



Chemical Demilitarization Citizens' Advisory Commission
Chemical Destruction Community Advisory Board
P.O. Box 449
Richmond, KY 40476
kentucky.cac2016@gmail.com



Doug Hindman
Chair

Reagan Taylor
Craig Williams
Co-Chairs

**Kentucky Chemical Demilitarization Citizens' Advisory Commission (CAC) and
Chemical Destruction Community Advisory Board (CDCAB) Meeting
Summary of Action Items and Discussions
Dec. 11, 2019
Eastern Kentucky University (EKU)
Richmond, Kentucky**

Attendees

CAC: Doug Hindman, Harry Moberly, George Ridings, April Webb (for Jon Maybriar) and Craig Williams

CDCAB: David Benge, Robert Blythe, Chuck Cash, Dr. Candace Coyle, Tatum Dale (for U.S. Rep. Andy Barr), Jim Davis, Judy Greene-Baker, Dustin Heiser, Jeanne Hibberd, Doug Hindman, Ron Hink, Leslie Kaylor, Mark Klaas (for Michael Dossett), Col. Joseph Kurz, Darcy Maupin, Lt. Col. Rodney McCutcheon, Harry Moberly, Stephanie Nelson (for U.S. Sen. Mitch McConnell), George Ridings, Mica Sims (for U.S. Sen. Rand Paul), April Webb (for Jon Maybriar) and Craig Williams

Media Attendees:

The Richmond Register: Taylor Six
WEKU-FM: Stu Johnson

Meeting Synopsis

The meeting provided information on the following:

- Remarks from Department of Defense Visitors
- Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) Project Update
- Greater Than 1 (>1) Vapor Screening Level (VSL) Secondary Waste Shipment for Mustard and GB Agents
- Kentucky Department for Environmental Protection (KDEP) Permitting Updates
- Economic Impact Working Group (EIWG) Update

Meeting Summary Structure

This meeting summary is not intended to be a verbatim record of conversations; instead, it will provide an overview of the discussions and action items of government representatives and various members of the CAC and CDCAB. Key action items identified in the meeting and a synopsis of the major questions and comments discussed during the various updates are noted below. Copies of slides and handouts presented during the meeting can be obtained from the Blue Grass Chemical Stockpile Outreach Office (ORO) at (859) 626-8944 or bgoutreach@iem.com.

Action Items

Action Item: Consider advertising open project positions in local newspapers.

Responsible Entity: Ron Hink, Bechtel Parsons Blue Grass (BPBG) project manager.

Timeline: By March 4, 2020.

Action Item: Provide waste transportation presentation to Robert Blythe's organization.

Responsible Entity: John McArthur, BPBG environmental manager.

Timeline: By March 4, 2020.

Outline of Key Issues and Discussions

Welcome and Introductions – Sarah Marko, Manager, ORO

Marko welcomed the attendees, reviewed the meeting agenda and noted the following action items from the Sept. 11, 2019, CAC/CDCAB meeting:

Action Item	Steps Taken	Date/Status
Confirm 2020 CAC/CDCAB meeting dates.	Dates confirmed at meeting: March 4 June 10 Sept. 23 Dec. 9	Complete.
Provide CAC/CDCAB updated numbers from the EIWG Potential Future Economic Impact slide	Information is being compiled and will be delivered to Craig Williams.	By Jan. 31, 2020.

Opening Remarks – Doug Hindman, Chair, CAC; Dustin Heiser, Director, Madison County Emergency Management Agency (EMA)/Chemical Stockpile Emergency Preparedness Program (CSEPP); and Craig Williams, Co-Chair, CDCAB

Doug Hindman said he was glad to see everyone and noted the main plant is about to start. He said Dr. Charles Ball, Deputy Assistant Secretary of Defense for Threat Reduction and Arms Control (DASD(TRAC)), and Michael Abaie, Program Executive Officer (PEO), Assembled Chemical Weapons Alternatives (ACWA), are helping work through the last-minute details.

Dustin Heiser said Madison County Judge-Executive Reagan Taylor could not make it to the meeting. He said he knows this is an important time and he appreciates everyone's attendance.

