



Chemical Demilitarization Citizens' Advisory Commission  
Chemical Destruction Community Advisory Board  
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Doug Hindman  
Chair

Reagan Taylor  
Craig Williams  
Co-Chairs

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**Kentucky Chemical Demilitarization Citizens' Advisory Commission (CAC) and  
Chemical Destruction Community Advisory Board (CDCAB) Meeting  
Summary of Action Items and Discussions  
March 13, 2019  
Eastern Kentucky University (EKU)  
Richmond, Kentucky**

**Attendees**

**CAC:** Doug Hindman, Diane Kerby, Mark Klaas (for Michael Dossett), Harry Moberly, April Webb (for Jon Maybriar) and Craig Williams

**CDCAB:** Jeff Brubaker, Chuck Cash, Jim Davis, Tatum Dale (for U.S. Rep. Andy Barr's office), Dustin Heiser, Jeanne Hibberd, Doug Hindman, Ron Hink, Sheila Johnson (for Lt. Col. Rodney McCutcheon), Leslie Kaylor, Diane Kerby, Mark Klaas (for Michael Dossett), Col. Joseph Kurz, Tara Long, Harry Moberly, Stephanie Nelson (for U.S. Sen. Mitch McConnell's office), Mica Sims (for U.S. Sen. Rand Paul), Reagan Taylor, April Webb (for Jon Maybriar) and Craig Williams

**Media Attendees:**

*Richmond Register:* Taylor Six  
*WBON-TV:* Sawyer Adams

**Meeting Synopsis**

The meeting provided information on the following:

- Remarks from the Deputy Program Executive Officer (PEO)
- Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) Update
- Perimeter Monitoring Overview
- Blue Grass Chemical Activity (BGCA) Update
- Process Working Group (PWG) Update
- Economic Development Working Group (EDWG) Update
- Kentucky Department for Environmental Protection (KDEP) Permitting Updates

## **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:** Provide CAC/CDCAB with numbers of employees working on the Blue Grass Army Depot (BGAD) versus in Richmond.

**Responsible Entity:** Ron Hink, Bechtel Parsons Blue Grass (BPBG) Project Manager.

**Timeline:** By June 12, 2019.

**Action Item:** Provide CAC/CDCAB the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP) tonnage of mustard agent.

**Responsible Entity:** Jeff Brubaker, BGCAPP Site Project Manager (SPM).

**Timeline:** By June 12, 2019.

**Action Item:** Provide CAC/CDCAB the schedule between start of operations and start of supercritical water oxidation (SCWO).

**Responsible Entity:** Jeff Brubaker, BGCAPP SPM.

**Timeline:** By June 12, 2019.

**Action Item:** Provide CAC/CDCAB the perimeter monitoring station locations.

**Responsible Entity:** Ron Hink, BPBG Project Manager.

**Timeline:** By June 12, 2019.

**Action Item:** Provide the calculation on how much agent hydrolysate will be processed through SCWO and how much agent through the Static Detonation Chamber (SDC) from the average residual expected in the drained rocket warheads.

**Responsible Entity:** Jeff Brubaker, BGCAPP SPM.

**Timeline:** By June 12, 2019.

### **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 Dec. 12, 2018, CAC/CDCAB meeting:

<b>Action Item</b>	<b>Steps Taken</b>	<b>Date/Status</b>
Provide CAC/CDCAB with types and numbers of available positions.	Information provided via ORO email Jan. 22.	Complete.
Check forecasted personnel and payroll numbers and provide update if changes are made.	Information provided via ORO email Jan. 22.	Complete.

***Opening Remarks – Doug Hindman, Chair, CAC, and Craig Williams, Co-Chair, CDCAB***

Hindman welcomed attendees and said this meeting should be the last time this group will meet before the start of destroying chemical weapons. Williams noted several members who were not able to attend. He welcomed Jim Davis, new CDCAB member from the City of Berea, and said he appreciated U.S. Rep. Andy Barr and U.S. Sen. Mitch McConnell’s staff attending the meeting.

