



IWA PIPELINE



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Our best friends were telling us

Sometimes we didn't smell very good. It's a problem that has plagued IWA — and many other water companies — for years. Our well water contains sulfur, lots of it, and that results in the familiar rotten egg smell.



In the past we have avoided any smell in our treated water by blowing air through it in scrubbers. While the process was effective in getting rid of the sulfur, it had some serious drawbacks.

First, it sometimes resulted in a rotten egg smell in the vicinity of the R.O. Plant...unpleasant for our neighbors and ourselves. The fumes also rotted our buildings and machinery.

Second, it was not cheap. The scrubbers used a lot of electricity and rinse water.

Third, and most important, the process resulted in high levels of oxygen in our water, which was a major cause of corrosion in copper plumbing.

Last month IWA began using a new process called Sulfide Conversion to tackle this problem. In this process small amounts of chlorine and sodium hydroxide are added to the water to get rid of the sulfur odor.

The results of the new process thus far are little less than spectacular. The odors around the plant have been completely eliminated; the oxygen level in our water has already dropped to an acceptable level and the water stream coming from our treatment plant is much cleaner.

And there's this piece of serendipity. We will be using the old air blowers to add oxygen to our brine system. This will further improve the quality of the waste water that we are emptying into the Gulf.

So everybody's happy — even the fish.

President's commentary



Thomas A. Sharp

One would not guess that there are inventors on our staff but it is true. First, Richard Derowitech was granted a patent on an improved, lower-cost method for rejuvenating deep wells and more recently Robert Hollander and Roger Blind co-authored a patent for "sulfide conversion" of the odoriferous component in our raw well waters. IWA has been using the well treatment process for years and has just built a sulfide conversion system. Both processes work very well.

As a matter of fact we are becoming inventors because of necessity. Both the

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federal and state governments are establishing strict rules that tax our capabilities. So far we seem able to meet all of the new standards but at considerable expense for testing and new plants. We wonder what the future will bring.

By the way IWA does not "own" patents. The non-profit, tax-exempt status of IWA makes ventures into entrepreneurship difficult. Instead, IWA authorizes payment for patent costs and in return IWA forever receives royalty-free use of the inventions. The inventors retain title to their patents and are free to license others who might wish to use them. This policy gives members of our staff some extra incentive to stay with us and to be creative.

Getting the lead out

The U.S. Environmental Protection Agency (EPA) has started a tough new campaign to protect Americans, especially children, from the effects of lead ingestion.

In our last Pipeline we reported on one phase of this effort, namely, testing for lead in residential water systems. The government's program is a long-range one taking several years to determine what the problems might be and how to alleviate them. In July 1992 for instance IWA will be asked to test lead levels in 60 Island households.

IWA decided to jump the gun and conduct some tests immediately. So far we have tested five households with some surprising results.

The tests consist of drawing a sample of water from a kitchen or bathroom tap after a period of six hours when no water has been run. This sample is then tested for lead content.

The surprise came when two of the five houses showed lead content in the sample as much as 10 times higher than the other houses. All of the houses had the same type of copper plumbing joined with lead solder.

Why the difference? After further research we have concluded that the faucet made the difference and our findings have been confirmed by recent articles in the press. It seems that in the manufacture of many more expensive washerless faucets lead is added to the brass alloy to act as a drilling lubricant. As water stands in the faucet it actually leaches out some of the lead. When the water is first turned on it has a much higher lead content. As it continues to run the lead content drops rapidly. In our tests the first liter of water had lead content six times higher than the proposed acceptable standard. By the time the sixth liter of water was drawn the lead level had dropped below a detectable level.

We think the EPA would do well to prohibit the use of lead in faucet manufacture. Apparently other lubricants can be substituted with no ill effect. But of course that won't solve the problem of all the faucets now in use.

So, the EPA is going to ask water providers to solve the problem by producing water that will not draw lead out of faucets and soldered joints. This job is supposed to be done by 1997.

Water produced by reverse osmosis is especially aggressive because of its purity, so it's going to take some doing...and rest assured we're not going to sit on this problem until the government's deadline takes effect. We've been testing a process which involves adding calcium to our water before pumping it into the distribution pipes. This makes our water much less aggressive and it might be the answer to the lead problem.

If the addition of calcium is the answer, there will be some high initial costs in the installation of such a system. The good news is that there also will be some significant long-range cost savings in day-to-day operations.

We feel confident that IWA will be able to solve the lead problem well ahead of governmental time tables. In the meantime if you have small children living in your house we suggest you read the accompanying article.

