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CITY TAKES CHARGE OF CONTAMINATION PROBLEM

The City of Wichita, Kansas receives national recognition.

WICHITA, Kansas. -- The City of Wichita, Kansas, is receiving national recognition for the way they are handling the problem of contaminated ground water. According to John Davis, supervisor of Environmental Health for the City of Wichita, about a four-square-mile area of water that lies underneath the city has become polluted over a span of about 50 years. "Instead of letting the situation become a superfund with the EPA (Environmental Protection Agency) involved, the city decided to take matters into their own hands and take charge of the clean up," said Davis. The process is unique because most municipalities wait for the EPA to step in where the financial woes can become enormous. The superfund is a liability scheme rather than a monitoring program and the law is particularly controversial. Superfund cleanups have been slow and cumbersome. Some argue the law unfairly punishes companies only fractionally responsible for enormously expensive cleanups.

The \$7 million plan calls for a treatment plant to be built that will strip the chlorinated solvents from the ground water using a hydraulic-venturi air stripper. The treatment plant will also house an educational facility for the study of water purification and serve as a model for others.

For now, the city is busy mapping out and installing a polyethylene piping system to remove the water from the ground and transport it to the treatment facility.

"The new treatment plant will be open to the public," said Kevin Raborg, assistant project manager for CDM Engineers and Constructors Inc., the consultants spearheading the operation. "The public is welcome to come out and view the treatment facility after it is built. When the handling of the water is complete, it will be drinking water quality." Raborg added that they are not treating the water to be a supply for the city. They are simply removing the water and cleaning it up.



Altogether the project includes some five-and-a-half miles of 3- to 8-inch high-density polyethylene (HDPE) SDR 11 pipe. There will be 13 extraction wells that are between 30 and 40 feet deep that will be used to draw out the contaminated water and transport it to the new



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treatment plant that will be located in Herman Park near the Arkansas River.

“HDPE was the obvious choice for the project,” said John Nowak, vice president of Nowak Construction Co., who is installing the piping system. “There is no service required after the installation and no chance for infiltration or seepage.”

Nowak used McElroy’s TracStar 412 to fuse the pipe together and said the new machine made the fusion process go much smoother. The TracStar 412 is a self-propelled, self-contained, hydraulic fusion machine that will fuse 4-inch IPS through 12-inch DIPS. “The TracStar probably cut our fusion time in half,” said Nowak.

“This project is taking place in a highly populated area of the city and we have been able to get this fusion machine to wherever we needed it. We are doing a lot of horizontal boring and it is very important that we are able to perform with the smallest amount of intrusion in the residential and business areas.” Nowak continues, “We have been able to drive this machine on its track system through yards without hurting the lawn. It’s handy when we need to move up and down the line to make a fusion joint. It saves a lot of time not having to load and unload the machine when you need to transport it a short distance.”

Nowak construction is best known for their patented process called InneReam. It is a process that consists of the destruction of in-place VCP, AC, PVC or non-reinforced

concrete pipe and simultaneously replacing the line with a line of equal or greater diameter. In some instances the diameter can be doubled. Destruction of the existing pipe is accomplished by back reaming using a directional drilling machine with a cutting head that grinds and pulverizes the existing pipe. The crushed pipe is then mixed with the appropriate drilling fluids, flushed through the existing pipe to a pre-excavated relief pit along the line or a manhole where it is then retrieved with a vacuum truck or other method for disposal.

This method of trenchless replacement does not expand material into adjacent areas and eliminates the potential for damaging fragile or nearby structures or lifting paved driving surfaces. “We’re starting to see more cities go to PE,” said Nowak. “Most city managers are familiar with the old ways of doing things with other materials. When they learn about all of the positive things PE has to offer they are more willing to try something new,” then he adds with a smile. “And it’s not even new.”

The Plastics Pipe Institute, Inc. (PPI) is a Texas-based, non-profit organization, founded in 1950, that is the major trade association representing all segments of the plastic piping industry. PPI is dedicated to expanding awareness about plastic pipe systems and promoting plastics as the material of choice for pipe applications. It is the premier technical, engineering and industry knowledge resource that publishes data for use in development and design of plastic pipe systems. Additionally, PPI collaborates with industry organizations that set standards for manufacturing practices and installation methods. For more information about PPI and available information, go to: www.plasticpipe.org.