Craig Williams echoed Hindman and Heiser's comments and welcomed Ball and Abaie. He said he was impressed with the communications between Ball and Abaie and himself, noting he felt it was a good circle of information and continuing transparency, and he appreciates the time taken to keep him in the loop.

Key Updates

Remarks from Department of Defense (DOD) Visitors – Dr. Charles Ball, DASD(TRAC), and Michael Abaie, PEO, ACWA

Ball said it was good to be back in Kentucky and that he was attending the meeting primarily to listen and learn. He emphasized ACWA is extraordinarily important to DOD and has high visibility with them and noted the support from within the department is unshakeable. Ball said the program has an extraordinary leadership team, with top-notch people committed to the mission. He said another key attribute of the program's success is the relationship between community and program has been fostered and improved, and it is predicated on transparency and communications. He said, as a result, operations have begun and the main plant is about to start. Ball emphasized the implications of what BGCAPP is doing here are literally felt around the world. He reports to the Organisation for the Prohibition of Chemical Weapons (OPCW) on U.S. progress, which he said used to be not so pleasant, but due to the progress being made in Kentucky and Colorado, now the U.S. is not having to respond to criticism from other countries. Ball said what is done here matters greatly to the country's international reputation and to strengthening the U.S. position abroad. Ball emphasized the commitment to destroy the stockpile as rapidly and as safely as possible. He noted cognizance of the fact that once this program ends, the community remains and DOD has a responsibility to ensuring the transition occurs smoothly and there are opportunities once the program goes away. He said his office is working very hard to make sure that becomes a reality and there will be more information about that later.

Abaie said it is important to him to continue to provide an open line of communications with the community. He said a lot has happened this year, noting the start of the Explosive Destruction Technology (EDT) and BGCAPP Site Project Manager (SPM) Dr. Candace Coyle's arrival. Abaie said the relationship with the Blue Grass Army Depot (BGAD) and Blue Grass Chemical Activity (BGCA) is always great and the BPBG team is doing a great job transitioning the plant into the new rocket processing changes. He noted the start of the main plant is right around the corner, starting with the GB projectile line, with a target date of early January. Abaie emphasized safety is of the utmost importance. It is emphasized in every meeting and is embedded in the team that will be doing the work. He said the workforce is very important to ACWA and he wants to make sure they, the community and the environment are protected.

BGCAPP Project Update – Dr. Candace Coyle, SPM, BGCAPP, and Ron Hink, Project Manager, BPBG

Slides of this presentation may be obtained by contacting the ORO at (859) 626-8944 or bgoutreach@iem.com.

The presentation began by playing a BGCAPP Year-in-Review video featuring major plant accomplishments throughout 2019. Coyle then provided a year-in-review overlook of the project, noting the work toward and start-up of the EDT destroying mustard munitions, delivery of isopropyl alcohol to the supercritical water oxidation (SCWO) system, the plant's participation in the September CSEPP annual exercise, the plant's recent declaration of readiness and the plant's first shipment of contaminated waste today. She clarified the naming of the EDTs: the current Static Detonation Chamber (SDC) is to be called the EDT, the current EDT retrofitted for nerve agent destruction will be the SDC 1200 and the larger, incoming destruction chamber is the SDC 2000. Coyle noted challenges with the Levinstein mustard being destroyed in the EDT but said a great team is working through them and making destruction happen. She said equipment is being removed to support the new rocket processing changes in the main plant and work on the new SDC 2000 site has begun. Coyle said the project had planned to start the main plant at the end of 2019 but due to safety of workers installing and staging new equipment inside the plant, start-up has been pushed to early January. Coyle provided an EDT processing update and noted the chemistry of the Levinstein mustard unexpectedly impacted the chamber seals, but experts are working with the manufacturer to make changes to the equipment. All lessons learned will be shared with the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP), even though they do not have Levinstein mustard. Coyle then explained the rocket processing changes, noting permitting is very important, and said the main change is the punched and drained rocket warhead will now be sealed in a container to make it free of agent liability. The containerized warheads will be stored in igloos prior to destruction in the SDC 1200 or 2000. ACWA Director of Field Operations Tim Garrett explained the container by showing an example. He said he is still working on the optimum way to get destructive heat to the nose of the warhead, but they are close to a solution. He is working with the BGAD and

BGCA commanders on this issue. Garrett noted testing proved no sympathetic detonation will occur using the canisters. He said next week he will be testing with bursters made by Battelle to be as close to original as possible. The goal is as fast a cycle time as safely possible. Garrett noted two companies from Louisville, Kentucky, Crown Packing and CRG, are working on the canisters and processing changes.

