March 2013 | Volume 1 | Issue 3

CBARR NEWS

Edgewood Chemical Biological Center

A worldwide leader in CB solutions

Trusted partnerships are more vital now than ever. The Chemical Biological Application and Risk Reduction (CBARR) Business Unit at the U.S. Army Edgewood Chemical Biological Center (ECBC) continues to forge reliable working relationships with customers and mission partners to improve personal safety and implement energy solutions on project sites. Not to mention, working across the country to expand the Center's chemical analysis capability. The power of collaboration pays off, too—just ask Steve Norman, CBARR's graduate at the Aberdeen Proving Ground Senior Leadership Cohort. Or Jerry Wagner, the chemical engineer technician who's retiring after a 31-year career. These stories began when a community gathered around a shared vision and mutual passion for chem-bio defense. We've got plenty to celebrate this March, but even more of a reason to pursue the kinds of lasting partnerships that have provided the foundation needed to build a legacy. Read on!

When a South Dakota beef producer voiced concerns over the safety of its product to a meat inspection staff, the Animal Disease Research and Diagnostic Laboratory (ADRDL) at South Dakota State University (SDSU), called on the Food Emergency Response Network (FERN) for help in early January. Within a few days, ECBC answered.

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INSIDE THE ISSUE

Power up! Project sites get charged

Jeff Gonce, CBARR field maintenance branch chief, has a patent pending with the U.S. Patent and Trademark Office for his invention of the Multiple Power Distribution System (MPDS). The MPDS is a transportable power distribution technology used on project sites across the country, including Spring Valley, Washington, D.C., and saves customers time and money to establish site-wide power to equipment for any given project, even overseas.

The MPDS is a rapidly deployed system that uses commercial off-the-shelf electrical supplies configured to support complex site set-up and mobilizations by providing power distribution to multiple items. Gonce conceived the system after identifying a need to have a transportable power solution that could be deployed to multiple sites and reduce the amount of time it took to generate power to all necessary pieces of equipment on a project site. The MPDS satisfies customer field requirements and can operate in remote locations using two generators to power the system. In the event of a power failure, the MPDS is capable of automatically switching to the backup generator in less than a minute. Once primary power is restored, the MPDS switches back to its original input source.

The MPDS is constructed of a steel tube frame sheathed in special order aluminum, and has an input capacity of 400 amps.

The previous method for distributing power at project sites involved the construction of temporary structures using hard wires, panel boxes, circuit breakers and disconnects to adapt private power sources to the equipment. Upon project completion, the system would be disassembled, rendering many components unusable. Not the case with the MPDS, which is currently available in two configurations: trailer-mounted and skid-mounted. Now, customers can operate on clean, reliable energy without the complexity of a traditional site set-up. The MPDS is currently being used on project sites.

The MPDS is equipped with light poles that deliver light to the project site, as well as a wind sock to show wind direction in the event of a site evacuation.

STAY CONNECTED with hotspot Internet

Typically found in coffee shops and cafes where java-loving writers tap-tap away at their keyboards and business people share conversations over a cup of Joe, Wi-Fi Internet is a great way for people to stay connected on all of their mobile devices. Now, CBARR has integrated hotspot Internet technology into its operations for personnel traveling abroad. Goodbye air card, hello high-speed!

Mobile hotspot technology allows a number of people to connect multiple Wi-Fi enabled devices at the same time. Notebooks, MP3 players, cameras and smartphones—you name it. Coworkers can stay connected to each other from site locations around the world, and to CBARR headquarters at the Aberdeen Proving Ground, Md., even when outside the office. The hotspot investment has reduced costs and improved communications across the organization.

APG Senior Leadership Cohort

Steve Norman one of three ECBC personnel to graduate from 2013 class

ABERDEEN PROVING GROUND, Md. – The fourth Aberdeen Proving Ground Senior Leadership Cohort graduated 49 participants from its 2013 class on Feb. 14, including three from ECBC. Steve Norman, Ron Pojunas and Peter Emanuel represented all three ECBC directorates in the cohort program, which was created to build a self-sustaining leadership community among high potential GS-14/15 and equivalent level managers at APG.

