ECBC Engineers Partner with Industry, Academia to Develop New Guidance on Decontamination During HazMat/Weapon of Mass Destruction Mass Casualty Decontamination Incidents

When mass casualty incidents occur, it is imperative to be able to execute against a sound plan to ensure swift action is taken to preserve the lives of, and evacuate survivors. The response from medical and emergency personnel during the recent Boston Marathon attacks has been heralded as one of the best, due to the planning and practice of First Responders and hospitals who handle mass casualty situations. In situations pertaining to mass casualty decontamination efforts, experts at ECBC have partnered with industry and medical professionals to ensure that if the worst does occur, all personnel are ready and able to handle the conditions, especially in situations involving the accidental release of hazardous materials and terrorist events that utilize weapons of mass destruction.

Pete Schulze, from the U.S. Army Chemical Biological Radiological and Nuclear (CBRN) School partnered with Bill Lake and Stephen Divarco, Ph.D, both of the U.S. Army Edgewood Chemical Biological Center (ECBC) and Robert Gougelet, MD, from the Geisel School of Medicine at Dartmouth University to revise an ECBC Special Report featuring new guidance on Mass Casualty Decontamination during Hazardous Material (HazMat)/Weapon of Mass Destruction (WMD) Incidents. This report, based on input from community responders, Army responders, Department Of Defense (DoD) and DoD chemical-biological technical experts, was completed in May 2013. It will be presented at the 2013 International Association of Fire Chief’s (IAFC) International HazMat Conference in Baltimore, MD in June 2013.

Within the Joint Service Physical Protection Engineering (JSPPE) Branch, a unique blend of seasoned engineers work together, apply their collective and individual protection expertise, and counter Chemical Biological (CB) threats.

Within the last year, realignments brought the Collective Protection (ColPro) and the Individual Protection (IP) teams closer under the JSPPE Branch.

“We’re able to draw off the technical resources – there’s a lot of back and forth between ColPro and IP staff because we have common issues,” said Trish Weiss, IP Team Leader. “The combined Branch has been a really good thing for us.”

John Clayton, ColPro Sustainment and Fixed Site Team Leader, agrees with this sentiment: “Our team doesn’t operate in a bubble; we collaborate across other groups within ECBC and our customers harness this efficiency.”

The recent retirement of Jim Church, former JSPPE Branch Chief, extracted more than 40 years of knowledge. Yet his successor, Don Kilduff, is confident in the remaining and ever-growing knowledge in the Branch.
ECBC Engineering congratulates the 2013 Baltimore Federal Executive Board, Excellence in Federal Career Awards

From left to right: Shawn Funk (bronze award in the Outstanding Professional (Non-Supervisor) category, Engineering Directorate), Barbara Hawk (silver award in the Workforce Diversity/Equal Employment Opportunity Service category, Program Integration), Joseph Wienand, ECBC Technical Director, James Dallas Wright, Jr. (silver award in the Rookie Employee of the Year Technical Scientific and Program Support category, Research and Technology) and Nicole Rosenzweig, Ph.D accepting on behalf of Peter Emmanuel NOT PICTURED (Gold award in the Outstanding Supervisor GS13 and above category, Research and Technology)

The Baltimore Federal Executive Board (FEB) recognized four ECBC employees at its 46th annual Excellence in Federal Career Awards ceremony and luncheon on 6 May, 2013.

Awareness: Find Out How You Can SHARE

What is SHARE?
SHARE is a web-based tool that maximizes use of the APG knowledge base to accomplish critical mission objectives through a collaborative digital dashboard that enables agencies to solicit, advertise and offer support on APG projects. Skills, personnel and assets are posted to SHARE, exposing organizations to subject matter experts and other available APG-wide resources.

Home to 11 major commands that support more than 80 tenants, 20 satellite and 17 private activities, utilizing existing capital enables APG 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.

Why should I use SHARE?
SHARE’s digital platform turns available resources into highly visible prospects for organizations to capitalize on, increasing cost savings and providing operational flexibility in a fiscally lean environment. Use it to your advantage.