Williams asked if the warheads will be considered destroyed by the OPCW after their placement in storage. Garrett said yes. Williams asked if there were permit modifications to allow storage of this material longer than normally required. Dale Burton said it would have to be evaluated but he thinks that can be granted, if necessary.

Williams said the Anniston, Alabama, SDC, which provided instrumental information on the destruction of mustard projectiles for BGCAPP use, used a distilled mustard with different chemical properties than the Blue Grass Levinstein mustard. That difference has led to the seals problems encountered by the Blue Grass EDT, which he noted was not a misimpression about EDT capability, just a first-of-a-kind experience. Williams also said there have been many discussions with the community about the process of nerve agent destruction in an SDC and there will be significant oversight to make sure adequate testing has been done before that occurs, although all testing so far has indicated the SDC will be more effective at destroying nerve agent than mustard. Garrett noted different permit modifications will need to be submitted to KDEP for this.

Heiser asked if the predicted percentage of liquid agent left in the drained rocket warheads will be approximately 3 to 5%, like projected for the GB projectiles. Garrett said yes. Heiser asked the number of these rockets estimated in storage. Garrett said roughly 70,000. Heiser then asked Garrett to explain his use of "free of agent liability" when discussing the rocket warhead containers. Garrett said it meant humans could handle it safely without protective gear.

Hindman asked if the rocket bursters could have deteriorated since the 1960s. Garrett said explosives typically don't deteriorate unless negatively impacted by an exterior source, such as chemical agent. Abaie said there is a back-up plan if the bursters are compromised and gave Garrett's credentials for being the testing expert. Garrett noted the EDT is performing well, just the Levinstein rounds are bad for it. Jeanne Hibberd asked what percentage of the rounds contain Levinstein mustard. Garrett said all of them do. Abaie explained the Levinstein mustard contains a lot of impurities, plus the mustard has solidified over time. Sulfur in the mustard chemically attacks the destruction chamber seals and the solids sit on the seals and damage them. He emphasized safety is always first in their mitigation efforts.

Coyle provided information about and a schedule for the SCWO system, noting it is currently in a system demonstration using water and isopropyl alcohol. She said there will have to be 26,000 gallons of hydrolysate produced to start pumping it from the tank, which should be enough to start the community-promised six-month SCWO operational period. Coyle explained a commissioned study on operational metrics, another on corrosive impact to SCWO welds and piping and a safety analysis that mainly focused on

human-machine interface evaluation. She said the key takeaways were the operational metrics study said the system would need to have 76% availability to meet plant operations. She said there were safety concerns with high-pressure lines and operations and maintenance procedures. Coyle said the ongoing corrosion study indicated an increased chance of embrittlement in the high-pressure lines and erosion increase in 90° piping elbows near the reactors and the ongoing safety analysis showed a heavy reliance on automation to handle critical situations and issues with human-automation interfaces. She will be working with CAC/CDCAB and Process Working Group (PWG) members to determine path-forward success metrics addressing SCWO safety, availability, reliability and maintainability. Coyle then provided rocket-processing schedule information. From slide 22, she noted "changeover from GB projectiles" beginning in March 2020 does not mean the plant will be done processing GB projectiles, but that the equipment and systems to process GB rockets will be installed and tested while GB projectile operations are ongoing. Coyle then gave a brief look ahead for the plant, noting a study on closure planning and a decision to be made on rocket motor disposal.

Heiser asked if there was a plan to destroy rocket motors on site. Abaie said that decision has not been made.

Heiser noted his staff, Coyle's office and the two commanders communicate at a minimum on a weekly basis and he is very aware of what is happening on a day-to-day basis, they have great communications and operations are going well.

