

December

2010

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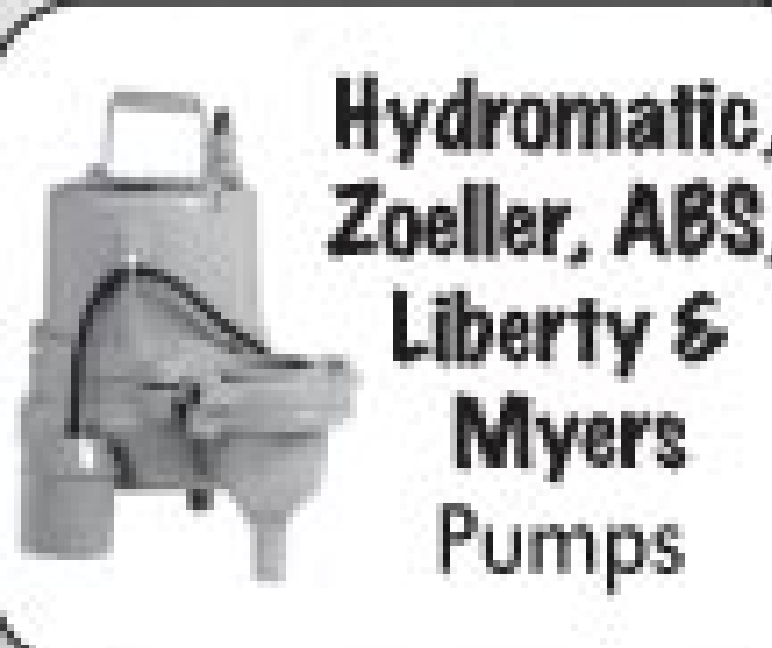
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Rugby vs. Football

Why don't more installers get into the O&M business? Perhaps more would if they understood that while the business is different, many basics are the same.

By Ted J. Rulseh, Editor

In my ad agency life I once worked for a loading dock leveler company. Their bread-and-butter products were platforms that created a bridge on which forklifts carried loads of goods from the dock to trucks at factories and warehouses.

It was equipment that essentially every customer needed — the only questions were: what size, what capacity, what brand? And the sales force knew exactly whom to sell to and how.

Then the company introduced a new product designed to enhance safety for forklift operators carrying heavy pallet loads onto trucks. The exact nature of the product isn't important here. What matters is that now salespeople were offering a product that customers didn't even know they needed.

The buying influences were different. The selling points were different. And often, purchases had to be approved by upper management, an audience salespeople hadn't dealt with before. Not surprisingly, the sales team struggled.

Then the company developed what it called the Rugby Program. The premise of it was simple: The process of selling this product is different, but in the end it's still selling. And they created a sports analogy: We all know how to play football. Let's learn to play rugby. And it worked.

Looking at O&M

Are installers looking at the onsite O&M business in a position similar to that of those loading dock leveler salespeople? Is O&M intimidating not mainly because it's difficult, but because it's different?

"O&M Matters," a series of articles now running in *Onsite Installer*, is designed to provide insights to the O&M sector and encourage practitioners to get involved. But before involvement must come interest and desire. While some installers have jumped in readily (as evidenced by cover stories in past issues), others seem reluctant. Perhaps they could benefit from thinking in terms of the football/rugby analogy.

For example: Both football and

rugby use a similar-shaped ball — the rugby ball is just a little bigger and plumper. Both installation and O&M involve onsite treatment systems. O&M just revolves around certain types of systems.

Football and rugby have the same basic objective: Getting the ball across a goal line. In football, a touchdown counts six points, and the rugby equivalent (a "try") counts four. Installation and O&M have the same aims: Protecting the envi-

ers one on one is not the same as dealing with, say, a handful of building contractors for the vast bulk of installation projects. O&M also requires different tools, different employees, different work schedules, different billing and so on. But different need not mean forbidding.

And even if the move over into O&M seems daunting, it's essential to consider the plus sides, chiefly the regular and reliable income stream and the superior

O&M certainly takes more people skills, or a different brand of them — as dealing with homeowners one on one is not the same as dealing with, say, a handful of building contractors for the vast bulk of an installation business.

ronment and keeping the owner's home and property clean and healthy. The routes to success are different.

There are 11 players on a football team and unlimited substitution. A rugby team has 15 players and substitution is restricted. Onsite installation and O&M mean dealing with different groups of people — the chief concern in O&M being homeowner relations.

Changing the mindset

All right, let's not work the analogy too hard — after all, it isn't perfect. The point is that installers have little to fear from venturing into O&M. Largely it's a matter of embracing a different way of doing business, and doing it with different people. But in the end, business is business.

O&M certainly takes more people skills, or a different brand of them — as dealing with homeown-

ers one on one is not the same as dealing with, say, a handful of building contractors for the vast bulk of an installation business.

ability to withstand down cycles in the economy — because even when people aren't building new houses, their existing systems need to be maintained.

So here's a word of encouragement to read our "O&M Matters" series, ably written by "The Septic Guy" Kit Rosefield. And it might not hurt, sometime before or after the current football season expires, to search the cable or satellite TV listings and tune into an occasional game of rugby.

■ ■ ■

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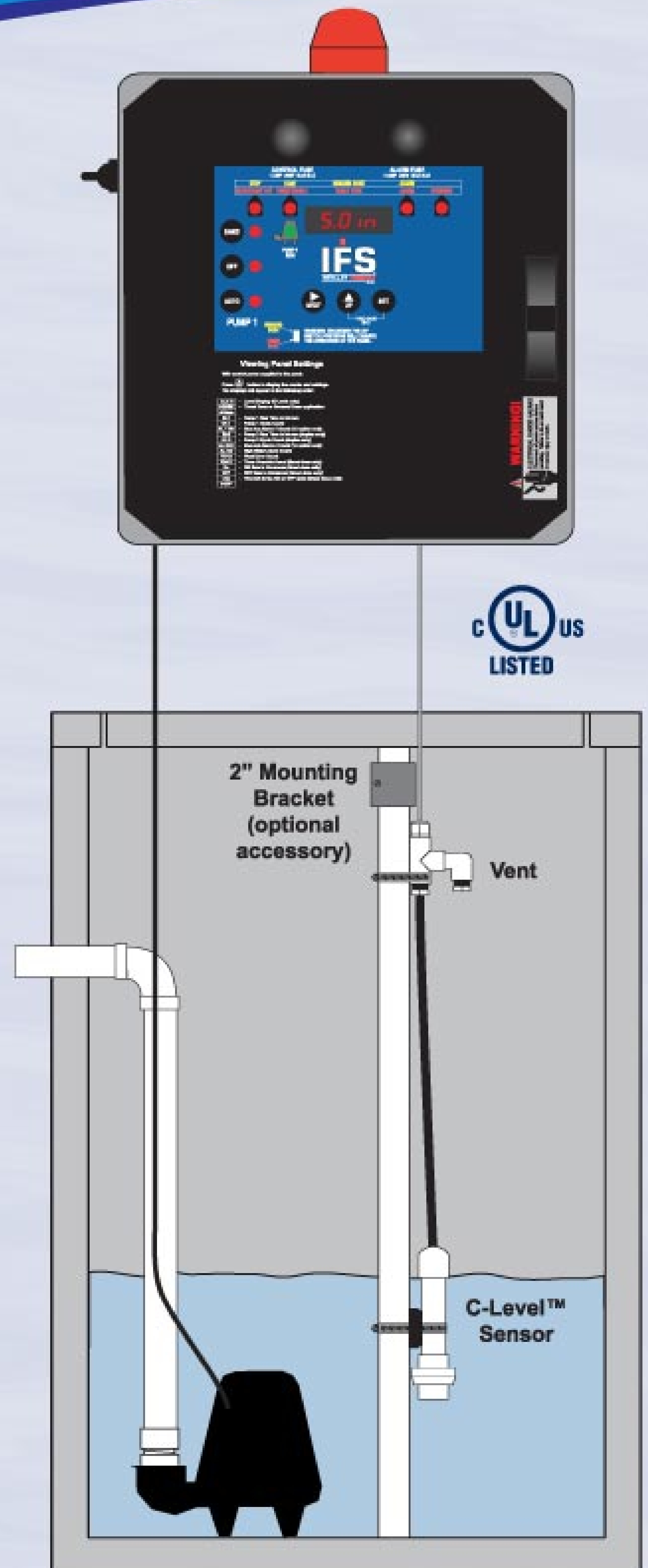
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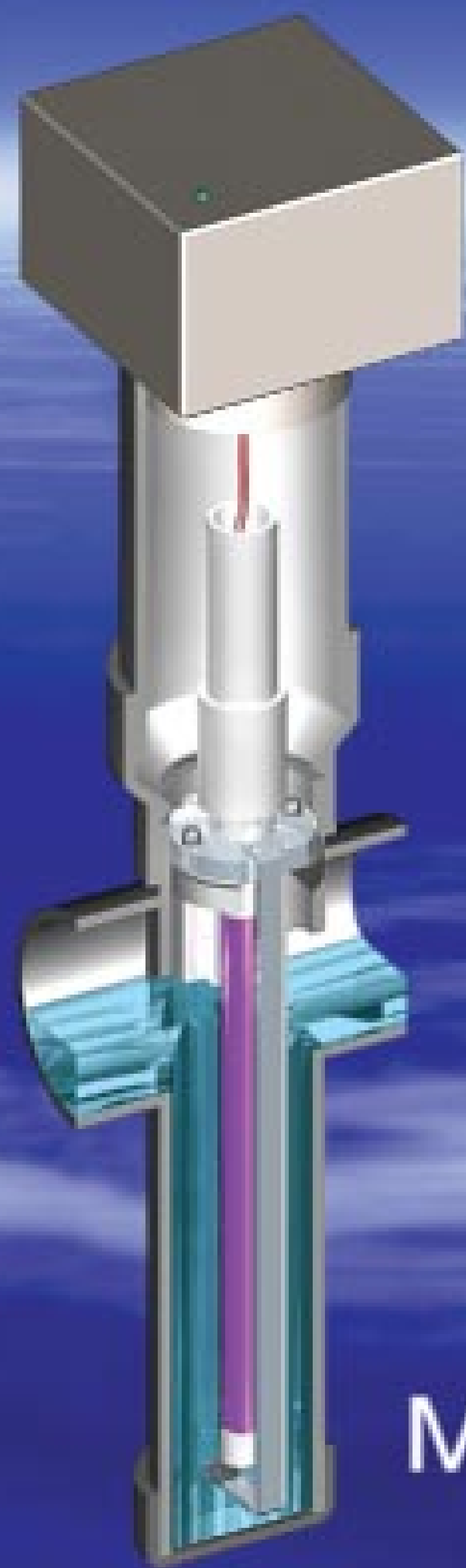
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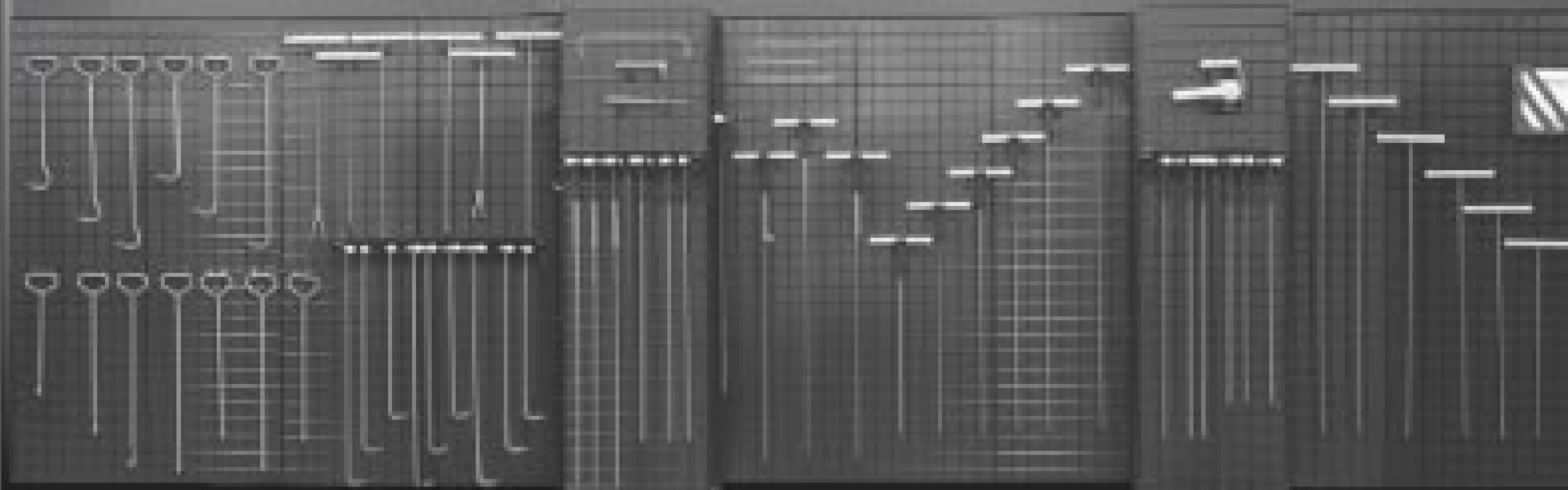


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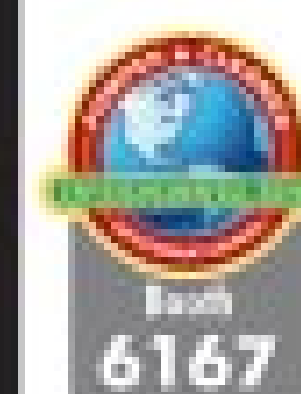
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Members of the team at D.J.'s Backhoe include, clockwise from left, owner Don Moats Sr., Don's wife Bertha, equipment operator Rodriguez Verela, Don Moats Jr., and equipment operator Jesus Verela. (Photography by Tony Bennett)

Old-School Values

Constant training, respect for employees and customers, and old-fashioned fairness and quality drive success for D.J.'s Backhoe

By Gil Longwell

D.J.'s Backhoe Inc., Kirtland, N.M.

