

On the Waterfront

by Jim Reed

This month's article from the Keller-Bleisner Engineering report on "Designing, Operating, and Maintaining Piping Systems using PVC Fittings" is on "Dealing with Entrapped Air". This concludes the section begun in the last **Bull Sheet** issue.

Obviously, the best way to reduce problems caused by entrapped air would be to prevent it from entering the system. Precautions should be taken to eliminate air entrance. When systems are filled, either initially or after draining for winterization or repair, they should be filled slowly, at a velocity of 1 foot per second or less, and the air should be vented from the high points before the system is pressurized. Even with these precautions, some air can remain in the system.

To deal with this remaining air or newly admitted air, continuous-acting air relief valves should be installed at high points in the line and lines should be laid to grade wherever possible. Continuous-acting valves contain a float mechanism which allows the air to vent through a small orifice, even when the line is pressurized. The orifice diameter should be about 1 percent of the diameter of the pipe on which it is installed to allow the entrapped air to be slowly released.

(cont'd. page 22)



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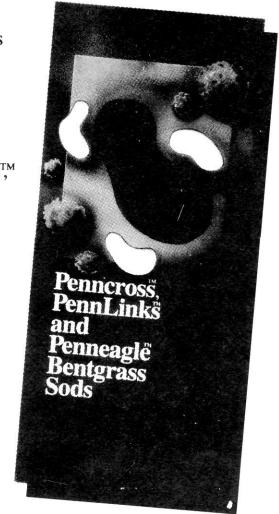
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(Pesticide Follow-Up cont'd.)

• In the late 1970's the major private laboratory that conducted toxicologic studies on developing products, deceived industry, federal regulators, and the public through negligent study procedures and make believe results.⁽⁶⁾ This is not as tragic as it sounds because other studies replaced the faulty information generated at the guilty lab, however, this brings a light of credence to reports that EPA testing procedures are questionable.

These are very enlightening situations. Knowing information such as this makes me better confront controversial situations, however, common sense must still reign. Roundtable panelist, Camilee Stauber bases some of her opinions on the book "Chemical Deception", by Marc Lappe. (Lappe is a University of Chicago Toxicologist with an "extreme" reputation). Dr. Lappe would like us to believe that the world is saturated with cancer causing agents. In his book he responds to the question — "are there really risks hidden in our daily exposure to commonplace substances? My mind raced through the chemicals that I knew would cause health problems — pharmaceuticals he or his wife might have taken; chlorinated by-products and heavy metals in their drinking water; aflatoxins in their peanut butter; diesel exhaust from their cars; polychlorinated biphenyls in the fish he had just eaten; preservatives in the delicatessen food we had just eaten; benzopyrene in last weekends barbecued steak; and manganese, alcohol, and aldehydes in our beer."⁽⁷⁾

With this in mind, consider the following questions:

1. If the US population is being exposed to pesticides through the food we eat, the air we breath, and the water we drink, why has the life expectancy gone up from age 50 in 1900 to age 76 in 1985?⁽⁸⁾

2. If pesticides are responsible for massive outbreaks of cancer and many other maladies, why aren't Golf Course Superintendents, or more specifically workers in factories that manufacture pesticides, dropping like flies?

COMMON SENSE

What was the difference between the Superintendents and anti-pesticide people in attendance at the NCTE? 2 things — we have the ability to collect data from **both** sides of an issue and reach a conclusion based on that research. We are not swayed by emotional outcries or misrepresented information. Secondly, we have an open mind! Neither Ms. Stauber or Ms. Mullarky was there to learn or gain an appreciation for the "other side". It was obvious to me that they are misinformed, "there aren't many birds on golf courses ... Lt. Prior died from Daconil poisoning".⁽⁹⁾

I feel that America is being poisoned more by journalists and politicians than man made synthetic pesticides. I also know that pesticides are **not** completely safe, however when applied according to label recommendations and proper safety precautions are taken, the benefit is well worth the risks. The future of pesticides in golf course maintenance programs will be influenced by the "doomsdayers". Hopefully cooler heads will prevail and the anti-pesticide people will focus their attention on something else.

FOOTNOTES

1. Abrams, Robert, March 28, 1990 — Testimony Before the Subcommittee on Toxic Substances Environmental Oversight Research and Development of the Senate Committee on Environmental and Public Works.

2. Koop, C. Everett — Responsible Industry For a Sound Environment (RISE) handout.

3. Sagan, Kathryn, April 2, 1991 — "Poison in Your Backyard", Family Circle.

4. Allen, Frank Edward, October 14, 1991 — "Lonely Crusade", The Wall Street Journal

5. American Cancer Society — Cancer Response System 1993

6. Whelan, Elizabeth, "Toxic Terror", Jameson Books 1985 p. 132

7. Lappe, Marc, "Chemical Deception", Sierra Club Books 1991 p. 7

8. Office of Disease Prevention and Health Promotion US Dept. of Health and Human Services, "Disease Prevention/Health Promotion — The Facts," 1988 Bull Publishing.

9. Mullarky, Barbara, December 1, 1992 — Statement at NCTE Pesticide Roundtable Discussion.

Recommended reading:

"Chemical Deception", Marc Lappe, Sierra Club Books, 1991 (331 pages)

"Toxic Terror", Elizabeth Whelan, Jameson Books, 1985 (348 pages)

"Trashing the Planet", Dixy Lee Ray, Regnery Gateway, 1990 (206 pages)

"Environmental Politics and Policy", Walter A. Rosenbaum, Congressional Quarterly Inc., 1985 (328 pages)

Keep your fears to yourself,
but share your courage with others.

— Robert Louis Stevenson

(On the Waterfront cont'd.)

Several combination air vent/vacuum relief valves are available for control of air in systems. Air and vacuum release valves are designed to exhaust large volumes of air from pipelines during the filling process and to close positively when water reaches them. These valves operate either by a buoyant float closing the valve as the water rises or by the impact of the water against a plate or other valve closure element. The valve remains closed until the pressure drops below atmospheric pressure, as would result from draining the line. These types of valves close rapidly and will cause a significant change in velocity at closure, thus care should be used in their sizing and placement.

Combination valves are manufactured to perform the functions of both continuous-acting and vent/vacuum air release valves. Upon filling, a large orifice is opened. Once water reaches the valve, the large orifice closes and allows air to escape only through the smaller orifice that is actuated by a float mechanism.

Next month: Installation Considerations