To access SHARE or for additional information, visit https://www.milsuite.mil/book/groups/apg-share.

This newsletter was published through the Balanced Scorecard.

For article suggestions, questions or comments please contact Ed Bowen at edward.c.bowen8.civ@mail.mil
LEARN WHAT KEEPS THE DIRECTORATE IN MOTION

Exciting things are happening in the Engineering Directorate. Want to know what they are? Attend the quarterly Strategic Management Meeting (SMM) on 27 June in the Berger Auditorium from 13:00-15:00. Take a break from your work day to learn more about the Division Chief Roundtables and Division and Branch Chief Offsites; find out about the Directorate’s priorities; and interact with co-workers. Attendees will earn up to 3 CLPs.

WHAT WILL THEY TALK ABOUT AT THE NEXT SMM?

8 Initiatives will be briefed at the SMM
6 of the initiatives will be briefed and are led by your Engineering Division Chiefs

WHAT ARE SOME OF THE CURRENT STRATEGIC INITIATIVES?

- Business Development
- Customer Service
- Develop a Human Capital Strategy
- Strategic Communications
- Smart Growth Infrastructure
- Knowledge Management
- Employee Growth and Enrichment
- Develop a Strategy Focused Organization

DO I GET CLPs?

3 CLPs will be earned for attending

WHAT CAN I EXPECT TO TAKE AWAY FROM THE SMM?

- To learn about the future of your Directorate
- Be a part of evaluating the strategic planning process
- Communicate with new people
- Interact with your Senior Leadership
- Learn about ways you can participate and help the Directorate

WHAT CAN I EXPECT TO TAKE AWAY FROM THE SMM?

- Gain a first-hand understanding of the Directorate’s strategic vision and the tangible, day-to-day actions that are being taken to execute against that vision
- Learn what some of your co-workers are doing to help forge a successful future for the Directorate and the Center
- Learn how you can be a part of shaping the future of the Directorate. Engage your senior leadership and peers who are actively leading strategic initiatives in dialogue to understand what your role can be in the process.

WHY SHOULD I ATTEND?

- Learn about the future of your Directorate
- Be a part of evaluating the strategic planning process
- Communicate with new people
- Interact with your Senior Leadership
- Learn about ways you can participate and help the Directorate
SPOTLIGHT ON SAFETY: Getting to Know the Safety ProAct Committee

You’ve heard their safety messages at your monthly team/Division safety meetings. You’ve seen their Safety Connect newsletter in your inbox. You may even know someone (or be someone) who has received one of their Safety awards. And you could also be their newest member.

The Safety Programs and Activities Sub-Committee (Safety ProAct), now in its sixth year, works on behalf of the Executive Safety Committee. The Executive Safety Committee includes Edgewood Chemical Biological Center Technical Director, Mr. Joseph Wienand, the directors from each ECBC Directorate, and ECBC Safety Director, Mr. George Collins. The sub-committee is made up of a revolving roster of about 15 employees who span across ECBC. Currently there are four members on the sub-committee from the Engineering Directorate: Pete Farlow, John Fok, Robin Matthews, and Evie Remines.

“We are very grateful for the support and participation by the committee members, who work for the committee in addition to their everyday work duties,” said Debra Cantemiry, Safety ProAct Chair. Cantemiry, who has been with ECBC since 2003, Cantemiry describes the committee as a cross-section of ECBC, with diverse members who revolve in and out. 

“Some work in a laboratory, some work in the field, some work in an office, and some design equipment,” said Cantemiry. “It’s helpful to have the different mind-sets coming together.” The advantage of a diverse committee is that safety concerns are identified from a multitude of vantage points and from a broad range of technical expertise.

This is an important feature to harness. Members of the Safety ProAct Committee all contribute to the Center’s monthly Safety agenda. The diverse backgrounds of the members ensure that the Safety ProAct committee is choosing appropriate safety topics that resonate with the ECBC workforce, both at work and beyond.