**Key Updates**

**Remarks from the Deputy Program Executive Officer – Nick Stamatakis, Deputy PEO, Assembled Chemical Weapons Alternatives (ACWA)**

Stamatakis opened the meeting by recognizing the uniqueness of the Department of Defense working with community stakeholders and said it is something ACWA enjoys. He emphasized the safety of the workers, community and environment is of utmost importance. Stamatakis mentioned he had recently observed testing of the SDC, which showed the technology is a viable way to destroy the mustard munitions. He said Michael Abaie, PEO, ACWA, met with the PWG and discussed destruction options. Stamatakis said he wants to commit to what Mr. Abaie has said in the past, that he wants ACWA to be a transparent organization and consider community input, which is critical and key to moving forward.

***BGCAPP Project Update – Jeff Brubaker, 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](mailto:bgoutreach@iem.com).***

Brubaker welcomed attendees and Hink opened with safety information. He noted it has been almost five years since a lost-time injury. Brubaker discussed the roadmap and said

SDC systemization from a mechanical/equipment perspective was completed in January, with demonstration first with inert rounds and then with conventional ammunition. He said the SDC team is currently focused on the Operational Readiness Review and is working toward an early June start of operations but has allowed a 60-day period in case any items hinder the June start date. Brubaker noted completed milestones and said, pending no issues, international treaty inspectors should arrive on site two-to-three weeks ahead of start-up. He shifted to the main plant portion of the roadmap and said it is on a similar evolution as the SDC but some elements are not as far along, with an Integrated Operations Demonstration (IOD) scheduled for August. Brubaker showed Explosive Destruction Technology (EDT) facility photographs and provided a project update, including the completion of the demonstration period, conventional ammunition processing and proficiency training and air-monitoring baselines. He said the facility soft lockdown began Feb. 26 and noted SDC start-up is scheduled prior to the next CAC/CDCAB meeting. Hink provided the main plant overview slide and said 56 of 59 systems have now been turned over to operations and all the Control Room systems are operational, with operators working at all stations. Brubaker provided economic impact information and said the plant has met the hiring levels necessary to meet limiting conditions for operations. He said some hiring is still ongoing but feels the plant will have sufficient people hired, trained, certified and enrolled in the Personnel Reliability Program to support operations. He then provided the economic forecast slide. Hink noted in some areas the project is losing people almost as fast as they can be hired, due to having to make Toxic Area entries and the physical demands of some jobs. They anticipated this and are making efforts at focused recruiting to include upcoming recruitment at Fort Campbell. Brubaker closed with PCAPP update.

Reagan Taylor asked questions regarding the number of employees who work in Richmond and within Madison County and SDC versus main plant staffing. Hink will provide those numbers.

Craig Williams asked if the SDC was ready in terms of staffing. Brubaker said yes, with personnel assigned to the four operating shifts, plus support personnel such as emergency response and medical. Williams asked the same of BGCA. Sheila Johnson said yes. Williams then asked where the ownership of the munitions changes hands. Brubaker said right after the loading of the transport container in the BGCA storage yard.

Jeanne Hibberd asked how the mustard agent destroyed in Pueblo compares to how much will be destroyed here. Brubaker said Pueblo has destroyed significantly more mustard than in the Blue Grass stockpile.

Harry Moberly asked what will happen before SCWO processing begins. Brubaker said changes in processing might speed up the SCWO start. Stamatakis said ACWA is working with the National Academies of Sciences, Engineering and Medicine (NASEM) to identify commitments ACWA has in operating SCWO and are expecting a report to be issued around May 1. He said the report will be provided to the PWG for review and comment. Moberly asked if NASEM will be producing the metrics and measurements to determine

the viability of operating the SCWO and Stamatakis said yes, they will be identifying the metrics the program should use to make that determination.

