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**FEBRUARY 2022** 

Think outside the bucket



FOCUS: WWETT Show Issue; Global Excavation Safety Conference Show Issue; Pipe Installation, Repair, Inspection and Rehabilitation



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Right combination of crew and successful jobs leads Washington, D.C., company to steady growth.

By Giles Lambertson

#### ON THE COVER:

Quality Pipe Cleaning operator Juan Urbina, uses a hydroexcavator (Vac-Con) on a residential construction project in Prince William County, Virginia. Quality Pipe Cleaning, based in Washington, D.C., provides a wide variety of underground utility services and was founded in 1990. The company now has 41 employees and services the Washington, D.C. metro area. (Photography by John Boal)

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JUST LIKE LEARNING TO DRIVE, YOU **NEED TO TAKE BABY STEPS WHEN IT COMES TO YOUR CAREER.** YOU CAN'T **EXPECT TO START** ONE DAY AND **EXPECT TO BE TOP** DOG AT THE SHOP THE NEXT.

# Patience Pays Off

#### TAKING THINGS SLOW AND DOING WHAT YOU'RE SUPPOSED TO DO — LIKE LEARNING — WILL HELP YOU NOW IN YOUR CAREER, AND LATER

BY CORY DELLENBACH, EDITOR

am learning a lot about patience right now. You almost need to when you are teaching your teenage daughter how to drive.

In between the stomping on the brakes, then accelerating very quickly — testing your seatbelt strength — to knowing when to activate on a turn signal and how to adjust your mirrors, patience is something that is learned very quickly with a young driver.

You need to stay calm and think ahead to any possible outcomes that could happen as your teenager drives, all while trying not to get upset, start yelling and freaking out. Having patience will help them grow as a driver.

I keep relating that kind of patience to what I write about in Dig Different magazine. As an employee at a utility construction business, or the owner of a company, you know the importance of patience. And not just the patience you need when it comes to job site problems or customer interactions.

You need to have patience for your career to grow, no matter if you are looking for that growth as an employee, as a supervisor or the owner of a company.

#### **ONE STEP AT A TIME**

Just like learning to drive, you need to take baby steps when it comes to your career. You can't expect to start one day and expect to be top dog at the shop the next. It just doesn't happen that way.

Being patient means learning from those around you - your coworkers, your supervisor, even your customers. The more you learn and take in from them, the more it will help you grow as an employee and become that much for valuable to your company.

Building on your experience will help you rise up the ladder and eventually into a management role or, if you feel motivated to, start up your own company.

You need patience to do all that because it doesn't come fast and there will be little bumps and curves in the road. Take each one in stride.

#### **IT PAYS OFF**

When Thomas Buchwald, owner of Quality Pipe Cleaning, located near Washington, D.C., started his company he didn't jump into things too fast. He was patient and took his time growing the company founded in 1990 to what it is today — 41 employees strong and doing work all over the Washington, D.C. area for government and private customers.

The company, which is featured in this issue, has carved out a higher profile niche doing difficult or extreme excavation tasks, and is coming off its best year in history. That's saying something when a company can do that despite a pandemic and economic worries.

Having the patience to work and keep clients and to continue to grow the company stronger is what is leading Quality Pipe Cleaning to a bigger company headquarters and, potentially, expanding its service area in the near future.

#### **TAKING A CUE**

Learn from Buchwald, or even from new teenage drivers on the road. Rushing won't get you anywhere but in trouble, so have a little bit of patience, do what you're supposed to do — learn — and you'll see big things pay off for you and your company.

What valuable lessons have you learned from your career either as a general laborer, a supervisor, or the owner of a company. Email me at editor@digdifferent.com or call me at 715-350-8436. I look forward to hearing from you.

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#### **OPPORTUNITY**

# How to Capitalize on the Infrastructure Bill

The \$1.2 trillion infrastructure bill signed into law in November 2021 will provide significant funding for work that will benefit a lot of contractors in the coming years. How can you make the most of these future opportunities? This online exclusive offers some advice.

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#### **OVERHEARD ONLINE**

### "THE TIME FOR COMPROMISE IS NOT WHILE YOU'RE NEGOTIATING THE PARTNERSHIP AGREEMENT.

THE TIME FOR COMPROMISE IS AFTER, WHEN YOU'RE WORKING TOGETHER. IF YOU COMPROMISE UP FRONT, YOU HAVE TO LIVE WITH IT FOREVER."

The Risks and Rewards of Business Partnerships digdifferent.com/featured



#### **BUSINESS PROTECTION**

## **Prepare For Catastrophe**

You can't fully predict the future, but creating an emergency plan will help you face it if disaster strikes. Take some lessons from Tim and Becky Peltzer, owners of Waste Solutions of Iowa. The couple lost their business office in a fire in April 2021. In this online exclusive, they talk more about their experience and how proactive measures can help companies ride out disasters with less stress and disruption to day-to-day operations.

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#### **WINTER WORK**

### **Pipe Lining During the Cold Months**

With a few slight modifications, you should have no problems performing typical pipe lining work during cold-weather months. This online exclusive explains more. digdifferent.com/featured



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Here's the latest scoop from the nation's capital: Quality Pipe Cleaning is on the job, digging into things, exposing hidden failures, righting wrongs and generally trying to make systems come clean. It's a big job, Washington being Washington, but after 31 years in the trenches, Quality Pipe knows a thing or two about dirt.

And business is good. Essentially a one-man operation when Thomas Buchwald launched the company in 1990, the Sterling, Virginia, company now has a dozen hydrovac trucks rolling to jobs each workday. In addition, five closed-circuit TV system vans are kept busy. One municipality has just contracted with the company to perform a three-year video inspection of its pipelines.

"We've experienced steady growth," says Eric Tyler, company president. Buchwald brought Tyler on four years ago and has pretty much turned over day-to-day operations to him. The operations range across the region, including parts of Maryland, Virginia and West Virginia, as well as the District of Columbia.

Yes, recent calls have been to the White House, the Pentagon and other storied venues, but the company's trucks and vans are just as apt to be working on a municipality's storm drainlines or sewer infrastructure at a data center. There is no shortage of work opportunities for the company — primarily government, institutional and commercial. Residential jobs are limited to new construction site work.

#### **WORKING WITH TECH**

This being the District of Columbia, every small business in the metro area is somewhat insulated from the economic ebb and flow that roils most other regions of the country. The seat of federal government is mostly immune to downturns. That stabilizing factor is augmented by such economic engines as thousands of technology companies in northern Virginia.

In Loudoun County alone, structures for data centers total 25 million square feet.

"Those centers have a lot of underground infrastructure and sensitive underground facilities," Tyler says.

Quality Pipe was called to video one of the center's sanitary sewer lines and determine why there was a flow issue. Tyler sent out a crew, who in turn sent one of its Envirosight sewer inspection cameras into one end of the line. It encountered rock. Sent in from the other end, the video result was the same. Rock. To get to the bottom of it, Quality uncovered the area of flooring above where the obstruction was discovered and hydroexcavated down to the level of the pipe.

"It turns out there was no pipe," Tyler says. "When the center was constructed, two contractors laid the pipe from opposite directions. Somehow, they both missed laying about 30 feet of line. That's why the center was having an issue: no pipe. We excavated the area and one of the contractors was called back to complete the job."

#### **POWERFUL EQUIPMENT**

Three-quarters of Quality Pipe Cleaning's overall work uses its hydrovac equipment. The rigs are employed in diverse ways. Ten of the firm's 12 trucks are combination jetter-vacuum units. While those trucks are configured similarly — with front-mounted hose reels and a hydraulic boom, for example — they each are outfitted to perform certain kinds of cleaning jobs.

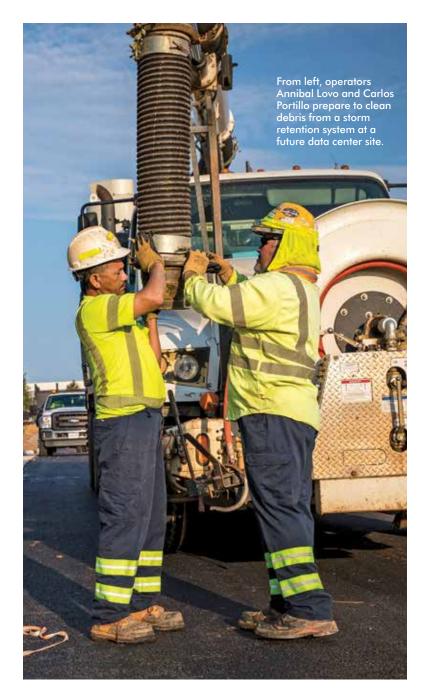


The Quality Pipe Cleaning team at their headquarters in Sterling, Virginia, along with several of the company's Vac-Con hydroexcavators and combination jet-vac trucks.



