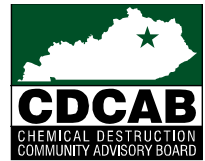




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Chair

Chemical Demilitarization Citizens' Advisory Commission
Chemical Destruction Community Advisory Board
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Kent Clark
Craig Williams
Co-Chairs

**Chemical Demilitarization Citizens' Advisory Commission (CAC) and
Chemical Destruction Community Advisory Board (CDCAB) Meeting
Summary of Action Items and Discussions
Dec. 11, 2013
Eastern Kentucky University (EKU)
Richmond, Ky.**

Attendees

Kentucky Chemical Demilitarization Citizens' Advisory Commission (CAC):
Doug Hindman, Mark Klaas, Robert Miller, Harry Moberly, Sheila Pressley and Craig Williams

Chemical Destruction Community Advisory Board (CDCAB): Robert Blythe, Jeff Brubaker, Kent Clark, Joe Elliott (for Col. Lee Hudson), Lt. Col. Christopher Grice, Jeanne Hibberd, Andy Hightower (for U.S. Rep. Andy Barr's (R-Ky.) office), Doug Hindman, Mike Hogg, Terry House, Scott Jackson, Leslie Kaylor, Mark Klaas, Bryan Makinen, David McFaddin, Robert Miller, Harry Moberly, Sheila Pressley, Carl Richards, David Rowlette, April Webb and Craig Williams

Media Attendees:

The Lexington Herald Leader: Greg Kocher
The Richmond Register: Sarah Hogsed

Meeting Synopsis

The meeting provided information on the following:

- Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) Year In Review
- Implementation of Explosive Destruction Technology (EDT) for Problematic Mustard Projectiles
- BGCAPP Cyanide Treatment
- The Organisation for the Prohibition of Chemical Weapons (OPCW) 18th Conference of States Parties to the Chemical Weapons Convention (CWC)
- Economic Development Working Group (EDWG) Update

- M55 Rocket Separation Operation

Meeting Summary Structure

This meeting summary is not intended to be a verbatim record of conversations, but instead 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: Explore a way to explain total project completion vs. construction complete.

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

Timeline: By March 12, 2014.

Action Item: Incorporation of munitions scrap metal recycling questions into EDT Working Group (EDTWG) dialogue with Bechtel Parsons Blue Grass (BPBG).

Responsible Entity: Dr. Paula Maionchi, member of the public, to Craig Williams, Co-chair, CDCAB.

Timeline: By March 12, 2014.

Action Item: Coordination of EDTWG trip to Alabama to view Static Detonation Chamber (SDC) operations.

Responsible Entity: Craig Williams, Co-chair, CDCAB.

Timeline: By March 12, 2014.

Action Item: Announcement of working group meeting dates and provision of group member rosters to greater group.

Responsible Entity: Craig Williams, Co-chair, CDCAB.

Timeline: By March 12, 2014.

Action Item: Create a Gantt chart for BGCAPP systemization and operations for emergency preparedness planning decision-making.

Responsible Entity: Jeff Brubaker, SPM, BGCAPP.

Timeline: By March 12, 2014.

Outline of Key Issues and Discussions

Welcome and Introductions – Sarah Parke, Manager, ORO

Parke welcomed the attendees, reviewed the meeting agenda and noted the following action items from the Sept. 10 CAC/CDCAB meeting:

Action Item	Steps Taken	Date/Status
Poll group for 2014 meeting dates.	Meeting dates provided in meeting packets.	Complete
Forward Sen. Mitch McConnell (R-Ky.) letter of appreciation to group for consensus.	Forwarded by Craig Williams.	Complete
Create a Gantt chart (a bar chart showing project scheduling) for BGCAPP systemization and operations for emergency preparedness planning decision-making.	Forwarded from Sept. 10 meeting.	By March 12, 2014

Opening Remarks – Doug Hindman, Chair, CAC, and Kent Clark and Craig Williams, Co-chairs, CDCAB

Hindman thanked attendees, especially members of the public, and the working groups. He said it has been a very busy time and he appreciates everyone's efforts.

Clark thanked everyone and expressed his appreciation to Williams, Brubaker and Doug Omichinski for the recent Madison County Fiscal Court presentation.

Williams also thanked the group and welcomed Bryan Makinen, ECU director of Environmental Health and Safety and Risk Management, as a new member of the CDCAB.

Key Updates

BGCAPP Year in Review – Jeff Brubaker, SPM, BGCAPP

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

Brubaker opened by noting the project's 75 percent construction complete status and recapped the year by presenting milestones. He updated the group on construction progress and safety information. He said the project had 30 percent fewer Occupational Safety and Health Administration-recordable incidents in 2013 than in 2012, but there is a need to continually focus on hazards analysis and injury avoidance. Brubaker then provided economic impact numbers, a look at upcoming milestones and touched on topics like the SDC design and permitting process, a process for rocket motor disposal and the cyanide treatment issue.