OWNERS:

Don and Bertha Moats

YEARS IN BUSINESS: 19

MARKET AREA:

100-mile radius

ANNUAL REVENUE:

\$550,000

SPECIALTY:

Finding solutions for failing systems

EMPLOYEES: 9

AFFILIATIONS:

NAWT, NOWRA

WEB SITE:

www.djsbackhoe-septic.com



As a family business prepares for a change in ownership, the values that made it a success will remain.

"Dad built this business on old-school values," says Don Moats Jr., whose father started the company in 1991. "That will not change. He was always focused on delivering value first. He knew that quality service and fairness in his customer relations would bring financial success — more as a consequence than as a goal."

Serving a customer base in a 100-mile radius of Kirtland, N.M., D.J.'s Backhoe Inc. emerged when Don Moats Sr. needed a service provider to clean grit and debris from the drains in his carwash bays, and needed onsite systems installed for a mobile home park he was developing. About 200 miles north of Albuquerque, Kirtland is in the heart of a natural gas extraction and exploration area.

Today, the business mix includes

about 30 percent installations, 30 percent real estate inspections, 15 percent septic system pumping, 15 percent system repairs, and 10 percent portable restroom rental.

It just grew

After Don Sr. bought a vacuum truck for the carwash, a friend taught him how to pump septic tanks. Soon, Don Jr. was pumping tanks in the evenings after school and in summer. As work on the real estate project advanced, none of Don Sr.'s contractor buddies would help him learn the ropes of system installation.

"When the local regulator told me I needed a contractor's license to do my own installation, I studied for the exam and passed it on the first try," he recalls. It was 1991 when he really focused on installation and pumping.

"I liked it," he says. "Every day was different. Every day we were providing a service somebody wanted and needed. It just stuck to me."

From a one-man operation, the business has grown to a nine-person enterprise.

Don Sr.'s wife, Bertha, handles the books and is an as-needed relief person in the office. Don Jr.'s wife,

"When I went to the other job, I didn't understand what I'd walked away from. It took me fifteen years to figure out what dad had here."

— Don Moats Jr.

Jamie, administers the portable restroom side of the business, while Ella Charles handles secretarial duties.

In the field, brothers Jesus and Edmundo Verela are equipment operators. Shawn May and Ben Burge are cross-trained to service portable toilets and pump treatment tanks. Don Jr. and Don Sr. do it all. These days, Don Jr. focuses on crew and

Owner Don Moats Sr. takes digital photos of the removal of a collapsed septic tank for documentation.



Rodriguez Verela pumps a septic system. Company owner Don Moats Sr. got his start in the pumping side of the onsite industry.

job coordination, while Don Sr. is the primary customer contact person.

Busy through the downturn

The younger Moats at first didn't intend to move into his father's place. After high school, he went to work in the gas industry: He didn't want to listen to his dad or have him for a boss. But after about six years, his gas industry job was gone.

"When I went to the other job, I didn't understand what I'd walked away from," he says. "It took me 15 years to figure out what dad had here." He has now worked with his father for two years.

A gas exploration frenzy, and the resulting influx of people, now keeps D.J.'s Backhoe's trucks and personnel busy in an area where the overall unemployment is 10.7 percent. Because of a new state law that requires all onsite systems to be inspected when properties are sold, the Moats men are busy.

"This is not necessarily a sign of happy times for all, by any means," says Don Jr. "We have inspected the same system multiple times in a very short period because when one person's mortgage application fails, the next buyer's lender demands a current inspection." In a typical year, about 30 percent of their work is pre-sale inspections, but in the last year or so, that has jumped to nearly 60 percent.

"What powers our success is this company's reputation in the marketplace," says Don Jr. "My dad didn't just make a business. He made a name for the business that is rooted in our values and his fair dealings. These are, in large part, what set us apart from others in this marketplace."

Don Sr. adds, "Quality work comes from a thorough understanding of what we do, why we do it and how systems work in different site conditions. We have been to every training event we can find and get to." Three or four times a year, father and son take a seven-hour drive to Ruidoso for two-day seminars sponsored by the Lincoln County Advanced Treatment System (ATS) Summit Group.

Don Moats Jr. applies sealant to piping for an installation.



No Other Option

Three or four times a year, Don Moats Sr. and Don Moats Jr. drive seven hours to take part in two-day installer training events. They do it because there are no other training options nearby.

Four years ago, a group of onsite installers and the New Mexico Environment Department Liquid Waste Program office got together and began offering installer-focused training, under an entity called the Lincoln County Advanced Treatment System (ATS) Summit Group. "The initial gathering was voluntary, and participation remains voluntary," says Jack King, environmental supervisor with NMED.

Jace Ensor, owner of Mountain Top Inc., an onsite installation company, adds, "From our first meeting, we were doing what everybody said could not be done. We were a group of competitors sitting together talking about mutual problems and what we could do about them."

Ensor and King have seen changes in how every participating company conducts its business. From the most basic to the more complex tasks, change is apparent. "Seldom do we see dirty, oily shirts on installation workers," says King. "Installers are paying more attention to how their equipment looks, too."

Participants recognize that they need training for every aspect of the onsite installation industry, and the Summit Group provides it. "We were dirt guys," says Ensor. "We needed to mature and become more professional."

The next potential step in evolution is to create a New Mexico Onsite Wastewater Association. For now, the two men hope to enable good installers to become great onsite system professionals. Like Don Moats and son, they see that when it comes to the onsite industry, it's all about training. They see no other option.



Jesus Verela seals a wastewater treatment system from Bio-Microbics that the team installed at a residential location.

"If you don't understand the what and why, you can't possibly explain the job to your customer, and without that explanation, the customer cannot make an informed decision. Helping homeowners become informed buyers is part of our job."

— Don Moats Sr.

The dedication to learning also sets them apart. Don Sr. estimates that 90 percent of local installers have not taken training. "If you don't understand the what and why, you can't possibly explain the job to your customer," he says. "Without that explanation, the customer cannot make an informed decision. Helping homeowners become informed buyers is part of our job as well."

Leadership and pride

The business thrives on respect for employees and customers alike. Don Sr. observes, "If I am not willing to do a particular job, I will not ask a crew member to do it." And his son adds, "If dad and I are not convinced a particular technology will work, or we do not like the way it is manufactured, we will not install or service it."

Both believe in looking and acting professional. They treat their

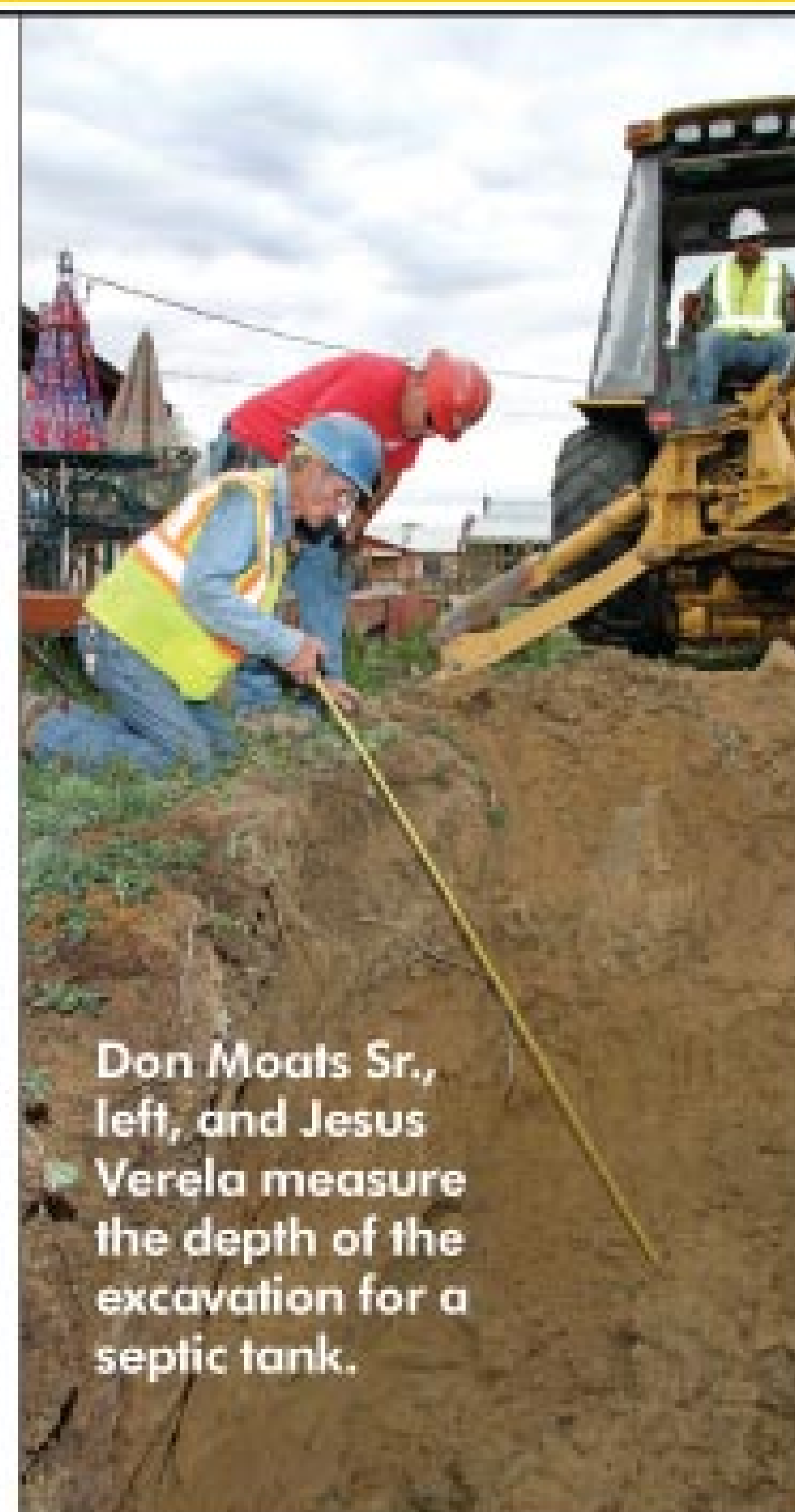
equipment as a reflection of their business and their attention to detail, and they know that cleanliness telegraphs to customers how they will treat a property.

"A clean truck says, 'We care about you and what we do,'" Don Sr. says. What customers can't see is the attention to the mechanical health of every piece of equipment.

When it comes to job materials, "Gravel aggregate is out," says Don Sr. The cost of the aggregate itself and the cost of transportation make the material unattractive. Many repair sites present significant obstacles to the delivery and stockpiling of material. Even new construction sites with significant slopes can make it difficult to move aggregate to an installation area.

O&M for the future

"We substitute EZflow aggregate (Infiltrator Systems)," says Don.



Don Moats Sr., left, and Jesus Verela measure the depth of the excavation for a septic tank.

Sr. "It's easy to carry and install, and if you can walk to the installation site, you can get the material to it." The men also like Infiltrator chambers.

Improving on a good thing, Don Sr. believes it is important to use two additional soil infiltration barriers in EZflow installations. After the product is placed, he covers it with a layer of permeable geotextile fabric, then with a layer of straw. The need to keep soil and media separate emerged from his observation of many failed systems that suffered from soil intrusion.

"I'm a plain and simple guy — I know what works," he says. Moats and son both like the Wisconsin mound design, whether served by gravity or pressure distribution.

Don Jr. sees operation and maintenance as the future of the onsite industry and of the family business. He continues to build that line of service. "If demand for O&M continues, we'll be adding a half-time employee in the near future," he says.

The company now provides O&M services on Jet, Bio-Microbics, Delta Environmental and Norweco advanced treatment systems. They see a disconnect with what the state now requires for O&M and the realities in the field.

While manufacturers and installers agree that advanced systems require lifelong O&M, New Mexico, like many other states, requires owners or installers of new systems

to guarantee only two years. "After that, what?" Don Jr. wonders.

Part of the overhead

On the installation side, the equipment pool includes a 2000 Cat 430D backhoe, a 14-foot dump trailer, three portable toilet trucks, a 2009 Dodge 3500 truck, and a 1997 2000G Ford equipped with a 2,000-gallon vacuum tank. The company has 250 rentable portable toilets.

A digital camera enables documentation of every step of every job. Photos are archived and are used as an education tool when talking to landowners. Owners of new systems receive a set of photos, an as-built drawing, the permit and system design, and an owner's manual.

Don Sr. and Don Jr. don't charge their time to individual jobs. "That means we are part of the overhead costs of doing business," says Don Sr. "For 99 percent of our jobs, one of us is on the job site at each key point. If we mess up, we go back and fix it. This is part of the value we bring to every job. It is part of our core values, and it is part of what sets us apart."