Robert Blythe noted previous discussion on the quality of SCWO welds and asked if this situation was different. Coyle said yes. Abaie said he was concerned about piping corrosion and had asked the study conductors to analyze them. They had no concerns on that topic.

BPBG Project Manager Ron Hink provided safety information and said it is good when you can compare your facility to a desk job in terms of safety. He said the employment of 1,259 is considered fully staffed and the plant will remain at that level for the next three years or so. Hink showed a picture of processed projectile bodies at the recycling facility and said they will be destroyed through smelting. He provided the economic forecast and said it will remain about the same for the next 3 to 4 years, with the rocket processing changes being accommodated by existing staff, but for a few small subcontracts. Hink then provided diversity and minority numbers and recruiting efforts for the year, focusing on a recruiting trip to Kentucky State University in response to a question raised by Judy Greene-Baker at the previous CAC/CDCAB meeting. He noted of the 210 employees hired as of Nov. 30, 81% of them were local hires, and provided information on available positions and how to apply for project jobs. He said there will always continue to be available jobs due to attrition.

Williams asked if the available-positions slide could be placed in the newspaper. Hink said Bechtel could consider providing their information and he will approach the other joint-venture companies about doing so.

>1 VSL Secondary Waste Shipment for Mustard and GB Agents – Jeff Kiley, Physical Scientists, ACWA, and John McArthur, Environmental Manager, BPBG

Slides of this presentation may be obtained by contacting the ORO at (859) 626-8944 or bgoutreach@iem.com.

Kiley provided his credentials and said his main jobs are oversight of laboratory operations and managing the waste shipment program. He explained what secondary waste is and the definition of VSL, noting the detection equipment can detect at very low levels very accurately and routinely, and explained the difference between less-than-1 VSL and >1 VSL. Kiley said the first shipment of >1 VSL mustard waste was sent to Veolia in Port Arthur, Texas, today and he will be flying there to observe its arrival and destruction tomorrow (Dec. 12). He noted limited capacity to destroy this kind of waste on site and that there are more effective ways to destroy it. Kiley said ACWA looked back to the National Research Council (NRC) (now the National Academies of Sciences, Engineering, and Medicine), who agreed this is a very safe and effective way to destroy this waste and allow the plant to continue processing chemical agent. He noted this process began at the Aberdeen Chemical Agent Disposal Facility and the U.S. Army Chemical Materials Agency came up with the NRC-recommended Bounding Transport Risk Assessment for the Aberdeen and Newport destruction facilities, which was revalidated for ACWA. This basically gave them information about what amount of contaminated waste was safe to ship, including carbon, and a maximum level that would not endanger a local community in the event of an accident. He said these levels are what they are shipping under today. ACWA also did a secondary safeguard to ensure handling safety at the receiving Treatment, Storage and Disposal Facility. Once this determination was made, it was halved (1/2 Immediately Dangerous to Life and Health [IDLH]) to provide even more conservative protection. Kiley said ACWA looked at many topics before determining best practices on waste packaging and showed pictures of how a drum of waste is packaged. He noted there is no agent breakthrough, as there is no liquid agent in the waste, and the waste can be stored safely for months with no problems. Kiley said there is a very specific process followed in qualifying waste for shipment and BGCAPP is following PCAPP's lead in shipping waste to Veolia. He explained the trailer is monitored at both ends of the trip and mitigation measures are in place in case of a detection at Veolia. There are many safeguards for and during transit. Kiley explained what GB waste could consist of and said it was mostly routine waste like seen at PCAPP. He noted any waste above the 1/2 IDLH level would require special permission from oversight and regulatory agencies but does not anticipate it unless something non-routine happens. There are special precautions in place if it does happen. Kiley then said the shipment of today went very well and had Department of the Army Inspector General oversight. He said this kind of shipment will happen as required. Kiley anticipates shipping GB waste monthly when the plant is in GB operations, maybe 160 drums a month, similar to what PCAPP has been doing.