From left, Miles Perdue, vice president; Eric Tyler, president; and Thomas Buchwald, owner, with the Buchwald's original 1995 Vac-Con truck, which is the company's first hydrovac unit they purchased.

Tyler adds that he hasn't seen any other cleaning company's HyRail trucks in the area. "I think we're the only one doing it here. I know this for sure: Vac-Con has only built three of the trucks and we have two of them. The third one is in Canada."



Quality Pipe Cleaning's relationship with Vac-Con dates to the very beginning. The company's first brand-new truck purchased was a 1995 Vac-Con V390 sewer-cleaning rig with a 1,000-gallon water tank and a nine-yard debris body. Though the truck is still runnable, it's parked outside the company head-quarters today as a reminder of the company's roots.

No other brand of hydrovac truck besides Vac-Con has ever carried the company's logo, according to Tyler. Why the loyalty?

"Vac-Con always is willing to work with us, to design new equipment for us," he says. "When we've had a problem and needed some help, they always were there for us. We've been with them a long time. When they sold their first couple hundred trucks, we were buying some of them."

Tyler and other company executives periodically travel down to the Vac-Con manufacturing facility in Green Cove Springs, Florida, to talk about engineering issues. One such trip was scheduled in October to check out a new piece of technology. Company reps also visit Florida whenever an ordered truck is being assembled.

"We see the truck as it's built," Tyler says. "We watch the features we've asked for being installed. A lot of the standard stuff Vac-Con offers on its products were first designed for our trucks."

# Satisfaction Guaranteed at Suburban Hospital

Doing difficult things is its own reward. When a company like Quality Pipe Cleaning decides to take on tricky hydroexcavation jobs, one reason it does so is the satisfaction that comes from accomplishing a tough task. Sometimes there are other rewards.

"We have been doing a lot more hydroexcavation away from the truck," says Eric Tyler, president of the company. "In most excavations, the truck sits right by the hole, but we've been regularly digging holes 300 feet away, which means we need longer highpressure lines, a bigger vacuum blower and so on."

Combing the digging force of two or more hydrovac trucks is something the company does routinely, perhaps once or twice a month. For a digging job in a Washington, D.C., Metrorail station, Quality Pipe created a triple connection. Three trucks were hooked together on a 10-inch line. The hose snaked over a wall, down two escalators and through the station before reaching the bottom of a targeted elevator shaft.

In 2020, the company subcontracted a multi-truck project at a Suburban Hospital campus. The job entailed digging out a 40-foot-by-40-foot-by-50-foot hole beneath the center of the hospital without disturbing the facility's daily activity. Holes were cut in concrete walls to let the 10-inch hose run from two trucks down two floors, beneath the hospital's emergency room and past conference rooms.

Pressurized water hoses were used to loosen the packed earth before sucking it out. Large rocks were pulverized and carted away separately. Tyler says at the height of the vacuuming, patients being moved down the hallway in which the hose was suspended from the ceiling occasionally would see dirt trickling down — perhaps momentarily distracting them from their medical problems.

"It took us a couple of months," he says, looking back on the delicate and challenging operation. A stairwell and two service elevators eventually were installed in the cleared space.

The difficulty and success of the job was recognized by Washington Building Congress, an industry association that gives craftsmanship awards to area contractors and companies. The award cited Quality Pipe Cleaning as "an extremely cooperative partner in the effort to execute a somewhat nonconventional approach to excavation."

Somewhat nonconventional, indeed.

An example of that is the option a customer has of removing a hot water heater. Tyler asked that the heater be removable in summer months, Vac-Con developed the feature and now offers it to all its customers.

#### **WORKING WITH THE CREW**

A company begun with a single employee has, on average, hired three or four people each year to fill positions — when Tyler can find qualified candidates. The trades workforce complaint is a familiar one.

"I could take five or six more people right now," Tyler says. "I just can't find anyone who wants to work. We have the equipment and the workload. The missing piece of the puzzle is equipment operators."

On the other hand, retaining employees is not a problem. The company still is small enough that it can take care of employees in a personal way. A few weeks back, employees and executives went together to a DC United professional soccer game, with reserved seats close enough to the field to let workers meet the players.

"We treat our employees very well because we're still kind of a mom-andpop shop. Anyone can walk in my office or Tom's office and talk with us. There's

# "WE SORT OF **SPECIALIZE IN TAKING ON OFF-THE-WALL HYDRO WORK** WHILE OTHER COMPANIES PREFER TO LOCATE LINES AND PERFORM MISCELLANEOUS SMALL EXCAVATIONS."

Eric Tyler

no hierarchy. I'm president but I'll go out and dig a hole just like anyone else," says the 33-year-old executive.

In fact, before he joined Quality Pipe, Tyler was an active competitor of the company. He's worked in the industry in northern Virginia since 2008, operating a hydrovac truck for several years. He also was a truck mechanic, so he knows the nuts and bolts of the business.

Why company operators are comfortable with the president is easy to see. Just as evident is the esteem in which the president holds his crew. "It's all about our employees and their dedication. They come to work every day and give 110%," Tyler says. "They believe in doing quality work, Quality Pipe Cleaning wouldn't be where it is today without them."

Where the company is today is coming off the best year in its history — because of or despite the pandemic, no one can say for sure. It has become the dominant hydrovac company in the metro area, according to Tyler, partly because larger national outfits with a presence there generally focus their work on routine pipe cleaning.

Whereas Quality Pipe Cleaning has carved out a higher profile niche doing difficult or extreme excavation tasks. "We sort of specialize in taking on off-the-wall hydro work while other companies prefer to locate lines and perform miscellaneous small excavations," Tyler says. He adds that the company is not the lowest bidder nor the lowest priced, "but we're comfortable with that. We frequently get calls from customers asking us to go in and get a job done right after a low bidder has worked on it."

#### **CONTINUED GROWTH**

This reputation as a problem-solver seems to be working for them. The company headquarters was moved across town two years ago to a nearly five-acre property with a 6,000-square-foot headquarters building and a 7,500-square-foot mechanics shop.

A second warehouse and office were opened in Maryland so the company could more easily service municipal hydroexcavation accounts in that part of the service area.

Now, with a market growing south of the metro area around Fredericksburg and Virginia Beach, a transition to the Tidewater area might be in the offing, perhaps with a satellite office in Richmond. A transition in ownership might also occur in the relatively near future, with the founder cutting back his involvement and the 33-year-old president preparing to take the reins.

With inflation heating up and other economic indicators wavering, this might not seem like an ideal time for business expansion. However, Tyler is confident that Quality Pipe Cleaning is well-positioned to weather whatever comes. "I'm not too concerned about it," he says. "We have a good amount of contracts. We'll be all right."

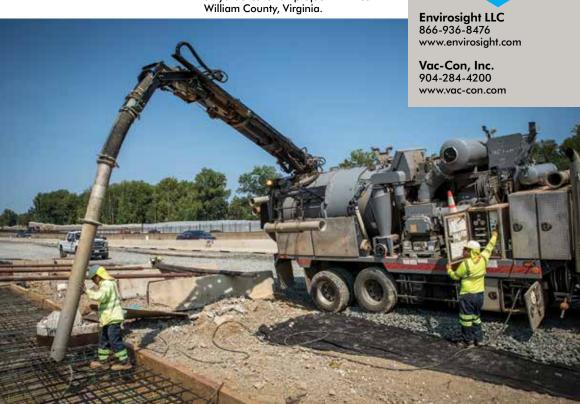


Quality Pipe Cleaning doesn't only do excavation work, the company also offers services such as pipe cleaning and CCTV. Here technicians Erik Rodriguez (left) and Patricio Carillo prepare to lower a Rovver X 130 (Envirosight) into a manhole for inspection for a storm retention system.

Featured products

from:

Operator Juan Urbina (left) and Jose Guevara move a Vac-Con digging tube into position during a hydroexcavation project in Prince William County, Virginia.