As the transition from father to son nears, Don Moats Sr. sees a bright future for his son. Don Jr. knows that integrity, value, education and even-handed dealings are the keys to his dad's success. They are the attributes that will continue through his generation of leadership, and that he will pass on to his children. ■

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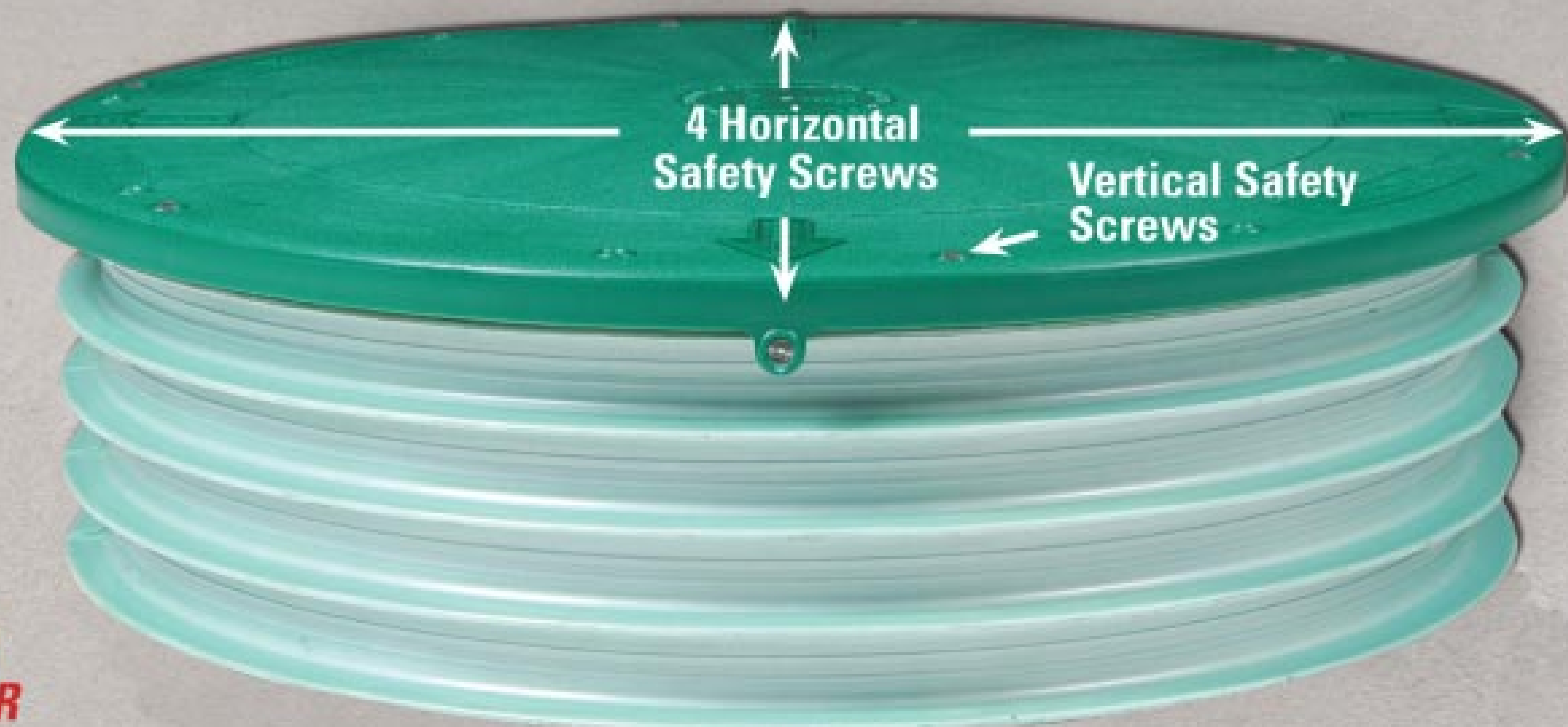
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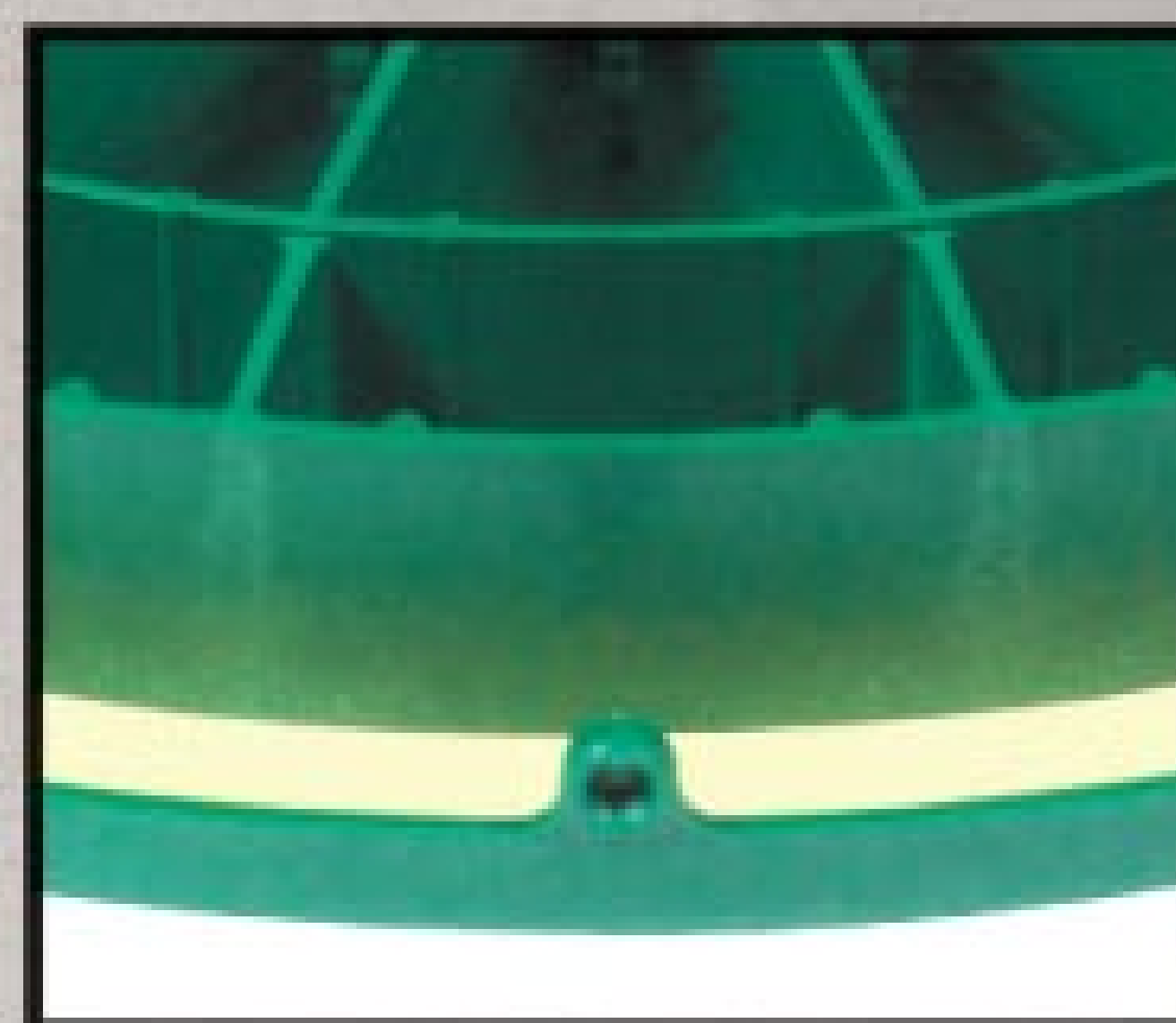
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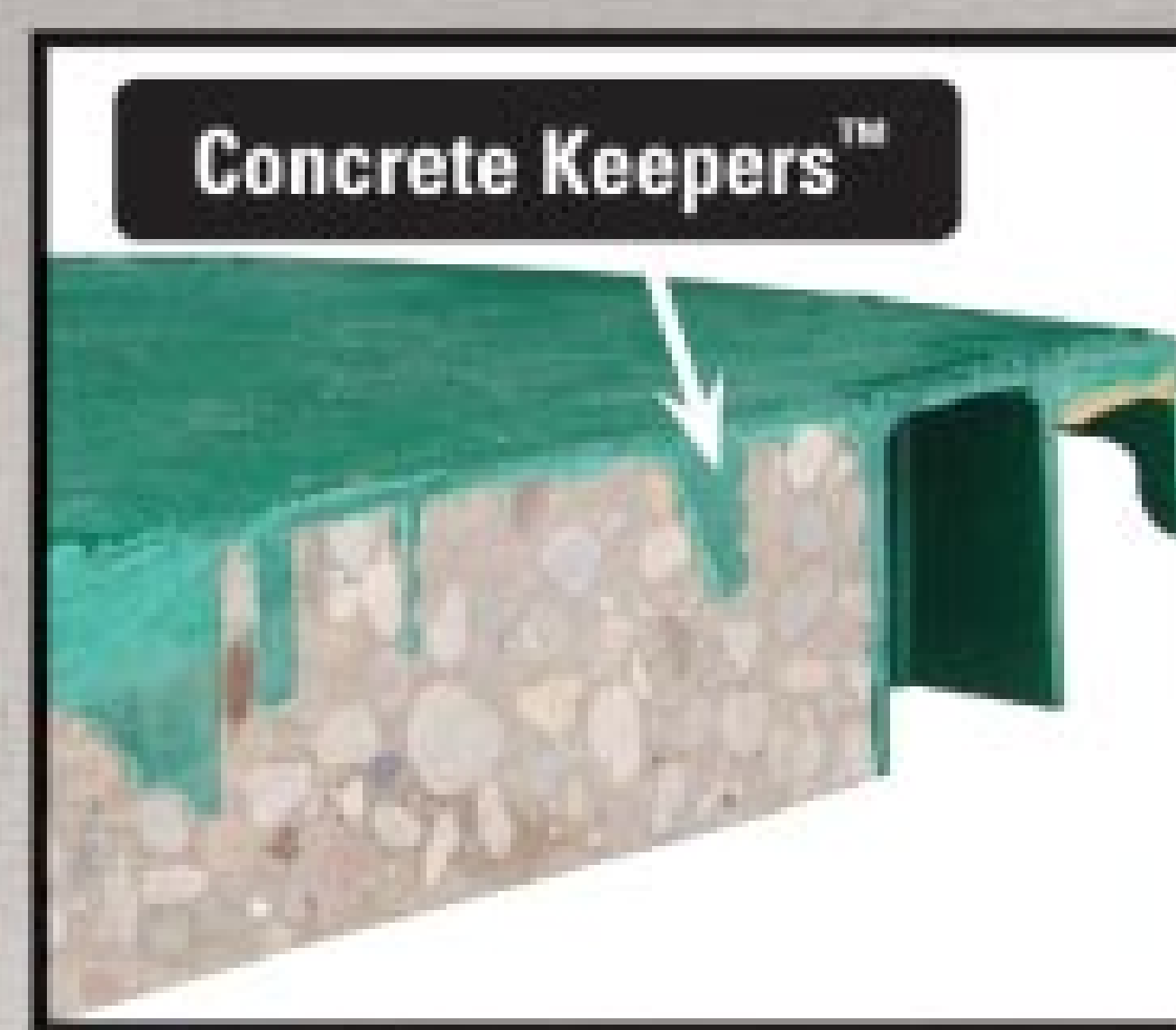
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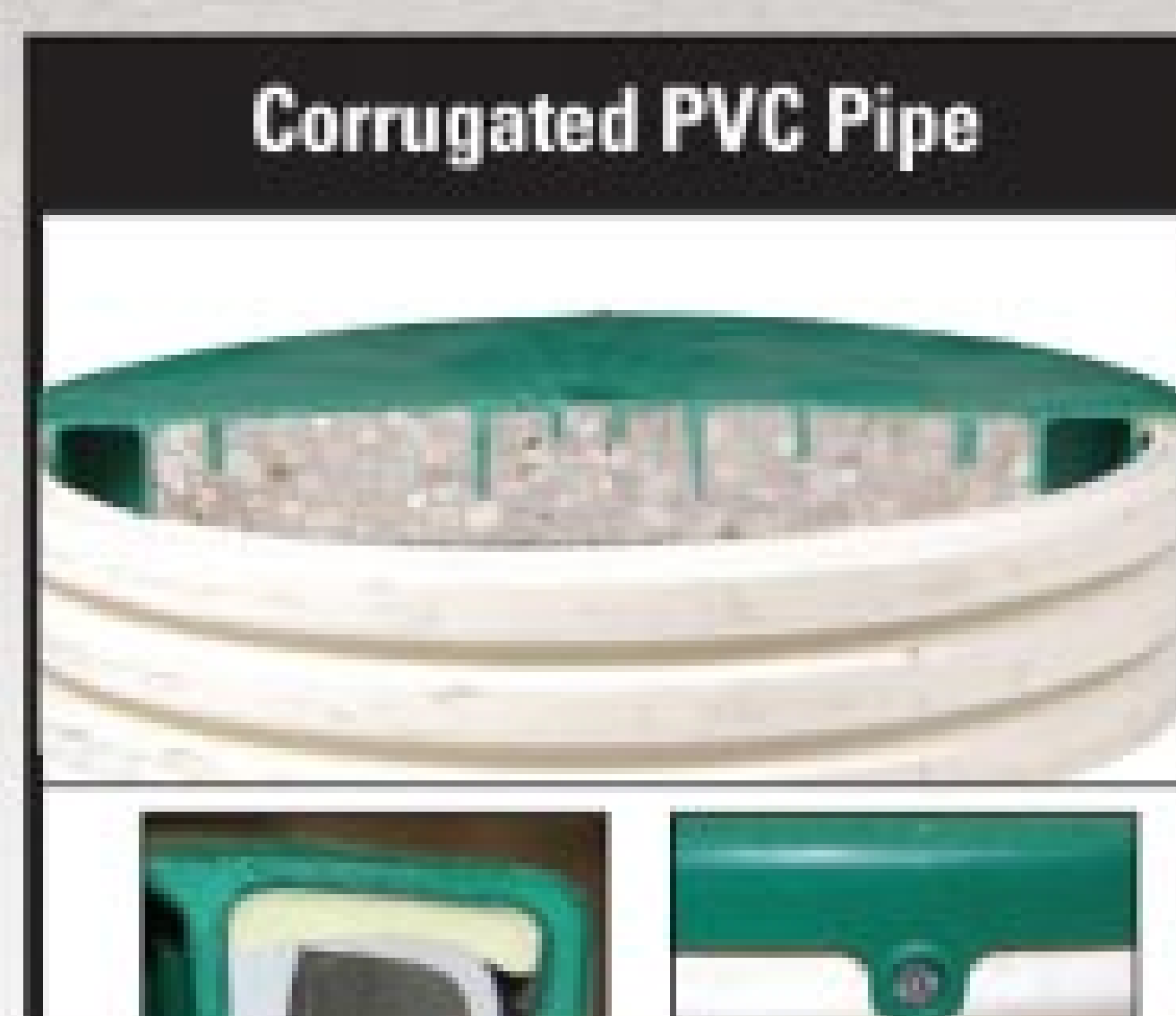
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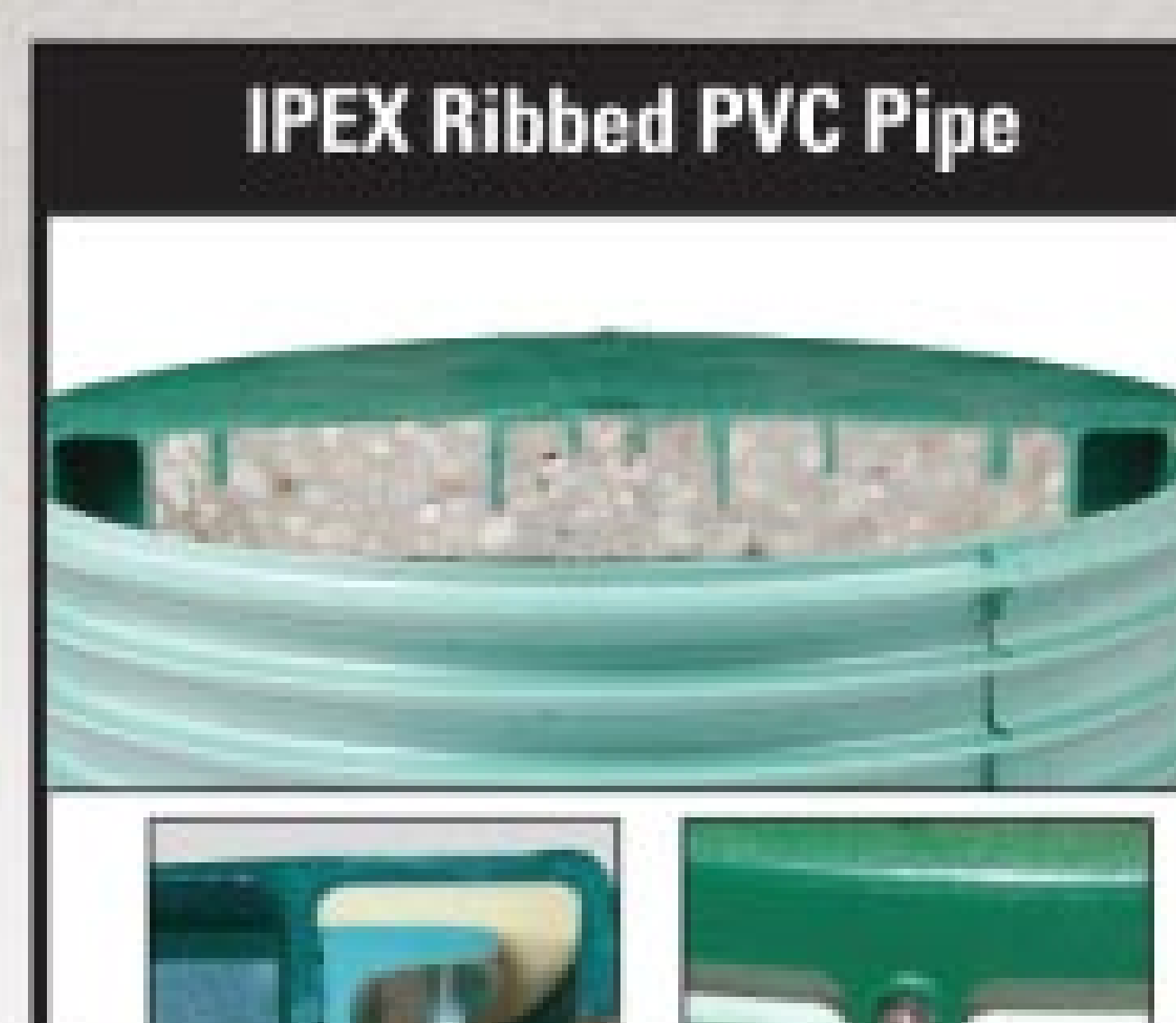
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Horizontal Safety Screws