Robert Miller asked if the injuries and lost-time accidents were due to construction or a change in policy and if the subjects or the equipment were at fault. Brubaker said both lost-time incidents were from construction-related issues, not policy, and said worker lifting techniques could have been better utilized. He noted each accident goes through a comprehensive review process and a review board to ensure processes and procedures are appropriate.

Williams suggested including additional schedule details to the construction percent-complete notifications so people do not think construction is 75 percent complete and the plant will be ready to start operations soon. Robert Blythe asked if it could be expressed as "X percent construction complete and Y percent project complete." Brubaker said that could be considered.

Implementation of EDT for Problematic Mustard Projectiles – Jeff Brubaker, SPM, BGCAPP

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

Brubaker explained Anniston Chemical Agent Destruction Facility SPM Tim Garrett gave a presentation regarding his experience with the SDC at Anniston to the EDTWG, noting all their effort and lessons are being rolled into Blue Grass EDT project planning. Garrett and his personnel will continue to support the Blue Grass SDC efforts. Brubaker gave background information on the Blue Grass EDT issue and discussed the project's operational philosophy of protecting the workforce, public and environment; minimizing or eliminating human interface with weapons; and minimizing or eliminating additional waste streams, noting the philosophy was of major importance in the project's selection of the SDC. He then provided background information on the affected mustard projectiles. Brubaker said the equipment selection was conducted via a competitive process and discussed SDC set-up and process, noting the SDC is unique in using an electrically driven system to heat the projectiles to detonation or deflagration, and said the initial step of munitions entry to the SDC is the only step where workers are in proximity to the destruction process. He pointed out the resultant scrap metal would be clean and ready to recycle. Brubaker reviewed the pollution control system and monitoring and gave information on the two permit applications necessary for the project (a Part B permit, prepared and submitted under the Resource Conservation and Recovery

Act and Clean Air Act Title V air permit), noting additional design work and equipment fabrication will occur during the permit application process. He estimated it would take about six months to receive and install the equipment followed by an eight-month systemization process before operations could begin. The site will be located on the south side of the demilitarization facility. Right now, Brubaker said he projects operations to begin around the end of 2016 or beginning of 2017. Brubaker will confirm this at the next CAC/CDCAB meeting.

Dr. Paula Maionchi, a member of the public, asked what the munitions shells are made of and inquired about recycling the scrap metal. She then asked if recycling the scrap metal would be handled locally and where recycling funds received would be directed. Brubaker responded the shells are 90 pounds of carbon steel and said disposition of the metal was not known at this time and would be worked out further along in the process. Williams noted the EDTWG has been working on this issue and will take those questions up in their engagement with BPBG.

Williams asked if the EDTWG would look at the SDC design efforts incrementally thereby affording group members opportunity to make suggestions before the design phase is over. Brubaker replied his intent is to provide matured information to the working group as it becomes available. Project representatives will meet with the EDTWG before the two permit applications are formally submitted.

Terry House questioned how leaking projectiles would be processed. Brubaker said the SDC will process them through the overpack containers in essentially the same manner but noted it will take a little longer than the standard process. The overpack process will result in the same amount of destruction as the standard process.

Jeanne Hibberd asked what the word 'deflagration' means. Brubaker explained deflagration as a burning action, like a road flare, rather than an explosive event.

Hindman asked what a Department of Transportation (DoT) bottle looks like. Lt. Col. Christopher Grice said it resembled a propane container. Brubaker said the DoT bottles house agent that had been removed for sampling in the past and transferred to the bottles when the sampling effort ended.

Williams noted Garrett had invited EDTWG members to Alabama for a first-hand look at the SDC in use. Brubaker said he asked Garrett to offer availability in January or early February for these visits. Williams noted the Anniston operation fulfills the EDTWG request that the Blue Grass EDT have previous full-scale use in the United States. Williams also noted that the Anniston EDT processed chemical weapons in the past and continues to process thousands of conventional weapons today.

Williams then asked about an animated video of SDC operations. Brubaker said he made a commitment to work on that with Program Executive Office, Assembled Chemical Weapons Alternatives (ACWA) personnel.