“We have raised awareness to many seasonal concerns, such as our boating safety and tick awareness topics that we present in the May/June timeframe,” said chemist Dora Chang. Chang says that her work drew her to want to be involved with something that could help people; she found her opportunity three years ago supporting ECBC’s Safety and Health Office.

“We recently worked with EMS from Aberdeen Proving Grounds to develop a briefing on their emergency response mechanisms,” said Chang. “We also team with fire departments during Fire Safety month in October.”

Chang and Cantemiry say the committee is currently working with various groups on several projects related to National Safety Month.

“We have technical guardian committees at ECBC that consist of experts in their respective fields, such chemical safety, industrial safety, explosives safety, radiation control, biosafety, and ventilation safety,” explains Cantemiry. “During National Safety month, each committee is providing a product, such as a video, poster or fact sheet, to raise awareness about their committee or of specific issues to their field.”

For example, the biosafety committee is using a video produced by Mississippi State University, Lab Wars, which takes a humorous look at standard precautions to take in microbiology labs.

The Safety ProAct committee is also gearing up for the Executive Safety Committee to award the second annual Excellence in Safety on June 4. “The winners for 2013 were Dr. John C. Carpin and Mr. David A. McCaskey, are from ECBC’s Research and Technology Directorate. Two of the finalists represented Engineering Directorate, the ECBC Rock Island Safety Committee and Joseph May, from the Engineering Directorate’s Pyrotechnics and Explosives Branch.

The committee urges ECBC members to get involved; this includes conducting regular nested safety meetings, submitting topics that the committee can raise awareness on, raising awareness on safety hazards during their nested meetings or to Safety ProAct –and, by joining the committee.

Those interested in joining the team, or would like more information, please email USARMY.APG.ecbc.mbx.safety-programs-and-activities@mail.mil.

For more information about the safety at ECBC, please contact the ECBC Safety and Health Office at 410-436-4411.

On the Spot Safety Program

The committee oversees the “On the Spot Safety Program,” which is a supervisor-led recognition award. When a supervisor sees someone exemplifying safe behavior in the workplace, he or she can present a ticket to the employee; tickets can later be cashed in for prizes or certificates.

“It’s a way for supervisors to recognize safety and prevention activities,” explained Debra Cantemiry, Safety ProAct Chair. Sometimes, the bar can be high for obtaining a ticket: “We’ve seen tickets go to an individual that initiated a practice emergency response exercise, carried out the planning, and successfully executed the exercise.”

Prizes include umbrellas, certificates, lunch boxes and more! So recognize your employees today.

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Each June, the National Safety Council encourages organizations to get involved and participate in National Safety Month. This year’s theme is “Safety Starts with Me,” and the NSC is highlighting a number of topics that span the workplace, home, and beyond. Here are a few tips that the NSC is featuring:

**Ladders.** Choose the right ladder for the job, and read the warning labels carefully. Always keep three points of contact with the ladder.

**Ergonomics.** Simple stretches can reduce sprains, strains, and your risk of injury, including carpal tunnel syndrome or tendonitis. Try: wrist stretches – with your arm straight out, grasp the involved hand and slowly bend the wrist down until a stretch is felt; hold for 20 seconds. Repeat four times for each hand.

**Outdoors vacationing.** The best way to lower the risk of skin cancer is to avoid the sun for long periods of time and to practice sun safety, such as seeking out shade and applying sunscreen. Never leave a child alone near water, and make sure you know how to swim if you’re supervising.

**Being prepared.** Have a plan in place for home evacuation, and discuss and practice it with your family. Test your doors and windows to ensure they can be used as an escape route.
ECBC Engineers Partner with Industry, Academia to Develop New Guidance on Decontamination During HazMat/Weapon of Mass Destruction Mass Casualty Decontamination Incidents

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The guidelines presented in the revised ECBC Special Report provide First Responders with consistent means to countermeasure the after effects of mass casualty incidents,” said Lake.