The senior leadership program was modeled after the Office of Personnel Management's Executive Core Qualifications, and was designed to develop leaders as individuals within team and organizational atmospheres in order for the APG community as a whole to better meet the challenges of a changing defense environment.

"Never lose sight of the network you have created and the cohort that has formed here today because that is invaluable," said Kathryn A. Condon, executive director of the Army National Military Cemeteries. Condon served as the keynote speaker at the ceremony and addressed the graduates with reflections from her own leadership journey.

"What do you do as a leader?" Condon asked. "Leaders make decisions. If you're afraid to make a decision, then be a manager. Leaders set the standard and then train to that standard and hold people accountable. There are no perfect solutions and there are no perfect answers, but don't be afraid to act."

Condon encouraged the cohort graduates to weigh the pros and cons of every decision, assessing what they know versus what they don't know. People, Passion, Perseverance and Public Service were "the four P's" Condon used to reflect on her career as she offered graduates a guideline for discovering their own leadership philosophies.

The cohort program included nine learning periods that drew upon leadership concepts and shared knowledge from coaches who have experienced similar work situations on results-driven projects. Acting as change agents within the APG community, the participants completed action-based learning that required individuals to expand their comfort zones and adapt to new ways of problem solving through scheduled meetings and daily reflections. The program concluded with executive project briefings to General Officers and Senior Executives reflecting the real return on investment for the organization. The briefings are considered contributions to the on-going strategic mission as well as organizational change initiatives at APG.

Along with Norman, Pojunas and Emanuel represented ECBC at the graduation ceremony. Pojunas is the Associate Director for the Joint and Interagency (JIA) for ECBC's Engineering Directorate. His responsibilities include the management and direction of the directorate's chemical and experimental agents, and toxic industrial chemical testing capabilities. Emanuel serves as the BioSciences Division Chief within ECBC's Research & Technology Directorate. As the biological research lead, Emanuel oversees a team of life scientists who work to discover new ways of protecting the Warfighter using biological tools and processes.

APPROVED FOR PUBLIC RELEASE

Employee Profile: Steve Norman

Chief of the Chemical Services Laboratory, CBARR

Norman oversees a branch of 55 chemists, biologists, technicians and administrative staff. The high-throughput, full-service laboratory is responsible for detecting chemical and biological targets in various matrices.

Leadership philosophy: Lead by example and provide the proper amount of guidance, training and growth opportunities that help employees reach their full potential. This "Golden Rule" is paramount for interactions with employees, management and customers.

The fourth Senior Leadership Cohort graduated 49 participants on Feb. 14 at Top of the Bay, located at the Aberdeen Proving Ground, Md.

SDSU calls on CBARR for chemical testing of meat product

FERN links organizations, CBARR expands sampling capability

(CONTINUED FROM P.1)

"It was really great," said Laura Ruesch, research associate II at SDSU. "I would have had no way of knowing that ECBC existed if it weren't for the FERN. It was a really great way to connect people who have the resources and similar interest in food testing, but otherwise would not have had contact with one another."

"It was a great way to connect people who have the resources, but otherwise would not have had contact with one another."

-Laura Ruesch, SDSU Research Associate II

FERN, an integrated system of food-testing laboratories across local, state and federal levels in the United States, facilitated the partnership between SDSU and ECBC's CBARR Business Unit laboratories at the APG, Md. Federal and state funding cuts caused SDSU's biochemistry laboratory to close in 2011, leaving the university without the facility or personnel to support a core chemistry capability for food testing. Furthermore, the absence of a Department of Agriculture laboratory in South Dakota left Ruesch with little state resources to reach out to. Instead, she utilized her contacts within FERN to connect to CBARR's Environmental Chemical Monitoring Laboratory.

