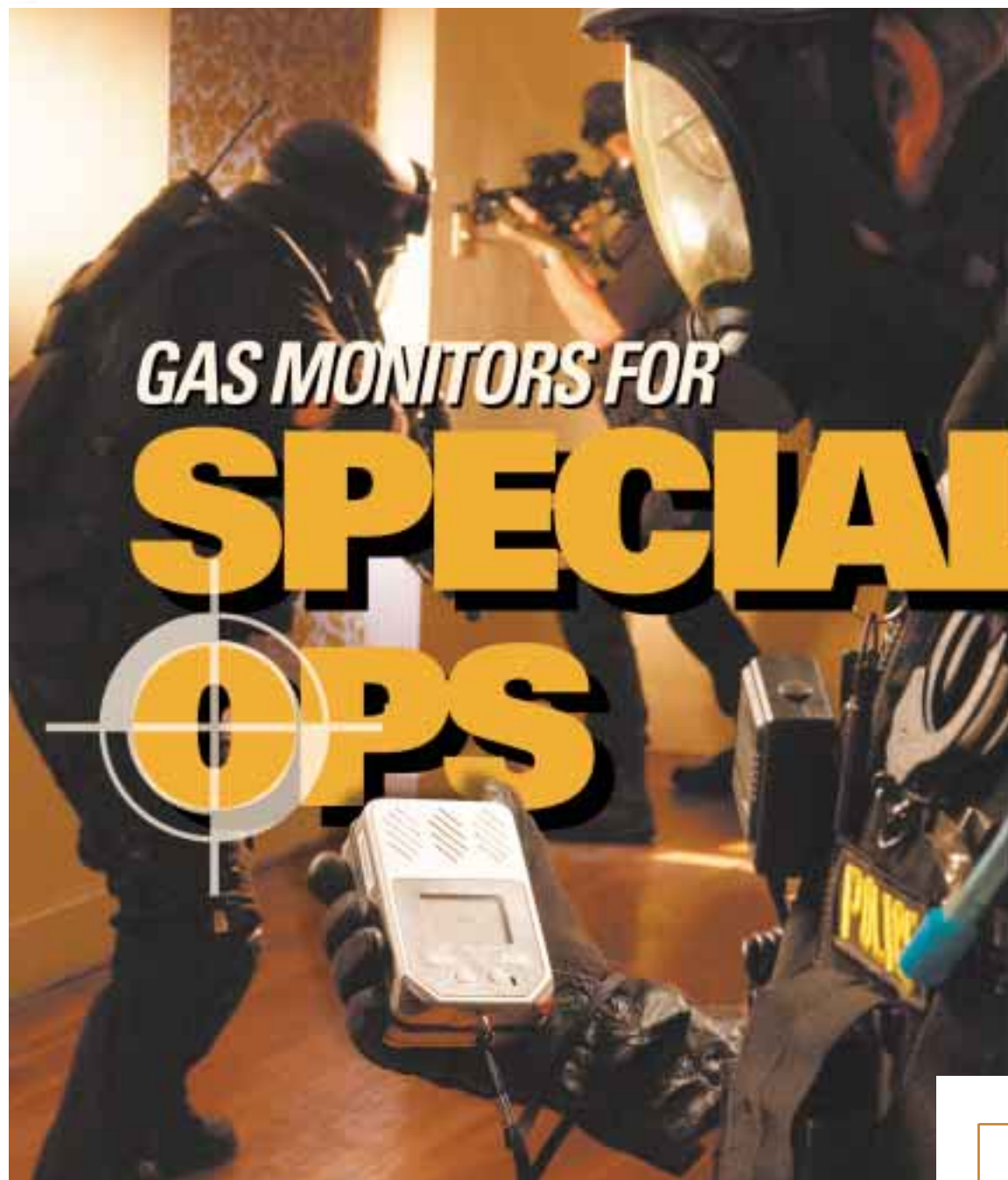


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NOVEMBER 2004

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Seizing meth labs — a toxic stew of solvents & gases

By DAVE KUIAWA

Early morning sun is just about to break the horizon. It's 6:00, the wind is deadly calm, and a dim light dances across the frosty meadow — the only thing that stands between your team and a plain-looking farmhouse. But this farmhouse is far from benign.

You've received complaints about strange smells wafting from the property, traffic comes and goes at all hours of the night, and a small dump sits in the back containing cold medicine bottles, modified propane tanks, solvent containers, and lithium battery skins. All signs of a small clandestine drug lab on the premises.

