



# CBARR NEWS

Edgewood Chemical Biological Center

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*A worldwide leader  
in CB solutions*



## A MESSAGE FROM LEADERSHIP

The U.S. Army Edgewood Chemical Biological Center (ECBC) faces plenty of unknowns in its everyday operations, from protecting the Warfighter against emerging chemical and biological threats to safely handling an unidentified recovered sample on remediation project sites. But it is the history behind ECBC's 96-year existence that supports an unparalleled mission to U.S. forces, and it is one of the reasons we celebrated the U.S. Army's 238th birthday on June 14. As ECBC's Chemical Biological Application and Risk Reduction (CBARR) Business Unit, it is important to understand our organization's history in relation to the larger Army story, one that has taken turns in stride and risen to every unimaginable challenge with a sound fortitude and determination to find solutions. Safety has always been a cornerstone for ECBC, and CBARR celebrates National Safety Month this June with the understanding that it is a founding principle when providing CB solutions, and one that remains an absolute in a world of change. The *CBARR News* is one of the ways we like to share our story as it evolves, so please take a few minutes to provide valuable feedback through our readership surveys on Page 6. Stay safe. Get connected. Read on.

—Tim Blades, CBARR Director of Operations

## INSIDE THE ISSUE

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# CBARR brings field capability home to Edgewood

## Monitoring aids characterization project for WWII-era buildings



**ABERDEEN PROVING GROUND, Md.** – The ECBC CBARR Business Unit is known for providing onsite field support at locations across the country. Now, the organization is utilizing this capability back home at the Edgewood Area of Aberdeen Proving Ground. Since May 20, a team of CARR personnel have provided air monitoring and sample analysis support for the E3200 block building characterization effort.

The project is led by the U.S. Army Engineering and Support Center, Huntsville (USAESCH) and operated by prime contractor Parsons.

“Because of the history of the buildings, there is the potential that chemical warfare materials were used and there may be some building contamination as a result,” said Bill Bruchey, CBARR project manager. “It’s the reason why we are supporting the effort to characterize the area in question.”

Parsons personnel wear personnel protective equipment to enter buildings and take surface samples, as well as soil and liquid samples from the buildings. Additionally, any unknown wastes in containers and drums are characterized in the buildings.

“These buildings have been abandoned for so long and are in such a state of disrepair that I think understanding the hazards and dangers of the work are paramount,” Bruchey said.

A pre-operational survey was conducted with USAESCH, Parsons and ECBC personnel two weeks prior to operations to assess techniques, practices, and protocols for the characterization work. The pre-operational exercises were designed to verify the Chemical Warfare Material Site Plan, familiarize all personnel with the operations, and practice responses to potential scenarios. According to Bruchey, the project is expected to run through early July, where upon completion, the results from the sample analysis will help determine the future of the buildings.

A similar operation was completed by CBARR in 2007 on the E-3640 complex, where more than 150 wipe samples were collected and analyzed in support of the Chemical Materials Activity-Program Manager for Non-Stockpile Chemical Materiel. The effort resulted in building demolition and the dismantling of former surety agent equipment. At the time, the 11-month effort consisted of sampling, monitoring, dismantling, decontamination and disposal of potentially contaminated former surety agent process areas. As a result, ECBC demolished several smaller structures within the E-3640 fence-line, including filtration and scrubber systems as well as storage and support structures.



**CBARR personnel monitor samples collected from the 3200 block in the mobile RTAP vehicle.**



**The E-3640 complex prior to demolition.**

**Southern Research Institute (SRI):  
Decommission and Decertify of Chemical Surety Laboratory  
Birmingham, Alabama  
November 2006-February 2007**

CBARR supported STEM International, Inc. in the decommissioning and decertifying of SRI Chemical Surety Laboratory in Alabama. The three-month effort consisted of performing hazard reviews, risk analysis, sampling, monitoring, dismantling, decontamination and disposal of potentially contaminated former surety agent laboratories and equipment.

The SRI facility was approximately 2,500 square feet and located on the third floor of the westernmost wing of a five-story building. It consisted of five separate laboratories with nine chemical fume hoods, two roof ventilation fans, two sets of High Efficiency Particulate (HEPA) and charcoal filter banks, and associated ductwork. The laboratories also contained standard cabinets and laboratory case-work.