How you can get the lead out

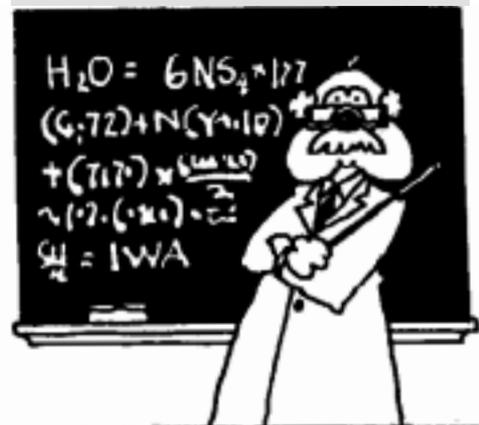
The hazard of lead poisoning is much greater for children than for adults. If you have children at home there are steps you can take to insure that they are safe from lead exposure in their drinking water.



1. The IWA water in the supply main outside your home has a lead content so low it can't be measured. But lead will leach out of some faucets and pipe joints inside the home after several hours of non-use. After such dormant periods you can purge lead contaminated water by running the faucet wide open for about one minute. This is a low-cost option — two gallons per morning costs 15 cents per month.
2. Most of the tests we ran showed no lead problem (three of five homes were fine; we also tried one refrigerator door tap and found no detectable lead). You might want to check your own home. The tests cost us \$34 apiece. If you're really concerned we'll help you get your water tested.
3. We've talked to local plumbers about this problem. They can supply standard single-lever mixing faucets which are non-metallic, and which cost less than the lead-bearing models. Someone who feels strongly about the reported risks may want to consider such action.

And especially remember this important point. There is need of a reasonable response to the threat of lead exposure for children but there is no need for panic or drastic action. Recommended acceptable levels today are extremely low. Even today there are many old homes

where all of the water service pipe is made of lead. The exposures we are discussing here are miniscule in comparison.



Variety quiz

This issue's puzzlers cover everything from "where we got it" to "where it goes". Check your answers on back page.

1. Periodically IWA has to ask permission to take water out of the ground. Is it from the:
 - A. South Florida Water Management District?
 - B. Lee County Regional Water Supply Authority?
 - C. Southwest Florida Water Management District?
2. During the last decade IWA's "Reverse Osmosis" plant capacity has increased 600%. Why the strange name for this process?
 - A. The process depends on a rapid change in the direction of water flow.
 - B. The water just naturally "wants" to go backwards in the plant.
 - C. The polarity of a direct current voltage is reversed regularly during the process.
3. 1991 has been a weird year for IWA water consumption figures. Our use in the last two months was only about 3/4ths of last year. But in March we reported our all-time one-day high. Was it:
 - A. 2 million gallons? C. 4 million gallons?
 - B. 3 million gallons? D. 5 million gallons?



Meet Roger Blind

Roger Blind is IWA's chief engineer. He, along with the rest of the engineering staff, designs all of our facilities and manages their construction and start up programs. He also finds time to invent new systems (see President's column) and tackle "anything else that needs doing".

Roger and his wife, Janet, live on Captiva.

Roger was from Ohio originally and before coming to the islands spent 18 years with Exxon in planning, design and management of refinery construction all over the world.

In whatever spare time Roger can find he's a volunteer with the Captiva Fire Department, works on his Corvettes and enjoys the beach.

What he likes best about IWA is the variety of responsibilities and opportunities

the job offers, the great people he works with and, we're sure, reading the Pipeline.

Movin' on up

Plant operators Phillip Noe and Ed Heindl have received their class A water operator's license from the State of Florida. That's the top grade.

Claude Tyus, Joseph Scofield and Steven Rensing have moved up to B class licenses.

Ron Leavitt has received his B class distribution license.

Congratulations guys. Keep on pumping.

Answers to quiz

1. A. The South Florida Water Management District. (The Southwest district starts at Punta Gorda.)
2. B. Natural osmosis dilutes salty water by forcing fresh water through a semi-permeable membrane. We have to use water pumps to overcome that force in order to reverse natural osmosis, and add much more pressure, to manufacture fresh water.
3. C. 4 million gallons. Last March also produced records for highest monthly and highest 10-day water consumption.

IWant you

Your water association is governed by a five-member Board of Directors. These directors serve without pay. Each spring at our annual meeting two or three directors are elected by the membership.

This year two seats on our Board will be up for election. Directors must be year-round residents of Sanibel or Captiva and be IWA members or an official representative of a local condominium association or corporate IWA member.

If you would like more information call our Administrative Supervisor Jack Middlebrook at 472-1502.

