

# CASE STUDY

## PLUMBING CONTRACTOR DISCOVERS CPVC SYSTEMS CONTRIBUTE TO WATER QUALITY AND MORE

**Hurley Board Plumbing Co.**  
Archdale, NC  
Established: 1962

Upscale homebuilders, architects and contractors have responded to their customers' call for energy efficient, safer homes with improved heating and air conditioning systems, better lighting fixtures, home security systems, and more. Now, with CPVC rigid plastic plumbing systems, plumbing contractors are able to install systems that ensure better water quality.

In North Carolina, one plumbing contractor, Hurley Board Plumbing Co., Archdale, NC, discovered CPVC systems after years of using copper plumbing systems and a trial and error experience with PEX systems. Hurley Board Plumbing is licensed to install plumbing in North Carolina, South Carolina and Virginia. Along with commercial and industrial projects, Hurley Board Plumbing installs residential plumbing systems in upscale homes and assisted living complexes in the mid-Atlantic states.

"Through a comparison of installing the different plumbing systems, CPVC plumbing systems have demonstrated the best performance for homeowners in terms of cost and energy savings, as well as contribution to the health of their environment," said Board. "And, CPVC systems are advantageous to us because installations are faster, easier and more predictable."



### Trial and Error

When Hurley Board Plumbing Co. was founded by Hurley and Linda Board in 1962, copper was the traditional choice for all residential plumbing systems. Homebuilders perceived a public opinion that copper was superior to any alternative for plumbing installations. Since copper was more expensive, it was considered the better choice. "We discovered that, in reality, homeowners didn't care about copper," said Board. "They just wanted to have the best system possible."

"The maintenance costs and time involved in replacing the system are considerable for both the builder and homeowner," said Board. With the concern of leaching of the metal pipe into the drinking water in severe water and soil conditions, many homebuilders and plumbing contractors were eager to find a replacement for copper.

"When it was first specified by homebuilders in North Carolina, we began installing PEX plumbing systems in their homes," said Board. "While it appeared the systems were installed right, once the water was turned on, the crimping of the couplers that connect the pipe with the fittings didn't allow water to flow properly. Plus, the coupling system could deteriorate from aggressive water, which includes concentrations of chlorine in city water systems."

The results of the PEX installations were disastrous. According to Board, about 20 percent of the fittings had to be reinstalled due to the difficulty of securing the coupling system.

While PEX did not succeed in giving homebuilders and plumbing contractors a cost effective, reliable alternative to copper plumbing systems, Board discovered that CPVC could provide all the benefits he desired – lower costs; faster, easier installations; reliable, long-lasting performance; and guaranteed water purity. CPVC plumbing systems will not rust, corrode, pit or scale under any water conditions including the most aggressive well water and city water with high levels of chlorine.

### Contractors Buy-In to CPVC Systems

In 1998, Hurley Board Plumbing decided to try FlowGuard Gold® CPVC plumbing systems from Lubrizol. The Lubrizol sales representative introduced Board to the many advantages of CPVC plumbing systems, including improved water quality, reliability, reduced noise, and faster installations.

FlowGuard Gold® CPVC plumbing systems exceed ANSI/NSF Standard 61 for water quality with no pH level restrictions. Unlike copper tubing, CPVC systems maintain their properties in high acidic levels. In fact, CPVC is the only plumbing system that does not contain any metal in the entire system. With homeowners demanding reliable and safe plumbing systems, CPVC pipes maintain the pristine level of water quality coming into the home.

CPVC plumbing systems also meet all model code approvals, including the International Plumbing Code, International Residential Code, BOCA National Plumbing

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**Type of Construction:**  
Residential –  
Single Family

**Installation Type:**  
New

**FLOWGUARD GOLD®**  
PIPE & FITTINGS  
**NOT A DROP OF DOUBT.**



# FLOWGUARD GOLD®

Code, Standard Plumbing Code, Uniform Plumbing Code, CABO 1- and 2- Family Dwelling Code and Canadian Plumbing Code. PEX is not approved by the Uniform Plumbing Code.

"It's a proven fact that copper leaches into the water supply, especially in aggressive water," said Board. "CPVC does not deteriorate, and it offers many additional benefits for homeowners."

In fact, Hurley Board Plumbing found CPVC plumbing systems also offer better insulation and energy savings than copper. Unlike copper piping materials, homeowners have found that the thermoplastic properties of CPVC plumbing systems provide insulation to reduce condensation and keep hot water hotter and cold water colder than copper, resulting in less energy loss through the wall of the pipe. This can save homeowners money on heating and cooling bills and virtually eliminate "sweaty pipes." The thermoplastic properties of CPVC systems also provide a system that is four times quieter than copper, reducing the potential of the pounding noise of water hammer.

"When we installed copper pipe, we had to make special allowances for the noise of the system," said Board. "Since CPVC systems are already insulated, we don't have to worry about noises being carried throughout the home."

## Predictable Plumbing Installations

CPVC plumbing systems are faster and easier to install for the professional plumber, reducing overall labor costs. CPVC plumbing systems require simple hand tools for installation, and no torches or crimping tools are needed. A one-step joining system can be pressure tested in as little as 10 minutes. The FlowGuard Gold® CPVC plumbing system includes pipe, fittings and valves.

Board sent his employees to a two-day training course sponsored by Lubrizol to teach them how to install the CPVC plumbing systems correctly. His plumbing crews saw that the system was lightweight and extremely easy to work with. With CPVC plumbing systems, fewer people are required for the installation.

Given the ease of installation and the ability to make job changes on site, CPVC plumbing system installations are more predictable. Board found that his plumbers could meet deadlines faster than ever before. And, unlike other plastic systems, CPVC is readily available in sizes up to 2" in diameter.

"Installing CPVC plumbing systems does not involve any trial and error," said Board. "We just applied the techniques for installing copper, only without the torches and heavy equipment. And, our material costs and labor savings have been considerable – nearly 25 percent less than copper. We are able to pass those savings to the builder and homeowner."

## Customer Satisfaction

Since he began installing CPVC plumbing systems in upscale homes, Board believes that his customers have been completely satisfied with the results. Hurley Board Plumbing takes pride in recognizing their customer needs, which include using the most effective selection for their plumbing system.

North Carolina has approved CPVC plumbing systems for all residential construction, and through the Lubrizol consumer and contractor education program, the public perception of CPVC plumbing systems has become very accepting.

"While some homeowners still insist upon installing copper in their homes, we consider CPVC our material of choice," said Board. "Not only are FlowGuard Gold® CPVC plumbing systems better, but Lubrizol stands behind their products, and that gives us peace of mind."

Since Lubrizol's development of CPVC plumbing systems over 45 years ago, more than three (3) billion feet of CPVC pipe has been installed in homes, condominiums, buildings, apartments and hotels, including twelve (12) million homes. For more information on the FlowGuard Gold® plumbing system, including pipes, valves, joining cement, caulks, sealants and tools, call 1-888-234-2436, X7393, or visit [www.flowguardgold.com](http://www.flowguardgold.com).

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