

Solutions for a Competitive Edge

WJTA Sets the Standard for Safety

The WaterJet Technology Association (WJTA) has published its first-ever set of guidelines for safe use of vacuum equipment.

The booklet, *Recommended Practices for the Use of Industrial Vacuum Equipment*, was written by representatives of the industry's largest vacuum equipment users and manufacturers, says WJTA Association Manager Ken Carroll.

"We're not trying to change how people do business, but we do want to provide practical guidance for creating a safer working environment," says Carroll.

By following best practices, contractors can demonstrate that they are doing their best to protect their workers and the people and facilities around them, explains Vactor Product Safety Supervisor Andy Current, who headed the Best Practices Committee.

"Safety is a high priority in large organizations. They want their contractors to comply with good safety practices because they know that in the end, cutting corners at the cost of safety is not good for business," says Current.

Industrial Focus

Recommended Practices was developed specifically for industrial vacuum contractors and plants. Its subjects range from training and vacuum truck safety to job setup and jobsite hazards. It also includes a sample pre-job checklist and job completion checklist.

"These are things everybody knows, but they've never been collected in one place before," adds Current. *Recommended Practices* gives smaller contractors a practical safety training manual that includes the best information used by larger companies in their safety programs."

The 37-page booklet has 10 chapters and a glossary of terms. Among the highlights:

Accidents. It is easy to underestimate the dangers of industrial vacuuming. Yet vacuum hoses typically generate air velocities of up to 160 mph and forces of up to 800 pounds. That's enough to grab a worker's hand and pin it there as long as the vacuum remains on. This chapter lists



potential injuries and covers abrasion, engulfment, back strains, electrical shock, and crushing.

Getting started. In addition to general safety precautions, this section looks at training requirements. Its recommendations range from personal protective equipment (PPE), hazard communication, and equipment operation and maintenance to vacuum pressures, hoses, safety decals, and control devices.

Pre-job. The right job setup creates a safe work environment. Workers should first assess worksite hazards and plan who to call and where to go in an emergency. The chapter provides an equipment inspection checklist and correct procedures for setting wheel chocks, grounding/bonding, avoiding pinch points, and equipment setup. It notes common worksite/dumpsite hazards and

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Why You Should Talk with Your Lawyer – Today

Google “lawyer jokes” and you’ll get 869,000 hits. Most of them are mean, calling attorneys “sharks” or “vultures” with few scruples or regrets. In other words, they pretty much reflect our own mixed feelings about lawyers.

“Lawyers definitely have a bad reputation with business owners,” says Cynthia Umphrey, a director of Troy, Mich.-based Kemp Klein, a law firm specializing in small businesses. Umphrey also chairs the Michigan Bar Association’s Small Business Forum.

“That’s because many business owners see lawyers only when they have a problem. Even if we fix it, you’re not going to like the bill,” she continues. “But people who use lawyers to prevent problems – to review contracts or make collections easier – feel a lot better about their attorneys.”

When to Talk

There are many times when talking to a lawyer might prevent bigger problems later. Among the key pressure points:

Acquisitions/sales. A good business lawyer can structure a deal so acquisitions cost less and asset sales earn more. One of Umphrey’s clients was offered \$14 million for his business. When she analyzed the tax consequences, he realized he wouldn’t have gotten anywhere near that amount.

Employees. Federal and state governments have lots of employee regulations. Lawyers can help formulate guidelines that keep you out of trouble with hiring, firing, safety, and sexual harassment.

Money. Banks (and non-bank lenders) want to saddle loans with lots of conditions. Lawyers will try to cap personal guarantees and exclude certain assets like a home or a spouse’s property. Attorneys can also help with collections.

Contracts. Lawyers can help strengthen your standard contract. They should also review critical contracts for delivery, service, warranty, and other terms.

How to Choose the Right Lawyer

So how do you find the right lawyer for your business?

Pick a specialist. “If your lawyer is doing everything from DWI to divorce to business acquisitions, either he’s a genius or taking on too much,” says Umphrey. “Generalists tend to fall apart on day-to-day business law troubleshooting. A good business lawyer can answer most of your questions and knows when to call for expert help.” When looking for a lawyer, ask how much time

they spend on business work daily, what types of business work they do, where they feel comfortable representing you, and why.

