



CASE STUDY



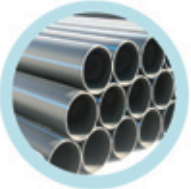
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DELAWARE COUNTY, OK CASE STUDY



LOCATION: Delaware County, OK

PROJECT SCOPE: Water District #10 in Delaware County chooses high-density polyethylene (HDPE) pipe for their water systems



APPLICATION: 11 miles of HDPE pipe ranging in sizes of 2-inch, 4-inch and 10-inch

PROJECT DATES: January 2003 to January 2004

KEY CONTACTS: Tim McCrary, of Crafton, Tull & Associates, Inc. Engineering firm

SUMMARY

Contractors and utility officials in Water District #10 in Delaware County, Okla. had always used PVC pipe for their water systems, in part because it was available in blue for easy identification in the ground. When a manufacturing member of the Plastics Pipe Institute (PPI) developed a solid blue HDPE pipe for potable water applications, the battle between HDPE pipe and PVC pipe was on. And HDPE won.

“We looked at both HDPE pipe and PVC and decided that the best choice for the district for the long term was the polyethylene,” said Tim McCrary, of Crafton, Tull & Associates, Inc. engineering firm. The water officials in Oklahoma discovered that the less water that leaked out of the pipes, the more efficiently they could sell it.

“Environmental concerns were among the criteria we used to pick the pipe material,” McCrary said. “When your only revenue stream is your water, you have to protect that as much as possible. There’s been a big crackdown here on the issue of water loss. We concluded that the HDPE pipe gives us the best chance at protecting this valuable resource.”

Unlike PVC, polyethylene pipe, in both solid blue and traditional black with the blue stripe, provides a leak-free system through its joining process – heat fusion – that produces strong, totally sealed connections. Because it is a non-conductor, polyethylene is simply not subject to corrosion.

The other criteria Water District #10 used to evaluate PVC and HDPE pipe included: cost, operational issues and performance, regulations, future development of the area, as well as public and environmental concerns. HDPE scored equal to or better than PVC for this application in each of those categories, according to the engineers. The cost factor was tied into the long-term performance. Engineers conducted a study that projected leaks, breaks and pipe/joint failure over a 15- year period and calculated potential lost water. Again, HDPE pipe was predicted to save more money over that period of time.

Another factor in the decision was the success contractors in the area had with polyethylene natural gas lines. Polyethylene pipe is used for more than 90 percent of the fuel gas distribution piping in the United States because of its reliability, leak-free performance and resistance to corrosion.

With all the new construction happening in Delaware County, the sewer lines also will be a major part of the development. “When it’s time for the sewer pipes to go in, we’ll be on the lookout for the solid green HDPE pipe,” McCrary said.

Source: PPI

*Please do not hesitate to contact the Alliance with any questions or comments.
Contact Steve Shur at 202-347-3077, sshur@pepipe.org*

www.pepipe.org

