

UNDERGROUND FOCUS

THE MAGAZINE OF BELOW-GROUND DAMAGE PREVENTION. THE GENUINE ARTICLE SINCE 1986.



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Striving for Industry Wide Safety Around Sewer Laterals

By Kevin Kemper

For Mike Kemper, CEO of NPL Construction Company, safety and quality are his highest priorities. This is true not only for his own company, but for the industry as a whole.

Safety Throughout Industry

According to Kemper, there is a safety issue facing the underground construction industry that must be solved. He believes that the solution to this issue should start within the industry, even though the problem is “first and foremost a public safety issue.” The issue that concerns him is the danger of cross-bored sewer service laterals. It is possible for underground contractors to install utility lines directly through these sewer laterals, the pipes that connect a building’s sewage system to the city’s main sewer lines. A breached sewer line is called a “cross-bored line.” It can occur even with conscientious pipeline installation. The possibility arises when using trenchless technology. A simplified definition for this type of technology would include any machine that operates underground, out of sight, to create a hole through which a utility line will be installed. There is a limited risk of breaching any utility lines (water, telephone, cable, electric, natural gas) other than sewer lines with this technology because there is already legislation mandating that, prior to any underground construction, utility owners/operators must come out and mark the location of their existing lines. This legislation is enforced. Sewer laterals are the only pipes that are not consistently marked, whether from lack of proper legislation or enforcement.

The danger from a cross-bored sewer lateral arises when a plumber is called out to the building to clear out a blocked sewer lateral. Often, a plumber will use a rotary cutting



A breached sewer line is called a “cross-bored line,” and can occur even with conscientious pipeline installation. Photo courtesy of the Minnesota Office of Pipeline Safety

device to clear out the sewer line. This will cause the implanted utility line to rupture. The worst damage from this scenario can occur with a ruptured gas line. If gas leaks in to the building and ignites, the consequences can be devastating.

NPL sees the solution to this problem in three parts: legislation, enforcement and technology. New legislation will mandate that sewer lines everywhere must be marked, according to the same laws governing all other underground facilities. Enforcement of existing legislation is another obvious and integral part of the solution.

Lastly, improving technology may someday prevent cross-bores. NPL is currently working with others in the industry to develop technology to locate water and sewer lines. “We are not an R&D company, but this issue is too big to ignore, so we are partnering with others who can help us make the industry safer.”

Safety Within NPL

Kemper and NPL’s commitment to quality and safety is seen within how the company operates. Phoenix, Ariz.-based NPL has more than 2,500 employees and more than \$300 million in annual revenue.

NPL strives to maintain a culture of safety and quality that Kemper believes has propelled the company to achieve such a high level of success. NPL offers turnkey services with the intention that, ideally, their presence goes unnoticed. NPL works to complete the central task of repairing or installing gas pipe and electric wire with follow-up surface restoration so that the job is complete in the customer’s eyes. This eliminates the need for the cost or coordination of hiring multiple subcontractors to finish the job and makes the site aesthetically pleasing.

“We install more than 15 million feet of pipe and wire a year, and we outsource very little,

so we need the skills to do the job right the first time," said Kemper.

By focusing on safety and quality, NPL achieves much of what helps the company succeed. With a positive safety record, insurance costs are minimized. In fact, NPL has one of the lowest insurance modification rates in the industry, with a score of .58. Improved safety also makes the company a desirable employer. "Rewarding people for working safely is unusual in our industry. People want to work for a company where safety and quality come before production," Kemper concluded.

These are all positive outcomes that result from the concrete actions taken by the company to applaud and reward safe, quality practices. NPL has named the month of August "Safety and Quality Awareness Month." During this month, there is a focus on safety promoted by management. At this time, employees meet with their supervisors to discuss safety and quality issues. At all times of the year, new employees must complete

intensive safety and quality training. Weekly "tailgate meetings" focus on specific safety issues to remind employees that, at the end of the day, their safety is more important to NPL than anything else.

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An original three-tiered rewards program was initiated by Kemper and NPL management in 1986. The first tier is open to all NPL employees. They are rewarded with a gift, such as an NPL travel bag or a small radio, if

they complete a full year without any safety or quality issues. A more expensive gift, such as a stereo, is given to the second tier of the company, front-line foremen (leaders of a team) with a perfect safety and quality record. The third tier is open to superintendents (leaders of a group of foremen) and above. These gifts include cash rewards. All gifts are given out at NPL's Annual Safety and Quality meeting each spring. This meeting is a time to celebrate the company's successes and gives management a chance to show their gratitude to the employees in the field that are achieving such great results. **UF**

Kevin Kemper is a recent graduate of Boston College. He has worked within several departments at NPL Construction Company as a project manager and consultant. In addition, he has authored several industry articles. His articles have appeared in American Builders Quarterly, Construction Today and American Executive.