Jim Anderson and Dave Gustafson are connected with the University of Minnesota onsite wastewater treatment education program. Dave is extension onsite sewage treatment educator. Jim is former director of the university's Water Resources Center and is now an emeritus professor, as well as education program coordinator for the National Association of Wastewater Transporters. Readers are welcome to submit questions or article suggestions to Jim and Dave. Write to ander045@umn.edu.

Install for Service

It is always a good practice to design an onsite system so that inspectors and maintenance professionals can easily access the components

By Jim Anderson, Ph.D., and Dave Gustafson, PE.

It has been awhile since we have touched on this topic, but during a recent series of inspection workshops we conducted, there were a number of comments about how installers have hurt the ability to inspect and maintain systems by the way they installed them.

So we thought now would be a good time to go over some basics in terms of making all parts of the onsite system accessible. The first thing to remember about access is that in general, the shallower the system, the easier access will be.

So here is our KISS principle at work again. Remember Keep It Shallow, S____, where you get to fill in the last blank! Shallower is better for all the treatment reasons we've talked about in the past, but here it means that an inspector or



An example of a quick disconnect to remove pumps.

maintenance person has less difficulty locating the system and performing maintenance if the components are near the surface.

Starting from the house, with the house sewer, a cleanout should be installed in the house sewer line

Sweep 90 fixtures at ends of pressure distribution laterals allow access for cleaning orifices as needed.

to the septic tank. This is generally placed near the house foundation on the outside so it can be accessed without having to go into the house.

There should be another cleanout near the stack, and generally inside, that is a part of the house plumbing. The outside cleanout should be made with a full branch Y-fitting and should extend two inches above grade for easy access. The cleanout should be of the same size pipe as the house sewer. For 4-inch pipe, additional cleanouts should be placed if the length of the run exceeds 100 feet.

For septic tank access, risers should be brought to the surface over each tank access port. This allows access to the tank for pumping and cleaning. These risers and covers can be made of concrete, polyethylene or polypropylene. Just remember that they must be watertight to prevent infiltration issues, as well as root intrusion.

With the advent of effluent screens at the outlet baffle to protect the soil treatment area, it is critical to provide access over the top of the screen so that it can be removed and cleaned. It is amazing to us how many tanks we see where the access is offset away from the screen, making it difficult if not impossible to reach.



Shallower is better for all the treatment reasons we've talked about in the past, but here it means that an inspector or maintenance person has less difficulty locating the system and performing maintenance if the components are near the surface.

In these situations, there are products on the market to extend the outlet pipe so the screen is accessible through the manhole. If you are installing, you can put this in at time of installation. If you are on a service call, this would be a good time to talk to the homeowner about providing this as an upgrade to the system that will save time and money in the future.

For safety purposes, since the manholes are brought to the surface, consider using one of the dual-cover products or ropes or

screens to prevent people or items from falling into the tank.

For pump stations, access to the surface should also be provided by way of risers. Here, another critical element is to bring a quick disconnect up into the riser so that the pump can be disconnected and brought to the surface for repair or replacement.

This also means the method to remove the pump (rope, chain, etc.) should be present at this location. One item often overlooked is to make sure at installation that the

block that the pump is set on to keep it off the bottom needs to be large enough so that the pump can be easily set back on the block when it is replaced.

Another good idea is to install the pump floats on a separate float tree. This way, the pump can be removed without affecting the floats



Risers provide easy access to tanks for maintenance.

— or if the floats need to be replaced, they can be removed without taking out the pump.

For gravity systems in the soil treatment area, we are seeing more inspection pipes brought to the surface out of the distribution and

drop boxes. This allows for easy inspection of the box to evaluate the level of water in the trenches, as well as the condition of the box itself.

If there is evidence of sediment or roots in the box, that means it is not watertight, and some work will be required to make it watertight. The boxes also offer the opportunity to use caps or levelers to rest parts of the system and to direct flow to parts of the system that have not been used as much.

At the very least the tops of the boxes should be near the surface so they can be opened and inspected periodically. Having access can help not only with management but with troubleshooting the system if there are problems.

We have always been proponents of having inspection ports at the end of the soil treatment trenches, or in the beds of pressure distribution systems. Here again, this offers an easy opportunity to evaluate the level of effluent in the trench or bed and see if the system is operating properly. The inspec-

tion pipe itself is regular PVC with holes below the rock (where rock is the media), and then solid pipe to the surface, preferably with a screw cap.

The inspection ports can be brought to the surface and cut off level with the surface to allow them to be mowed over. The inspection ports need to be secured so they will remain in place and cannot be pulled out of the system when accessed.

There are a variety of ways to do this. A 12- to 18-inch piece of rebar can be placed in the pipe, the pipe can be tied into the distribution pipe using a T, or a toilet flange can be installed at the bottom of the pipe under the rock. In chamber systems, the inspection ports are attached to the chamber in the designated location.

One last item: In pressure distribution systems, for low-pressure pipe applications such as mound systems, it is important to provide access to each of the distribution laterals. This is so they can be periodically jetted to remove solids and

slime buildup. This keeps the holes from becoming plugged over time and affecting the equal distribution of effluent.

The typical way to do this is to install sweep 90s at the ends of the laterals and to bring those to the surface or near surface in a protective box.

Well, there is a very brief run-down of the things installers can do to make life easier for service providers, while at the same time providing a high-quality, long-lasting system to the homeowner. ■

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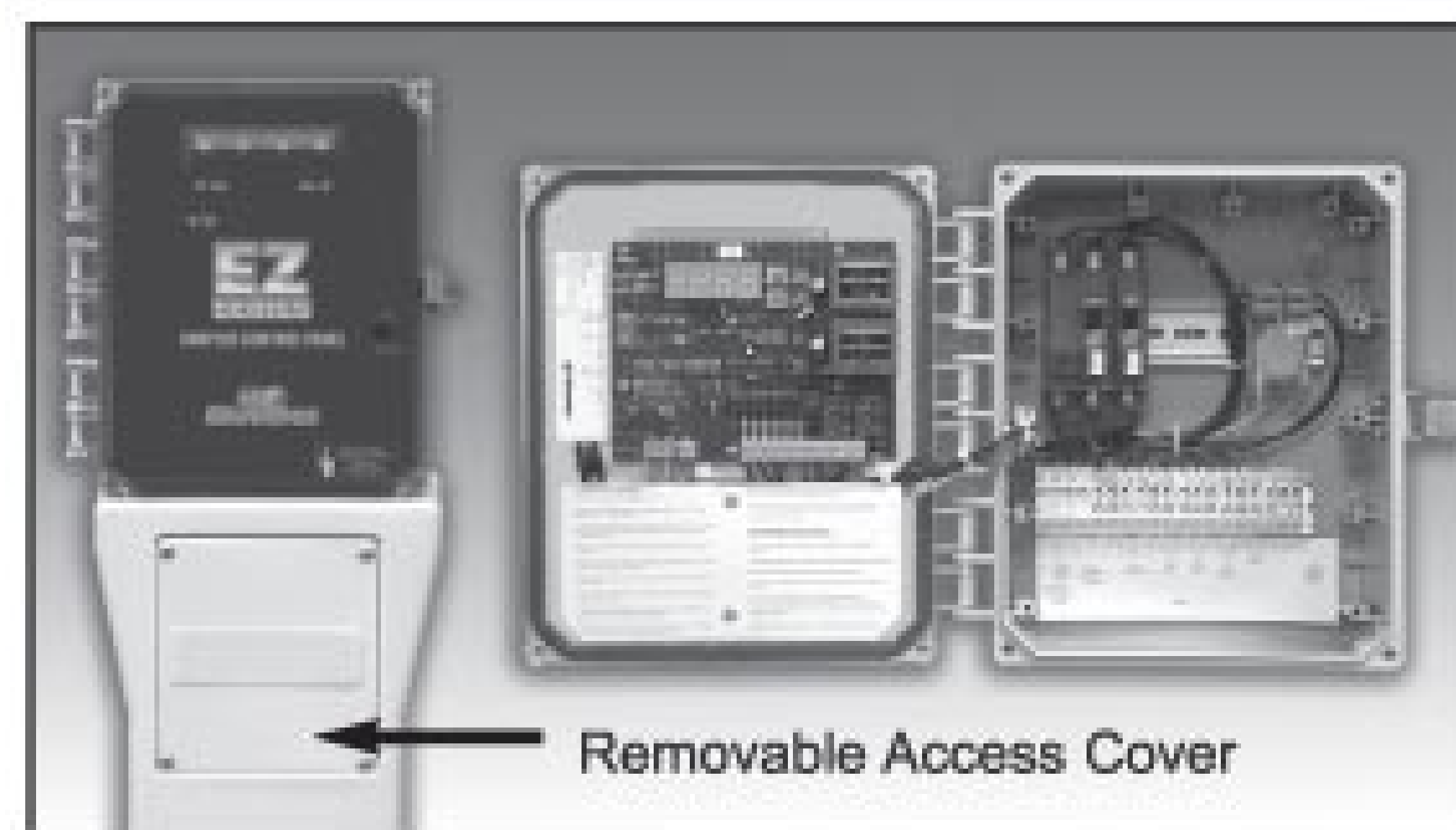
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Where Treatment Starts



To perform O&M properly, it is essential to understand septic tank components and be able to recognize defects that could compromise treatment

By Kit Rosefield

In the last O&M Matters article, we started a series discussing the concept of the treatment train as a way to view and evaluate an onsite wastewater treatment process and to provide insights for professionals who want to perform operations and maintenance service as a line of business.

Having discussed the first component of the treatment train (the source) in the last article, we now move downstream to the pretreatment tank. Most onsite wastewater treatment systems, whether standard gravity or advanced systems, employ some type of pretreatment tank. It may be a trash tank, a septic tank or a pump or process tank.

As standard gravity systems are still the preferred option, we will focus here on the septic tank. The

A septic tank is a simple system, but not as simple as it may seem. It includes distinct parts that serve essential functions and must be in good condition if the tank is to perform properly. A professional performing O&M or conducting an inspection needs to know what to look for in assessing a tank's condition and diagnosing trouble.

Dual compartments

While single-compartment septic tanks are still in use, most septic tanks installed today are designed with two compartments — a larger compartment on the inlet side, and a smaller outlet compartment.