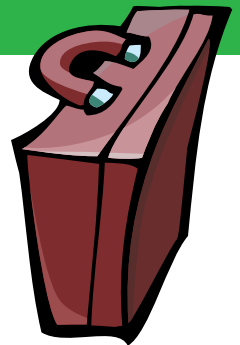
Find someone practical. Since you don’t have an unlimited budget, you need a lawyer who knows how to focus on what’s important. Umphrey recalls a client who wanted to sue his former partners: “We asked him if it was really worth \$50,000 in legal fees to go after \$75,000 with no guarantee of winning.”

Find someone who talks sense. Find someone who explains complex legal issues clearly so you understand your choices. And watch out for answers that are too simplistic. For example, a lawyer who gives advice about firing an employee without asking about age, gender, race, and disabilities may not understand protected employment classes, warns Umphrey.

Find someone who wants you. Your attorney should want your business. Have a sit-down and make sure you feel comfortable with one another. Ask if he or she works with businesses your size. Ask how fast the lawyer will return your phone calls. Make sure you walk away feeling positive about the relationship.

Ask about fees. Legal advice is not cheap. Attorneys usually charge hourly rates or flat fees for most services and contingency fees on lawsuits where they recover money. Sometimes, these fees are negotiable. Remember – low hourly rates do not always result in low costs. Try to get a feel how long a typical job, such as a contract review, might take.

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WJTA Vacuum Guide – continued

materials handling issues. Finally, it discusses hose and fitting selection.

Working safely. To bring risk into focus, this section lists hazards that vary from site to site (chemical waste, burns, high voltage, etc.) and those that are always there (tripping, working around vacuum trucks). It covers PPE, falls (the top cause of worksite accidents), confined spaces, and the use of vacuum breakers. It also reviews proper truck operation.

Job completion. After the job is done, workers need to clean their equipment to avoid cross-contamination and unexpected chemical reactions. The chapter also covers emergency shutdown procedures, including communications and the use of portable vacuum breakers and vacuum breaker switches.

Regulations and certifications. There are many government regulations that govern the operation of heavy-duty vacuum trucks. The U.S. Department of Transportation (DOT), for example, regulates the transport of hazardous materials, the code vacuum trucks that carry them, and the inspection cycle needed

Confined Space Sense Saves Lives

Every year, nearly 100 American workers die in confined spaces. Most of them never even knew they were in danger.

Dean Blauser of HazMat Solutions, Inc., in Grand Haven, Mich., tracks those accidents for his confined space training classes.

He recalls one worker who poked his head into a storage tank. The tank was filled with odorless nitrogen. After inhaling, he passed out from lack of oxygen and died of asphyxiation.

Another worker was fixing a pump in a pit when a part shot out under pressure. It knocked him cold and he drowned when leaking water flooded the pit. Blauser also recalls many times when workers rushed in to save a friend, only to succumb themselves.

Nearly all confined space accidents are preventable. Here are four points to consider:

Know a confined space when you see it.

According to the Occupational Safety & Health Administration (OSHA), confined spaces have three characteristics:

- Workers can get into them. They might include tanks, railcars, sewer lines, storage bins, or silos.
- They have limited access. They may have only one way in or out, and it may be hard to reach in an emergency.
- They are not designed for continuous use. They may lack ventilation or lighting, or hold moving machinery or electrical junctions.

Many industrial spaces meet this definition.

Jason Kurpinski, operations manager of Kurpinski/HUCO Environmental Services of Jackson, Mich., often jets and vacuums under metal presses that make auto body parts. "These spaces have limited egress, they're more than four feet deep, and they're filled with metal scrap and oil that can be dangerous," he says.

for code vehicles to maintain their certification. This chapter covers basic regulations, DOT hazard identification placards, and legal weight.

"This is not a document that we're going to let sit or stay static," says WJTA's Carroll. "We already have meetings set up at next year's Pumper Show to get feedback and discuss what we can improve, change, or delete."

In the meantime, you can order copies of *Recommended Practices for the Use of Industrial Vacuum Equipment* from WJTA either on its Website (www.wjta.org) or by calling 314-241-1445. The cost is \$5 for WJTA members and \$10 for non-members, with volume discounts available.

Dylan Osborne, safety manager at Advanced Vacuum Services, Inc., in Greensburg, Ind., cleans under factory paint booths or 10,000-gallon tanks with only one hatchway. He explains that simply jetting off organic sludge can release toxic hydrogen sulfide or explosive methane.

