The 11th Annual Conference is slated for November 10th, 2004 at the Quails Inn Conference Center, San Marcos. There will be a presentation by State Health, a panel discussion on backflow incidents with the speakers from Rainbow Water, Sweetwater Authority and Irvine Ranch Water District. Also included in the program will be tester headaches in the field, how to perform a Cross Connection Control Survey, EPA updates and an overview of an AWWARF study on cross connections in residential housing. Lunch is included and we will have vendors displaying their products with all the latest information about those products.

As President of this chapter I would like to congratulate our treasurer, Dick Carlson, on his retirement after 31 years of service with the County of San Diego, Department of Environmental Health. His knowledge and common sense approach to his job will be missed and the County will poorer with his departure. Dick has indicated that he will be traveling widely and often. Congratulations, Dick and enjoy life on the easy street.

I encourage all Chapter members to get involved in the upcoming Chapter election. We are accepting nominations for President, Vice-President, Secretary, Treasurer and all County Director positions. This is an excellent opportunity for you to be involved in guiding the Chapter in the direction you believe it should be heading.

Our Chapter membership is continuing to grow and with that growth comes an increase in knowledge that is of value to all the members. Every person in the industry has some experience to share with all the others in our field. Sharing the information from that experience will benefit other members in the Chapter. The editorial staff is constantly requesting articles for publication in the Chapter newsletter and new material is always appreciated. Articles can be submitted to me by fax at (760) 431-2658 or e-mail at blair@ci.carlsbad.ca.us.

Bill Laird, President
Southern California Chapter
Calendar of Events

September 15, 2004  Inland Counties Update Seminar, San Bernardino Hilton
Sept. 29-Oct. 1, 2004  ABPA Hawaii Chapter Pacific Rim Conference; Honolulu, Hawaii
November 10, 2004  ABPA Southern California Chapter Annual Conference, Lake San Marcos, CA
May, 2005  ABPA International Conference; Orlando, Florida (dates to be announced soon)

Benefits of ABPA Membership

There is a genuine need for education, cooperation and organization in the changing and growing world of backflow prevention and cross connection control. That need is met by ABPA, a non-profit organization founded in 1984. Our goal is to provide education and technical assistance to ensure safe drinking water through effective cross-connection control.

Our members include both new and experienced plumbing contractors, backflow prevention assembly testers, regulators from health departments and water suppliers and others with an interest in maintaining water quality standards. Chapter members receive a quarterly newsletter, reduced rates at seminars, and can participate in special “member only” tours. Your $45.00 payment includes $30.00 for National dues and $15.00 for local Chapter dues. Join today!

MEMBERSHIP APPLICATION FORM

Complete the application form and return with your payment (check or money order only made payable to Southern California Chapter ABPA) to:

Southern California Chapter ABPA
PO Box 712
Cypress, CA 90630

$45.00 ABPA Membership, includes $15.00 Chapter and $30.00 National dues (dues and contributions are tax deductible). Already a member of ABPA National? Just submit $15.00 SoCal Chapter dues.

Name:_______________________Title:_____________Company: _____________________________
Address: ____________________  City: ______________ State: ______ Zip Code:________________
Phone: _______________________  Fax: ______________ E-mail: _________________________
Announcing Chapter Elections

It’s election time for our Southern California Officers, including President, Vice President, Secretary and Treasurer and County Directors from Imperial, Los Angeles, Orange, Riverside, San Bernardino and San Diego Counties. The complete duties of each office can be found in the Chapter by-laws posted on our web site at http://www.socalabpa.org.

Nominations for Chapter Officers and County Directors must be submitted to Chapter President Bill Laird by September 30, 2004. Mr. Laird can be reached by phone at (760) 438-2722 x7152 or e-mail at blair@ci.carlsbad.ca.us. If necessary, elections will be conducted by mail in October 2004.

President: The President, under the Board’s direction, shall have general supervision over the activities and operations of the Chapter. The President shall preside over all meetings of the Chapter and, in general, shall perform all duties incident to the office of the President.

Vice President: The Vice President shall assist the President in the performance of his/her duties, shall chair meetings of the Chapter during the absence of the President, and shall assume the office of the President in the event of his/her departure or incapacitation before completion of his/her term.

Secretary: The Secretary shall properly maintain all records and reports of the Chapter as required by law and the Association. The Secretary shall have the responsibility for providing that notices required by these by-laws be issued, and shall prepare the minutes of all Chapter meetings and Board of Directors meetings.

Treasurer: The Treasurer shall provide for the custody of the funds or other property of the Chapter and shall keep or see to the keeping of a separate book account of the same, shall collect and receive or provide for the collection and receipt of monies earned by or in any manner to or received by the Chapter.

This is a perfect opportunity for Chapter members to become more involved in the activities and operation of our Chapter.