In either case, the first point of reference in a service or inspection is to verify that the tank water level is at the invert of the outlet pipe.

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septic tank plays two important roles in the treatment train. First, it separates and stores unwanted solids that could compromise downstream processes, most notably the soil treatment unit (drainfield). Second, it provides some biological treatment by anaerobic degradation.

This indicates that water is flowing to the drainfield without obstruction.

If the liquid level is below the invert of the outlet pipe, the tank may have a leak. If the liquid is higher than the invert of the outlet pipe, there may be obstructions in the distribution line, in a distribu-

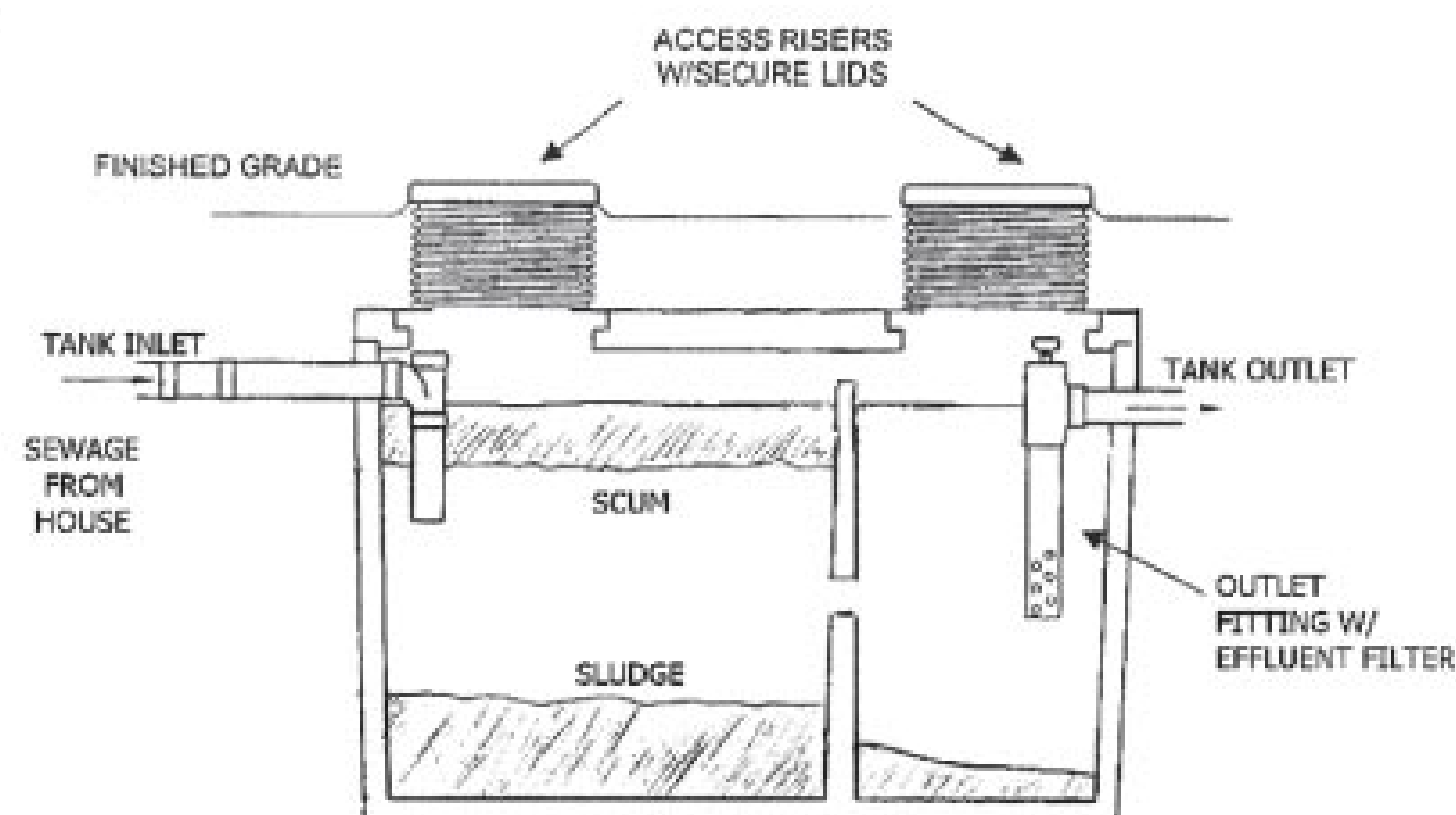


Diagram of a typical dual-compartment septic tank

tion box or in the drainfield itself. This condition might also be the result of the tank settling due to inadequate bedding, causing the distribution line to lose its desired slope and become higher than the tank outlet.

After verifying the tank is at its normal operating level, we can move to the tank inlet side, where wastewater from the source (the house or business) flows into the tank through an inlet baffle or sanitary tee, which diverts the flow into the mid-depth level of the tank, referred to as the clear zone.

Here, in a quiescent environment, separation of solids takes place. Lighter materials such as fats, oils, greases and synthetic materials float to the top and form a scum layer. At the same time, heavier materials such as dirt, fillers from

detergents, and decomposing bacteria, settle to the bottom and form a sludge layer.

All the time, the decomposing bacteria are working to break down the organic materials entering the tank. This separation and breakdown process depends on detention time — how long the wastewater is held in the tank.

Excess accumulation of solids or excess wastewater flow will reduce detention time and will affect both separation and the biological treatment process. In the case of single-compartment septic tanks and trash tanks, managing solids is even more important, as there is no internal baffle to serve as a buffer if solids levels become excessive and migrate through the tank.

In the more commonly used two-compartment septic tank, the

internal baffle separates the inlet and outlet compartments and serves as a sort of dam that holds solids in the larger inlet compartment for processing. Some solids, mostly decomposing bacteria, move through the clear zone passage between the two compartments and settle to the bottom of the outlet compartment.

The next important component of the septic tank is the outlet fitting. This may be the same fitting used at the inlet — a baffle or sanitary tee. However, the best option is an effluent screen (filter) that protects the next downstream process from unwanted solids. And last but not least are watertight access risers. Risers not only protect the system from inflow and infiltration but allow easy access for routine inspection and maintenance.

Taking a look

So what do we look for in a routine maintenance inspection of a septic tank? Here is a basic checklist.

1. Are the tank risers and covers watertight so as to keep surface water or groundwater from entering the tank? Excess inflow will cause hydraulic overloading and reduce detention time.

2. Is the tank at a normal operating water level, with the liquid at the invert of the outlet pipe?

3. Is the inlet fitting intact to prevent turbulence and mixing of separated solids in the clear zone?

4. Is there excessive solids build-up thus reducing detention time?

5. Are there unwanted inorganic solids in the tank that will not decompose?

6. If a dual-compartment tank, is the internal baffle intact, provid-

ing a positive barrier for solids separation?

7. If a dual-compartment tank, are there excessive solids in the outlet compartment?

8. Is the outlet fitting or effluent filter in place and clean?

9. Is the tank structurally sound, and are the covers properly secured so as not to pose a health or physical hazard?

10. Is there evidence of a physical or biological problem in the tank, such as unusual odors, scum on both sides of the tank, or no scum layer at all?

Where to learn more

To learn more about why these various conditions are a problem and how to clearly evaluate and resolve them, check with your local onsite association or with the National Association of Wastewater Transporters (NAWT) to find out what training programs are available in your area.

You also might consider attending the two-day NAWT O&M training program in Louisville Feb. 28-March 1, just before the 2011 Pumper & Cleaner Environmental Expo. In our next O&M Matters article, we will look at the gravity drainfield, the next component of a standard gravity onsite treatment system.

Kit Rosefield is an adjunct instructor at Columbia Community College and a trainer for NAWT and the California Onsite Wastewater Association. His company, Onsite Wastewater Management in Mi Wuk Village, Calif., has a consumer education service at www.septicguy.com. Reach him at 209/770-6760 or kit@septicguy.com. ■



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You Don't Want to Miss This

The 2011 Pumper & Cleaner Environmental Expo includes more new products, exhibits, more learning, more networking, and a blockbuster show at the Saturday Evening Jam

By Ted J. Rulseh

Eighty percent of attendees surveyed at the last Pumper & Cleaner Expo said they would come back in 2011.

That says a lot about the 2010 show, and the 31st Annual Expo March 2-5 in Louisville promises to be even bigger and better. More than 500 exhibitors are expected. There will be a record number of educational seminars. The new-product display space will double. A special Saturday morning Roundtable pancake breakfast will give industry professionals a chance to network and discuss key issues and concerns.

And, to top it all off, the annual Saturday Evening Jam features Dierks Bentley, nominee for 2010 Country Music Association Male Vocalist of the Year and Album of the Year (for *Up on the Ridge*).

"In every respect we continue to make the Expo a bigger and better event for our attendees and exhibitors," says Julie Gensler, Expo coordinator for show sponsor COLE Publishing. "We want professionals in our industry to get more for their investment — in business value and pure enjoyment — every time they attend."

More products and technologies

Tools and equipment remain a key Expo attraction: some 79 percent of 2010 visitors said that new products and technologies were their main reason for attending.

Interest from exhibitors for 2011 is running high. After the 2010 Expo, 85 percent of the 492 exhibitors already said they were planning to be back. Since then, a number of new companies have expressed interest in floor space. The total number of exhibits will most likely exceed 500.

In addition, the popular new-product display, which included 16 companies last year, is moving to larger quarters, and more than 30 exhibits are expected. In these unmanned displays, open throughout the exhibit hours, visitors can examine the products, watch loop videos, and scan their badges to request more information.

More skills and knowledge

The ever-expanding education lineup includes 85 seminars spread across three days. The Education Day program, on Wednesday, March 2, includes tracks of seminars presented by:

- Leaders Resource Network
- Southern Section Collection Systems Committee
- National Association of Sewer Service Companies



The 2010 Pumper & Cleaner Environmental Expo International in Louisville, Ky.



- National Environmental Health Association
- National Onsite Wastewater Recycling Association
- WaterJet Technology Association
- Portable Sanitation Association International
- Safety Management Systems
- National Association of Wastewater Transporters

Another track will feature motivational speaker and business coach Scott Hunter, speaking on leadership and "Creating an Outrageously Successful Organization."

The Thursday and Friday morning programs (March 3 and 4) include six seminars in Spanish to serve the growing number of Expo visitors from Mexico, Central America, and South America. All day Thursday, Jim Anderson and Dave Gustafson of the University of Minnesota onsite program will present an installer seminar.

Many seminars qualify for state-approved continuing education credits.

Another way to network

The show hall, dining area, lobby, shuttle buses, and Louisville nightspots remain as venues for networking, along with the COLE Pub outside the show hall. But this year there's a new opportunity. A Roundtable Discussion and Pancake Breakfast runs from 8 to 10 a.m. Saturday. Here, in a forum moderated by COLE Publishing staff, attendees will share ideas on industry "hot topics."

"We're still developing the list of topics," says Gensler. "Attendees who want to suggest a topic may send me an e-mail to julieg@cole-publishing.com. We will seriously consider all ideas and will choose the topics of greatest interest to our industry members."

The breakfast price is \$10 and includes fresh fruit salad, buttermilk and blueberry pancakes, link sausage, maple syrup, orange juice and coffee.

Good times for all

As always, the Expo offers lots of enjoyment. The Roe-D-Hoe, sponsored by the National Onsite Wastewater Recycling Association, will be back after a successful first year. More than a spectator event, it lets equipment operators practice their skills in a series of timed events requiring a combination of speed, precision and finesse.

The annual Thursday evening Industry Appreciation Party once again offers 25-cent tap beers.

Dierks Bentley, headliner for the Saturday Evening Jam, is the highest-profile act ever to appear at the Expo. Just reaching the height of popularity, he has been a big draw at his own concerts and at country music festivals around the country. Find out more about him at www.dierksbentley.com.

The concert will be held in Freedom Hall, connected directly to the Kentucky Exposition Center, so that attendees can walk to the show while staying indoors. Twenty-five-cent tap beers will be served before the concert.

"Visitors to the 2011 Expo are in for a treat," says Bob Kendall, owner of COLE Publishing. "Each year we try to make the Expo the most rewarding and most fun few days in our attendees' business year. We look forward to seeing old friends again and to meeting many new business owners and municipal managers who want to sharpen their skills and learn better ways to serve their customers."

Early registration costs just \$40 per person (until Jan. 28). At-the-door registration is \$60 for the full program. To find out more, visit www.pumpershow.com or call 866/933-2653. ■

"Each year we try to make the Expo the most rewarding and most fun few days in our attendees' business year. We look forward to seeing old friends again and to meeting many new business owners and municipal managers who want to sharpen their skills and learn better ways to serve their customers."

— Bob Kendall

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WANTED. Very serious and well qualified buyer looking for sewer, septic or industrial business in Dallas, Texas area. Must be grossing between \$500,000-\$1,000,000. All inquiries are kept confidential.

Green Bay, Wisconsin Area Septic & Drain Business. Solid and steady revenue history and nearly 20 years established. Excellent opportunity to expand or start your own business. Includes very well-maintained 3,800 gallon septic service truck, fully outfitted 2002 Chevy drain service van, drain & sewer equipment, all office equipment and computers, 2,700+ customer list, and more - a true turn-key or easy expansion opportunity. Very meticulously maintained equipment all kept inside a heated shop. Current owner is retiring. Large shop and real estate is also available if desired at additional cost. **Asking \$249,000.**

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New Jersey VIP Restroom/ Portable Toilet Business. Servicing Metro Philadelphia and Southwest New Jersey with VIP restroom trailers and portables. Many late model assets including 2 nice service trucks, 1 back-up service truck, pick-up truck, 4 VIP restroom trailers, nearly 300 restrooms, sinks, holding tanks, slide-in unit, 2 forklifts, and more. Assets worth over \$300,000 - priced to sell at **\$399,000.**

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We are reaching out to industry professionals and their families who would be interested in participating in a talent contest to be held during the 2011 Pumper & Cleaner Expo. Prizes would be awarded to the top three finalists.