Prior to demolition, CBARR performed a hazards review of each room in order to assess the risk associated in handling and disposing of all items, equipment and materials. During the first phase of the operation, only items that were outside of engineering control, such as fume hoods, were handled. Phase two operations involved the clean-up and

decontamination of laboratory hoods and glove boxes using standard procedures outlined in the CBARR Chemical Hygiene Plan. General area monitoring was conducted using DAAMS, and at least one location in each laboratory



room was monitored during active operations. A mobile laboratory was also set up to monitor and analyze liquid and air samples in near real-time.

Phase three of the operations included the removal of all hoods and other contaminated or potentially contaminated equipment and materials. Fume hoods were monitored prior to disassembly for HD and VX, and ventilation system



components were monitored for agents of concern identified during the hazard review. After the ventilation to all laboratory areas was shut off, the unventilated rooms were monitored for three days.

CBARR succeeded in safely dismantling and removing all process and laboratory equipment from the Chemical Surety Laboratories. No chemical agents of concern were detected during monitoring.

**A LOOK BACK IN HISTORY**  
*Site characterization projects*

# SHARE program shines light on available resources across APG

## Project from APG Senior Leadership Cohort offers community-based tool for organization efficiency

**ABDERDEEN PROVING GROUND, Md.** — There is a wealth of subject matter experts, resources and assets across the Aberdeen Proving Ground (APG) installation that spark innovative research efforts and perform sound testing capabilities to accomplish mission critical objectives for the U.S. Army.

Tapping into these areas across APG organizations has become even easier thanks to a new digital bulletin board tool available to government employees. Seeking Help through Available Resource Exchanges (SHARE) is a community-based project developed from this year’s APG Senior Leadership Cohort. In February ECBC’s Steve Norman, Peter Emanuel and Ron Pojunas, graduated from the program, which was created to build a self-sustaining leadership community among high potential GS-14/15 and equivalent level managers at APG. SHARE was one of the capstone projects that resulted from the cohort. It is a web-enabled milBook product that facilitates the exchange of goods and services in a collaborative effort to accomplish our missions.

“There’s a lot of talent on APG that we really aren’t taking advantage of, this board came about as an electronic media where you can advertise resources,” said Norman, chief of the Environmental Monitoring Laboratory branch for the U.S. Army Edgewood Chemical Biological Center’s (ECBC) Chemical Biological Application and Risk Reduction (CBARR) Business Unit.

“For example, if you are in need of two chemists to work on a certain project, you would put the duration and specifications of this detail on the web-based bulletin board. Someone who may have two chemists that are available can respond to the request, exchange contact information and begin the process to execute the detail. That requirement then comes off the board,” Norman explained.

Similarly, an organization can advertise resources they may have available in order to attract potential customers across APG and make visible their assets that have traditionally remained hidden on a grassroots level. SHARE’s digital platform turns available resources into highly visible prospects for organizations to capitalize on, whether it is reducing costs, cutting down the time needed to generate contracts or completing a project in a more efficient manner.

“In this time of sequestration, we’re trying to do more with less,” Norman said.

“If you have folks that are available who aren’t fully engaged, you now have an opportunity to advertise their core competencies with the hope that they may be needed to support other organizations. This also prevents the organization receiving the support from the laborious process of generating contract vehicles to accomplish a task or procure a resource.”

As the largest employer in Harford County with more than 21,000 civilian, military and contractor employees, the U.S. Army garrison supports military intelligence, medical research, engineering and computer technology achievements. Home to 11 major commands that support more than 80 tenants, 20 satellite and 17 private activities, utilizing existing capital enables organizations to work more collaboratively, effectively manage the ebbs and flows of a given workload and raises awareness of the “buyer” and “seller” existence.

Using the digital interface, users can create blogs to start discussions and receive notifications of new posts. Information can be tailored and formatted in ways that facilitate advertisements and solicitations. Attachments can also be added to posts, which can be tagged with key words to target specific audiences and make searches more efficient.

The SHARE program has been active for the past three months and encourages collaboration not only within ECBC but installation-wide. Engaging APG’s workforce in the digital space can also lead to creative problem solving in real time. The unique, yet simple, concept of the SHARE project fosters a resource-sharing environment where APG tenants can reach out to the local Army workforce for support. As a result, it equips the installation with better buying power capabilities during a challenging Department of Defense climate of sequestration, war time drawdown, contract reform and reduction in force.