As part of South Dakota's meat inspection program, SDSU needed to conduct additional chemical testing on a meat sample to determine whether or not Ivermectin, an anti-parasitic agent, was present. According to Ruesch, the Ivermectin compound is used in a pesticide that is poured on live cattle to control internal and external parasites such as roundworms, cattle grubs, mites, lice and flies.

"Typically, there is a withdrawal period of 45 days before they can slaughter that animal," Ruesch said. "Whatever product was absorbed into the body of the cow was processed by the liver and kidneys and excreted via feces and urine so levels present in the tissue are reduced to tolerable levels."

The meat sample in question, however, had been processed before the 45-day time period, after only 28 days. Additional testing was conducted by CBARR to ensure the meat sample was not contaminated and the Ivermectin compound was not still present. The anti-parasitic agent is widely used as insecticides in agriculture, gardens and veterinary practices. When exposed to unsafe levels of the chemical, humans may develop mydriasis, depression, coma, tremors, ataxia, stupor, vomiting and drooling.

After two weeks of testing, CBARR did not find any hazardous levels of Ivermectin in the meat samples.

"A lot of chemistry laboratories that have such a high sample throughput usually don't have the time for some of these more unique cases," Ruesch said. "ECBC really went out of their way to help us out. A lot of places just didn't have the time or the qualified staff available to investigate that method and put it into place."

Nam-Phuong Nguyen, CBARR senior chemist, was excited to take on the task. Based on previously proven USDA methods and the work conducted with raw milk samples, Nguyen developed and verified the appropriate method for detecting the presence of Ivermectin in the ground beef product sample provided by SDSU.

ADRDL is integrated into SDSU's Department of Veterinary and Biomedical Sciences, and joined FERN in 2004. Photo courtesy of SDSU.

"After we received the samples, I applied my research to develop the analytical methods," Nguyen said. "Using the reference standard provided by Ruesch, I started working on the acquisition methods by first running in scan mode to find and optimize the signal intensity at the peak of interest."

(CONTINUED P.8)

Safety First: prepping for Melbourne, Australia

Chemical surveillance measures protect deployed personnel

Traveling to Australia can feel like a time warp. Sixteen hours ahead of Eastern Standard Time can result in jet lag that causes the body's physiological responses to be out of sync with its normal circadian rhythms. It's no wonder CBARR has partnered with the Kirk U.S. Army Health Clinic to prepare personnel for the journey with safety measures that ensure optimal on-site working performance and environmental conditions halfway around the world.

"Each site that they go to, whether it is Australia, Albania or Washington, D.C., is a little bit different so sometimes there are special procedures for a particular operation," said Lauren Abbott, a certified Physician Assistant at the Kirk U.S. Army Health Clinic. "With this particular operation in Melbourne, they are doing some work that requires scaffolding because the height of the rooms is so tall."

Abbott traveled to the Melbourne operation site in September with about 20 other CBARR personnel who will be supporting the Australian Department of Defence (ADoD) during an upcoming remediation mission. For two weeks, pre-operational set up and mock exercises were conducted by personnel who ran through several staged scenarios, including what would happen if someone had an emergency while on the scaffolding.

"What if somebody was exposed to something? Had chest pain or a heart attack? How would you get them down? We were able to run through that procedure several times and stage multiple scenarios. Safety is definitely one of the first things CBARR looks at in every type of operation," Abbott said.

Heat stress is likely to be the No. 1 safety issue posing a threat to workers who are encapsulated in personnel protective equipment (PPE) for hours at a time. Abbott estimated that the average worker would be able to work effectively for four or five hours on a day when it is 44 degrees outside. However, once temperatures climb closer to 100 degrees as in Australia, the time to be able to work safely becomes significantly less. CBARR does have a heat stress plan that incorporates a work/rest cycle that compares the outside, or ambient temperatures, with humidity levels to determine how long a person can work before needing to rest.

"Essentially, the biggest thing is going to be heat stress. If they are physically fatigued, maybe they didn't get enough sleep or are dehydrated, that can really put stress on the body. With additional respiratory equipment and physical protection gear, it can really get you tired pretty quickly. The key is to stay well-rested and drink plenty of fluids."