Know what you're getting into.

Osborne reviews confined space issues with customers before coming to the site. "If it sounds really dangerous, I'll spend a few hours performing a hazard analysis," he says.

If a chemical is involved, he looks up its material safety data sheet (MSDS) beforehand. It lists the proper protective clothing to wear and warning signs of exposure. Once at the site, workers take air safety readings before entering. They also lock out energy sources so machines can't start by accident.

Train right. Both Kurpinski and Advanced Vacuum give workers an eight-hour, hands-on confined space class every year.

Training involves teamwork, says Blauser. The smallest confined space team should have two members. The person in the space should know how to identify lockout/tag-out problems, unusual odors, and chemical exposure symptoms. The outside attendant monitors the worker and knows how to help.

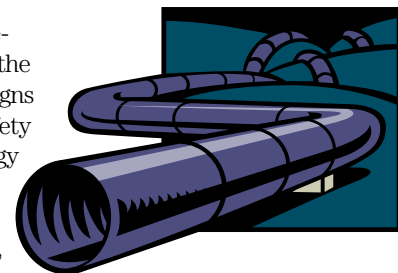
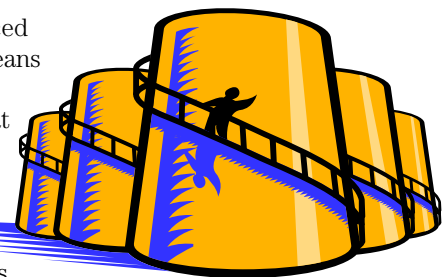
Don't enter permit spaces unless you're prepared. Some confined spaces pose additional dangers, such as hazardous gases, entrapment by moving equipment, or engulfment (cave-in or flooding). They require an OSHA permit to enter.

Permit spaces require special precautions. OSHA requires companies to train workers to enter a permit space and to post a third worker outside the space.

Workers also need specialized equipment. Kurpinski, for example, brings a small trailer to permit spaces. It contains an air monitor to measure for hazardous gases, an air blower to circulate fresh air into the space, and protective clothing. He also brings harnesses that attach workers to safety lines. If something goes wrong, the attendants can pull or winch the worker out of danger without exposing themselves.

Still, the best way to deal with a confined space is not to enter it, says Kurpinski. "We try to use longer lances and longer vacuum extensions so we don't have to get into the hole" he says.

He also builds confined space personnel into his estimates. "If the hole falls within the description of an OSHA permit confined space, we spec it into the job," he explains. "Many shops don't understand the regulations, so we try to bring them up to speed. Once people understand the regulations, they're usually willing to go along. If they're not, we walk away. The possible loss of life always exceeds the value of any job."



“ Nearly all confined space accidents are preventable. ”



FS Solutions for All Your Needs

You've already invested in expensive industrial cleaning equipment. Now check out FS Solutions, Federal Signal Environmental Solutions Group's chain of service centers that provide everything you need to run your equipment more profitably.

"FS Solutions provides everything from parts, accessories, and training to repairs, rentals, and used equipment," says Federal Signal Environmental Solutions Group Sales Director Tony Fuller.

There are already centers in Birmingham, Ala.; Houston; Toledo, Ohio; and Streator, Ill. "We just signed a lease for a new center in Long Beach, Calif., and plan to open more centers in 2008," says Fuller.

Each FS Solutions center offers a wide range of services. Although they vary with location, they include:

Parts. FS Solutions centers stock tens of thousands of waterblaster, vacuum truck, vacuum excavator, and sewer cleaner parts and accessories. If a part is not in stock, staff can track it down in seconds in our other locations and warehouses and ship it to you within hours.

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Repair. We handle more than Guzzler, Vactor, and Jetstream. Technicians at most of our centers are factory authorized to repair Fruitland, Hibon, F.E. Myers, Dana, and Omsi equipment and factory trained on Roots Dresser and Holmes blowers. We also repair water pumps for blasters and sewer cleaners. "From a new paint job to a complete rebuild, we can fix any blower, water pump, vacuum truck, or water blaster you bring in," says Fuller.

Used equipment. Our Birmingham, Houston, and Streator centers have the widest selection of used industrial cleaning equipment in the United States. These include fully restored and warranted Class A machines.

"Simply put, FS Solutions is a one-stop shop for all your needs," concludes Fuller.

For more information, please visit us at www.fssolutionsgroup.com.

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