# Landshark Group

#### **BRANTFORD, ONTARIO, CANADA**

Landshark Group, located in Brantford, Ontario, Canada, keeps this 2021 **Tornado F4** hydroexcavator

— called Hydro X 6 — rolling throughout the Ontario region servicing customers. The hydrovac unit is built on a Western Star chassis and has a Robuschi 145 6,400 cfm blower and full vacuum. The truck has a 12-yard debris tank capacity and 1,400-gallon water tank capacity. The water pump from Pratissoli is capable of 20 gpm and 3,500 psi. The truck honors the Royal Canadian Navy and the Royal Canadian Naval Benevolent Society with the HMCS/NCSM Regina printed on the side of the truck with its retro naval camouflage. The Regina, a Halifax class frigate, is assigned to Maritime Forces Pacific and is home ported at Canadian Forces Base Esquimalt and flied the "Bravo Zulu" flags, a naval signal meaning "Well Done" on a successful deployment and outstanding performance. The RCNBS supports those who have served or are currently serving with the Canadian Armed Forces and their dependents with financial assistance. When the truck is on a job, its hours are recorded and a percentage of hourly revenue is donated to the associated group.



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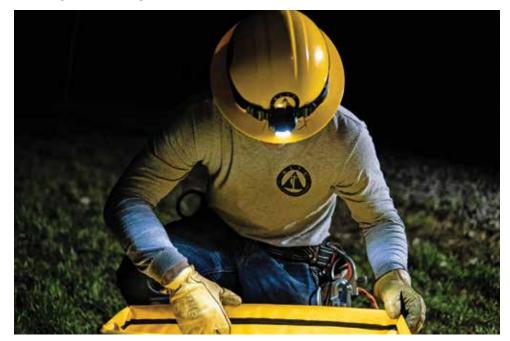
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We look forward to hearing from you!



#### **SAFETY FIRST**



Headlamps are essential when hands-free lighting is required for tasks in low-light areas.

"WITH AN INTRINSICALLY SAFE HEADLAMP, YOU ARE MEETING THE STANDARD AND ENABLING EMPLOYEES TO WORK IN THE SAFEST POSSIBLE CONDITIONS WITH THE MOST UP-TO-DATE EQUIPMENT."

John Navarro

# Illuminating the Job Site

#### INTRINSICALLY SAFE HEADLAMPS IMPROVE WORKER SAFETY IN HAZARDOUS ENVIRONMENTS

**BY DEL WILLIAMS** 

tilities have a duty to protect employees and provide a safe work environment, but many fail to supply or specify all the proper personal protective equipment — namely headlamps.

The lack of suitable headlamps can lead to serious — even deadly — accidents in hazardous locations.

As a tool, headlamps are essential when hands-free lighting is required for tasks in low-light areas. This can include operating/maintaining machinery and assessing its condition, or servicing pipes, manholes or other infrastructure. Headlamps are also necessary for safe, efficient personnel movement, particularly in confined or restricted spaces.

In many situations, having a headlamp that does not generate a spark is critical. This is particularly important whenever flammable gases, vapors, liquids or off-gassing is present.

Despite meeting OSHA's definition of PPE, "equipment worn to minimize exposure to hazards that cause serious workplace injuries and illnesses," head-lamps are often not included in budgets for PPE. As a result, workers may be left to purchase their own, and if they overemphasize price and choose products that lack necessary options, the units may be unsafe for some tasks, settings or conditions. This could open the utility to potential liability.

To protect personnel in any work environment and to defend against such liability, a growing number of safety officers are including or specifying head-lamps in the budget, as PPE.

"It is safer to provide suitable headlamps upfront rather than leaving it up to employees to make their own purchases. However, department approval of only intrinsically safe product would handle the issue. Preventing even one serious injury, fire or explosion would pay for any implementation," says Scott Colarusso, general manager and co-owner of All Hands Fire Equipment & Training in Neptune City, New Jersey.

When contractors and utilities supply intrinsically safe headlamps, which are specifically designed not to be a source of ignition in hazardous zones, workers are protected wherever they need to go from serious, even potentially lethal accidents. Essentially, everyone is covered and the chance of mishap eliminated.

"Without safety certified headlamps appropriate for the application, utilities are exposed to potential liability if an incident occurs. By supplying workers with headlamps that are rated for any hazardous environment that could be encountered, utilities can prevent the problem," Colarusso says.

#### **MANDATING GREATER SAFETY**

Headlamps enhance safety and efficiency by leaving workers' hands free. It's important to choose devices that are designed to be easily operable even when workers need to wear heavy gloves. Typically, the units are waterproof and chemically resistant, ready for use in rugged surroundings, which may include getting thrown into a truck toolbox or dropped, and providing sufficient "burn time" to last an entire work shift without a change of batteries.

For sewer and pipeline workers, however, typical headlamps can be a dangerous source of ignition if workers unwittingly enter a hazardous area or are exposed to flammable materials or conditions.

Safety considerations are particularly important considering OSHA's recently issued standard for construction work in confined spaces (Subpart AA of 29 CFR 1926). The new standard recognizes that such spaces can present physical and atmospheric hazards that can be avoided if recognized and addressed prior to entry. It is designed to eliminate potentially deadly hazards by requiring employers to determine what kinds of spaces their workers are in, what hazards could be there and how those hazards should be made safe

(including the use of headlamps, flashlights and other lighting equipment that carry the proper safety ratings).

Therefore, in inherently volatile settings, headlamps should carry the proper certification for various classes, divisions and groups of materials. One example that meets these requirements is the intrinsically safe Vizz II headlamp by Princeton TEC, a producer of ETL- and UL-approved lighting products.

In response to the new OSHA standards, some manufacturers now make headlamps with durable thermoplastic material designed to withstand drops and rough handling and have superior resistance to common, potentially dangerous chemicals and solvents utilized by utilities.

The latest models also offer anti-static properties and safety features, such as a locking mechanism that requires a tool to open the battery compartment. This prevents users from inadvertently opening the battery housing in a hazardous environment, which could not only result in electric shock, but also potentially ignition or explosion.

"Many of our corporate customers specify Princeton Tec headlamps and lighting products due to the reliability, longevity, price point and made-in-the-USA. production," says John Navarro, a purchasing agent for Bayville, New Jersey-based CWR Wholesale Distribution.

"With an intrinsically safe headlamp, you are meeting the standard and enabling employees to work in the safest possible conditions with the most up-todate equipment," Navarro says. "Now the technology is at a better price point than it was five years ago. So, it is affordable for corporate safety budgets."

Contractors can take a positive step by providing workers with headlamps that ensure compliance and minimize operational risk and liability.

Many of Navarro's industrial customers are willing to spend a little more for higher rated, compliant, intrinsically safe headlamps.

"Our industrial customers want to know their plant personnel can safely use their intrinsically safe headlamps anywhere. Safety committees do not want to worry about where personnel may use the units, if it is safe to use under hazardous conditions."

While sewer service and maintenance carry some inherent risk, companies seeking to improve safety can take a positive step by providing workers with safe headlamps that ensure compliance.

As the need for safety only grows along with stricter regulation, sewer cleaning contractors can take a positive step by providing workers with headlamps that ensure compliance and minimize operational risk and liability.



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# Bringing on Electric Power

#### **ELECTRIC AUGER BORING MACHINES CAN HELP CONTRACTORS COMPLY** WITH EMERGING EMISSIONS REGULATIONS AND IMPROVE OPERATOR PERFORMANCE

#### BY RICHARD LEVINGS

uger boring has been a staple in the construction industry for decades. However, the global environmental push to reduce emissions has forced many manufacturers to look at powering equipment differently. With electrical equipment starting to gain traction in many parts of the world, the industry is seeing the beginnings of change. While the adoption of electrical equipment, like electrical auger boring machines, might be slow, the benefits will prove advantageous in the future.

In fact, many cities around the world already have regulations in place that will limit or ban the use of dieselpowered cars in the coming years. And now some cities are eyeing similar regulations to reduce the use of dieselpowered construction equipment. In Oslo, Norway, for example, a new procurement strategy has led to nearly zero-emissions building sites.

However, contractors shouldn't only consider a shift to using electric equipment as a matter of compliance. A

### switch to electric auger boring machines offers multiple on-the-job benefits — from quieter and safer job sites, to enhanced equipment performance. **MINIMIZE FUMES**

Traditional diesel-powered auger boring machines generate exhaust and diesel fumes. And because the machines are typically used in sub-surface environments, these fumes can create health and safety concerns for workers.

In some jobs, a contractor may need to limit the amount of time operators can spend underground because of exposure to fumes. In addition, the contractor may need to use special equipment to monitor air quality and cycle fresh air down to the pit.

Of course, this can slow down work and add extra costs and logistics to a project.

An electric auger boring machine has no emissions. It allows crews to do their jobs without worrying about breathing in fumes or having to step away from the job site for health reasons. An electric option also saves costs by reducing the need for air-monitoring or circulation equipment.

