Explanation of the 3.0 psi buffer

On February 28, 2010, I had an opportunity to spend some time with Paul Schwartz. Paul is the Chief Engineer at the Foundation of Cross-Connection Control and Hydraulic Research at USC. One of the topics we talked about was the 10th Edition of the FCCC Manual and the 3.0 psi buffer.

Paul's explanation:

"Actually, the 3.0 psi buffer is required during both the Laboratory and Field Evaluation phases of the Approval Program. However, the field test procedures have recommended the 3.0 psi buffer since the 6th or 7th Edition. In our travels I have had to convince a lot of people that the 9th Edition field test procedures don't require the buffer.

As you know, the buffer was instituted years ago to try to reduce the number of spitting relief valves, but the manufacturers have insisted that they can design a product that will be less likely to spit, without any mention of a buffer. They have tried to incorporate moving check components that can absorb the pressure fluctuations, or designing the sensing lines and/or RV diaphragms to make them more 'stable'.

The main complaint from administrative authorities is that testers were replacing older products that couldn't hold the buffer any longer. However, the units were still performing well otherwise. Customer complaints about the change outs (i.e., $$) left a sensitive issue for the administrative authorities to deal with."

I would suggest that during the first test of the assembly after initial installation there should be a buffer of 3.0 psi or greater. After the first year the buffer value may fall below 3.0 psi. This does NOT necessarily fail the assembly.

Immediately after a repair, the buffer should be 3.0 psi or above. The next year the buffer value may fall below 3.0 psi. This does NOT necessarily fail the assembly.

It may take a while to get all of the water purveyors educated. They may elect to stay with the 3.0 psi minimum requirement.

Please call me if you still have questions.

Les O'Brien