***Perimeter Monitoring Overview – Mark Needham, Science and Technology Site Manager, BPBG***

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

Needham provided information about BGCAPP perimeter monitoring and said the four reasons for performing this action are: 1) it protects the public interest, 2) to comply with KDEP regulations and ACWA requirements, 3) to gather historical monitoring data, and 4) to provide useful data over the life of the project. He said readings have been collected for a five-year period to determine prevailing wind speed and direction and used dispersion modeling software to account for buildings, topography, plume rise, and other factors. He said this data was used to determine number and placement of the monitoring stations (eight) around BGAD. Needham explained the sampling process using the Depot Area Air Monitoring System (DAAMS) with sorbent tubes and said there are two DAAMS stations at each perimeter station, one for GB/VX nerve agent and one for mustard agent. He reiterated this is not a warning system but for historical records. Needham explained the monitoring General Population Limit (the level at which the unprotected general public can be exposed for 24 hours a day, seven days a week for a long period of time [70-year lifetime] without experiencing any adverse health effects) and said it was challenging for the instruments to monitor at such a low level, which is parts per trillion for GB agent. Needham explained the reporting and notifications that would be made in the event of a reading and showed photographs of a monitoring station and equipment.

Moberly asked Needham to explain the system designed for warning. Needham said the project uses Miniature Continuous Air Monitoring System detectors, known as MINICAMS, on a 4-to-6-minute cycle, which provides near real time notification if an event occurs. Monitors are located throughout the plant and on the Clean-Air Exhaust Stacks, with dual systems on the stacks and filtration systems. He said if a release occurred, the alarm will sound immediately, but confirmation would take about two hours. In the meantime, the plant will take protective steps at the sound of the alarm.

Moberly asked how measurement of the spread of agent released from the stack would happen. Needham said they would check the perimeter DAAMS tubes and use modeling software to show where the plume would go. Moberly asked how long that would take. Johnson said BGCA could deploy up to 15 Real-Time Analytical Platforms across BGAD, so the area could be covered quickly. Williams asked if the depot Emergency Operations Center would immediately use the modeling software to project the plume in the case of an agent alarm, so the emergency response would be ahead of the plume. Johnson said yes.

***BGCA Update – Sheila Johnson, Deputy Commander, BGCA***

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

Johnson provided a brief update on BGCA preparation for BGCAPP operations. She said the BGCA mission has always been to safely and securely store the chemical agents and now munitions transfer has been added. Johnson said four ways BGCA supports the destruction effort are: 1) exercises, 2) communications drills, 3) joint training and 4) technical equipment support. She explained different exercises and noted an upcoming joint exercise on the BGCAPP footprint and said following exercises, detailed after-action reviews are performed, and corrective actions taken if necessary. Johnson said the shift to transporting weapons to the plant involves all three engaged entities: BGAD, BGCA and BGCAPP, and said BGCA intends to continue training throughout operations to ensure proper training of all new employees. She noted on-location mask fittings and other equipment issuance as part of BGCA actions, with a dedicated station at BGCAPP, and said to date they have issued 1,046 masks and do approximately 1,000 pounds of laundry daily to support the BGCAPP facilities.

***PWG Update – Jeff Brubaker, SPM, BGCAPP, and Craig Williams, Co-Chair, CDCAB***

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Brubaker provided a slide of milestones the PWG is tracking and said to expect SDC hard lockdown at the end of March, IODs from April 29 to May 10, a BPBG joint-venture readiness declaration May 17 and SDC operations to begin June 4. He discussed the successful conventional ammunition processing by SDC crews and said the rounds were selected because their net explosive weight was almost exactly that of three mustard-filled projectiles. He moved on to the main plant and said it would follow the same progression of activities, with soft lockdown in April, hard lockdown in August, a significantly longer IOD than the SDC facility and operations scheduled to begin in the October time frame. To protect the workforce, the plant will start with 8-inch GB projectiles due to fewer plant systems necessary and lessons learned from the Pueblo plant. The lessons emphasize starting slowly to build familiarity and confidence, then progress into energetics processing – a crawl/walk/run process. Brubaker then explained the review for changes in the Energetics Neutralization System due to worker safety. These changes would eliminate the use of the energetics processing equipment and process drained rocket warheads in two SDCs. Projectile processing would not be affected by this change. Evaluation of a second, larger SDC unit is being performed for this purpose, as it would be able to process full overpacked rockets without personnel having to take them apart. Brubaker then noted PWG members toured the current SDC facility as it processed inert rounds and met with Mr. Abaie for an in-depth discussion on