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1. You must be present and registered for the 2011 Expo. No transportation or hotel accommodations will be provided.
2. A video from all applicants performing their talent must be submitted to COLE Publishing in advance. All talents must be appropriate for all age groups.
3. An independent panel will pick the top ten finalists from the submitted videos.
4. The top ten finalists will then need to perform their talent in front of industry peers on Friday, March 4th, 2011 at the 2011 Pumper & Cleaner Expo.
5. The audience will be able to vote for their favorites and the top 3 vote getters will be the winners.

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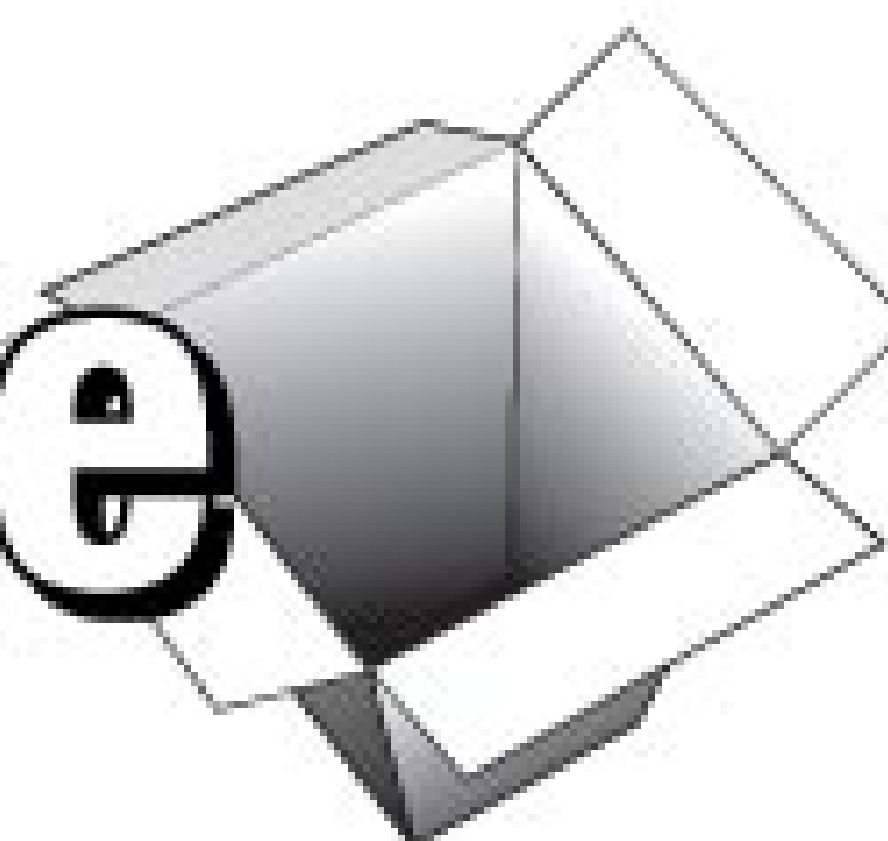
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Maryland Imposes Drip Irrigation System Moratorium

By **Scottie Dayton and Doug Day**

Problems with two of the 13 drip irrigation septic systems in Maryland have prompted a yearlong moratorium on new drip systems in the state. Ponding and other problems over the last several years at two developments in the southern part of the state led to calls for a three- to five-year moratorium from 16 environmental groups.

In a letter to Richard Klein of the Community & Environmental Defense Services, environment secretary Shari Wilson said her department would not process any new permit applications for drip systems until Aug. 1, 2011. "At that time, the department will evaluate the available information to determine the efficacy of the technology and how it should be employed in Maryland," she wrote.

Wilson also said any systems that have been permitted but not yet built will be allowed to be installed, but all systems will be monitored and any complaints investigated promptly. The 13 permitted drip irrigation systems must install soil moisture sensors (tensiometers) in the drip irrigation field. If soil moisture reaches 90 percent saturation, drip irrigation must be terminated.

"With the above safety measures," wrote Wilson, "the department anticipates drip irrigation systems can be properly operated to eliminate ponding and runoff."

■ ■ ■

Maryland's "flush tax" could be used to fill a hole in the Chesapeake Bay Restoration Fund. Passed in 2004, the Bay Restoration Fee charges each household and septic system \$30 a year to help improve water quality in the Bay. An increase to \$54 is one option being considered by the advisory committee as a recommendation to the

legislature. The fund has a shortfall of \$660 million.

Other options under consideration are reducing the amount of state funding used to upgrade local wastewater treatment systems, doubling the length of terms of bonds to 30 years, eliminating operating grants for wastewater systems, or delaying or eliminating some projects. The program to upgrade septic systems to remove nitrogen has already been scaled back. After upgrading some 2,000 systems, the Department of the Environment is prioritizing funding requests to upgrade those that pose the biggest threat to clean water.

Massachusetts

Two environmental groups have filed suit against the EPA, claiming it has not done enough to regulate nitrogen discharges into Cape Cod waters. The Conservation Law Foundation and The Coalition for Buzzards Bay filed the actions in August.

One contention of the lawsuits is the definition of septic systems as non-point pollution sources. The groups claim they should be defined as point sources, which would open septic systems to more stringent regulations under the Clean Water Act.

California

The California Farm Bureau Federation says California's long-awaited onsite wastewater regulations will include a three-tiered system based on risk to water quality. In a Sept. 15 *Ag Alert*, the federation reports that the new rules were still in development, but could be ready for passage late in the summer of 2011.

"In their preliminary form, the proposed regulations would divide septic tank installations into three tiers," wrote federation president

Danny Merkley. "The vast majority of currently operating septic systems would have no new requirements unless they are in a Tier 3 area where water quality problems exist," he said in the online report.

Florida

At least four Florida counties are objecting to new septic system regulations requiring testing of all septic systems every five years. A petition of about 10,000 people in Holmes County was presented to State Representative Brad Drake in August in support of his efforts to overturn the legislation or exempt rural counties.

Illinois

The Department of Public Health in August proposed changes to the Private Sewage Disposal Code that would require the use of suitable soils for systems "when feasible" and develop licensing and certification for portable sanitation companies and technicians. The rules will also clarify construction and excavation rules dealing with chamber sizing, design and location of sample ports, alarm location, electrical connections, baffle filters, and disinfection devices, among others.

Indiana

New onsite rules go into effect on Jan. 1. The action updates the standards for construction, location and sizing of systems based on the number of bedrooms and the type of soil on the property.

Michigan

About \$209,000 in state grant money will go to finding and fixing failed septic systems in the Huron Rivers watershed. It is part of \$3.9 million in water quality grants issued in August by the Depart-

ment of Natural Resources and Environment.

■ ■ ■

Mediation is the next step for the troubled septage plant in Grand Traverse County, Michigan. A tank wall collapsed just a month after the \$7.8 million plant opened in 2005 and it has been losing money ever since; about \$400,000 in 2010 and an estimated \$600,000 in 2011. Local officials say the plant costs more to run than projected and it is taking in half as much septage as expected.

Minnesota

The Minnesota Pollution Control Agency is considering several updates to its subsurface sewage treatment system regulations. Besides clarifying some terms and correcting minor errors, the proposal makes changes dealing with the requirements for the use of pressure distribution and design of tank maintenance openings, and adds standards dealing with high-strength waste.

Some existing requirements would be simplified, including consolidating and revising soil tables and eliminating some duplicated language. Recent legislative changes dealing with surety bonds and a five-year compliance grace period are also included.

Virginia

The Department of Health extended the deadline for interim regulations on alternative treatment systems from Dec. 31, 2010 to April 7, 2011. The regulations eliminate local governments' ability to ban alternative technologies and require the systems to be operated according to manufacturer instructions.

They also mandate maintenance contracts and licensing of soil evaluators, installers, system operators

and owner-operators. Effluent from systems larger than 1,000 gpd and installed after July 1, 2009, must be tested by a laboratory. If the agency does not adopt the final version based on manufacturer O&M requirements before next April, it can extend the interim rules an additional six months.

South Dakota

Pennington County residents appealed the county's new onsite ordinance to the courts after they failed to collect enough signatures in time to refer the issue to a public vote. The ordinance, approved in July by the county commission, went into effect in August, subjecting onsite systems to a \$20 permit and inspection every six years. It also tightened regulations for installing systems. The appeal, which seeks

to overturn the ordinance, will be heard by a circuit court judge.

Oregon

The proposed Legislative Concept 848 would adopt rules for the state Department of Environmental Quality to make grants or loans available for repairing, replacing, or decommissioning onsite systems, and for developing land-applied septage solutions.

The concept also establishes the Subsurface Sewage Disposal System Improvement Fund to help communities address septic system problems. Some of the money would have to be dedicated to courses on onsite installation and operation and maintenance. The DEQ estimates that more than 30 percent of residents use onsite systems and that 10 percent of them are failing. ■

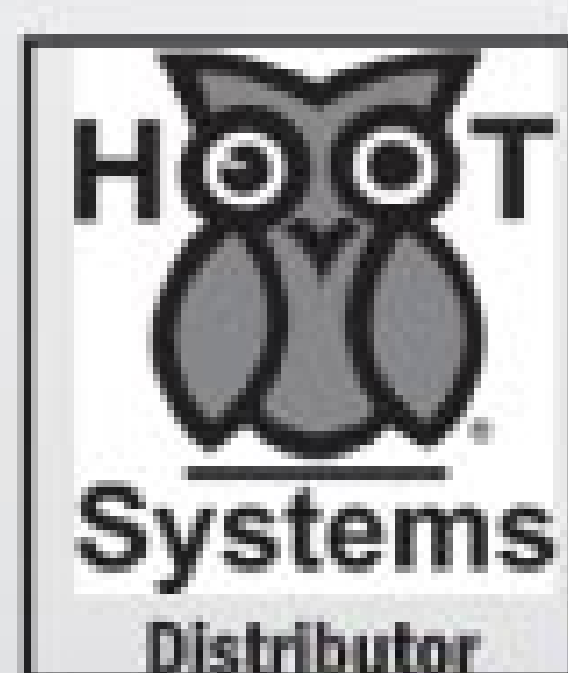
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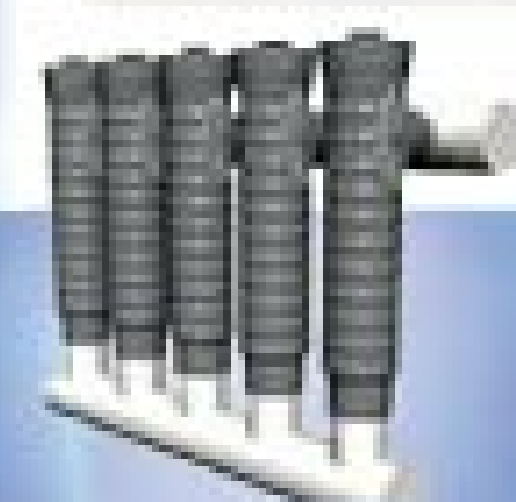
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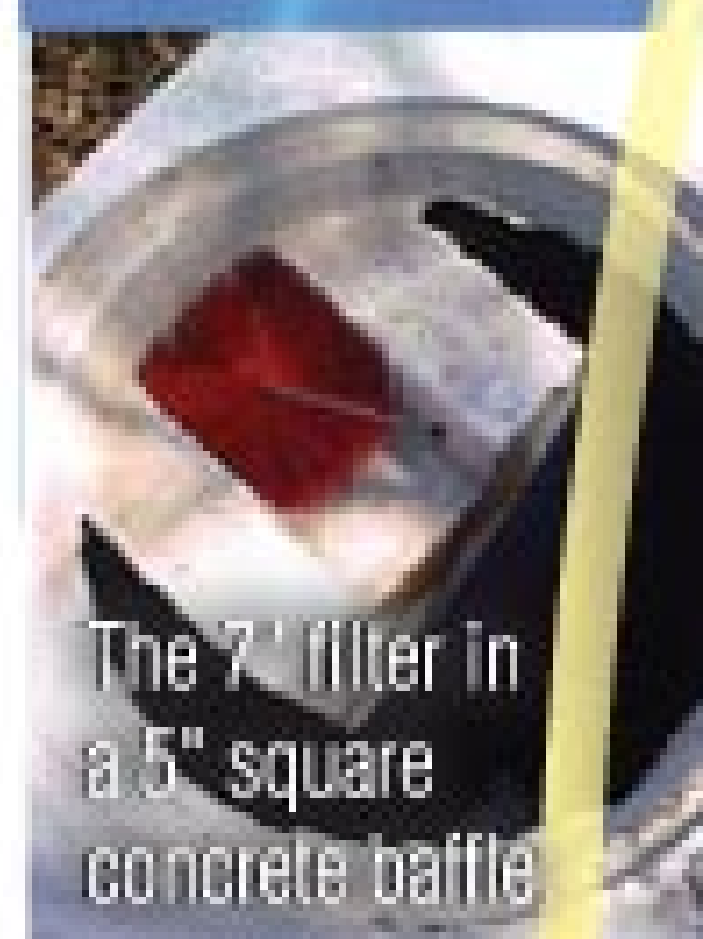


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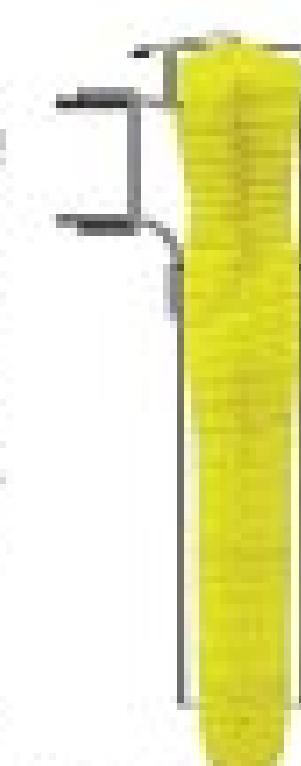
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Right System, Right Place

The nation's first installation of a sophisticated aerobic treatment system is performing well at a mobile home park in Michigan

By **Scottie Dayton**

Effluent was ponding in the outdated, overused drainfield of a 44-unit mobile home park in Allegan, Mich., and raw sewage flowed into a swamp forest draining into Swan Lake. The owner called maintenance provider Rod Carroll of Wray's Septic Tank Co. in Allegan to pump the 20,000-gallon septic tank twice a year until health officials gave him an ultimatum to replace the system in three months.