Lake also stresses that, “the Federal Emergency Management Agency’s (FEMA) National Incident Management System (NIMS) identifies concepts and principles that First Responders can use to manage emergencies from preparedness to recovery, regardless of their cause, size, location or complexity. Much like NIMS, the revised ECBC Report provides a consistent approach and vocabulary for First Responders, multiple agencies, and/or jurisdictions to work together to deliver the core capabilities needed to achieve mass casualty decontamination.”

Lake, the Engineering Support Division Chief, first collaborated with Schulze and Dr. Gougelet in April 2009 to publish guidelines for “Mass Casualty Decontamination during a HAZMAT/Weapon of Mass Destruction Incident, Volumes I and II (ECBC-SP-024),” which was an update of two nearly eighty-year-old reports.

Due to recent international research and recommendations by the Mass Casualty Decontamination Integrated Project Team (IPT), ECBC was again tasked by the Army CBRN School to update to the original 2009 report, focusing on the decontamination of chemical, biological, radiological and unknown hazards based on new empirical data and technical information. Leading the ECBC effort is Dr. Divarco, the Organizational Chief Systems Engineer for ECBC, whose previous private sector experience as a First Responder and Safety Engineer, combined with his Government Decontamination Engineering experience, provided the critical expertise that the Team required to complete the updated report. In addition, the Team has collaborated with the U.S. Department of Homeland Security and U.S. Department of Health and Human Services, who are publishing a higher level national report, “Patient Decontamination in a Mass Chemical Exposure Incident: National Planning Guidance for Communities.” This federal level document and the ECBC report can be viewed as companion products that support both local planning and response actions for mass casualty incidents.

The Team took a four-step, 360-degree approach to create the guidelines for the report incorporating scientific research and feedback from First Responders. The approach consisted of Think Tanks with state, local and DoD First Responders; research for new decontamination scientific advances/studies; latest best practices and ideas from the First Responder community and a Responder Knowledge Base review.

Dr. Divarco points out that despite being written by mass casualty decontamination experts, “The revised ECBC Report was developed for field application by First Responders. It was designed to provide technical information and suggested procedures for mass casualty decontamination following a hazardous material (HAZMAT)/WMD attack. Because of the combination of theoretical information, the inclusion of more recent findings from our international partners on the subject, and potential best practice practical applications offered, it was critical to involve a diverse group of individuals in the development and review of the revised Report in order to produce a meaningful product.”

“Life safety, especially in the event of a mass casualty situation, like the recent Boston Marathon Bombing incident, is always the highest priority. Mass casualty decontamination requires timely response, gaining rapid control of victims, and applying proven, life saving decontamination techniques in an efficient and timely manner.”

–Bill Lake, ECBC Engineering Support Division Chief

Lake said, “While there is no perfect solution to mass casualty decontamination and there is no single process or method that can account for all variables such as hazard, time, number of victims, environmental conditions, resource availability, etc., the information presented in Volume I and II of the revised Report provides a means to help identify a simple, consistent mass casualty decontamination process that can be applied with reasonable effectiveness to any HAZMAT/WMD incident.”

The updated Guidelines include redesigning Volume I to be a quick reference book with short, concise descriptions of procedures and checklists to set up and execute mass casualty decontamination. Whereas Volume II has been revised to include an in-depth discussion of HAZMAT/WMD mass casualty decontamination and additional reasoning behind guidelines presented in Volume I. Both volumes now include high resolution graphics developed for emergency reference and follow-on training in multi-lingual communities.

“The key to successful mass casualty decontamination is to use the fastest approach that will cause the least harm and do the most good for the majority of the people. Coordination of initial assessment, decontamination, and subsequent observation procedures is critical to ensure that the health needs of victims continue to be met as the incident response evolves,” wrote Dr. Divarco in a presentation for the upcoming IAFC Conference.