#### **REDUCE JOB SITE NOISE**

The loud whir of equipment is a mainstay on any construction site — and too often a factor that limits when a contractor can work. That's because many cities have noise ordinances in place that only allow crews to run their equipment during certain hours of the day.

Electric auger boring machines are significantly quieter than their dieselpowered counterparts, allowing contractors to work longer on job sites, with less risk of violating ordinances.

This was the case for Swedish contractor Riggtech. The company needed to complete a 36-meter bore as part of a storm sewer installation in the city of



American Augers had its electric auger on display at The Utility Expo in Louisville, Kentucky, in October. The company demoed the unit several times for attendees throughout the event.

**ELECTRIC AUGER BORING MACHINES ARE SIGNIFICANTLY** 

QUIETER THAN THEIR DIESEL-POWERED COUNTERPARTS, ALLOWING CONTRACTORS TO WORK LONGER ON JOB SITES, WITH LESS RISK OF VIOLATING ORDINANCES.

> Gothenburg, Sweden. Local laws required that construction crews keep noise levels down. Using an electric auger boring machine, Riggtech was able to complete the job while still meeting the city's noise ordinances.

#### **INCREASE VISIBILITY**

One of the biggest benefits operators have with an electric auger boring machine is the ability to step off the machine and control it from some-

With wireless remote control, operators can get off the rig or even out of the pit to operate the machine. This can give them more freedom of movement and better visibility through all machine operations.

Also, while noise and vibration are significantly reduced with an electric auger boring machine, they're not eliminated. Being able to control the machine remotely can reduce on-machine distractions while operators work.

#### **ENHANCE OPERATOR PERFORMANCE**

From a performance standpoint, contractors will appreciate the greater versatility that an electric boring machine can bring to job sites.

First, an electric machine gives operators the freedom to adjust speed and torque according to what the job requires. On traditional machines, torque and speed are tied together and determined by the operator's chosen gear. But an electric machine can achieve full torque instantly. This allows operators to balance torque and speed based on soil conditions.

Second, an electric machine can meet a wider range of job demands than a traditional machine.

For example, diesel-powered machines are typically only rated for 0- to 20-degree angles because of a need to keep oil level in the machine. An electric machine doesn't have this concern, allowing it to be used in high-angle applications. Also, as contractors in places like Canada have discovered, an electric machine is more reliable in extremely cold environments, where diesel-powered machines can struggle to start.

#### **FUTURE COMPLIANCE**

Regulations limiting the use of diesel-powered equipment won't take effect for years, but they are coming. Because of this, contractors who are looking to invest in an auger boring machine today may want to take a long-term view with their investment.

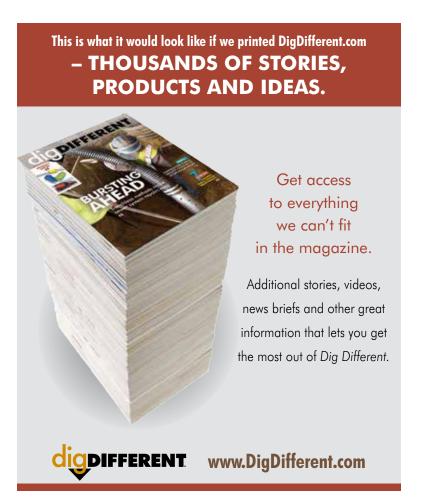
Also, while regulations limiting diesel equipment may not be in effect today in most cities, the populations in many cities are largely wanting to see lower emissions in their communities. Contractors who can address this sentiment with solutions like electric machines may be able to strengthen the marketability of their business.

#### **EXPANDING THE HORIZON**

Early adopters of the industry's first available electric auger boring machines are discovering how the machines can reduce their job site emissions and improve their operations. From increased operator visibility to machine versatility, electric systems give contractors the ability to stay competitive in the marketplace and meet a broader range of bid requirements.

#### **ABOUT THE AUTHOR**

Richard Levings is a product marketing manager for American Augers.







# Mastering Difficult Workplace Conversations

#### LEARN HOW TO POINT OUT CO-WWORKER SAFETY VIOLATIONS IN A CONSTRUCTIVE WAY AND EVERYONE WILL BE HEALTHIER AND HAPPIER

BY KEN WYSOCKY

o you see a colleague violating a safety procedure while operating equipment, or breaking office ethics protocol.

Given most people's propensity for avoiding conflict, it's undoubtedly tempting to just let things slide. After all, who wants to be perceived as that person on the office team or field crew — the one who thinks they're perfect and always calls out other people on the error of their ways?

Fortunately, you can have it both ways — as in, speak out and hold people accountable while still maintaining good workplace relationships. The trick is to do it with the right motivation and attitude, and to hopefully work at a place where management builds a culture where accountability is prized, says Joseph Grenny, the co-founder and co-chairman of Vital-Smarts, a national leadership training organization.

If you're one of those people who finds speaking out very difficult, you're not alone, notes Grenny, who's also a four-time New York Times bestselling co-author of business books. (Titles include Crucial Conversations: Tools for Talking When Stakes Are High; Crucial Accountability: Tools for Resolving Violated Expectations, Broken Commitments, and Bad Behavior; and Influencer: The New Science of Leading Change.)

"We've spent more than 30 years talking about the consequences of avoiding crucial conversations, which is absolutely ubiquitous in the workplace," he observes. "So many of the common complaints in our lives have roots in our inability to handle these crucial conversations."

Second, problems avoided typically turn into recurring issues that can create damaging ripple effects in the workplace — which puts everyone's safety at risk. "It becomes a chronic problem through the unwitting consent of people around them who don't say anything," he notes.

Of course, there's always a chance things can go sideways when someone speaks out about something in the workplace. "But if you don't say anything at all, it never goes well either," Grenny says. "Things such as employee retention and strong engagement are all strongly tied to workplaces where people speak up about emotionally and politically risky things."

#### KIND REMINDERS

So how does one go about handling these delicate situations? First of all, don't wait and don't go to your boss first. Research performed by VitalSmarts shows that in high-performance organizations, issues get handled between peers and at the moment they occur, Grenny says.

"Escalations [going to a supervisor] almost always end in failure," he explains. "They're unnecessary political and social behaviors that drag down the process of managing a fairly straightforward and logical process."

Also keep in mind that to achieve good results, it pays to ensure your motives are right — a mindset Grenny calls "kind to remind." In fact, Grenny says the best indicator of how a crucial conversation will go is the reason you want to have it in the first place. If you want to punish, belittle or prove you're right, expect it to go badly.

"Too often we behave in ways that prevent the outcome we want," he says.

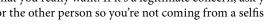
On the other hand, good things happen when you speak from a sense of kindness. "Positive intent is a huge indicator of how well things will go," he explains. "Before you open your mouth, you need to pause and think about what you really want. If it's a legitimate concern, ask yourself what you want for the other person so you're not coming from a selfish place."

## **IT'S NOT EASY**

Why is speaking out so hard to do? Part of it stems from the way we've been hard-wired to think pessimistically about outcomes from confrontations. "That mentality served us well in prehistoric days when we were constantly faced with physical threats," he says. "But it doesn't serve us as well now, when we have to deal more with social challenges."

Moreover, the worst outcomes we can imagine rarely ever happen, he adds. In other instances, employees feel like it's not their place to tell others what to do or how to act. Or they figure it won't do any good. Or they don't know what to say or how to say it without being offensive.

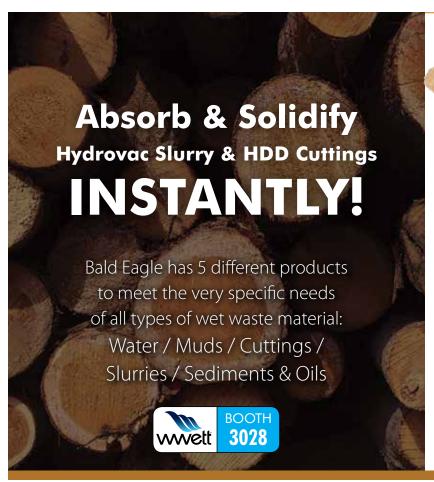
But in the long run, there are obvious downsides to ignoring such transgressions. For starters, if you don't talk things out, you'll probably act it out, creating a downward spiral of trust and repressed anger that can destroy team morale. "It all gets expressed one way or another through things like sarcasm and resentment," he says.



**ACCEPT REMINDERS GRACEFULLY** 

If you're on the receiving end of the criticism, it's crucial to assume what Grenny calls an "attitude of gratitude." In other words, politely accept any reminders to follow certain safety rules and assume they're being expressed with good intent.

Companies can help enforce this mindset by creating a culture of accountability — a place where it's the norm to say, "OK, thanks for the reminder," whenever someone speaks out about a safety violation.