the changes to rocket processing. Williams emphasized the rocket-processing change has had strong focus and is being considered for worker safety and not becoming a choke point in plant operations. Based on this, he said the group recommends the adoption of Mr. Abaie's approach of making the change to these operations. Williams provided a data sheet on the comparison between emissions from the Anniston, Alabama, SDC during mustard-munitions processing and the Metal Parts Furnace (MPF) (incineration technology). He said the SDC provides a monumental lowering of emissions from the MPF, except heavy metals, which can't be destroyed by either process, but must be captured, contained and disposed of at a properly permitted disposal facility. Williams noted the destruction-process chemical reactions are significantly different for the SDC in an air-starved environment than they are for the air-enriched incineration process and pointed out orders-of-magnitude reductions in dioxins and furans alone using the SDC process.

Taylor asked if everyone in the partnership (BPBG, ACWA, BGCA, BGAD, community, etc.) agrees with the rocket-processing change. Partnership members present confirmed their agreement.

Hindman said a lot of the change was to reduce worker entries into toxic areas in the main plant and asked if there will still be work entries into those areas and if the plant was planning on getting rid of some of the energetics-processing equipment to make room. Brubaker said this is one of the key questions that has been identified and to move the equipment from as-constructed configuration is highly unlikely. It is more likely those areas will be repurposed. Hink said it makes sense to keep the equipment available as a Plan B, should one be needed.

Hibberd asked if SCWO would still be used to treat the agent hydrolysate. Williams said the neutralized agent will be combined with a chemical surrogate to represent the energetics hydrolysate and treated in SCWO.

Jim Hamner, a member of the public, asked if there have been any environmental air or water problems with the Pueblo facility. Stamatakis said an SDC is not currently being operated in Pueblo, but the main plant has had no environmental releases and no issues with groundwater contamination. Williams said the Anniston facility operated an SDC that moved into processing conventional munitions and has had no environmental issues since their start-up. He mentioned the Blue Grass SDC is identical to the Anniston unit, but with several improvements, including a more robust filtration system.

Hamner opined the lag time between a potential problem and the time it takes the laboratory to evaluate, saying it seems long in the event of a crisis. Needham said the monitoring system alerts very quickly and protective actions are taken immediately, and the plant treats every alarm as real, but analyzing the tubes to confirm the presence of agent is not instantaneous. Williams reaffirmed there are both an alarm system and a confirmation system, and the plant will react immediately upon an alarm.

Moberly asked Stamatakis about Mr. Abaie's commitment to operate SCWO for at least six months. Stamatakis said this was a decision by the previous PEO and Mr. Abaie is committed to it, as well. He said if the decision is made not to process energetics, using a surrogate chemical will make the process more predictable. Moberly asked if metrics exist to determine success. Stamatakis said he believes that is what is being worked on with NASEM. Brubaker said that report will be shared in draft with the CAC/CDCAB and will need a quick turnaround. He will work with Williams and the PWG on it. Williams said he thinks the six-month language is to determine the efficacy of SCWO and if it will continue processing. Moberly asked Hink if he and BPBG believe SCWO will work. Hink said yes, it is a complicated process, but having control of a part of it (the surrogate material) will help.

A member of the public asked how the plant will deal with the percentage of agent left in the drained rocket warheads. Williams explained the SDC process. The member of the public asked if it would be actually burning it that way. Williams explained the deflagration process and said the air-starved environment modifies the off-gasses significantly, but still provides 99.9999 percent destruction efficiency. Stamatakis said for GB/VX this is pursuit of a different technology than originally designed, so a change to the permit would need to be made. No decisions have been made and ACWA must go through the National Environmental Policy Act process. Taylor asked how the permitting process will affect the destruction timeline. Stamatakis said that topic is being discussed.

