Flow Back

Newsletter from the Backflow Group

Issue 8, May 2012

The Backflow Group of Water New Zealand are looking to produce a monthly newsletter for you, the members – to keep you involved and informed on what is happening in the industry and the activities of the Backflow Group. For more information about the Backflow Group follow this link: www.waternz.org.nz/backflowprevention.html

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A Word from the Chairman

-Nick Fleckney

Welcome to 2012 and another exciting year for the Backflow group.

This year amongst other projects, we are undergoing a review of the Code of Practice, which for water suppliers is an important document to ensure compliance and commonality through the country, particularly with regards to Boundary Protection. The group is presently engaging with water suppliers and industry for input towards the review.

For those field testing Backflow devices a reminder that *New Zealand Industry Standard Field testing of Backflow Prevention Devices and Verification of Air Gaps* is now referenced in G12 as a source document for Field Testing in New Zealand. This standard and templates of Test sheets can be found on the Water New Zealand website: http://www.waternz.org.nz/backflow_testing_industry_standard.html

I look forward to keeping you updated on the Code of Practice review and encourage those involved in the backflow industry to provide comment in the review process.

Do you have any queries?
We would love to hear from you!

Either post a topic on the Backflow Page of the Water New Zealand Forum:

http://forum.waternz.org.nz/

Or Email the SIG Liaison

amy.aldrich@waternz.org.nz

Masters Plumbers plays active role in Backflow

- Jon Lewis

A number of Master Plumbers members are involved in backflow prevention, and the organisation plays an active role in progress for the sector. “Backflow protection is fundamental to the plumbing industry,” says national president Ray Galt. “Master Plumbers recognises this and will continue to advance the cause wherever possible.”

Master Plumbers in conjunction with Water NZ Backflow SIG was part of the working group developing the NZ industry standard for the field testing of backflow prevention devices and verification of air gaps, which is to be referenced in G12.

Ray Galt and former technical manager Eric Palmer were the Master Plumbers' representatives on this group, both working to ensure members’ views were included.

The Backflow Management Committee:

From left: Logan MacDonald (MacDonald Industries Limited, Auckland), Jon Lewis (Backflow Prevention Ltd, Rotorua), Chairman: Nick Fleckney (Manukau Institute of Technology, Auckland), Murray Cockburn (M Cockburn Plumbing, Auckland), Kevin Healy (Reliance Worldwide Ltd, Auckland), Graeme Mills (Tauranga City Council, Tauranga), Wayne Shields (Hydroflow Distributors, Auckland)

Absent: Richard Aitken (All About Plumbing, Christchurch), Diana Staveley (Whangarei District Council), George Little (Auckland Council)

Masters Plumbers plays active role in Backflow - Continued

Master Plumbers member Jon Lewis, who presently represents Master Plumbers on the Water NZ Backflow SIG Committee, says it is important everyone's voice is heard, and the standard shows how well the two organisations can work together. The document and test report templates are on the Master Plumbers website www.masterplumbers.org.nz, which has a dedicated backflow section for members. This includes a library of technical articles that have appeared in the Master Plumbers-owned *NZ Plumbers' Journal.*

Anyone wishing to take backflow tester and backflow survey courses is welcome to contact Master Plumbers Training Officer Bev McKay (email: training@masterplumbers.org.nz) for assistance.

Backflow Code of Practice Update - Diana Staveley

In general the feedback from the Water Supply Managers questionnaire was for the Code of Practice (CoP) to retain focus on boundary protection only with internal devices as per Building Act. Write it as a guide to "taking all practical steps" that would be robust enough in the event of legal prosecution.

The following task were worked through and agreed at the March Backflow Group committee meeting. A subgroup of 5 of the committee members will meet twice before the next full committee meeting on the 21st June to work through updating the CoP.

In summary the updates to the CoP will include:

- Update references in the CoP
- New section on ownership following the Health (Drinking Water) Amendment Act 2007 (HDWAA) framework for both options with the recommendation that best practice is to go with water supplier ownership as it has less risk of non-compliant devices etc.
- Include a process diagram stepping through the decision making and how to set up a programme.
- Follow the PHRMP format for risk assessment.
- Update ABT qualifications section re unit standards or equivalent qualification. The backflow group is also working on the national register for IQPs.
- Fire lines: Liaise with Fire Industry. CoP still promoting boundary device in the valve house to reduce the likelihood of tampering/accidental valve closure.
- Bore water: In light of current issues with chemigation in Canterbury more guidance required here on minimum protection.
- Appendices will include point of supply diagrams and risk tables.

Congratulations

Robb Stobie

for winning the worst installations competition we ran last year!

Robb Stobies's entry for the 'worst installation'

You will be contacted shortly regarding your prize.

The winner was selected randomly by Water NZ

Flow for thought...

Wilkins Customer Service recently received a call from a very concerned contractor by the name of Mr. Tuxedo. As Mr. Tuxedo reported, he has been sending his technician, a gentleman by the name of Chumley, out to the house of Professor Whoopee on a weekly basis. Professor Whoopee is complaining that every time he uses his irrigation system, he gets constant relief valve discharge from his 25mm 975XL after the last zone valve closes. When Chumley arrives, he finds that the relief valve is, indeed, dumping. Chumley opens the relief valve cover, and each time he finds that the relief valve seal ring is displaced from its cup, and is quite mangled. He always puts the seal ring back as it should be, but he knows that he will get a call next week for the same thing. Obviously, Professor Whoopee is quite mad due to the cost, and Mr. Tuxedo is also upset because he feels that the valve is defective. He is looking to rectify the problem so that Chumley doesn't have to go to the Professor's house on a weekly basis. Also, he wants this solved because he doesn't want to loose the Professor as a regular customer. What could be causing this to happen?

In this case, it is the result of water hammer. When the last zone valve on the irrigation system closes, it does so very rapidly. The instantaneous shut off causes water hammer to occur. Water hammer, typically, creates a pressure on the order of 6 times the flowing pressure. Further, the direction of the shock is directly back toward the RP. Since water hammer travels extremely fast, a portion of the shock wave is able to enter the zone and also a portion of the shock wave slams the second check valve shut very quickly. This combined, raises the pressure in the zone to a level far beyond the working pressure of the valve and causes the relief valve to open. This, in turn, sucks the rubber seal ring out of its cup, and the relief valve can no longer close. Chumley needs to do a couple of things to rectify this situation. First, he should try to slow the closing speed of the solenoid valve. This would eliminate the water hammer. If he is unable to do this, he should install a water hammer arrester before that bank of solenoid valves. If this doesn't totally stop the problem, he will need to install a soft-seated, spring loaded check valve between the RP and the zone valves. This should prevent the shock wave from hitting the RP, and hence the problem will cease.

One last note:
Should you find the seal ring out of its cup due to water hammer like Chumley has, the seal ring must be replaced. The pulling out of the seal ring is so violent, that the rubber is ruined, and it will want to come out very easily in the future.