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"When such a response becomes a cultural norm, it reduces the emotional stakes involved," Grenny explains. "It's not hard to create such a social contract, but very few organizations do it. It takes training and presentations and leaders who are willing to reinforce and model it.

"It's kind of like getting a train started. It requires enormous energy at the beginning to get it started. But after that, it's easy to sustain."

Last but not least, after people speak up, they then need to let things go, understanding that they cannot control the colleague's response. "Don't turn it into an ego match or a test of wills," he advises. "Deliver the message, and then look out for your own safety.

"MOST OF US ... ATTACH OUR SELF-WORTH TO WHETHER OR NOT THE OTHER PERSON AGREES WITH US OR COMPLIES. BUT WE DON'T NEED TO DO THAT. JUST DO WHAT YOU'RE SUPPOSED TO DO IN A GRACEFUL WAY AND LET THEM HANDLE IT HOW THEY HANDLE IT."

"Most of us in those moments attach our self-worth to whether or not the other person agrees with us or complies. But we don't need to do that. Just do what you're supposed to do in a graceful way and let them handle it how they handle it."

If this approach doesn't work, then it's OK to take the matter up the ladder to a supervisor or someone in human resources or a safety department — whoever has responsibility for the respective issue.

In the long run, inaction is not the best option. When handled the right way, speaking out trumps silence. As Grenny points out, "The inability to do so adversely affects every workplace outcome we care about."

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BY CRAIG MANDLI

## Hydroexcavation Equipment

#### **Ditch Witch HXT Line**

Contractors looking for the efficiency and payload capacity of a truck-mounted vacuum excavator can turn to Ditch Witch's HXT Line of vacuum excavators. The HXT50 and HXT75 are powered by Kubota engines with 50 and 75 hp, respectively, for



optimal suction power. The HXT50 has a 1,005 cfm blower and 3,000 psi water pressure. Both units are available with 500-, 800- and 1,200-gallon spoils tank configurations, allowing contractors the freedom to stay on a job site longer and avoid repeated spoils disposal and water refilling. The 500-gallon configuration is designed to be under CDL requirements, allowing contractors to transport the machine without a CDL driver on staff. The HXT75 offers 1,315 cfm and up to 5.5 gpm water pump flow. They are designed with a spoils tankdoor that can be controlled curbside or remotely to keep operators clean during spoils disposal. Both come with a multifunction remote control option for the boom, allowing operators to more easily control the vacuum hose.

580-336-4402; www.ditchwitch.com

#### **Dynablast HV420**

Custom Dynablast HV420 hydrovac water heaters produce 420,000 Btu with an output temperature of 175 degrees F at 5 gpm, making them suitable for colder climates and improved digging in clay-filled areas. All models come with ETL certification for safety, which also includes certification on the coil for higher efficiency and heat transfer, a stainless



steel target plate for increased coil life and momentary override control. They include an Interpump Group T 2040 water pump package providing 10.5 gpm at 2,900 psi and 1,750 rpm, as well as a hydraulic package with a Sunfab 34 cc motor. All components are custom-mounted in a 24-by-24-inch cabinet.

905-867-4642; www.dynablast.ca

#### **Easy-Kleen Pressure Systems Wildcat Heaters**

Wildcat Heaters high-pressure, oil-fired hot-water/steam heaters and hydraulic pump systems from Easy-Kleen Pressure Systems are designed for

reliability and efficiency, and are installation-ready for vacuum trucks and hydroexcavators. A full range of heater options includes dry steam, redundancy packages, schedule 80 and 160 stainless steel or A53 boiler pipe, fine-tuned temperature and flow-control systems. All coils are manufactured in-house, with CRN boilerapproved coils now available. Heaters can be designed



for mounting in a cabinet or supplied as a completed cabinet unit. They are CSA and ETL approved. Hydraulic pumping systems are available.

800-315-5533; www.easykleen.com

#### **Enz USA Hydro X**

The Hydro X nozzle from Enz USA is available in 3/8inch NPT or 1/2-inch connecting threads, and it can function at up to 5,000 psi with flow as low as 8 gpm. It combines a powerful, oscillating water jet with a high debris removal rate. A tungsten carbide front jet ensures a longer life than ceramic jets can offer. For quick and easy maintenance, a repair kit is available. Due to the nozzle's simplicity, repairs can be made quickly and efficiently in the field with little downtime. For the operator's safety, a plastic cover provides protection against harsh and sensitive environments.

888-369-8721; www.enz.com

#### HotJet USA Vac 'n Jet Series

The HotJet USA Vac 'n Jet Series of vacuum trailer jetters are designed to be rugged and compact, engineered to haul equipment and spoils loads, can clean valve boxes and storm



drains and hydroexcavate and/or clean drainlines and sewer lines. They offer hot- and/or cold-water operation with a choice of engines ranging from 13 to 66 hp and gas or diesel. They are equipped with premium triplex pumps, a 500-gallon spoils tank, 200-gallon water tank, Gardner Denver vac/blowers, 4-ton hydraulic dump and Centriclean filter system. They can also be designed to meet specifications.

800-624-8186; www.hotjetusa.com

#### GapVax HV33

Designed to safely transport water and debris in urban areas, the GapVax HV33 is shorter, smaller and more compact than its predecessor. It is 30 feet long overall on a medium-duty chassis and includes a 600-



gallon water tank, 6-cubic-yard debris body, 6- or 8-inch top-mounted telescoping boom with a 14- to 17.5-foot reach, 4,000 cfm power and an inverted, full-opening tailgate.

888-442-7829; www.gapvax.com

#### **RAMVAC** by Sewer Equipment HX-12

The HX-12 hydroexcavator from RAMVAC by Sewer Equipment has a 12-yard debris tank and a heated, secured equipment locker that contains the entire water system, including water tanks, for cold-weather application and tool secu-



rity. This machine touts a directional discharge system with the ability to offload debris back into the excavation site when done, without the mess of dumping the tank. This system also allows operators to blow any obstructions out of the dig hose and get back to work. It includes a long-range wireless remote, NEMA 4 electrical system, an 800,000 Btu water heater and a threestage cyclonic filtration system. The standard 4,400 cfm blower will match the performance of larger blower machines while delivering fuel economy with the ability to go up to 5,400 cfm. The series offers debris capacities from 3 to 15 cubic yards while maintaining a short overall footprint.

877-735-4640; www.ram-vac.com

#### **Rival Hydrovac T7 Tandem and T10**

The T7 Tandem from Rival Hydrovac was designed primarily to be a unit that could be loaded with debris and drive within legislated road limits with most types of debris on board. The unit comes standard with a scale that reads real-time weights both in the cab and on the



wireless remote to confirm weights prior to travel. The T10 is built with the same features and operating system, but with larger capacities and components. It is popular with clients who do both utility and industrial work. It is available in three chassis layouts to meet weight restrictions in a given area. An air compressor option allows for excavating with air when required, while a truck-mounted coring system allows for removal of hard surfaces prior to non-destructive excavating.

403-550-7997; www.rivalhydrovac.com

#### Soil Surgeon hydroexcavating tool

The Soil Surgeon hydroexcavating tool fits any sewer combination truck equipped with a telescoping 6- or 8-inch boom. The tool has a 1-inch water connection. The operator controls water pressure and power through truck controls. It has a 6-foot Tuff-Tube with handles to guide the unit down for potholing or side to side for trenching. Six jets boring inward cut the soil, while six boring outward bring the tube down.



949-363-1401; www.soilsurgeoninc.com

#### SmartVac Hydrovacs

SmartVac Hydrovacs are modular builds with patented tank designs and innovative features to dig effectively and efficiently. They are built specifically for the municipal market. The lightweight, compact trucks maneuver in tight



alleyways, are non-intrusive in residential areas and are fully automated for solo operation. The single and tandem axle offers the largest legal debris payload and is more powerful while still being light and fast. Built to meet the most demanding safe-digging conditions, it is an answer for the urban ecoconscious consumer.

844-786-9966; www.smartvac.ca

#### **Super Products Mud Dog 700**

Mud Dog 700 vacuum excavators from Super Products are designed for operator convenience and consistent performance to meet the challenges of applications from compact, urban projects to large-scale excavation. Units come standard as hydroexcavators with an optional air excavation package. They maximize legal payload, allowing



operators to carry and accomplish more while still excavating safely in small work areas. The compact, versatile vacuum excavator features a 7-yard debris body and 600-gallon water tank. The unit comes standard as a dump body with an electric vibrator offering a 50-degree dump angle with the capability of dumping into a 48-inch container. Additionally, it is equipped with a rearmounted, extendable, 8-inch-diameter boom that reaches 18 feet, has 270-degree rotation and pivots 10 degrees downward, which minimizes job site restoration and eliminates traffic congestion near roads.