“If we let some other folks know what our skill sets are and what talents we have here at ECBC that are available, that may also help generate funding opportunities. A majority of the work we do is customer-funded so we have to get out there and find new ways to capture the work ourselves. This is almost an avenue to advertise what we can do for folks who need our capabilities,” Norman said.

For more information, visit: <https://www.milsuite.mil/book/groups/apg-share>.

### “FITTING” ORGANIZATIONS’ NEEDS WITH AVAILABLE RESOURCES

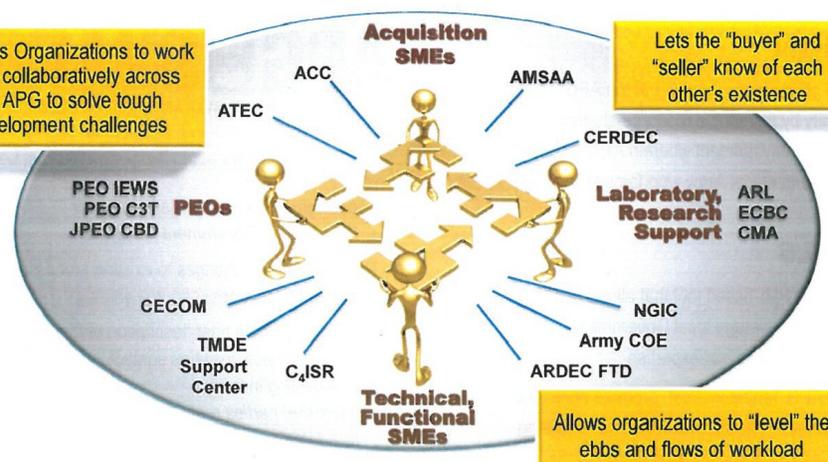


#### MEETING NEW CHALLENGES WITH A SOLUTION

- Web-based tool that maximizes use of resident APG knowledge base
  - Accomplish critical mission objectives
  - Agencies solicit and offer support (skills, resources, and available assets)
- Advertises requirements for resources/ SMEs and capabilities of APG talent pool
- Exposes agencies to the work, expertise of other APG tenants
  - Retains knowledge base, fosters more unified APG community
- Focused on sharing APG resource/assets; opportunities to expand Army-wide exist
- Provide a resource for operating in a fiscally “lean” environment; increased cost savings and flexibility

Enables Organizations to work more collaboratively across the APG to solve tough development challenges

Lets the “buyer” and “seller” know of each other’s existence



Allows organizations to “level” the ebbs and flows of workload

# TOO **HOT** TO HANDLE? CBARR KEEPS ITS **COOL** WHEN INVESTIGATING AN UNKNOWN SAMPLE

Unidentified contents can pose great dangers to personnel supporting Department of Defense remediation efforts across the country. With a highly trained and experienced workforce that is certified, vaccinated, cleared and mobile, it's no wonder CBARR is recognized as a leading entity that can safely determine unknown samples and recommend follow-up protocols to ensure proper handling.



## What happens to an unknown sample once it is recovered from a project site?

Safety protocols are implemented and the item is secured by trained onsite professionals. The appropriate response agencies are notified, including the Army response agency, CARA, and the non-explosive item is securely transported to ECBC's Chemical Transfer Facility (CTF) at Aberdeen Proving Ground, Md. Explosively configured items are safely transported to a storage bunker at Edgewood. The CTF is the single repository for the Army's research and development stocks of toxic chemical agents and is classified as a Single Small Scale Facility under the Chemical Weapons Convention. It is equipped with personnel and technologies to accurately handle, analyze and identify an unknown substance.



## How does ECBC determine how to handle an unknown sample?

Members of ECBC's Chemical Operations Branch, Environmental Monitoring Laboratory (EML) and the Safety and Healthy Office meet and perform a table-top risk assessment for handling the unknown sample. Determining proper methods, the sample container is opened and the solid or liquid contents are assessed and analyzed by the appropriate methods in accordance with customer requirements.



## What capabilities does ECBC provide to customers?

Using state-of-the-art equipment, the EML has the capability to perform analysis of several matrices. This includes: air, water, soil, paint chips, wipes, organic solids and liquids, marine tissue, demolition debris and unknowns. Environmental sample screening includes qualitative and quantitative analysis of chemical agents, biological agents, degradation products, industrial compounds and metals in a wide range of media.



