

# CASE STUDY

## PB PIPE REPLACEMENT IS FULL-TIME JOB FOR VIRGINIA CONTRACTOR

### Plumbing Express

Alexandria, VA

Established: 1988

From 1979 to 1995, polybutylene (PB) plumbing systems were installed in six to 10 million homes throughout most of the U.S., primarily in the booming housing market of the Sunbelt states. In the mid- to late-1980s, class-action lawsuits began popping up in regions where PB plumbing systems were experiencing failures. In 1991, PB plumbing system failures were brought to national attention on 60 Minutes. And by 1995, the product was discontinued.

As a result of the class-action lawsuits, money was allocated through the Consumer Plumbing Recovery Center toward the re-piping of all homes, apartments and other properties with a PB plumbing system.



### Express Lane

Contractors John Ellis and Peter Page recognized the call of millions of homeowners whose PB plumbing systems had failed. Their company, Plumbing Express, Alexandria, VA, founded in 1988, refocused their efforts to re-piping PB systems in 1993.

Plumbing Express began as a two-man business that today has well over 200 employees. Within one year alone, the company re-piped 3,500 single- and multi-family residences in Virginia, Delaware, Maryland, North Carolina, South Carolina,

Georgia, and Texas. The volume of business allows Plumbing Express to concentrate its efforts solely on re-piping homes and apartment buildings, so the company does not work on any new plumbing installations.

### Coastal Concerns

While re-piping residences with copper plumbing systems has proven effective in many areas of the Sunbelt, Ellis sought an alternative system for the corrosive environments of the coastal regions. Harsh water conditions along the coast can cause corrosion in copper pipes, which leads to a breakdown of the plumbing system over time.

"When we discovered CPVC plumbing systems in 1994, we were prepared to give our customers the option so they could avoid additional plumbing system breakdowns," said Ellis. "Today, we only give our customers in coastal areas the CPVC option."

Ellis was introduced to FlowGuard Gold® CPVC plumbing systems by the FlowGuard® Gold piping systems consultant, who explained the benefits of CPVC plumbing systems, demonstrating durability and proven performance in single- and multi-family residential applications for more than 40 years.

In environments with aggressive water, pH levels of less than 6.5, copper plumbing may not meet the water quality standard, ANSI/NSF 61. Plus, copper cannot resist certain soil chemistries or compositions and will begin to degrade. In these severe conditions, copper pipes can begin to leach into the water, causing it not to meet the potable water quality standard. With CPVC pipe and fittings, the corrosion, pitting or scaling that may occur with metal piping systems is eliminated.



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**Type of Construction:**

**Residential -  
Single Family**

**Installation Type:**

**Repipe**

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

# FLOWGUARD GOLD®

In addition, CPVC plumbing systems meet all model code approvals, including the International Plumbing Code, International Residential Code, BOCA National Plumbing Code, Standard Plumbing Code, Uniform Plumbing Code, CABO 1- and 2- Family Dwelling Code and Canadian Plumbing Code.

## Re-Piping with CPVC

Re-piping plumbing systems is a more time- and labor-intensive task because the drywall must be repaired when the plumbing system is replaced. The average single-family home takes five days to completely replace the plumbing system, repair the drywall and paint.

With CPVC plumbing systems, the re-piping process is simplified—contractors only need to cut 15 to 25 holes in drywall to install the entire system. CPVC pipe and fittings are installed using a hand cutter, and one-step joining cement. Because no torches are necessary to install CPVC plumbing systems, the installation process is faster and safer.

"When we install copper plumbing systems, we have to be cautious when using torches because of fire hazards," said Ellis. "Our employees like using CPVC pipe and fittings because they are faster and easier to install."

## Owner Advantages

Homeowners and apartment building owners also benefit by installing FlowGuard Gold® pipe and fittings because the system is four times quieter than copper. CPVC systems generate less resonance

than metal plumbing systems, reducing the sound of running water and the potential of the pounding noise of water hammer, which can be annoying to apartment building tenants.

According to Ellis, apartment owners appreciate the cost savings of CPVC plumbing systems. However, cost is not an issue to the homeowners who are getting their PB system replaced as a result of the class-action lawsuits. Instead of cost, homeowners appreciate the fact that they have a new plumbing system that performs better than copper in many ways and has a long record of proven performance.

"When homeowners are educated about the advantages of CPVC compared to other materials, they will choose CPVC plumbing systems," said Ellis.

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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## FlowGuard Gold® CPVC Marketing Department

9911 Brecksville Road  
Cleveland, Ohio 44141-3201 USA  
888.234.2436 ext.7393  
216.447.5000  
216.447.5750 FAX