“The fire service is a critical resource for mass casualty decontamination and one of the purposes of this revised Report is to bring them on board with the early minutes of decontamination and get their buy in on the final product,” said Dr. Gougelet.

“The original ECBC Special Report was accepted and put into practice by nationally recognized and private fire fighting organizations. Inclusion of the new information in the revised Report represents the latest evolution in the approach to mass casualty decontamination and validates early HAZMAT/WMD mass casualty decontamination incident strategies,” Dr. Divarco said. “It is our intent to again ensure widest dissemination of the revised Report and to ensure our First Responders have the best available information to use in mass casualty decontamination situations.”

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**Just Make it Fit:** Robin Haupt describes how a lunchtime quilting club opened her creativity and ECBC network

It was 2009, and once a month several employees from ECBC would gather in a conference room in the Berger Building to display their handmade quilted treasures. I would watch the women and occasional man meet in the conference room once a month. Oh the treasures they brought with them! Amazing, beautiful hand-made quilts and quilt related items. I was always invited in the conference room to come and see what everyone had brought for the show-and-tell portion of the gathering. I was in awe of my fellow coworkers’ artistry and what they had made with their hands. I have always had a love affair with quilts and even the history of quilting in America - the tradition of the art, the incredible meaning of the historical quilts, the fun and colorful Gee's Bend quilts, which are still being made to this day.

In addition to being invited to the monthly gatherings in Berger, I was encouraged to try my own hand at quilting. I was reluctant at first and doubted my ability to create something as beautiful and practical as the items I saw each month in that conference room. I have always had a love affair with quilts and even the history of quilting in America - the tradition of the art, the incredible meaning of the historical quilts, the fun and colorful Gee's Bend quilts, which are still being made to this day.

Slowly, ever so slowly, I began to think: “Maybe I can give this a try.” And while the self-talk was a starting point, I still did not pick up the hobby. I did not want to make something less than perfect and bring it in to show these artists. Forget it. But once, on one of those gathering days, I was again admiring a beautiful quilt made by ECBC's Patty Phillips. I told her that I could never make something so incredible. “Sure you can,” Patty told me. “If you sew this block and it doesn’t fit, sew in some more fabric and just make it fit. It’s your quilt!” The quilting world immediately opened up to me with those four words - “Just make it fit.” I realized I did not have to achieve perfect corners or perfect quilt rows or perfect anything. If she can do it, then I suppose I could too. It was right there that I decided to give it a go.

My decision that day to take up quilting was memorable for the fact that it has since become a part of my life and even framed the way I show care for the people I love. I love quilting. I love making quilts for my adult children. I love giving the people I love something they have use for a long time that I’ve made from start to finish. Maybe they could even give it to their children some day.

I made my first quilt for my daughter, under the gracious mentorship of Suzanne Michling. Suzanne is what I call a professional caliber quilter. I have yet to ask a quilt question, that she could not answer. She helped me come up with a quilt design and showed me the very basics of quilt making to get me started. It’s been three years since that first quilt and I have not stopped. I know I will be a quilter for the rest of my life.

Quilting is a hobby that gives back as much as you give towards it. And while my quilts are better than when I first started, I still do not worry about perfection. I make it fit, and not one person I’ve given a quilt to seems to mind at all about perfect corners or perfect rows.

I am grateful always to the group who invited me in, and inspired me to leverage the creativity I did not know I had. They encouraged me to keep at it. I am still in awe of the quilts and creations they make and bring in for show-and-tell. There are no “rules” or restrictions and if you think you have a mind to try your hand at quilting, you’re welcome to come see what it’s all about. We still meet at lunch time for some informal quilt sharing. This group is a wonderful way to make friends, learn a new hobby, enjoy the company and to discover inspiration in a new way.