Wray's won the bid, and Carroll worked with Randy Rapp, P.E., of Exxel Engineering Inc. in Grand Rapids, to design the system. "We had no room for a replacement drainfield, but the septic code allowed us to build one on top of an existing bed," says Carroll.

"Nevertheless, we needed variances on everything, including the 100-foot water setback. Our site had water lapping against the tapers of the berm." To treat the effluent, the men agreed on a highly advanced

purification tank and a Fusion aerobic treatment unit from Clarus Environmental, a Division of Zoeller. The equipment fit easily into a very small space.

The installation was the first large commercial Fusion system in the country. Its performance is still being documented, but the sophisticated aerobic treatment unit is functioning perfectly.

Site conditions

Soils are sandy with the water table 18 inches below grade. The system is on a 178- by 120-foot man-made berm in a swamp forest eight feet below the park.

System components

Rapp designed the system for a hydraulic loading handle of 5,000 gpd. Its major components are:

- Existing 20,000-gallon three-compartment concrete septic tank retrofitted with WW4



The first 2,400 gpd ZFL Fusion unit is set in place with the excavator bucket and chains. The excavation is 7 feet deep.

COURTESY OF SALES SERVICE PLUS

effluent filter from Clarus Environmental.

- Clarus Environmental treatment package from ETNA Supply, Grand Rapids. It includes a Tru-Flow effluent splitter box, two 2,400 gpd ZFL Fusion treatment units with 24-inch risers, two N153 high-head 1/2 hp Zoeller effluent pumps, and a Zoeller duplex control panel.
- 1,500-gallon concrete dosing tank with risers to grade from Wray's Septic Tank Co.
- Two 32- by 78-foot low-pressure drainfields in six zones.

System operation

The 4-inch laterals of east-side homes tie into a 6-inch main discharging to a 10,000-gallon two-compartment septic tank with dosing chamber. Effluent is pumped 800 feet



COURTESY OF WRAY'S SEPTIC TANK CO.

A Hydrotek 6606 valve in the center of the field splits the flow through a 1.5-inch header to six zones.

to the existing septic tank and new system on the west side of the park.

West-side homes have identical plumbing, except that wastewater flows to the primary septic tank, then to the 18- by 18- by 12-inch-tall distribution box. When water enters the box, a tray splits the flow equally between the two treatment

System Profile

Location:	Allegan, Mich.
Facility served:	Mobile home park
System designer:	Randy Rapp, P.E., Exxel Engineering Inc., Grand Rapids, Mich.
Installer:	Rod Carroll, Wray's Septic Tank Co., Allegan, Mich.
Site conditions:	Sandy soils with water table 18 inches below grade
Type of system:	ZFL Fusion treatment system, Clarus Environmental
Hydraulic capacity:	5,000 gpd

Rod Carroll of Wray's Septic Tank Co. lowers the filter cartridge assembly into the housing of the WW4 effluent filter from Clarus Environmental.



COURTESY OF SALES SERVICE PLUS

systems. The tray can be leveled from the surface if the box shifts later due to settling.

Secondary treatment occurs in the Fusion tank's four chambers. The sedimentation compartment acts as a septic tank. In the anaerobic chamber, microorganisms on a fixed 4-inch spherical-skeleton type media digest nutrients at the same time suspended solids are captured. The media provides a stable environment so that bacterial colonies are unaffected by high-flow events.

The aeration chamber, with an upper aeration section and a lower filter media section, is filled with 3/4-inch-long hollow cylinders. Incoming air keeps them agitated. Microorganisms growing in a thin biofilm on the cylinders remove



COURTESY OF SALES SERVICE PLUS

Rod Carroll and Austin Root of Wray's Septic Tank Co. plumb the line from the septic tank to the distribution box. When water enters the box, a tray on a pendulum tips back and forth, equally distributing the dose to the two treatment units.



COURTESY OF SALES SERVICE PLUS

Jason Nett of Clarus Environmental helps Austin Root and Rod Carroll of Wray's Septic install the Fusion control panels. There are panels on both sides of the board.

impurities. Residual suspended solids are captured by the stationary filter media in the chamber's lower portion.

Because sludge develops rapidly in the third chamber, the filter is backwashed in 5- or 10-minute cycles twice daily.

Air vigorously stirs the media to break up accumulated materials. An airlift pump transfers wastes back to the first chamber for further digestion and to aid in denitrification. The anaerobic and aeration chambers have risers.

The fourth chamber temporarily stores treated water leaving the aeration chamber before it flows to the dosing tank. The pumps run 7.5 minutes, five times per day, sending 511 gallons (23.8 gallons are drained back) to the absorption beds. A Hydrotek 6606 valve in the center of the field splits the flow through a 1.5-inch header to the six zones.

Each 10- by 39-foot zone has five 1.25-inch Schedule 40 PVC laterals 37 feet long on 2-foot centers. The 1/8-inch orifices with shields are spaced three feet apart with every fourth hole down to drain the lines and prevent freezing. Every lateral has a turnout and cleanout. The effluent meets secondary standards of 30 mg/l BOD and TSS.

Installation

Installation began in early April. Carroll's crew erected a soil erosion fence around the berm, cleared the perimeter of brush, and stripped the topsoil down to the old beds. They inspected the septic tanks for watertightness, then replaced the baffles and installed 36-inch Orenco risers.

The men mounted an effluent filter in the third compartment of the primary tank, located in the center of the berm with 2,000-square-foot drainfields of 6-inch clay tile and stone on either side.

Michigan's winter weight restrictions were still in effect. "We got a variance from the county road commissioner and hauled 2,300 cubic yards of sand as fast as possible," says Carroll. "The spring thaw was days away, and at that point our trucks would break through the asphalt."

Drivers dumped their loads by backing 10 feet off the park's main

road to the front of the berm. Using a John Deere 650 bulldozer, Carroll pushed 2-foot-deep layers of sand 120 feet to the far end of the system and worked forward. In less than three days, the crew elevated the berm four feet, bringing it level with the road and establishing a 42-inch separation between drainfields.

Hydraulic pressure from the tons of sand on the failed beds pushed fluid back to the septic tanks. Wray's two 3,600-gallon vacuum trucks pumped them for three days, then as required to keep any discharge from reaching the absorption area. The pumping

"Every lateral has a cleanout on both ends, so each drainfield has 60 caps and six observation ports. The area looked like a mushroom farm."

Rod Carroll

action of the bulldozer crossing the ground brought up effluent that the trucks dewatered.

"We installed the treatment units 20 feet after the septic tank so we could add something later if needed," says Carroll. "The 7-foot-deep excavations broke through the existing drainfields, and we had to dewater the holes." The men backfilled them with 6 inches of pea stone on top of 12 inches of saturated but solid native sand, then set the plastic fiberglass resin units.

"We were two feet below the water table, and the holes filled immediately if we stopped pumping," says Carroll. "To prevent the treatment tanks from floating, we filled them halfway with water, then laser-leveled them. Sitting flat is crucial to how they operate." When the tanks were level, workers backfilled with stone up to the mold line, filled the compartments with water, and finished backfilling.

Excavation for the dosing tank uncovered a nasty layer of the old bed, so Carroll installed the tank on six inches of sand before connecting it to the treatment units with 4-inch PVC lines. "Dewatering this hole wasn't as bad because the tank is two feet shorter than the Fusion units," he says. Workers



COURTESY OF WRAY'S SEPTIC TANK CO.

The drainfields, protected by geotextile fabric, are covered with 12 inches of sand.

backfilled the tank, then mounted the pumps, float poles and control panels.

To minimize impact on the low-pressure-dosed beds, the crew hand-dug 4-inch-deep trenches in 12 inches of washed and leveled 6-A stone, then laid the piping and orifice shields. "Every lateral has a cleanout on both ends, so each drainfield has 60 caps and six observation ports," says Carroll. "The area looked like a mushroom farm."

The fields were covered with geotextile fabric, 12 inches of sand, and 4 inches of topsoil. Because of the layout of the beds and cleanout ports on the end, Carroll had to place the topsoil with the excavator. "I'd take a pile off the road, set it on the other side of the cleanouts, move the excavator, then move the pile over again," he says.

With the May deadline approaching, Carroll discovered that he needed a new electrical service and meter for the control panel. He hired Redfern Enterprises Inc. of Wayland to directional bore 60 feet under the road, while his crew hand-dug 60 feet between the homes to the nearest transformer and ran the conduit. Esper Electric Ltd. of Kalamazoo completed the electrical work.

Maintenance

Wray's Septic Tank Co. has the

three-year maintenance contract. "It's a low-maintenance system with no media to change or remove," says Carroll. "But because it's the first commercial system of its kind and we're still adjusting backwash, recirculation, and flow rates, the state and Randy want it monitored monthly and effluent samples taken for two years."

Normal twice-per-year maintenance includes monitoring sludge levels in the anaerobic compartments, checking the aerators and recirculation valves, and opening the air flush valves fully for a minute. The fixed-film media harbors the bacteria during this procedure to ensure uninterrupted treatment.

The technician also checks the diaphragm air pumps, floats, effluent pumps and control panels. He cleans the effluent filter and pumps the septic tanks and treatment system compartments as needed. ■

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The septic aerated batch reactor system (SABRe) from Advanced Wastewater Systems LLC is designed to convert an existing septic tank into an aerated batch reactor, similar to a sequencing batch reactor. By convert-

ing the anaerobic septic process into an aerobic process, the SABRe provides a greater degree of treatment and pressure doses the drainfield on a timed basis. The system includes control panel with integral air pump, fine-bubble diffuser on the inlet side of the tank, submersible discharge pump suspended in the clear zone of the outlet end of the tank, piping, valves, fittings, alarm float and electrical connections. Components are available as a kit along with installation instruction and owner's manual. 812/528-8784; www.sabreseptic.com.

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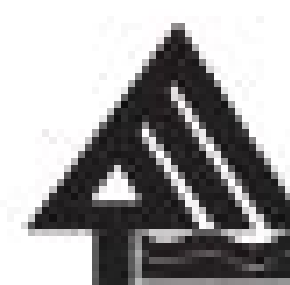
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Congress Sweetens the Deal

If you've been waiting to buy new equipment, you might want to re-crunch the numbers before the end of the year to take advantage of the latest tax law changes

By Judy Kneiszel

Uncle Sam wants you ... to buy things for your business. Big things. And to motivate you to spend money on equipment, newly revised Section 179 of the federal tax code allows you to write off 100 percent of major capital expenditures immediately, putting quick cash in your company's pocket.

Section 179 has been around for a few years, but thanks to the Small Business Jobs Act, signed into law in September, it has been extended and expanded. Before passage of the act (officially the Small Business Jobs and Credit Act of 2010), the future of Section 179 was unclear. Its benefits and deductions were set to expire this year and, almost nine months into it, there was no indication it would be renewed.

But now, Section 179 allows you to buy qualifying equipment and expense 100 percent of the purchase in the same year. This means you can deduct the cost immediately rather than depreciate it over time. The new law raises the amount you can deduct from \$250,000 to \$500,000.

It also changes the "phase-out threshold." In the earlier provisions, the \$250,000 expensing was phased out if you bought more than \$800,000 in qualifying property for that year. Congress changed the law so the phase-out begins at \$2 million. All of the changes cover the 2010 and 2011 tax years.

Immediate infusion

With these larger tax deductions

for equipment, software and vehicles, Section 179 can mean dollars going into your bank account, giving your bottom line a substantial boost this year. As long as the purchases are less than your profits, you can take up to the full amount of the Section 179 deduction this year, if you make your purchases by Dec. 31. The deduction applies even if you finance or lease the equipment, making only a small down payment.

Leasing or financing equipment with the Section 179 deduction in mind can be a savvy strategy because it can significantly improve cash flow and profits. The amount you save in taxes could actually exceed the amount you pay on the equipment in 2010.

What qualifies?

The purpose of Section 179 was to encourage businesses to buy equipment sooner and so stimulate the economy by increasing orders to the nation's factories and getting people back to work. The range of qualifying items is broad, and includes:

- Machinery and equipment.
- Business vehicles with a gross vehicle weight greater than 6,000 pounds.
- Computers and software.
- Office furniture and equipment.
- Property attached to a building that is not a structural component (such as large manufac-

turing tools and equipment).

- Equipment purchased for both business and personal use. (Here the size of the deduction is based on the percentage of time the equipment is used for business.)

How Section 179 works

Here are three examples of how the new Section 179 could affect your business:

Example 1: Suppose your company expects a \$200,000 profit for 2010 as reported on Schedule C of your federal tax return, and that you buy or lease qualified equipment worth \$150,000 before the end of the year. You would be able to deduct that entire \$150,000 from your 2010 taxable income, reducing your profit for tax purposes to \$50,000. That means a significant 2010 tax savings.

Example 2: Suppose your 2010 Schedule C profit is \$50,000 and you buy or lease business equipment costing \$55,000. You would be able to deduct \$50,000 of the purchase price from 2010 taxable income under Section 179, reducing your net profit for tax purposes to zero. For the remaining \$5,000 of the equipment cost, you could either take depreciation over the useful life of the equipment, or carry it over to 2011 and fully deduct it under Section 179 — as long as you have enough profit in that year to absorb the \$5,000 expense.

With these larger tax deductions for equipment, software and vehicles, Section 179 can mean dollars going into your bank account, giving your bottom line a substantial boost this year. The deduction applies even if you finance or lease the equipment, making only a small down payment.

Example 3: Suppose you operate at a loss in 2010. In that event, Section 179 will not benefit you for that year. If again you made \$55,000 in equipment purchases, you could depreciate that amount over time, or carry it over and take the Section 179 deduction for 2011, provided your profit in that year covers that amount.

