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New Gear

Advanced technology and some new equipment are changing how the Guard responds domestically

Plus: Guard Still in Iraq as Dusk Approaches for New Dawn

solar panels that together can generate two kilowatts of electricity. That's enough to power radios, run a water pump, operate a radio retransmission site and recharge batteries, says Maj. Timothy Franklin of the Army Research, Development and Engineering Command.

Over the course of a year, solar shade use in Djibouti saved more than \$230,000 in fuel costs, according to the Army.

Compared to current petroleum-powered generators, solar shades are blessedly silent, require little maintenance and have no logistics trail, Army scientists say.

Besides Djibouti, they've been used with success at the National Training Center in the California desert, Franklin says. And though they're still experimental, they show some promise for use in disaster response operations.

DRY DECONTAMINATION

Whether it's an accident at a chemical plant or a terrorist attack, the Guard has to be ready to decontaminate victims. Typically that means setting up shower tents and scrubbing people with water and decontamination solutions.

But the Georgia Guard has successfully tested a new dry decontamination method that simply wipes most contaminants away.

Using decontamination mitts that look like large oven mitts, members of Georgia's CERFP demonstrated last fall that dry decontamination can be effective against 80 to 90 percent of the contaminants the Guard is likely to encounter.

The mitts are made of a new high-tech fabric called Fibertect. It's a highly absorbent material made of two layers of cotton with a layer of activated carbon sandwiched in between.

"It absorbs any kind of toxic chemical," including chemical warfare agents, says Amit Kapoor, the president of First Line Technology, which supplied mitts to the Georgia Guard for testing.

Fibertect was developed by Texas Tech University for the Defense Department and the Department of Homeland Security.

The mitts don't neutralize the chemicals, but rather absorb and trap them. They have been shown to be effective at decontaminating clothing, skin, weapons and equipment such as computers that can't be cleaned with water, Kapoor says.

Current decontamination practice is "you have to wash down people—hundreds or maybe thousands of people" after a major incident, Kapoor explains. "The mitt offers you immediate decontamination," although follow-on showers and decontaminating solutions probably will not be abandoned.

After testing, Sgt. Shannon Richardson, a senior nuclear, biological and chemical specialist with the Georgia Guard, says he would urge the National Guard Bureau to add Fibertect to the CERFP's equipment inventory.

In addition to mitts, Fibertect is available as various size wipes for cleaning equipment and in sheets as large as 20 feet long and 4 feet wide "for sopping up chemicals," Kapoor says.

NETWORK IN A BOX

It's hurricane season again, and this year the Florida National Guard is taking delivery of 44 miniature cell phone systems designed to provide emergency communications capability when commercial networks and other communications have been knocked out.

It's a "3G cellular network in a box," says Mike Bristol, senior vice president and general manager of TeleCommunications Systems Inc., which received a \$3.8 million contract to provide the communications gear.

Each 15-by-22-inch box serves as a small GSM cell phone node. GSM is a technology standard used by about 80 percent of the world's cell phones.

Each tiny network can be activated in less than 10 minutes and will provide cell phone service for a five to seven kilometer area, Bristol says.

The networks come in two sizes—a small one that can handle seven calls simultaneously and a larger one that can handle 23, he says.

The networks are intended for use by "the first of the first responders," and the Florida Guard expects to use them mainly to establish initial command and control in the immediate vicinity of an emergency.

In addition to letting Guardsmen and other first responders communicate, the system will also "sniff" for working cell phones within its range and send them text messages such as instructions on where people can go to receive aid, Bristol says.

In addition to phone and text service, the network will support data communications.

Upon arrival at a disaster site or other emergency, the systems operate initially on battery power, and later may be powered by small generators, Bristol says.

The mini-network equipment would serve until arrival of Florida's much larger Regional Emergency Response Networks that can be trucked into the disaster area. 📡

William Matthews is a freelance writer based in Springfield, Va., who specializes in military matters. He can be contacted at magazine@ngaus.org.



NGAUS ACTION

Providing the National Guard with the latest force structure, technology, equipment and specialized training for domestic missions has long been a NGAUS priority.

The association was an early supporter of the UH-72A

Lakota light utility helicopter and state-of-the-art communications. This session, NGAUS is strongly supporting a bill (S. 28) introduced by Sen. John D. Rockefeller IV, D-W.Va., that would allocate the D Block in the 700 MHz band of spectrum to public safety to develop a nationwide wireless broadband network dedicated to first responders. The bill includes \$11 billion for the construction, maintenance and operation of the network.