*Robin has worked for the U.S. Army Edgewood Chemical Biological Center (ECBC) for almost 11 years. Prior to her work at ECBC she worked for the U.S. Army Aberdeen Test Center (then Combat Systems Test Activity) for eight years. She is currently a quality assurance specialist within the ECBC Engineering Directorate.*

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**Take a look to some of Robin’s creations below**

![2010](image1) ![2011](image2) ![2012](image3) ![2012](image4) ![2013](image5)
Joint Service Physical Protection Branch Expertise Defends Nation from ChemBio Threats
CONTINUED FROM PAGE 1

“In Jim’s retirement may seem like an overwhelming gap for the Branch, but I would consider it a success story,” says Kilduff. “Jim felt passionate enough about what we do here within the branch to be able to amass those years of knowledge and build upon them by staying with us for so long.”

Despite Church’s departure, the Branch remains packed with experts, passionate about protecting the Warfighter. Prior to the Branch Chief position, he served as the team leader for the Apache Joint Service Aircrew Mask (JSAM) project since 1999. Clayton, who started supporting ECBC as a student contractor during college, is approaching a two-decade term of service. Weiss has built a career on loyalty to the Army, with more than 28 years of experience.

“There are several other people in this Branch who have many years of experience in the physical protection commodity area,” Weiss said. “For example, Sam Carter, our Systems Manager for the M45 series mask, has over 25 years experience with the M40 and M45 series masks. He is our ‘go to’ technical resource and ‘corporate memory’ on these systems. Such experience and technical expertise is highly valued here.” Weiss and Clayton also note other long time experts in their Branch, Wayne Gulian, a ColPro engineer, has nearly 30 years direct experience, and Allen Swim, an ECBC representative SME for PM Ground Combat Vehicle, has a diverse skillset extending to most things related to CB.

Weiss, who marked her start with ECBC before a six year assignment with the then-U.S. Army Chemical Materials Agency’s Non-Stockpile Chemical Materiel Project, supporting the Explosive Destruction System, eventually found her way back to individual protection.

When Weiss first began working with ECBC in the early 1980s, the M40 mask was what she calls “the new toy.” Now as her IP Team manages the sustainment of the M40 as a legacy mask, Weiss values the experience she has of working with a mask from its conception to its sustainment.

“Sustainment in those systems is very important because the M40 and M45 are still in production at Pine Bluff Arsenal,” says Weiss. “Even legacy systems have issues arising in production, such as tooling or availability of materials or components, and these things require technical support.”

In addition to sustaining the legacy M40 mask, the IP team also aids with the current fielding of the Joint Service General Purpose Mask (JSGPM), the M50 and the JSAM. Recently, they began providing support to the Combat Support Team, conducting Personal Protective Equipment training.

Weiss and her team are passionate about protecting the warfighter, and work to inform and educate the military community on issues involving safety of use of individual protection systems through forums like Army Chemical Review and PS Preventative Maintenance Monthly Magazine.

“For example, we recently published an article in the Army Chemical Review about the importance of using the authorized military C2A1 Canister with the M40 series mask versus look-alike commercial canisters. We are advocates for the safety of our soldiers,” Weiss said. Weiss and her team earned a Silver Quill award for an article appearing in Army Chemical Review about this topic. Many within the IP Team also share knowledge with their co-workers in the ColPro Team.

“I have several team members who are part time with the ColPro Team and move between the two,” Weiss said. While IP focuses on individual systems such as protective masks, ColPro focuses on the protection of multiple people. The ColPro Sustainment and Fixed Site Team mission has three major focus areas: sustainment of legacy ColPro equipment, support to active acquisition programs, and support to protected fixed site facilities. Each heavily focuses on fielding and maintenance of various ColPro systems, such as protective filtration systems incorporated into the Heating, Ventilation and Air Conditioning system of a protected building.

“If there was an attack, these filters are there to protect the people,” explains Clayton. “The systems filter incoming air and provide overpressure in the protected space; as pressure is increased, air travels from the protected area to the contaminated area through any leaks (instead of vice versa), so we don’t have to worry about absolutely sealing every leak point. This results in a protected space for work and relief from wearing IP equipment.”

The story does not end there, visit https://www.ecbc.army.mil to read more.