Seek professional advice

Of course, as with any tax matter, consult with an accountant or tax advisor before jumping in and making significant capital expenditure in hopes of benefiting from the improved Section 179. Make sure it's going to benefit you — and then go shopping. ■



Iowa Association Receives Grant

The Iowa Onsite Waste Water Association received a \$100,000 Technical Assistance and Training grant to develop a curriculum for maintaining onsite systems. The association will use the Habitat for Humanity site in Waverly to develop the training program, which includes monitoring of effluent quality from various systems and working with manufacturers to produce video clips of maintenance procedures. Once completed, the materials will be applicable for nationwide operation and maintenance training programs.

First Time

The Oregon Onsite Wastewater Association sponsored its first outreach booth at the State Fair. Members distributed information packets and *Home Owners Guide*, published by the USDA, EPA, and O2WA, to more than 500 visitors. They were directed to the association's Web site to find service providers.

Cold Water and Onsite Systems

The theme of the Ohio Water Quality & Waste Management Conference Feb. 3-4 at the University Plaza Hotel in Columbus is the "Impact of Cold Weather on Small and Onsite Wastewater Treatment Systems."

Sponsored by the Ohio State University Extension, seminars will cover the challenges of operating systems and reusing wastewater for irrigation in winter, the impact of freezing on sand bioreactors and ammonia removal, and case studies. Bob Tsigonis, P.E., from Lifewater Engineering in Fairbanks, Alaska, will share his expertise from working more than 30 years in the arctic.

Attendees receive 8 CEU hours. Contact Holly Bartholomew at 843/471-2357, bartholomew.six@gmail.com, or visit www.setll.osu.edu/programs/owqwm_conf.html.

Homeowner Inspections

Matt Lee, president of the Washington On-Site Sewage Association, participated in a two-hour class offered by Cowlitz County to

instruct residents on septic care and inspection. The county allows homeowners to handle operation and maintenance, since advanced treatment technologies are rare.

Persons who talked to Lee bluntly asked him how he could help them evade the county's installation or inspection permitting process. Their reasons included avoiding fees and restrictions on their property. Lee even had an ex-government official, who was not a county regulator, ask him not to submit paperwork. He wished to remain off the radar to save less than \$200 per year on a \$750,000 property.

An article in the association newsletter stresses the importance of employers recognizing a persistent and growing issue in rural communities and on rented properties — meth labs. The article describes what employees should look for to identify the labs and the actions they should take when service calls go bad. Download the newsletter at www.wossa.org.

CALENDAR OF EVENTS

Jan. 12-13

Iowa Onsite Waste Water Association Conference, Polk County Convention Complex, Des Moines. Visit www.iowwa.com.

Jan. 17-19

Missouri Smallflows Organization Conference and Exhibit, Holiday Inn Select, Columbia. Call 417/739-4100 or visit www.mosmallflows.org.

Jan. 18-19

Ohio Onsite Wastewater Association Conference and Trade Show, Ramada Plaza Hotel and Conference Center, Columbus. Call 866/843-4429 or visit www.ohioonsite.org.

Jan. 20-22

North Carolina Septic Tank Association Convention. Call 336/416-3564 or www.ncsta.net.

Jan. 20-23

Alberta Onsite Wastewater Man-

agement Association Convention and Trade Show, Capri Convention Centre, Red Deer. Call 780/489-7471 or visit www.aowma.com.

Jan. 23-25

Pennsylvania Decentralized Wastewater Conference and Trade Show, Lancaster County Convention Center, Lancaster. Call Stacy Henninger at 717/763-7762 or visit www.pasma.net.

Jan. 24-25

Tennessee Onsite Wastewater Association Conference, Murfreesboro. Visit www.tnonsite.org.

Jan. 26-28

Kansas Small Flows Association Conference and Trade Show, Prairie Band Casino & Resort, Mayetta. Call 913/594-1472 or visit www.ksfa.org.

Jan. 28-29

Wisconsin Onsite Water Recycling Association and Wisconsin Liquid Waste Carriers Association Joint Convention, Holiday Inn, Stevens Point. Call 800/377-6672 or visit www.wowra.com.

Jan. 28-29

Washington On-Site Sewage Association Conference, Yakima Convention Center, Yakima. Call 253/770-6594 or visit www.wossa.org.

Jan. 31-Feb. 1

Indiana Onsite Wastewater Professional Association Annual Convention, Camp Camby, Indianapolis. Call 317/889-2382 or visit www.iowpa.org.

March 2-5

Pumper & Cleaner Environmental Expo International, Kentucky Exposition Center, Louisville, Ky. Call 800/257-7222 or visit www.pumpershow.com.

TRAINING & EDUCATION

Iowa Offers Special Classes

The Iowa Onsite Waste Water Association conference Jan. 11-13

in Des Moines starts a day early with a CE-approved class for renewal of the state's plumbing and mechanical license. A separate registration is required. Plumbing license CE hours also apply for the first aid class on Tuesday, open to any registrant. A special two-hour OSHA class on Wednesday fulfills the plumbing license requirement for OSHA training.

Maine Training Center

The Maine Rural Water Association and Maine Association of Site Evaluators have created a Subsurface Wastewater Training Center in Richmond. The facility has five common onsite systems, enabling site evaluators, plumbing inspectors, code officers, and installers to observe their operation, evaluate test pits, and practice slope and fill extension calculations. Sessions include films of how the systems were installed. Registration is \$55. Visit www.maine.com/training-center.php.

Safety First

The Pennsylvania Septage Management Association will focus its 2011 educational and inspector classes on confined-space and competent person training. The courses are in response to a Sewickley, Pa., sewage plant employee who became faint while climbing out of a 30-foot hole, fell back in, and died of fall-related injuries. Three other people who tried to rescue him were overcome by an unknown gas and required hospitalization.

NAWT

The National Association of Wastewater Transporters has these sessions:

- Feb. 28-March 1 – Inspector training, Louisville, Ky.
- Feb. 28-March 1 – Operation and Maintenance, Louisville, Ky.
- March 1 – Vacuum Truck Technician, Louisville, Ky.

Call NAWT at 800/236-6298 or visit www.nawt.org.

Connecticut

The Connecticut Onsite Waste-

water Recycling Association is holding its Installer School Jan. 13, 20 and 27 and Feb. 3, 10 and 17 with a snow date Feb. 24. Students are automatically enrolled in Education Day on March 2 at the Pumper & Cleaner Environmental Expo International, as the information is part of the 2011 Installer exam.

The COWRA Pumper/Cleaner School is Feb. 17 with a snow date Feb. 24. All classes are at Wesleyan University in Middletown. Call 860/267-1057 or visit www.cowra-online.org.

Georgia

The University of Georgia, ASCE, and SWCS are sponsoring PDH training for engineers on Dec. 1 and 2. The course, Designing Sustainable Community Wastewater Solutions, addresses the technologies and trends in the integration of centralized and decentralized treatment approaches to deliver economical, flexible, and sustainable wastewater services to communities. Pre-register by calling the Continuing Education Center, UGA-Griffin at 770/229-3477 or visit www.ugaonsite.com.

Minnesota

The University of Minnesota Extension has these classes:

- Jan. 10-12 – Introduction to Onsite Systems, Alexandria
- Jan. 13-14 – Installing Onsite Systems, Alexandria
- Jan. 27-28 – Pumper/Maintainer Continuing Education, Owatonna

- Feb. 8-9 – Installer Continuing Education, Hinckley
- Feb. 9 – Pipelayer, Hinckley
- Feb. 16-17 – General Continuing Education, Fergus Falls
- Feb. 22-24 – Pumping and Maintaining Onsite Systems, St. Cloud

Call Nick Haig at 800/322-8642 or visit www.septic.umn.edu.

Oregon

The Oregon Onsite Wastewater Association is offering the Consortium of Institutes for Decentralized Wastewater Treatment Educational Institute National Installer course:

- Jan. 13-14, Dalles
- Jan. 27-28, Eugene
- Feb. 3-4, Portland
- Feb. 17-18, Grants Pass

Call 541/389-6692 or visit www.o2wa.org.

Washington

The Washington On-Site Sewage Association and Washington State Department of Health in cooperation with Washington State University are offering these certification courses at the training center in Puyallup unless stated otherwise:

- Jan. 5 – Proprietary Systems
- Jan. 12 – Maintenance Basics
- Feb. 2 – Design of Subsurface Drip Systems, Spokane
- Feb. 10 – Liens and Contracts
- Feb. 16 – Exploring and Understanding Soil, Mt. Vernon
- Feb. 23 – Matching System to Site Conditions, Mt. Vernon

Call WOSSA at 253/770-6594 or visit www.wossa.org. ■

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Pumper & Cleaner Expo Heads to Indianapolis in 2012

The 2012 Pumper & Cleaner Environmental Expo International will be held in Indianapolis, Feb. 27 to March 1. The Indianapolis facility has more than 4,000 connected hotel rooms, shopping and dining, all within walking distance. More information will be available at the 2011 Expo in Louisville, March 2-5. The 2010 Expo drew nearly 4,000 companies and 13,000 attendees from 48 countries.

Crouch Recognized for Work with Students

Chris Crouch, chief design engineer at Bio-Microbics, was recognized in September by the City of Kansas City, Mo., for his work with teens in urban communities on green technology and innovation through critical thinking. Crouch, an avid electric car enthusiast and plastics engineer, helped students design an electric-powered vehicle that gets the equivalent of 300 mpg as part of an extended course curriculum.

Premier Tech Acquires Purflo Group

Premier Tech has acquired the Purflo Group of France. A manufacturer of high-density polyethylene and polyester tanks for wastewater treatment and storage, the company will be known as Premier Tech Aqua Purflo.

COLE Publishing Launches Gas, Oil & Mining Contractor

Gas, Oil & Mining Contractor is a new COLE Publishing trade magazine launching in January 2011. The monthly publication is directed at environmental and support service professionals working in land-based gas, oil and mining exploration, resource recovery and refinery operations throughout North America.



Readers are service company owners, managers and technicians who transport, set up and maintain equipment critical to the mission of fuel and mineral extraction companies. These services include water and wastewater conveyance and treatment, byproduct dewatering, industrial cleaning, portable sanitation equipment and maintenance, worker camp development and maintenance, electrical power generation and site preparation.

COLE president Jeff Bruss said the energy and mineral extraction and refinery sectors are being served by a diverse group of contractors who will benefit from the editorial content and focused advertising in *GOMC*.

"At a time when energy exploration and recovery of valuable mineral resources are especially critical to economic growth and sustainability, we're excited to reach out to contractors working in these industries," Bruss said. "This new publication will help the hardworking men and women who provide important support services operate more efficiently and grow their businesses."

The magazine will include profiles of successful contractors, monthly themed product roundups, comprehensive new product coverage, emerging technology coverage, industry news, and general business development and human resources topics. For more information or to request a free subscription or a media kit for the magazine, go to www.gomcmag.com. ■



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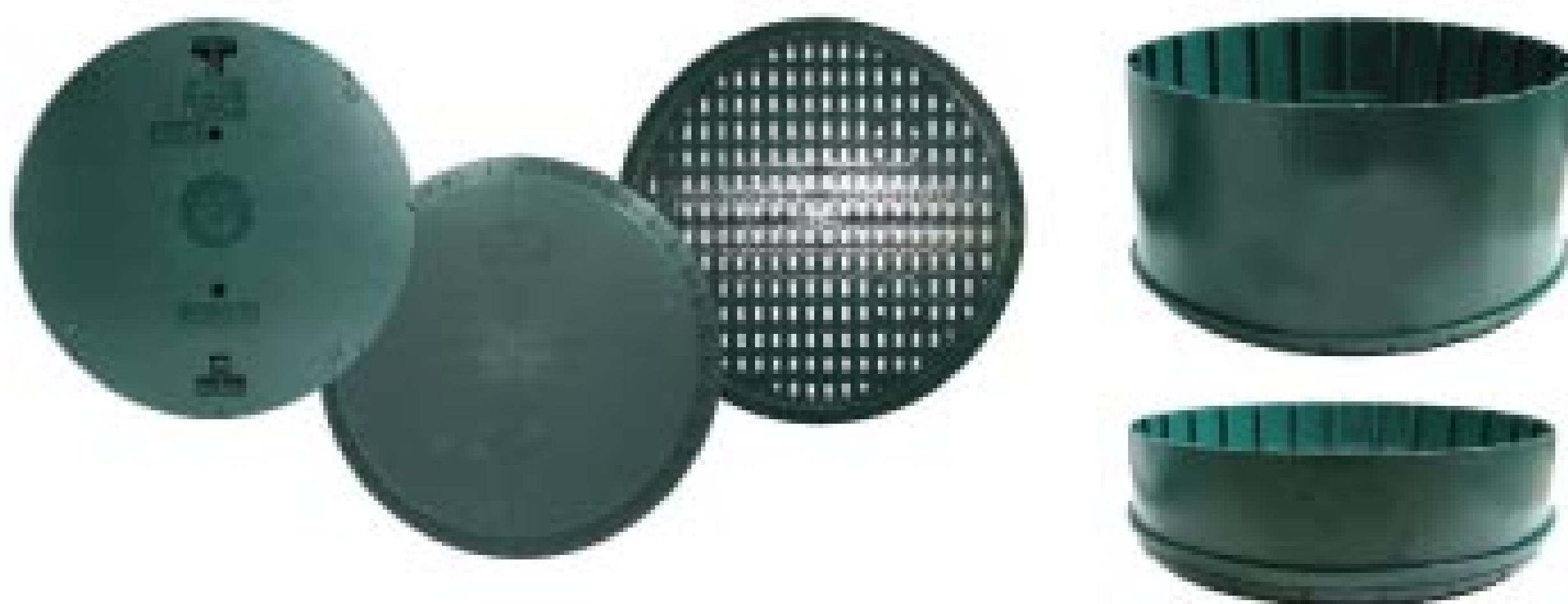


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