A YouTube stakeholder asked what percentage of the Blue Grass stockpile is expected to be treated in the SDC and SCWO. Williams said all the mustard rounds will be treated in the SDC, which is about 15 percent of the stockpile. The quantity of material to be treated with SCWO will depend on how much agent is drained from each rocket and the corresponding volume of neutralizing solution. He said a calculation will need to be made.

Another YouTube stakeholder asked if the plant was still on track to meet the 2023 deadline. Stamatakis said absolutely, that this was one of the key factors why ACWA looked at the safety of the workers. The more workers are sent into toxic areas, the more the schedule slows down. ACWA is working with BPBG to determine the exact schedule, but the congressional law mandates 2023 for the completion of destruction.

### **EDWG Update – Craig Williams, Co-Chair, CDCAB**

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Williams provided an update of group actions and said the group is concerned about the impact on the tax base of people leaving after the project is complete. Williams said Bechtel contacted him with the offer of assistance to create a post-demilitarization vision/plan at no cost to the group. He said Bechtel deals with this topic in other states and countries around the world. The point person will be Tam Nguyen, Bechtel global

head of sustainability, and Bechtel personnel will meet locally with EDWG members on March 29. Williams mentioned the potential for a second SDC and said post-demilitarization use of the SDCs by the depot could improve their conventional destruction operations. With the potential to move another SDC from Pueblo to BGAD, that could provide a win-win for the community, depot and the U.S. Army. He is gathering information for this effort and would also like to engage with other joint-venture members to see how they envision their post-demilitarization roles in the community. He said he is very appreciative of Bechtel's initiative.

Moberly thanked Brubaker for helping the group understand the path forward and said the information provided was exceptional. He said all the group's questions had been answered. Moberly said he appreciates how Brubaker has handled the topics and said Brubaker and Hink are people the group has come to trust.

### ***KDEP Permitting Update – Dale Burton, BGAD Section, KDEP***

Burton said the Department of Waste Management (DWM) has been very busy. He said since the last meeting the division has made several approvals, including the main plant and EDT laboratory and analysis monitoring plans, main plant waste analysis plan and EDT demonstration test plan. They have also processed 20 main plant and two EDT permit notifications, which include drawing updates and other changes to reflect updated information. The DWM has provided comments on several documents such as the VX permit application, the Resource Conservation and Recovery Act operations plan and the Metal Parts Treater monitoring plan. Burton said there are currently two remaining EDT items, the ramp-up plan resubmittal and a Class 1 modification change, to complete the EDT compliance schedule items needed before BGCAPP formally requests KDEP approval to start mustard destruction operations. He sees no problems with those. Burton said the division is currently reviewing several items such as the Equipment Decontamination Plan and the main-plant Human Health Risk Assessment Protocol, along with more Class 1 modification requests, mainly updated drawings. He noted the DWM is in ongoing discussions with the BGCAPP team on the permitting process going forward, mainly some Class 2 and Class 3 modifications that will require public notification. He said the division has added three inspectors to the Richmond satellite office.

Williams asked if the division was adequately staffed at this point and for moving through major modifications. Burton said he believes so. He said some of the latest changes may tax the staff more than anticipated, but they have the funding to add a person or two as needed. The learning curve and difficulty of finding qualified personnel are challenges.

***Closing Remarks – Doug Hindman, Chair, CAC, and Craig Williams, Co-Chair, CDCAB***

Hindman said by the time the group gets together again the start-up of chemical weapons destruction will hopefully have happened and asked everyone to spread the word to their friends and neighbors.

Williams thanked Stamatakis and Berea Mayor Bruce Fraley for coming and everyone else for their attendance and attention and said the start of chemical weapons destruction is very close.

***Next CAC and CDCAB Meeting***

The next meeting is scheduled for Wednesday, June 12, 2019, at 1:30 p.m. at the ECU Carl D. Perkins Building, Rooms A and B.

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