You brief your team before the raid while a thousand things race through your mind. On

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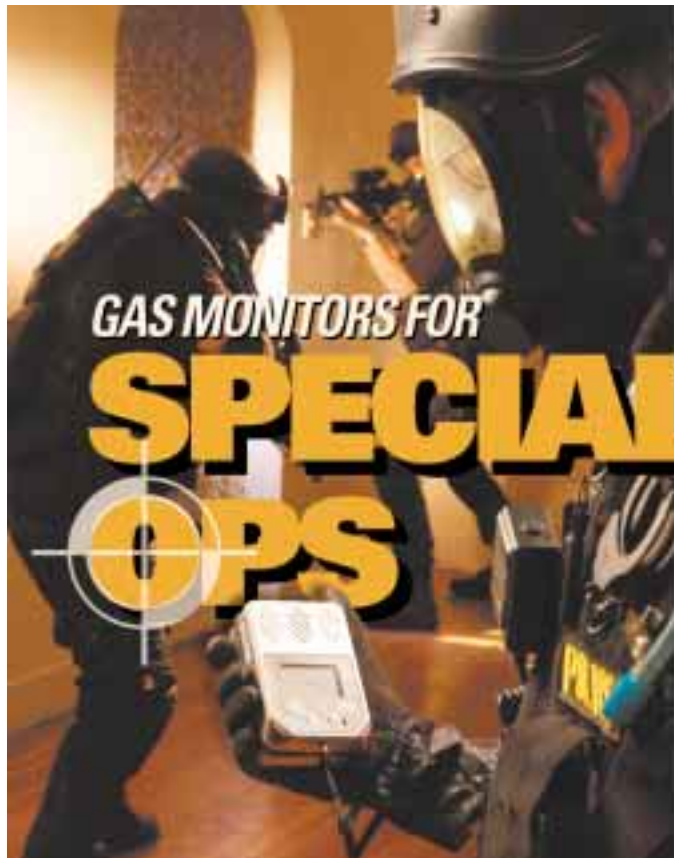
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the top of the list: what are the hazards you might encounter? The physical ones are most obvious. You've heard of everything from landmines, home-made bombs, and automatic weapons, to snakes, tigers, and rottweilers.

Unseen hazards

Then there are unseen gas hazards — they can be even more deadly. A clandestine drug lab, or “clan lab” for short, is really a crude chemistry lab operated by people ranging in experience. Those who “cook” the product have backgrounds that vary from chemical engineers to junkies wanting to sniff their next high. Crude equipment operated by inexperienced

hands makes the lab highly unstable.

The most popular of all clan labs are ones that produce methamphetamine or “meth.” Methamphetamine is a stimulant that is generally sold in a crystal or powder form. It's ingested or smoked and is highly addictive. Meth production is quite simple and highly profitable. Most of the chemicals required to produce meth are commonly available and the cooking tools are in just about everyone's house.

You would never consider entering a tactical situation without your bullet-proof vest, and you should never breach a clan lab without a device to measure the levels of deadly toxic and explosive combustible gas. Here's why:

Multiple exposures

Meth is cooked up usually two ways: using a method called the “Nazi Dope” and another called the Red Phosphorous or RP method.

“Nazi Dope” produces small quantities for mostly personal use. Ephedrine or pseudoephedrine (over-the-counter cold medicine) pills are crushed and mixed with a common solvent such as acetone or lacquer thinner. This frees the ephedrine from the binder. The mixture is filtered to leave the solvent/ephedrine mixture behind. The mixture then sits so the solvent can evaporate, leaving powdered ephedrine. Due to the free solvent vapors in the air, this stage of the process is highly volatile and potentially explosive.

The powdered ephedrine is then combined with lithium battery strips from disassembled batteries and anhydrous ammonia is added. The chemical reaction results in a material called meth oil. Toxic ammonia gas is present during this stage of the process, due to

the uncontrolled use of liquid ammonia.

The next step: manufacturing a crude hydrogen chloride gas generator by combining common acids

Meth might appeal to workers because it provides the “superman syndrome” — excessive amounts of energy and a false sense of confidence.

and rock salt. The hydrogen chloride gas is then bubbled through the meth oil. Meth crystals fall out of

METH USE SOARS

Methamphetamine use is up 68 percent in workplace drug tests, according to Quest Diagnostics, a national drug testing company. Use of meth is growing so quickly it may surpass cocaine as the top illegal stimulant. Some users binge for hours on the drug then stay up for days at a time. Not someone you'd want to work with.

“The person may become a disturbance at the workplace; the person may, depending on the level of irritability, throw a temper tantrum or have hallucinations or some other bizarre behaviors,” said one health expert.

Meth might appeal to workers because it provides the “superman syndrome” — excessive amounts of energy and a false sense of confidence. But it can cause everything from increased heart rate to anxiety and unusual violent behavior.

the solution. Deadly hydrogen chloride gas is present and poses a severe health risk in this final stage of the process.

The Red Phosphorous or RP method produces large quantities of meth — and large quantities of hazardous waste. “Super labs” often run by organized crime use this technique, which is a bit more sophisticated and controlled. Laboratory grade equipment and chemists are used to maximize production and quality.