November 10th Conference

Our Chapter will be holding its 11th Annual Conference on November 10th, 2004 at the Quails Inn Hotel Conference Center, 1025 La Bonita Drive, Lake San Marcos, CA from 7:00 a.m.-3:30 p.m. Certificates of attendance will be provided to those who are present from 8:15 a.m. to 3:30 p.m.

Plan to arrive early. Backflow prevention vendors and manufacturers will be on hand beginning at 7:00 a.m. to show you the latest in backflow prevention assemblies, test gauges and other related products. There will also be opportunities during the break and lunch to meet with our vendors. The program begins at 8:00 a.m.

Scheduled speakers and topics include ABPA, AWWA and Southern California Tester Certification updates; California Department of Health Services Regulations - Titles 17 and 22; How a Cross Connection Incident Affects Your Water District; Conducting a Cross Connection Survey; AWWARF Study Overview/EPA Updates/Manual of Cross Connection Control - 10th Edition; Demonstration of Proper Field Test Procedures and Backflow Prevention Assembly Tester: Headaches in the Field.

Registration forms will be mailed to Chapter members and available on our web site at http://www.socalabpa.org. For more information, contact Bill Laird at (760) 438-2722 x7152.
As you all know, the preliminary steps for testing backflow prevention assemblies begin with the N-I-I-Os (Notify-Identify-Inspect-Observe). But what if you can’t FIND the assembly in the first place? I’ve wasted many hours roaming all over the countryside looking for assemblies that were “out there somewhere” and know how frustrating that can be. That’s why it’s best to know what you are getting into before you actually get there, so ask ahead of time if you haven’t been out to the site before. A good place to start is by asking the people who are requesting the test if they know about the plumbing system. Do they know where the assembly is? If so, you’re free to go. If not, see what they know about other aspects of their plumbing system. Do they know where the water meter or water shutoff valves are? How about pipes? Have they seen any strange looking devices coming out of the ground?

See if the agency asking for the test actually has the location listed on their test form. As we continue into these techie days, you may start seeing GPS locations for backflow prevention assemblies listed on the test form also. So grab a locator for yourself and start keeping track of the ones that are hard to locate for future reference.

Once you are on site, you have to rely on your instincts and common sense to locate the assembly(s). Look for clues as to where the water mains are running. Usually water mains can be easily traced going down the street by locating the valve covers marked “water”. Fire hydrants are also a big giveaway as to where the main water lines are located. Frequently, you will see fire hydrants around the back of commercial buildings and that will tell you there may be water meters and backflow prevention assemblies back there also.

One of the hardest situations I encounter is when we find the correct water meter, but no backflow prevention assembly adjacent. There are many reasons why this happens. Maybe the administrative agency has allowed the assembly to be installed in an “alternate” location, like inside the building where it is safe from freezing or other damage. Maybe the assembly is covered by something like landscaping and cages. It might even be buried. I know you’re saying “That’s illegal!”, but it does happen. Somebody might have thought the assembly is ugly or maybe they were trying to protect it from damage. In that situation you would fail the improperly installed assembly as part of your Inspection step and then notify the administrative agency about this for their corrective action.

Sometimes you just have to grab your magnifying glass, play the part of Sherlock Holmes and say “If I were a backflow, where would I be?” Just remember, It’s elementary, Watson, just look for the clues. Good luck and happy backflow testing (once you find them).
Test Forms
Submitted by Robert Mattson, San Diego County Director

How many times have I heard boy wouldn’t it be nice to have one test form for all the water agencies. Well I don’t think that will ever happen. Ever water agency has a different computer program that tracks the backflow program with a different type test form. Some agencies even send out test forms with preprinted information, isn’t that cleaver. That might even help you locate the device. Once you have located that invisible backflow and are ready to test the assembly what sort of information am I going to need? You will still need to know and do your IIIO’s. If you have the assembly info already printed then it makes it a little easier as you just need to verify (identify) that you are on the right assembly. Hopefully you are close to the address so you can notify your customer that you are on site to test the assembly. Then you can inspect & observe the assembly and move on with the test. Let’s take a closer look at the test form, do I need both the apparent and the actual pressure drop across the number one check. If so I better remember this. Most forms will have an initial test area, repairs, and a final test area. If on you initial test everything goes fine and the assembly doesn’t need any repairs, then you need to fill out that part of the test form. On an RP what was my apparent and actual, did both checks hold tight, the value at which the relief valve opened. On a DC what were the values on the first check and the second check. On a PVB what was the value the air inlet opened, did it open fully, and what was the check valve value.

If repairs are needed then fill out that part of the test form as best you can, let the water agency know what you did. Don’t just check a box that repairs were done.