BGCAPP Cyanide Treatment – Jeff Brubaker, SPM, BGCAPP, and John Barton, Chief Scientist, BPBG

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

Brubaker provided background on the cyanide issue, noting Blue Grass is the only project in the U.S. to perform caustic neutralization of bursters, and introduced BGCAPP Chief Scientist John Barton to explain the technical details. Barton said the cyanide issue does not involve the chemical agent neutralization system. It is involved with the neutralization of the energetics, a separate process. He explained the neutralization process for explosives and how the cyanide forms within it. He said BGCAPP personnel confirmed cyanide ion formation in the energetics neutralization process using bench-scale tests performed in late 2012. If unmitigated, hydrogen cyanide will off-gas inside the Supercritical Water Oxidation Processing Building's Aluminum Precipitation Reactor (APR) system, the Aluminum Filtration System (AFS) and from produced filter cake, which would pose a worker hazard. Barton then discussed the levels of cyanide produced in the bench-scale process and said without treatment, the levels were high enough to cause concern. To mitigate the cyanide hazard, Barton said project personnel will increase the Energetics Neutralization Reactors' (ENR) temperature from 240 to 300 degrees Fahrenheit, which was found to be suitable for maximum cyanide treatment. This method does not add any chemicals, minimizes changes to the downstream supercritical water oxidation (SCWO) process and does not impact the project baseline schedule. Barton said personnel completed a number of confirmation tests and repeat analyses and observed no operational challenges at the higher temperatures. Making this change will significantly reduce potential cyanide contact, inhalation and ingestion hazards in the SCWO Processing Building. He informed the group that engineering changes will be made to increase the ENR operating temperature, and the project may add cyanide monitoring to the SCWO Processing Building.

Robert Miller asked if cyanide was the only hazard in the hydrolysate. Barton said pH will be high in the caustic solution, and workers will be protected for that potential exposure.

Makinen asked how many gallons of hydrolysate would be generated and inquired about the number of tanks available to store the hydrolysate. Barton replied that two 275,000 gallon storage tanks will be used to store hydrolysate. He noted there would be no hydrogen cyanide hazard at the storage location due to the high causticity.

Maionchi inquired about the levels of personnel protective equipment (PPE) workers would normally wear in the AFS area. Barton said the design basis is Level D (the lowest level), and a respirator would not normally be required.

Williams asked if the headspace in the Hydrolysate Storage Area tanks could be monitored to validate the ENR process. Barton replied it was possible, and that headspace monitoring during bench scale tests had confirmed that hydrogen cyanide

does not offgas during storage. The ENR hydrolysate will be tested on site before it will be released to the storage tanks in a hold, test and release cycle. Williams asked for confirmation that the cyanide problem would manifest in the AFS and to avoid that problem, it is being mitigated at the ENRs. Barton confirmed the cyanide is generated in the Energetics Batch Hydrolyzers and will be treated through elevated heating in the ENRs, reducing the potential offgas concentration well below the National Institute of Occupational Safety and Health (NIOSH) short-term exposure limit of 5 mg/m³ for hydrogen cyanide in air.

Robert Miller asked how this was revealed to be a problem. Barton replied project scientists were doing background research as they were trying to test the hydrolysate processes and found one report that said lower-level cyanide was formed in a similar high-caustic process. They then analyzed hydrolysate produced in a lab-scale test unit for cyanide ion and confirmed that it was present.

Terry House asked if the process had been successfully used in other locations and if so, how it was tested. Barton replied that no other site has a process like this one and testing was done by running the same process as proposed for the site at bench scale. He noted similar data can be found for waste waters, where high-temperature hydrolysis has been used to destroy residual cyanide.

David McFaddin asked if there was a reverse flow planned to move the product back if high levels of cyanide were found at the APR after treatment. Barton indicated that the project would mitigate as necessary, as they will be testing at the ENRs and can make changes there, if needed.

Williams asked if the cyanide would re-form after treatment. Barton stated it would not re-form, but that there would still be some residual cyanide as the process does not destroy it all. Barton explained that the destruction process works at room temperature as the material is being stored. He noted the cyanide will naturally diminish possibly 10 to 20 percent in the hydrolysate storage cycle, but the planned treatment will not take credit for that additional reduction in hazard.

Hindman asked what would happen to the cyanide in the ENRs and if its mitigation would change the SCWO recipe. Barton said it would degrade and create more ammonia and formate in solution and the additional byproducts will not impact SCWO.

Maionchi was concerned about worker exposure and NIOSH levels in different areas. Barton said he did not anticipate exposing workers to NIOSH 1-STEL (Short Term Exposure Limit) levels and the cyanide hazard will be treated at the source because the project does not want to rely upon worker PPE to control the hazard. Maionchi also inquired about the Long Term Exposure Rate and indicated a desire for additional discussion.

Joe Elliott asked if something changed for ACWA to not discover the cyanide issue in their initial testing. Barton said yes, ACWA did not realize the SCWO process is not

compatible with aluminum and added in an acid process to precipitate out the aluminum, which allows hydrogen cyanide to offgas.

Williams noted he was comfortable with the project finding and remedying any future surprises prior to operations, as long as they are not discovered to be a worker hazard.