800-837-9711; www.superproducts.com

## Tornado Global Hydrovacs F4 ECO-LITE

The F4 ECO-LITE from Tornado Global Hydrovacs has a 12-cubic-yard mud tank and holds 1,550 gallons of freshwater. The unit is more than 7,000 pounds lighter than the company's older models and offers more than double the



payload. The boom has a 342-degree rotation and 26-foot reach. The smaller F3 ECO-LITE is a 10-cubic-yard, 1,250-gallon tandem-axle unit that more than doubles older payload capacities. It features an 8-inch boom and 3,800 cfm blower.

877-340-8141; www.tornadotrucks.com

#### Transway Systems Terra-Vex HV38

The Transway Systems Terra-Vex HV38 has a 12-yard debris tank with onboard scales for efficient hauling and offloading, and a 26-foot-by-8-inch telescoping boom. It has



a one-touch-operated hydraulic half-door with a 3,800 cfm at 27 inches Hg hydraulically driven blower. Water pressure is achieved with a hydraulically driven triplex pump, delivering 10 gpm at 3,600 psi from a 1,000-gallon HDPE

baffled water tank. The water is heated with a 420,000 Btu diesel-fired burner for cold-weather operation.

800-263-4508; www.transwaysystems.com

#### TRUVAC FLXX

The TRUVAC FLXX is a vacuum excavator built to perform for utilities and contractors installing, replacing, and repairing underground infrastructure, utilizing both air and hydroexcavation options for all conditions. This safe digging machine offers more power and



maneuverability ideal in tight urban settings where street excavation jobs can include supporting, repairing, and installing a city's water, sewer, power and telecommunications infrastructure. Designed to maximize productivity on the job, it boasts the highest legal payload capacity in a mid-size truck with a 10 cubic yard debris body. In addition, it offers Park-n-Dig, an always-connected water source; safe and precise digging with the DigRight one-touch flow control technology; a water heater to dig in all types of weather/material conditions; a 22-foot boom reach with 340-degree rotation; and a DigFast option to maintain peak vacuuming performance and a clear airstream in the vacuum tube.

800-627-3171; www.truvac.com

#### **Vac-Con X-Cavator**

The X-Cavator hydrovac from Vac-Con includes a cold-weather enclosure for the water systems and control panel as well as an interior area for opera-

tor seating and workspace. Unit filtration is based on the Titan combination machine, with a single-cyclone design and final cartridge-style filter. The redesigned boom is lightweight and flexible,



rotating 310 degrees around the unit and moving plus 45 degrees and minus 22 degrees vertically. The durable rubber hose material can withstand harsh environments, according to the maker, and has a reach of 26 feet.

904-284-4200; www.vac-con.com

#### **Vacall AllExcavate**

High-pressure water and air jetting and standard intelligent controls, plus easy startup and operation, set Vacall AllExcavate machines apart. Water pumps generate 24.5 to 120 gpm



and pressures to 3,000 psi with optional air excavation at 185 cfm and dual psi of 110 and 150. The water system, wand, control panel, tools and worker apparel are protected in a heated compartment. Standard AllSmartFlow CAN bus intelligent control systems have a programmable LCD display that monitors engine, water and airflow and vacuum performance, allowing for precise boom and reel adjustments. Aluminum water tanks carry 1,000 to 1,300 gallons. Galvanized debris tanks have a supreme finish. Units use one engine to power the chassis and excavation functions, reducing serviced and operation costs. **800-382-8302: www.yacgll.com** 

## Vactor 2100i water recycling system

The Vactor 2100i water recycling system saves thousands of gallons of freshwater in every shift. By eliminating the need to refill a water tank, users can drive up productivity, saving time, effort



and expense. It effectively reuses water already in the sewer, eliminating the need for freshwater. It is simple to operate and self-cleaning with no moving parts in the body or tanks. Its five-step water filtration process combines settling, centrifugal separation and absolute filtration to 100 microns. It has stainless steel construction for years of reliable service.

815-672-3171; www.vactor.com

(continued)

#### Vermeer VXT300

Vermeer's VXT300 truck vac is outfitted with an 8-cubic-yard spoil tank, 6-inch dig tube and the ability to carry up to 800 gallons of water so crews can maximize productivity on the job. It is one of the lightest truck vacs in its class and designed with a low overall height of 11.5 feet to efficiently transport spoils from the job site to the dumpsite. The vac truck is built on a Kenworth T370 truck chassis with a 350



hp diesel engine and a 6-speed automatic 3,000 RDS Allison transmission. The truck's PTO drive powers its Roots 624 vacuum blower with a maximum flow of 3,500 cfm and maximum suction of 18 in Hg. With a water pump capable of producing 10 gpm at 3,000 psi, the VXT300 delivers productivity on large jobs as well as when digging at deeper depths. In addition, this truck vac's PTO drive system allows the vac to keep running while repositioning the truck between holes, rather than requiring full machine shutdown, for optimal efficiency.

800-837-6337; www.vermeer.com

### Inspection Equipment

#### **CUES CCTV** inspection vehicles

CUES offers custom truck-, van-, ATV- or trailermounted systems for TV inspection, condition assessment and rehabilitation needs. Made to withstand the most severe conditions and ergonomically designed for comfort and efficiency, vehicle-mounted systems can include TV inspection equipment for sanitary and stormwater lines, laser and sonar pipe



profiling systems, mainline joint and lateral sealing, and lateral reinstatement cutters for the relining industry. Equipment can be ergonomically mounted to inspect 6- through 200-inch mainlines and 3- through 8-inch lateral services. The truck interior can be customized, with cabinets, equipment and mounting configuration, to fit unique requirements. Truck- and trailer-mounted grout rehabilitation systems are available for mainline, manhole and lateral joint sealing and can be equipped with the latest CCTV equipment and decision support software for television inspection with documented condition assessment

800-327-7791; www.cuesinc.com

#### **Envirosight ROVVER X**

The ROVVER X from Envirosight lets an operator control inspections, view and record digital video, identify sources of I&I, log observations, generate reports and link directly to asset management software. All these capabilities are packed into a simple three-piece layout, with no CCU or other



components to clutter the workspace. Twelve wheel options — plus camera lift, carriage and illumination accessories — mean it transforms in seconds to inspect lines from 4 to 96 inches. It can identify illicit connections, roots, cracks and corrosion with 145-degree tilt, 12X digital zoom and add-on sidescanning, laser profiling and lateral launch. Its six-wheel drive with proportional steering navigates past obstacles, and overlapping wheels climb offsets with ease. Powerful motors and a geared drivetrain maximize travel range. It is built on an expandable digital backbone, and future capabilities are limitless, as its firmware updates automatically to the latest features.

866-838-3763; www.envirosight.com

#### **Subsite Electronics Private Eye II**

The Private Eye II inspection system from Subsite Electronics is a suitable solution for easements, offroad manholes or any hard-to-get-to location. It is also well suited for smaller municipalities or contractors desiring the power and capabilities of a full mainline inspection system in an affordable, all-inclusive mobile package. It is compatible with all the company's mainline cameras and tractors. When combined with the Compact Portable Reel loaded with single-conductor cable, it can

inspect 4- to 200-inch-diameter pipelines up to 1,000 feet in length.

800-767-1974; www.subsite.com

### Pipe Bursting

#### **Pow-R Mole Trenchless Solutions PD-33M**

The PD-33M pipe bursting machine from Pow-R Mole Trenchless Solutions is designed to replace existing underground pipes 2 to 6 inches in diameter. Its nonslip, cylinderactivated jaws prevent cable damage while providing 60,000 pounds of pulling force. It offers a cost-effective alternative to opencut excavation, reducing customer disruption and increasing company profits. The process replaces the exist-



ing pipe with a fused HDPE pipe, which eliminates all joints, and allows the operator to pull through bends such as 45-degree fittings. This system is modular and can be easily disassembled and reassembled for manhole and basement applications. With a compact design and very small footprint of only 20 by 20 inches, this unit can be used in tight locations.

800-344-6653; www.powrmole.com

#### **RODDIE R8**

The R8 pipe bursting system from RODDIE is easy to use, lightweight, can be set up vertically or horizontally, and can also be adjusted to use three different size cables. This unit can replace 1-, 2-, 3-, 4-, 6- and 8-inch pipes with ease and speed. Inexpensive cable grabbing inserts last 70 to 120 jobs, which reduces costs. High-quality tool steels on articulating bursting heads promote rare resistance for long lasting service. The pulling rate is 8 feet per minute and is



hydraulically powered from your tractor, providing a pulling force of 30 tons. The wireless remote system is reliable and has a signal strength that moves through any cellar wall. Maintaining the system is simple, as the user only needs to rinse off and re-grease six Zerk fittings.

