connections to be tested.

Panel member - Not all of our irrigation systems have separate connections.

Panel member - We require that these systems are tested annually but we do not require that they submit the results to us. Eliminate the requirement to track the testing.

Panel member - This is isolation in lieu of containment that falls under the building code.

ODW - Yes, you are allowing the isolation device to be used in lieu of containment, so it is required that the device is tested and tracked.

Panel member - We are afraid residents will read item 4 and think they can take a class instead of doing their annual testing.

ODW - The intent is not to allow a high hazard device (like lawn irrigation) substitute education for annual testing. ODW will revise to make sure testing is required for high hazards for residents.

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Panel member - we all agree that annual testing should be required but allow flexibility for the tracking results (i.e., sending reminders and documentation of test). We accomplish the requirement through public outreach. We are not tracking the 20,000 residents.

Panel member - Aren't backflow devices downstream of a service connection part of building code?

Panel member - We track all of the nonresidential devices required in Section 610, subsection E - list of 22 uses. Restaurants do not get tracked.

Panel member - We track all devices - residential and nonresidential. Lawn irrigation systems fall under the isolation in lieu of containment.

DHCD - You don't have the authority to regulate something under the building code. You can only do it through user agreements or threats to cut the water off. The building code does not regulate the testing of irrigation unless the locality has adopted Part III of the USBC. There is no enforcement of irrigation testing unless the locality has adopted Part III (maintenance code).

ODW -this indirect requirement allows isolation devices to be installed in lieu of installing containment device at the service connection. ODW will reconsider the removal of lawn irrigation from the list in Section 630, subsection E.

Section 610 Containment of backflow

ODW - a member had a comment that subsection G should not require ASSE listings for emergency and temporary connections.

Panel member - One example is when a new water line extension is installed. In this situation, the backflow device is a "contractor" constructed device. The water extension can be a 16 inch main. Waterworks inspector approves it. Removed once the service is put in place. Many of the assemblies do not meet ASSE.

ODW - That is a special case for construction and falls outside of these regulations. ODW will consider additional requirements for situations like these; possibly in Part III of the Waterworks regulations.