Physical fitness also plays a role in how well a person can perform given tasks in challenging environments where heat stress is likely. Prior to traveling, personnel must pass a "step test" that requires stepping on a 10-inch step stool at a moderate pace for three-minute intervals. During the rest period, healthcare personnel like Abbott check their heart rates. Once cleared, this monitoring effort is replicated in the field where employees are required to wear heart rate monitors.

"That's one of the things that ECBC and CBARR use to monitor their employees for heat stress. While they're actually doing the operation, the workforce wears heart rate monitors so every 15-30 minutes an onsite safety officer can conduct a check to record heart rates. They can then determine if a person is getting fatigued or dehydrated and may need to sit for a few minutes or be pulled from the operation," Abbott said.

About 40 CBARR personnel will support the overseas effort, but must first be medically cleared with the appropriate vaccinations like Tetanus, which will protect against infection from cuts or punctures from sharp metal objects. Hepatitis A and B vaccinations must be up-to-date to prevent illness in case of exposure to blood-borne pathogens while working with pipes for waste disposal. According to Abbott, different countries require different vaccinations prior to entry and the destination may determine the kinds of bacterial diseases or viruses that are present in a given location. Fortunately, the Melbourne cityscape does not pose any particular threats, she said.

Asbestos, however, is likely to be present at the onsite location. The mineral fiber is found in rock and soil, and because of its strength and resistance to heat, has been used in building materials. Exposure typically occurs during demolition work or building repair, when the fibers may be disturbed and released into the air. Increased exposure to asbestos may cause harmful health effects and lead to lung disease; however, the Kirk U.S. Army Health Clinic conducts extra surveillance to keep an eye on personnel health over time.

Chest x-rays are conducted on a routine basis every five years to ensure there are no health changes inside the lungs. According to Abbott, the development of asbestos-related illnesses is unlikely due to the PPE CBARR is required to wear, including respirators, Tyvek suits and other appropriate gear that prevents the inhalation or exposure to such fibers.

(CONTINUED P.8)

ECBC CONNECTION

Celebrate Women's History Month!

Four leading women share their stories, advice, sense of humor and perspective on women in the workplace.

March 5, 12, 18 and 25 from 12-1 p.m. Berger Auditorium

What's the Word? Contact us!

Send us your feedback. For article suggestions, questions or comments please contact CBARR Communications Officer Kristen Dalton at **kristen.a.dalton.ctr@mail.mil**

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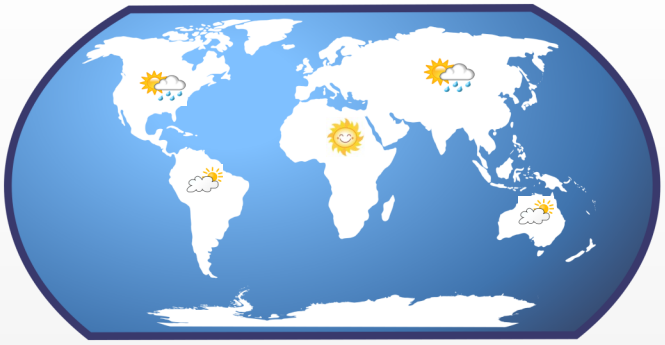
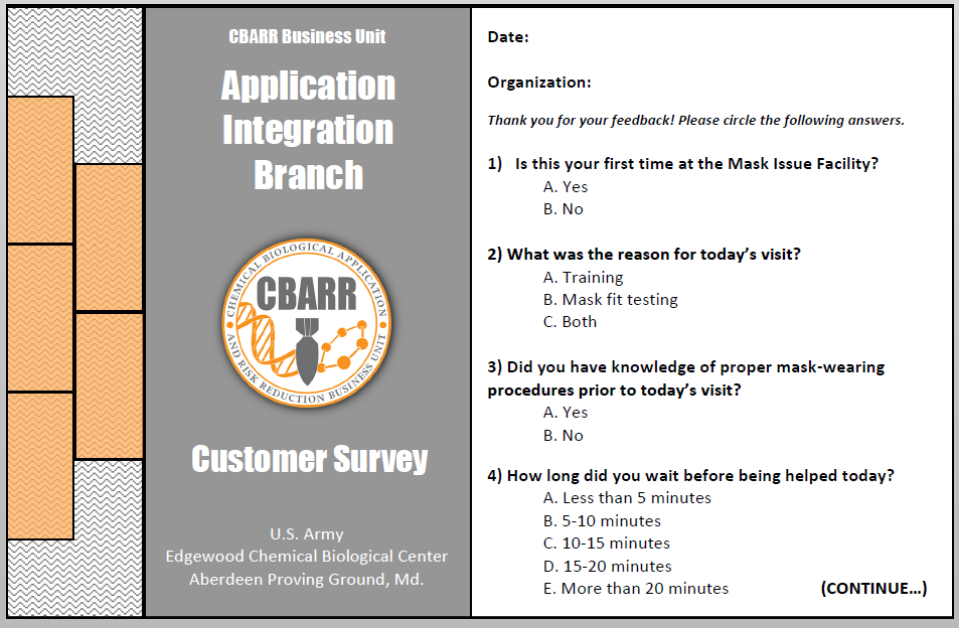
MARCH forecasts