888-406-3821; www.roddieunderground.com

### Pipe Fusion

#### **McElroy TracStar iSeries**

McElroy's TracStar iSeries fusion machines have improved mechanical, hydraulic, electrical and control systems. They are powered by the FusionGuide Control System that offers three levels of control, from



operator-controlled to completely automatic, machine-controlled operations. The DataLogger 7 is completely integrated with the iSeries, ensuring that each fusion joint is recorded and complies with the fusion standard. The TracStar 630i, 900i and 1200i cover three size ranges from 8-inch iron pipe size to 48-inch outside diameter. All are equipped with a new and quieter Perkins (Caterpillar) engine that meets U.S. Tier 4 environmental regulations while providing greater torque. The system pressure was raised to more than 3,000

psi for more powerful ground drive, pipe lifts and other functions that use higher levels of pressure.

918-836-8611; www.mcelroy.com

## Pipeline Surveying and Mapping

#### **Vivax-Metrotech VMMap Utility Mapping App**

The VMMap Utility Mapping App from Vivax-Metrotech records data from the field, which is instantly available online via the VMMap Cloud web portal, or can be shared using the email function in the app. Location data is obtained from the mobile



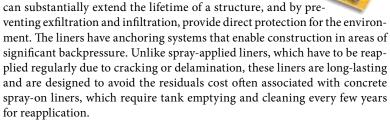
phone, or an external GPS device of your choice. Depth readings, GPS coordinates, the distance between locates and more are captured as data logs and can be saved as .xls, .txt, .shp and .kml extension files. The image capture feature allows the user to attach a JPEG format image to the surveys. This is useful to add points of interest or a snapshot of the completed survey. The app generates maps in real time, giving confidence to the field technician that the data being collected is accurate.

800-446-3392; www.vxmt.com

### Pipeline Rehabilitation/Lining

#### **AGRU America Sure-Grip**

Sure-Grip liners from AGRU America are made of HDPE, HDPE-el, PP, PVDF or ECTFE, and serve as a long-term alternative to spray-applied concrete protection products. The liners prevent concrete corrosion and degradation, can substantially extend the lifetime of a structure and by



843-546-0600; www.agruamerica.com

#### **Applied Felts AquaCure**

The AquaCure inversion tube from Applied Felts is a multi-layer felt liner with a choice of impermeable PU or PP coating that conforms to ASTM 1216. Available in up to 130-inch diameters for pipes with 1.5 to 100 mm wall thickness, this liner is used with inversion installations and



is available in any length. Seams can be stitched or flame-bonded for liners in the 6- to 130-inch-diameter range. They are constructed specifically for municipal sewer applications such as force mains, and can also be used for industrial purposes including fire water lines and more. Fiberglass reinforcement provides static, self-supporting properties. They can be engineered to have the pressure resistance of a standalone AWWA Class IV pipe. Maximum pressure will depend on size and design criteria, but typically pressures exceeding 150 psi can be accommodated.

276-656-1904; www.appliedfelts.com

#### HammerHead Trenchless Bluelight LED CIPP Lining System

The Bluelight LED CIPP Lining System from HammerHead Trenchless is an advanced light-curing system for the rehabilitation of laterals and small drain pipes. The technology empowers CIPP installers by alleviating the time pressures of other lining systems. The specially formulated resin only cures under light in the blue wavelength (444-



457 nm) giving installers virtually unlimited working time between liner wetout and curing. Once the liner is in place, the automated curing system pulls the LED light head through the liner, curing the resin almost instantly — as fast as 5.4 feet per minute. Instead of waiting hours for the liner to cure, a 50-foot sewer line could be fully cured in under 10 minutes. The system has a touchscreen interface and three light head options to cure liners 3 to 10 inches in diameter.

800-331-6653; www.hammerheadtrenchless.com

#### Pipeline Renewal Technologies Quick-Lock

For standalone point repair, or for pre-lining under high infiltration, the Quick-Lock rehab sleeve from Pipeline Renewal Technologies offers a rapid, easy-to-install way to repair failing pipe. It restores the host pipe's



strength with heavy-gauge 316L stainless steel, and seals out infiltration with a single-piece vulcanized EPDM rubber gasket. Suitable for sewer, water and industrial applications, a sleeve installs in minutes with minimal equipment and overhead. It is positioned inside the host pipe on a wheeled flow-through packer pushed by any standard CCTV crawler. Once in position, the packer expands the sleeve against the pipe wall to structurally reinforce it, and to stop infiltration. They address a variety of common pipe problems, including infiltration, longitudinal and circumferential cracks, root intrusion, holes, leaks, offset joints and abandoned laterals. They are available in diameters ranging 6 to 28 inches, and in lengths of 16 and 20 inches. Multiple sleeves can be interleaved to perform longer repairs.

Waterline Penewal Technologie

866-936-8476; www.pipelinert.com

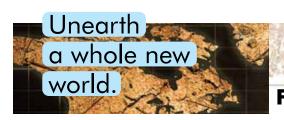
## Waterline Renewal Technologies LightRay LRI System

The LightRay LRI System from Waterline Renewal Technologies allows complete operator control and closely resembles traditional ambient-cure inversion methods. It can accomplish throughput up to 6.3 feet per minute of casting



with the light train, which incorporates cold LED lights that require no heat to cast the liner. The light train comes in a standard casting length of 50 feet, operates on a low-voltage DC platform and is internally protected to accommodate bends in pipes up to 90 degrees. Liners arrive ready to install without any need for refrigeration, which dramatically reduces the variability from mixing and preparing liners and eliminates the requirement for extra equipment in the field. The system uses non-thermal UV casting resin that is temperature-stable and only activated by UV light coupled with high-strength flexible fiberglass coated liners.

866-336-2568; www.lightrayinversion.com ▼





# Products



# 100 XTR:



#### 1. Cat Pumps Hydroexcavating Pump

Over 50 years' high-pressure pump manufacturing experience has earned Cat Pumps a reputation for producing the highest-quality, longest-lasting pumps in every marketplace it serves. Engineers at Cat Pumps designed Models 2560 (16 gpm at 3,000 psi) and 2565 (20 gpm at 2,500 psi)to meet the hydroexcavating market needs. Constructed for continuous-duty applications, the 2560 and 2565 pumps are dependable, high-quality products backed by world-class customer service, training and support. BH versions have a machined-bearing cover to mate with Cat Pump's 76SAEC.25FR hydraulic bell housing, allowing the 2560BH and 2565BH to be directly driven by an SAE C hydraulic motor. The compact direct drive allows for a space-saving footprint, and it's simple to install and maintain. 763-780-5440; www.catpumps.com

#### 2. HammerHead Trenchless 100XTR radio remote system

The HydroBurst 100XTR by HammerHead Trenchless has a 100-ton capability rated for up to 16 inches in diameter, yet it is compact enough for use on pipe down to 4 inches. It comes with an easy-to-learn, easy-to-use radio remote control, freeing operators from the pit to position them-

selves for the best view of a bursting operation. Lightweight, heat-treated alloy rods feature an API-style joint that resists buckling under the greater thrust loads required by longer burst runs, sweeping bends, and encrusted and collapsed lines. Operators can swap power for speed by switching to its 50-ton mode, working up to twice as fast depending on the job's requirements. Hydraulic leveling jacks allow for making adjustments on the fly as needed, keeping the machine on-grade without interrupting bursting operations. 800-331-6653; www.hammerheadtrenchless.com

#### 3. GPS Trackit GL500MG theft-deterring trailer management unit

GPS Trackit's GL500MG universal trailer management solution protects unpowered assets including construction equipment, freight trailers, flatbed trailers, freight containers, generators, tool storage boxes and recreational equipment. Features of the unit include: a 5-year lithium battery; durable and waterproof shell; a user update button that immediately shares GPS coordinates; geofences that provide alerts when asset leaves pre-set area; flexible mounting options; wake up on motion; and a tamper-detecting magnet. 866-320-5810; www.gpstrackit.com

## This Issue's Feature:

# CASE makes several upgrades to popular wheel loader line

**BY CRAIG MANDLI** 

G Series wheel loaders from CASE Construction have long been go-to heavy equipment. But just because its popular in the industry doesn't mean a product cannot be enhanced. CASE has done just that, making several improvements that not only improve performance and productivity, but also increase uptime, and empower the operator with greater control and understanding of the machine and its work.

