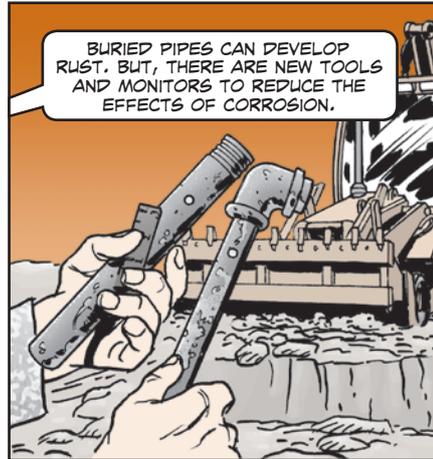


# HIGH TECH UTILITY PROTECTION



**S**oldiers live because of corrosion control and prevention in the utilities they use every day.

There's an old saying, "What you can't see can still hurt you!" This is true of underground utilities such as gas and water. Their pipes and valves need corrosion control because their metal parts are subject to corrosion. Corrosion can lead to leaks and breaks, and in the case of gas lines, explosions.

The Army is applying some new options to fight utility corrosion.

Cathodic protection (CP) runs an electric current between a ceramic anode and the utility to be protected. The utility is kept at a negative potential, and the anode is kept at a positive potential. Newer "deep well" ceramic anode CP systems have recently been installed at two installations to protect water reservoirs and pipelines, as well as fire suppression, steam and natural gas lines.

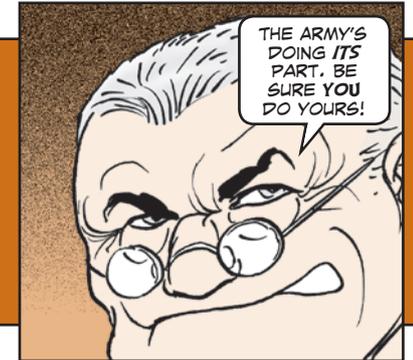
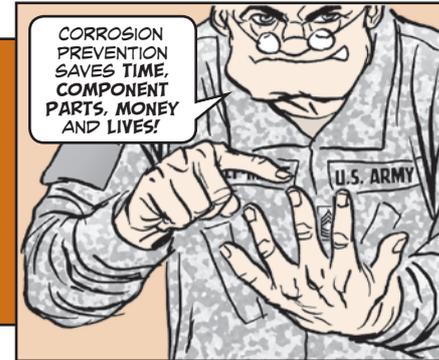
But monitoring these systems was hard because they are laid underground and there are a lot of them.

Maintenance workers now use a new wireless system to check the working condition of the utility lines. Workers can drive past CP test stations where remote monitoring units (RMUs) gather data. The data can be analyzed and used to keep the utility lines in good condition. Some Army installations already have 100 such test stations that can reduce monitoring time from three months to three days!



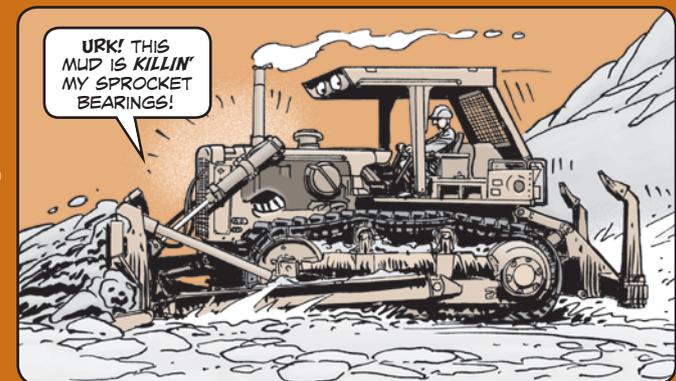
Maintenance personnel can use a laptop PC or a PDA unit to automatically interrogate and record CP protection levels during a "drive-by" of each monitoring station.

What's that mean for Soldiers? Life on Army installations is safer as better prevention keeps utility systems working. And better corrosion prevention provides considerable time savings for maintenance personnel.



D7G Tractor...

## LUBE SPROCKET BEARINGS



**O**perating in dirt and mud is murder on the dozer's sprocket bearings.

That's because water and dirt get past the seals and into the bearings, causing abrasion and corrosion that eat at the bearing's polished surfaces. Worn bearings knock the dozer's track out of alignment—causing excessive wear and tear on the vehicle's undercarriage components.

To head off problems, lube the bearings every time you finish a day's run in mud or water. Pump in grease until new lube comes out around the diagonal bearing cap assembly, which is behind the drive sprocket.