## How long does it take to determine the contents of an unknown sample?

The EML is a full-service laboratory for processing a high volume of samples. With more than 50 civilian and contractor staff members, the EML is capable of analyzing samples in a short period of time and with a sense of urgency that ensures safety for personnel and the community.



## What happens after a sample is accurately analyzed and identified?

ECBC issues a final report to the customer regarding the unknown sample. This report includes an analytical narrative, sample summary, photographs, charts and analytical results for all of the tests conducted on the sample. From the data, the customer can accurately assess the situation on the project site and decide the best path forward.

# ECBC CONNECTION

ECBC Leadership Welcomes West Point Cadets



This summer ECBC welcomes 10 Cadets from the United States Military Academy at West Point to work on research projects in the Center's laboratories with scientists and engineers.

These Cadets will be here during two- to three-week rotations over the course of the summer. This is an Advanced Individual Academic Development experience where the students forfeit their vacation to receive additional laboratory credits for the final stage of their education.

On June 7, ECBC Technical Director Joseph Wienand, Associate Director James Baker, Ph.D., and Senior Research Scientist Augustus Fountain, Ph.D., greeted two of the new Cadets.

By coming to ECBC, the students will be working with some of the most experienced subject matter experts in the field of chemical and biological defense in the nation. ECBC mentors who will be hosting the students will also gain a direct connection to the Soldier, our end user.

## 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](mailto:kristen.a.dalton.ctr@mail.mil)

## Subscribe!

If you are interested in receiving the electronic edition of the CBARR News, click [here](#).

# JUNE forecasts



# WEATHER AROUND THE WORLD

CBARR LOCATIONS	AVG. HIGH (F)	AVG. LOW (F)	AVG. PRECIP. (in)
Aberdeen Proving Ground, Md.	81	63	3.82
Pine Bluff Arsenal, Ark.	88	69	3.67
Washington, D.C.	84	66	3.78
Deseret Chemical Depot, Utah	83	58	1.16
Umatilla, Ore.	79	54	0.59
Redstone Arsenal	88	67	4.29
Melbourne, Australia	57	45	1.70

## TAKE OUR READERSHIP SURVEY!



It's been six months since the *CBARR News* was redesigned and we want your feedback! Your input is valuable and will help us improve various aspects of the newsletter. Take 15 minutes to let us know how we've been doing and what we can do to make it better. Thanks!

Click: [Survey for Customers](#)

Click: [Survey for CBARR Employees](#)

We've covered a lot since January, from laboratory work for the Food Emergency Response Network and environmental sample analysis onboard a research vessel off the coast of Hawaii, to using innovative resources like a multiple-power distribution generator and C-130 military aircrafts. CBARR has been in many places in 2013, and we're glad to have captured it all right here.

# National Safety Month 2013

EDGEWOOD CHEMICAL BIOLOGICAL CENTER

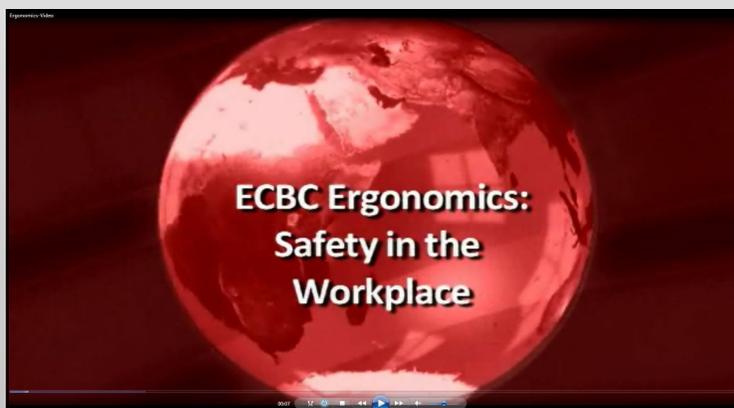


*"Safety Starts with Me"*

June 2013 theme



June is National Safety Month, and every year the National Safety Council encourages organizations to actively observe, educate and influence behaviors that can prevent injuries and death in various places: at work, in the home or on the road. This year, the ECBC Industrial Safety Committee has put together an educational [video](#) on ergonomics, one of the themes of National Safety Month. The video explores how ECBC employees can help improve their workplace environments through simple design improvements and equipment solutions, whether it is in the laboratory, in the office, in the field or in an industrial setting. The ECBC Safety and Health Office has you covered. For more information, call 436-4411.