WEATHER AROUND THE WORLD

CBARR LOCATIONS	AVG. HIGH (F)	AVG. LOW (F)	AVG. PRECIP. (in)
Aberdeen Proving Ground, Md.	52	34	3.89
Pine Bluff Arsenal, Ark.	64	43	4.81
Washington, D.C.	56	38	3.48
Deseret Chemical Depot, Utah	54	34	2.44
Umatilla, Ore.	56	36	0.78
Melbourne, Australia	75	57	1.70

MASK ISSUE SEEKS FEEDBACK FROM CUSTOMER SURVEYS



CBARR Business Unit

Application Integration Branch

Customer Survey

U.S. Army
Edgewood Chemical Biological Center
Aberdeen Proving Ground, Md.

Date:

Organization:

Thank you for your feedback! Please circle the following answers.

1) Is this your first time at the Mask Issue Facility?
A. Yes
B. No

2) What was the reason for today's visit?
A. Training
B. Mask fit testing
C. Both

3) Did you have knowledge of proper mask-wearing procedures prior to today's visit?
A. Yes
B. No

4) How long did you wait before being helped today?
A. Less than 5 minutes
B. 5-10 minutes
C. 10-15 minutes
D. 15-20 minutes
E. More than 20 minutes

(CONTINUE...)

The next time you head over to the Mask Issue Facility, whether it is to be issued an M40 mask for the first time or just a six-month routine equipment check, be sure to fill out a short customer survey that will help the Mask Issue staff identify areas of improvement to enhance your mask training and fitting experience. Thanks for the feedback!

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The number of years of APG employment

"They come to me and say, 'Innovate something that's going to work.' And every time they come to me with something, they want it right now."

-Jerry Wagner

CBARR Star Jerry Wagner

Innovative. That's the word Jerry Wagner used to describe his 31-year career at the APG, Md. The chemical equipment engineering technician has spent the last 27 years with CBARR, fabricating and installing equipment in support of various projects, including the decommissioning and demolition of the Pilot Plant complex. Wagner also served as the maintenance team lead for the Chemical Transfer Facility (CTF) and Thermal Treatment Facility, but his most notable achievement was his instrumental role in the design of a remote drill for the Chemical Agent Transfer System at the CTF. Wagner also set up equipment to support the deployment of CBARR personnel for a project in England to support the Project Manager for Non-Stockpile Chemical Materiel.

"Jerry was a 'go-to guy' on the job. If you needed something, he more than likely had it," said Tim Evans, chief of the Chemical Equipment Maintenance Branch, and Wagner's supervisor for the past 14 years. "His experience and knowledge within the organization was unique. There have been a lot of changes in the organization over the years, from regulations and the way we work, to environmental and safety awareness. Jerry has worked with the equipment and processes within these changes, which has made his experience invaluable to CBARR."