Blythe said from a local perspective, one of the most anxiety-producing discussions in the community was transporting chemical agent over the roads, noting "shipping," "truck" and "transport" might cause concern to the uninformed. He asked if the public will be

informed of this waste information and asked for a presentation for his group. John McArthur said the purpose of this presentation and meeting with the PWG (and again for the VX campaign) is the avenue for the project to communicate this message. Williams said the emphasis is no agent is being shipped and he has been in communication with the community in Port Arthur and they understand the action and why and the level of potential problems. He said the shipment and receiving site communities are on the same page with this.

KDEP Permitting Update – Dale Burton, BGAD Section, KDEP

Burton said today was the final day of the 45-day public comment period for five permit modifications KDEP has been working: conversion of the plant's Research, Development and Demonstration (RD&D) permit to a standard hazardous waste Part B permit, adding a container storage facility (CSF), adding two igloos to store uncontaminated rocket motors, incorporation of organic air emission requirements and a non-BGCAPP-related addition of a controlled destruction chamber (CDC) to BGAD operations (for conventional munitions). These do not include the new SDC 2000, SDC 1200 changes, rocket processing changes, and other modifications related to those changes, and there will be an opportunity for public review and comment on those topics in the future. He then provided information on the BGAD hazardous waste permit sections and the two changes made by these modifications. KDEP Environmental Engineer Assistant Monica Alden explained the change from the RD&D permit to the Part B permit, gave an overview of the CSF and its function and said no recoverable liquid agent shall be allowed in the CSF. She provided an overview of rocket motor storage and explained it is for uncontaminated rocket motors and shipping and firing tubes only and each of the two igloos will store no more than 3,000 motors. She also gave information about the organic air emissions requirements. She said the organic air requirements have not changed, only that responsibility has been delegated to Kentucky from the federal level. Alden then discussed the BGAD CDC and said it supplements previous Open Burn/Open Detonation operations and is permitted for conventional weapons, not chemical weapons. She anticipates mid-January for final actions and permit issuance. Burton then provided a list of other approved items, mostly in preparation for main plant GB operations, noting 20 RD&D and eight EDT permit modifications were issued since the last CAC/CDCAB meeting. He noted recent site visits and continued discussions with BGCAPP personnel regarding rocket processing changes and said the Richmond KDEP office has two new BGAD inspectors.

Hindman asked if there will be carbon filtration on the CSF exhaust ventilation. Burton said the system includes carbon filter banks.

EIWG Update – Craig Williams, Co-Chair, CDCAB

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Williams said he went to Washington, D.C., to discuss the project economic impact issue with elected officials and had meetings with U.S. Sen. Mitch McConnell, U.S. Sen. Rand Paul and U.S. Rep. Andy Barr on the subject. He said Bechtel Inc. and Bechtel Enterprises Inc. are doing a great job with the EIWG. Williams said he provided a presentation to the Kentucky Commission on Military Affairs Nov. 14, which both colonels also attended, and the group was very supportive. He reiterated that any decisions on potential future economic opportunities will be made by the Department of the Army and the existing local command, not the community, and said the EIWG's interest is long-term viability. Williams provided the current statutory provision (50 USC 1521) regarding disposition of chemical weapons destruction facilities and said statutes can be adapted to accommodate evolving situations. He rhetorically asked how the SDCs could be used after the BGCAPP facility is closed and said there is a tremendous collaborative of people working on the overall economic impact issue, but noted a lot of them may have changed with the governor change in Kentucky. He is working to establish lines of communications with those people. He has established communications with the U.S. Army Joint Munitions Command Executive Director for Ammunition/Deputy to the Commander JoEtta Fisher and Director of Public and Congressional Affairs Justine Barati and will have discussions on this topic with them as well as Col. Joseph Kurz going forward.

Closing Remarks – Doug Hindman, Chair, CAC; Dustin Heiser, Director, Madison County EMA/CSEPP; and Craig Williams, Co-Chair, CDCAB

Hindman said he appreciated everyone's attention.

Heiser said the same.

Williams thanked Ball and Abaie for taking their time to come to Kentucky and said it was noticed and appreciated.

Next CAC and CDCAB Meeting

The next meeting is scheduled for Wednesday, March 4, 2020, at 1:30 p.m. at the ECU Carl D. Perkins Building, Rooms A and B.

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