"Wheel loaders — especially those in production and heavy working environments — achieve significant improvements in performance and profitability when you shorten cycle times, simplify operation and increase uptime," says Andrew Dargatz, product manager, CASE. "Each of these enhancements drive those incremental improvements that lead to big gains in productivity and efficiency."

Enhancements to the CASE G Series wheel loader lineup include a touchscreen display that delivers an intuitive user experience and puts all core operational controls at the operator's finger-

tips, configurable buttons built into the armrest that allow the

operator to program certain settings/tasks and perform their work faster and more efficiently throughout the day, adjustable electro-hydraulic controls that further dial in machine performance to each task, a Smart Power mode that improves communication between the engine and transmission based on workload to further drive fuel efficiency and reduced tire wear, electro-hydraulic parallel lift functionality (Z-bar and XR models) that improves material retention and loading operations, a fully integrated OEM payload system that helps improve load accuracy and provides detailed reporting for billing, tracking and operational performance, enhanced telematics performance and reporting, and remote diagnostics for increased uptime, and a tire pressure monitoring system that optimizes tire life and fuel consumption.

As with any truck or car, tire health and performance have significant effects on overall perfor-



mance, tire and component life and fuel efficiency
— especially when driving on underinflated tires.
The tire pressure monitoring system features individual sensors that mount to the valve stem of each tire along with a receiver module that communicates the pressure for each tire onto the display and alerts the operator when the tire pressure is outside of a set range.

"That detail helps illustrate the extensive pragmatic thought that's behind these new enhancements," says Dargatz. "All of these new features have been driven by direct feedback from customers and dealers — from the tires to the bucket to the engine and to the controls — to provide comprehensive connectivity and systems improvement that will increase productivity and uptime while decreasing all of the operational elements that drag on performance and profitability."

866-542-2736; www.casece.com



# Got a RIG that you really DIG?

Show it off to Dig Different readers!

o you have a really cool-looking rig, directional drill, excavator or work truck with all the bells and whistles? We'd like to feature it!

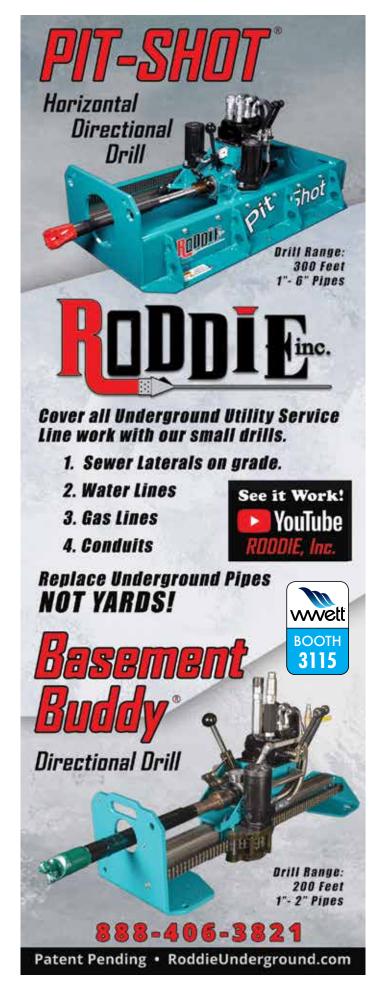
Your **Dig My Rig** submission must include a photo of your rig lettered with your company name, along with your name, company name, mailing address and phone number. Include information such as the manufacturer of your rig, cab/chassis and pump/blower; tank capacity; and water pump mfr./gpm/psi; and any other details you consider important. In particular, tell us what features of the truck help make your work life more efficient and more profitable.

#### Email your materials to editor@digdifferent.com

PLEASE LIMIT YOUR SUBMISSION TO ONE RIG ONLY

We look forward to bearing from you!







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## THE LATEST:

# News

# Super Products appoints new vice president of rental

Super Products has appointed Chris Gittens to take over as the new vice president of rentals after Randy Buening, the previous VP of rentals,



Chris Gittens

was promoted to president at the beginning of 2021. Gittens has an extensive background in equipment manufacturing and distribution. He comes to Super Products from Thermo King, where he was the director of dealer development. Prior to Thermo King, he held leadership positions at CLAAS of America and CNH Industrial where he gained experience in financial analysis, strategic planning, dealer development and commercial credit. Chris holds an MBA and MIA from Columbia University and earned his undergraduate degree from Washington University in St. Louis.

## WJTA announces officers, board of directors

Bill McClister, an industry consultant based in La Porte, Texas, has been elected the 2021-23 chairman of the board of the WaterJet Technology Association. Also elected for the 2021-23 term are President Jimmy Peck, general manager, MPW Industrial Services, Hebron, Ohio; Vice President Kerry Siggins, CEO, StoneAge, Durango, Colorado; Secretary James Ashmead, research investigator, DuPont Specialty Products, Wilmington, Delaware; and Treasurer Drew Waltenbaugh, presi-

dent and CEO, NLB Corp., Wixom, Michigan.

Newly elected and re-elected board members are David Beckum, CEO, Augusta Industrial Services, Augusta, Georgia; Jerry Carter, vice president of sales and chief commercial officer, SPIR STAR, Houston, Texas; Bradley Coble, hydroblasting specialist, Covestro, Baytown, Texas; Dee Green, vice president of operations, USA DeBusk, Houston; Bill Krupowicz, vice president and general manager, Jetstream of Houston, Houston; and Bill Shaw, vice president of employee development, Evergreen North America Industrial Services, La Porte, Texas. Luis Garcia, president - Gulf Coast region, Northern Safety and Industrial, also in La Porte, continues to serve a remaining term on the board of directors.

#### Vermeer's launches new RigFitter HDD tooling configurator

Vermeer's RigFitter is a powerful and easy-to-use digital tool on www.borestore.com that simplifies the process of selecting HDD tooling and building a drill string for a pilot bore or pullback. Users indicate which Vermeer HDD model they have then RigFitter provides stepby-step recommendations for compatible tooling like drill rod, sub savers, adapters, transmitter housings and bits. Once the drill string is complete, users can check out via www.borestore.com or print out the completed drill string to provide to a local Vermeer dealer.

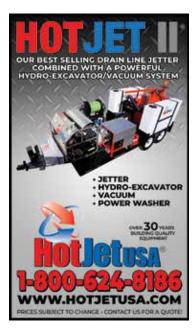






#### MARKETPLACE ADVERTISING











#### **CALENDAR**

#### Feb. 2-10

Ohio Contractors Association Annual Convention, Ritz-Carlton, Aruba. Visit www.ohiocontractors.org

Horizontal Directional Drilling Academy Undergrounding Utility Infrastructure, Arizona State University SkySong Center, Scottsdale, Arizona. Visit www.hddacademy.com

#### Feb. 4

National Utility Contractors Association (NUCA) of Iowa Annual Banquet and Leadership Seminar, Prairie Meadows Hotel and Casino, Altoona, Iowa. Visit www.nucaofiowa.com

National Utility Contractors Association (NUCA) of Nebraska Annual Conference, Cornhusker Marriott, Lincoln, Nebraska. Visit www.nucanebraska.com/annual-conference

Water & Wastewater Equipment, Treatment & Transport (WWETT) Show, Indiana Convention Center, Indianapolis. Visit www.wwettshow.com

#### March 1-3

Global Excavation Safety Conference, Phoenix Convention Center, Phoenix. Visit globalexcavationsafetyconference.com

#### March 2-5

National Utility Contractors Association (NUCA) Annual Convention & Exhibit, Naples Hyatt Regency Hill Country Resort & Spa, San Antonio. Visit www.nuca.com/convention

#### March 24-26

Mid-America Trucking Show, Kentucky Expo Center, Louisville. Visit www.truckingshow.com

#### March 31- April 1

National Heavy Equipment Show, International Centre, Mississauga, Ontario. Visit www.nhes.ca

#### April 10-14

NASTT's No-Dig Show; Minneapolis Convention Center; Minneapolis. Visit www.nodigshow.com

World Tunnel Congress 2022, Bella Center, Copenhagen, Denmark. Visit wtc2022.dk

#### May 10-11

National Utility Contractors Association (NUCA) of Iowa Contractor Conference & Convention, Downtown Des Moines Marriott, Des Moines, Iowa. Visit www.nucaofiowa.com

Electric Utility Fleet Managers Conference (EUFMC), Williamsburg Lodge and Conference Center, Williamsburg, Virginia. Visit www.eufmc.com

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