After repairs are done comes the final test. Let’s make sure that those repairs really brought that assembly back into manufactures specifications.

If you have filled out all the test information, then you need to fill out the part that let’s the water agency know who tested the assembly and what gauge was used and serial number and the date it was tested. Let’s not forget the water pressure. Some agencies like that.

All water agency test forms will look different but most will want the same information on them. Some more some less!!!. Remember to give as much information as if you were on the other side trying to enter it into the computer.

Happy testing.
How Does the RP Work? Part Five

Submitted by Jim Purzycki, Los Angeles County Director

This is the fifth article in a series of articles explaining the workings of backflow preventers.

In our last article we discussed what happens to an RP when the relief valve is not working properly. In this article we will see what happens when the check valves are not working properly.

Let us talk a little about the first check. Look below to our diagram of an RP. In this example we show an inlet pressure of 100 PSI. The pressure after the first check shows us 90 PSI which means we have an 10 PSID. This is the load the first check is generating on a properly working first check. If the first check was completely fouled and there was no differential produced that means we would have 100 PSI before and after the first check (0 PSID), then the relief valve spring would cause the relief valve to stay open. The first check rarely fails where there is no differential. The usual case is that instead of a 10 PSID as shown in our example the differential begins to fall as the first check begins to wear out. Let us assume we know our relief valve has a 2.1 PSID opening point.

Let’s add further that our first check is starting to degrade and it can only generate a 2 PSID. In other words our inlet pressure is still 100 PSI and the pressure after the first check is 98 PSI and we know we have a 2.1 relief valve opening point, what would happen to our relief valve? The answer is that the relief valve would open up and begin to discharge. If we have a 100 PSI inlet pressure and a pressure of 98 PSI after the first check you can see where the 98 PSI along with the 2.1 PSI from the relief valve spring loading would cause the diaphragm to move causing the relief valve to open because there is a greater pressure on the downstream side of the relief valve diaphragm (98 +2.1 =100.1 PSI) than on the upstream side (100 PSI).

Some administrative authorities require the loading on the first check to have a minimum of 3.0 PSID higher value than the relief valve opening. By having a buffer greater than 3.0 PSID, this would help minimize relief valve discharge from a small pressure fluctuation in a static condition. This would mean that if our relief valve opening point is 2.1 PSID than we would have to have a first check loading of at least 5.1 PSID to pass the field test. If a 3.0 PSID buffer was not required in your area, then any first check value greater (above 2.1 PSID) than the relief valve opening point would keep the relief valve closed and would be a passing check value.

The cause of check failure tends to be due to the failure of the disc to seal against the check seat easily. Many times the check spring is blamed for a check failure but this is usually not true. The more common causes are dirt and debris on the disc, disc degradation where the disc will not seal, or a check guide restricting the travel of the check component.
The criteria for the workings of the second check, like the first check, must maintain a higher pressure upstream of the check than the downstream pressure. This differential is established by the spring loading of the second check spring which is designed to be a minimum of 1.0 PSID. Our test procedure for the second check is different than the first check because it is a backpressure test. In our field test of the 2nd check, we take the higher inlet pressure from test cock #2 upstream of the first check (100 PSI) and with needle valves and hoses place it into our number four test cock (85 PSI) causing the pressure on the downstream side of the second check to rise until it is higher than the upstream side of the second check. When the second check fails, the higher pressure would go past the leaking second check into the area between the two checks. As the pressure in this area increases, the relief valve senses the differential. When the pressure in the area between the two checks increased to 98.0 PSI (relief valve opening point 2.1 PSID) then the diaphragm would move causing the relief valve to open. The causes of failure on a second check are similar to the first check.

In conclusion, the field test is the way we generate the data needed to determine which part of the assembly is performing below the accepted minimal standard. When the numbers fall below the minimum standards established by the accepted test procedure, a repair must be facilitated to bring the working condition of the assembly above the minimum standards. The generation of accurate data is very important and this means using an accurate test kit and proper test procedures and techniques to assure the data we generate properly reflects the working condition of the assembly.

Contact Bill Laird at (760) 438-2722 x7152 for articles 1-4.
Coming next issue: How Does the Double Check Work?
Chapter News

Chapter officers and directors have been working on our 11th Annual Chapter Conference to be held November 10, 2004 at the Quails Inn Conference Center at Lake San Marcos (see page 3). For more information, contact Bill Laird at (760) 438-2722 x7152. Vendors interested in participating in the Conference should contact Pete Peters at (909) 987-2591. Hope to see you there!

It’s election time for Chapter Officers and County Directors. Nominations must be submitted to Chapter President Bill Laird by September 30, 2004. See page 3 for more information.

Upcoming Chapter activity plans include an assembly repair seminar in the northern San Diego County area and a Backflow Industry Product Fair in the Los Angeles area.

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