The RP process also produces powdered ephedrine. The powder is then mixed with red phosphorous (extracted from match packs and flare strikers) and iodine. The mixture immediately begins to produce hydriodic acid and toxic phosphine gas.

The mixture is heated in a controlled environment and the cook lasts six to eight hours. During the process, the off-gases need to be cooled to minimize phosphine gas production. During this process, phosphine gas production will range anywhere from 5 percent to 95 percent by volume — extremely lethal concentrations.

Know what you're getting into

So how do you best protect yourself in this toxic stew?

Until recently, the only technology available to monitor phosphine, ammonia, and hydrogen chloride gas were colorimetric indicator tubes. These glass tubes were cumbersome, took several minutes to react, and were grossly inaccurate.

Now there are direct-reading gas monitors capable of monitoring the five target gases simultaneously and continuously. The monitors use the latest lithium-ion battery technology and run for 24 hours on a single charge. Optional sampling pumps with a sample draw range of 100 feet allow you to stay at a safe distance from the potential gas hazard.

Small enough to be worn on the belt, the ammonia, phosphine, hydrogen chloride, oxygen, and combustible gas monitors use the latest technology

Safe, well-protected enforcement teams mean safe, well-protected communities.

so you can protect yourself while recording the ambient gas reading and documenting who is using the monitor and where are they using it. These valu-

WHAT YOU NEED TO KNOW ABOUT METH LABS

The U.S. is experiencing an “exploding epidemic of methamphetamine labs,” according to Congressional testimony.

The number of Drug Enforcement Administration meth lab seizures has risen from fewer than 8,000 in 1999 to 10,000 last year, according to USA Today. “It’s pushed its way like a firestorm across the United States,” says a special agent with the DEA.

Clandestine production accounts for nearly all of the meth trafficked and abused in the U.S. Domestic meth production, trafficking, and abuse are concentrated in the western, southwestern, and midwestern U.S. Meth is also increasingly available in portions of the south and eastern U.S., especially Georgia and Florida. Clandestine labs in California and Mexico are the primary sources of supply for meth available in the U.S..

Many people are unaware that they’re living near a meth lab. Here are some things to look for:

▶ Unusual, strong odors (like cat urine, ether, ammonia, acetone or other chemicals).

▶ Residences with windows blacked out.

▶ Renters who pay their landlords in cash. (Most drug dealers trade exclusively in cash.)

▶ Lots of traffic — people coming and going at unusual times. There may be little traffic during the day, but at night the activity increases dramatically.

▶ Excessive trash including large amounts of items such as: antifreeze containers, lantern fuel cans, red chemically stained coffee filters, drain cleaner and duct tape.

▶ Unusual amounts of clear glass containers being brought into the home.

Presence of the following items could indicate the existence of a meth lab:

- | | | |
|------------------------------------|------------------------------|-----------------------------------|
| ✓ Alcohol | ✓ White Gasoline | ✓ Batteries/Lithium |
| ✓ Ether | ✓ Phenyl-2-Propane | ✓ Sodium Metal |
| ✓ Benzene | ✓ Phenylacetone | ✓ Wooden Matches |
| ✓ Toluene/Paint Thinner | ✓ Phenylpropanolamine | ✓ Propane Cylinders |
| ✓ Freon | ✓ Iodine Crystals | ✓ Hot Plates |
| ✓ Acetone | ✓ Red Phosphorous | ✓ Ephedrine
(over-the-counter) |
| ✓ Chloroform | ✓ Black Iodine | ✓ Cold Tablets |
| ✓ Camp Stove Fuel/
Coleman Fuel | ✓ Lye (Red Devil Lye) | ✓ Bronchodilators |
| ✓ Starting Fluid | ✓ Drano | ✓ Energy Boosters |
| ✓ Anhydrous Ammonia | ✓ Muriatic/Hydrochloric Acid | ✓ Rock Salt |
| ✓ “Heet” | ✓ Battery Acid/Sulfuric Acid | ✓ Diet Aids |
| | ✓ Epsom Salts | |

Source: Koch Crime Institute, www.kci.org

able features provide you with data that is admissible in court.

The gas monitors also interface with automated calibration systems that control calibration and bump testing routines and the timing of them. All routines are documented on a PC to prove the accuracy of the monitor. Certificates are available for printing to confirm and validate evidence of the calibration.

Protection that’s a win-win

Clan Lab Enforcement Teams operate in “work environments” most of us never see, or would want to enter. It’s a dirty, dangerous business filled with booby traps, unseen hazardous gases, jittery junkies and professional criminals. If ever a work

environment demanded guts — and specialized, easy-to-use gas monitoring equipment — this is it. Safe, well-protected enforcement teams mean safe, well-protected communities. And for that we can all be thankful. | **ISHN**

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