Prior to working at APG, Wagner was drafted into the U.S. Army from 1965-1967 and served as a power generator repairman. He attributes his fascination with machinery to his childhood when he would watch his father build things from scratch. Ever since then, Wagner has been creating, molding and problem solving maintenance issues for the CBARR organization, and is recognized as a vital team member in the safe handling and destruction of chemical warfare material around the world. At the end of a distinguished career, he reflected back on his favorite part of the job—the equipment—and is glad to have been part of modernization of new technology.

"I've really enjoyed my job down here and am definitely happy with my experience," said Wagner. "But now my challenges are really going to get me good—I've got three grandchildren to take care of!"

Wagner was born in Maryland and has family all across the country, from the Northeast region to Florida, Texas, Colorado and North Carolina. He said he looks forward to spending more time with his family and grandchildren, and is even contemplating a cross-country trip in his RV.

"There's a lot of United States I haven't seen yet," he said.

Nam-Phuong Nguyen, CBARR senior chemist

***FERN TESTING* (CONTINUED FROM P.4)**

Nguyen had previous experience creating and verifying testing methods, an invaluable resource when conducting this type of work with a quick turnaround time. According to Nguyen, other projects tend to take longer to complete because they typically involve validating another scientist's methods. But because Nguyen had designed the test methods for the FERN project herself, there was only one matrix and one analysis that needed to be done. Method validation serves to ensure that a specific process provides the results researchers anticipate.

"Before working on this project for SDSU, CBARR had done work on a food project for the USDA where we were asked to validate their developing method of detecting three compounds of interest in various food matrices, including orange juice, apple juice, egg yolk, egg white, whole milk, 2 percent milk, hot dog and ground beef, and deli turkey," Nguyen said. "Although the two projects were seemingly different, the same concepts, with respect to the development and validation of methods, were applied."

Out of nearly 10 laboratories across the country who responded to SDSU's FERN request for chemical testing capabilities, CBARR was the only one awarded the work. CBARR was accepted into FERN as a chemical, biological and radiological testing laboratory in January 2009, and has performed method equivalency testing for biological analysis with food matrices for other FERN partners. The work with SDSU marks the first time CBARR has expanded its FERN efforts to include chemical testing.

The partnership between ECBC and SDSU highlights each organization's commitment to detect agents of food-borne illness, and respond to emergencies involving the contamination of food. The inter-agency participation within the FERN structure enhances the network's ability to form, develop and operate across the country on complex issues involving the nation's food supply.

March 28, 2011

On this day in CBARR history… the organization received a certificate of appreciation from General Peter A. DeLuca, North Atlantic division commander for the U.S. Army Corps of Engineers, commending CBARR's support at the Spring Valley, Washington, D.C. site. For nearly two decades, CBARR has supported the on-going clean-up project and safely destroyed more than 100 items using the Army-owned Transportable Detonation Chamber T-30.

***AUSTRALIA* (CONTINUED FROM P.5)**

Abbott has also coordinated healthcare efforts with the ADoD, and onsite medical teams will be available to treat work-related injuries in the event of an emergency. Additionally, local urgent care centers are available to workers who experience sinusitis cold-related symptoms or other acute illnesses.

The Kirk U.S. Army Health Clinic provides healthcare services to different organizations on post, but ECBC may be its biggest customer at APG, Md. The chemical surveillance preparation was a unique opportunity for CBARR to work side-by-side with medical personnel.

"It was really impressive. It was wonderful for me as a provider to see how well everyone worked together as a team, and how much they take care of and look out for each other to keep everybody safe. It was really a once-in-a-lifetime opportunity to be able to participate with CBARR," Abbott said.

CBARR's unique ability to be deployed at anytime, anywhere is made possible through the exceptional medical and chemical surveillance measures implemented by the organization to ensure the safety of its workforce and customers both home and abroad.