The OPCW 18th Conference of States Parties to the CWC – Craig Williams, Co-chair, CDCAB

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

Williams reviewed his recent visit to The Hague for the above conference on the topic of the Syrian chemical weapons situation. He covered background and current information on the situation: that there was confirmed use of chemical weapons in Syria, mostly sarin, which triggered a U.S. military response threat in August 2013. Syria has now joined the CWC and inspectors have been in the country for months identifying all Syrian declared chemical agent. Williams explained the agent is all in bulk form and mostly precursor chemicals except for about 20 tons of mustard agent. Williams' main point was that somehow a one-year deadline was placed upon the destruction of the Syrian agent and there is much motion around trying to figure out how to safely transport the chemicals through a war zone to get them out of Syria and then destroy them by March 2014. He said he has received multiple calls about the one-year expected destruction of Syrian chemical agents while the Blue Grass process is taking 30 years. He said his short answer is that the Syrian chemicals are not weaponized, the Blue Grass ones are and those challenges are much greater. Williams went on to say what has been proposed by the U.S. and accepted, although not formally approved, is the Field Deployable Hydrolysis System, which will be installed and operated on a ship. They do not know exactly where the ship will perform the hydrolysis yet. Several different countries have offered support for the process. Williams explained he was invited to bolster confidence in the neutralization process due to past experience with the U.S. program and to share his experiences with garnering community support for this program and project.

Harry Moberly asked how the agent was delivered to kill people if it was in bulk form and how we know that Syria doesn't have more weapons than declared. Williams said the U.S. is relying on the Syrian declaration, as well as the inspectors within the country.

Jeanne Hibberd asked who the non-signatory countries are, to which Williams answered Egypt, Israel, Somalia, S. Sudan and N. Korea.

EDWG Update – Craig Williams, Co-chair, CDCAB

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

Williams discussed the group's action items from the September CAC/CDCAB meeting. He said three of the four have been completed and that the final one, submitting the proposal for the Phase 2 and 3 studies to the Office of Economic Adjustment (OEA) and other entities identified as possible funding sources for either or both phases, is currently in process. He noted the group received a better response when a political figure accompanied them to their meeting with the OEA and were planning to do so again in the future. The group is drafting a proposal for OEA to review and requesting feedback to ensure the proposal is in the proper format (the OEA is helping the group create the application for funding for Phases 2 and 3). Williams said U.S. Sen. Mitch McConnell's (R-Ky.) and U.S. Rep. Andy Barr's (R-Ky., 6th District) offices are looking at alternative funding from other agencies as well. Williams then said this process and the Depot Development Coalition (DDC) are going on concurrently but separately, while crossing paths as the group proceeds. The group met on Nov. 18 with a diverse representation from the region. He said "...everyone is talking about what will happen to the depot when the weapons are gone," and that the EDWG tied their study as closely as they comfortably could to the depot proper, with it being pragmatic to look at the economic impact of BGCAPP closure on two tracks at the same time. During the DDC meeting, CDCAB Co-chair Kent Clark motioned that the group continue to seek funding to complete Phases 2 and 3 and look into possible Public-Private Partnership opportunities, especially those appropriate for the BGCAPP infrastructure. This was approved by a unanimous vote. Williams said the group will be going back to Washington, D.C., in January to meet with the OEA, and they hope to have a draft application prepared by then and a final application in front of the OEA by late spring.

Hibberd asked if the EDWG was looking at environmental considerations for compatibility of facilities. Williams said that would be included in Phase 3, as well as industries that would not be considered acceptable. They do not want anything detrimental to the community's health, reputation and environment.

Williams then expressed his appreciation for, on the topics of today, the reputation the group has of being engaged at all levels with government, contractor and community and noted that everyone is together and "walking the walk."

M55 Rocket Separation Operation – Lt. Col. Christopher Grice, Commander, Blue Grass Chemical Activity

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

Grice gave a brief update of the progress of the Rocket Motor Separation Operation, noting 44 rockets will be part of this operation, 19 of those rocket motors will be for ACWA testing purposes, no agent will ever leave the Chemical Limited Area and the schedule has slipped about a month due to the contract taking a little longer than expected to obtain. He said personnel are undergoing training, but there currently is no equipment and no igloo modification yet. Grice said personnel were evaluated last week.

He is very happy with the process and will continue to train them as that is critically important. BGCA will make more notifications to local elected officials and the CAC/CDCAB as the process continues.

Williams asked what the contract is for and if OPCW inspectors will be on site for this operation. Grice said the contract is for the physical modification (retrofit) to the surety magazine, but his personnel would conduct the separation operation. He indicated although OPCW inspectors were not anticipated, personnel would plan for their presence. The inspectors had previously said video of the operation would be sufficient for their needs.

Next CAC and CDCAB Meeting

The next meeting is scheduled for Tuesday, March 12, 2014, at 1:30 p.m. at the ECU Carl D. Perkins Building, Rooms A and B.

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