## 2013 Excellence in Safety Award

For the second straight year, ECBC offered the Excellence in Safety Award to a team, office or individual that has made a significant contribution to the prevention of incidents and injuries, implemented safety management initiatives, or taken other actions that promote and improve a culture where safety is a core value.

The 2013 winners of the ECBC Excellence in Safety Award are **John Carpin, Ph.D.** and **Dave McCaskey!** These two individuals work in the Toxicology & Obscurants Division of the Research and Technology Directorate. They are two scientists that work well as a team, working together to solve problems and continually promote safety in their work.

Caprin and McCaskey have designed the first and second generations of the McNamara Glove Box Facility for the safe handling of NTA (non-traditional agent) materials. They have developed technology for the safe generation of NTA aerosols, which led to advancements in the science as it relates to understanding toxicology and detection.

## CALLING ALL MENTORS!

Interested in becoming an ECBC mentor next school year? ECBC's Community and Educational Outreach Program can connect you with students from Edgewood Middle School, Bel Air High School, Joppatowne High School and Cecil County STEM Academy.

For additional information, contact Outreach Specialist Jennifer Carroll at: [jennifer.j.carroll2.civ@mail.mil](mailto:jennifer.j.carroll2.civ@mail.mil) or at 410-436-5383.

## SAVE THE DATE: 6th Annual Back-to-School Drive! July 8-August 13

In appreciation of the selfless service of our Armed Forces, ECBC will collect Back-to-School Drive donations from July 8 until August 13 for military families located at the Edgewood Area of Aberdeen Proving Ground.



# CBARR to operate EDS at Pueblo Pilot Plant

**ABERDEEN PROVING GROUND, Md.** –The Program Executive Office for Assembled Chemical Weapons Alternatives announced on April 18 that it has selected the U.S. Army’s Explosive Destruction System (EDS) to support the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP) at the Pueblo Chemical Depot, Colo.

“We looked closely at cost, schedule and technical factors,” said Program Executive Officer Conrad F. Whyne in an April 18 press release, “and found that the EDS is fully capable of doing the work we need it to do, while offering the best overall value to the taxpayer.”

CBARR operators, technicians and chemists are qualified to operate the system, which was designed for the safe destruction of chemical munitions. The Chemical Materials Activity (CMA) owns and developed the EDS, which was chosen by PEO ACWA after a lengthy review of several technologies. An environmental assessment was conducted in compliance with the National Environmental Policy Act and concluded that EDS operations would not have any significant environmental impact.

The equipment is needed to destroy chemical munitions that cannot be easily processed through the PCAPP. According to PEO ACWA, these munitions may have leaked in the past, are overpacked or are in such a deteriorated physical condition that they are not suitable for automated processing.

“CBARR has supported numerous demilitarization operations across the country with trained and experienced personnel that support ACWA and CMA’s call for the elimination of



the nation’s stockpile of chemical weapons,” said Ray Diberardo, CBARR project manager.



*CBARR operators prepare for an EDS mission at Dover Air Force Base in September 2012.*

The PCAPP was built onsite at the depot to safely destroy the chemical weapons stockpile that has been stored there since the 1950s and contains more than 2,600 tons of mustard agent. Processes such as neutralization followed by biotreatment and explosive destruction technologies like the EDS have been chosen as safe and effective methods used to eliminate the stockpile.

Unlike an open detonation, which uses explosives to destroy chemical agent, the EDS instead seals munitions inside a steel chamber, then uses explosives to access the contents of the munition, expose the chemical agent and destroy the burster.

Chemicals are then added to the chamber to neutralize the munition’s fill of chemical agent. The blast, vapor and fragments are all contained inside the stainless steel chamber, where destruction of the chemical agent is confirmed by CBARR operators who provide onsite sampling and analysis of the residual liquid and air inside.

CBARR has operated the transportable EDS at project sites across the country, including Washington, D.C., Delaware, Arkansas, Alabama, Utah and Colorado. A prototype of the EDS was in operational testing in the United Kingdom more than 12 years ago when the call came to deploy to the former Rocky Mountain Arsenal, Colorado. There, on Jan. 28, 2001, the EDS conducted its first mission, safely destroying recovered GB bomblets that were considered unsafe for transport. Since then, the partnership between CMA and CBARR has resulted in many EDS deployments and the safe destruction of nearly 1,800 munitions.



For more information about CBARR’s mission, visit:

<http://www.ecbc.army.mil/cbarr>

