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**Chemical Demilitarization Citizens' Advisory Commission (CAC) and
Chemical Destruction Community Advisory Board (CDCAB)
Special Meeting Summary of Action Items and Discussions
Oct. 23, 2013
Madison County Joint Information Center
Richmond, Ky.**

Attendees

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

Chemical Destruction Community Advisory Board (CDCAB): Jeff Brubaker,
Colleen Chaney (for U.S. Rep. Andy Barr (R-Ky. 6th District)), Joe Elliott (for Col. Lee
Hudson), Lt. Col. Christopher Grice, Doug Hindman, Scott Jackson, Leslie Kaylor, Darcy
Maupin, David McFaddin, Robert Miller, Harry Moberly and Craig Williams

Media Attendees:

The Richmond Register: Sarah Hogsed

Meeting Synopsis

The meeting provided information on the following:

- Summary of Recent Activities Associated with Potential Application of an Explosive Destruction Technology (EDT) at the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP)
- Response to Comments on EDT Environmental Assessment (EA)
- EDT Summary

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: Provide CAC/CDCAB with information on what would happen if a round in the Static Detonation Chamber (SDC) did not detonate.

Responsible Entity: Jeffrey Kiley, Representative, Program Executive Office, Assembled Chemical Weapons Alternatives (ACWA)

Timeline: None discussed.

ACWA Response to Action Item: At 1,000 degrees Fahrenheit, the conservative approximate operating temperature of the SDC, the natural state of the mustard-agent contents of the munitions is the gas phase. Expansion of the mustard agent to gas in an unexploded munition would cause a rupture of the steel munition body and release the contents. The steel munition body will also begin to lose strength properties as the temperature of the body increases, aiding the rupture process. The pressure caused by the mustard agent at 1,000 degrees Fahrenheit will cause the burster well and then the top of the projectile to fail.

Outline of Key Issues and Discussions

Welcome and Introductions – Sarah Parke, Manager, ORO

Parke welcomed the attendees and reviewed the meeting agenda.

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

Hindman thanked attendees for their interest. He also thanked ACWA representatives, acknowledged that they weren't required to hold the meeting, and recognized them for going the extra mile, which he said has been characteristic of the ACWA program across the years.

Williams said he echoed Hindman's comments. He also said the group has been talking about this topic for three years and he feels there is a good rapport between the parties. Williams said he appreciates ACWA Program Executive Officer Conrad Whyne's willingness to allow everyone to get together to make sure all are on the same page moving forward. He thanked everyone for attending.

Key Updates

Summary of Recent Activities Associated with Potential Application of an EDT at BGCAPP – Jeff Brubaker, Site Project Manager, BGCAPP

Brubaker began by giving background on the aging mustard munitions in the Blue Grass stockpile, saying that ACWA has long been aware that the aging mustard munitions could pose a problem during destruction in the neutralization/supercritical water oxidation process. He discussed when the mustard agent, also known as H, was manufactured and when mustard projectiles were received at Blue Grass, and noted that the Army shared potential problems related to their destruction during a meeting in May 2009. Brubaker said difficulties processing similar projectiles at other sites, like Tooele, prompted ACWA to partner with the Blue Grass Chemical Activity for an X-ray assessment in 2011. In September 2011, the Army briefed CAC/CDCAB members on this assessment, which confirmed solidification of mustard agent was present and would hinder BGCAPP's processing ability. Brubaker covered the data discovered during the assessment and noted the large percentage of heel found in the stockpile posed a serious problem for BGCAPP's neutralization technology. Brubaker then said after the assessment, ACWA, in conjunction with the Blue Grass Army Depot, began to explore an EA for potential utilization of EDT for destruction of these munitions. He reviewed the steps and dates related to the EA process and noted U.S. Army and BGCAPP officials recently met with the EDT Working Group (EDTWG) to discuss the competitive process Bechtel Parsons Blue Grass (BPBG) is using to procure the technology.

Brubaker then shifted from presenting background information to explaining the purpose of this meeting, saying it was a special CAC/CDCAB meeting held to discuss ACWA's response to comments received regarding the EA, which supports the draft Finding of No Significant Impact (FONSI). He described the proposed action - to utilize EDT for safe and timely destruction of the H-filled projectiles and two Department of Transportation bottles - and said a proposed 38-week period of operations should allow enough time to facilitate destruction of the entire Blue Grass H stockpile. Brubaker said this action would be completed through the proposed EDT before BGCAPP operations begin, but cautioned the possibility of some overlap with facility operations does exist.

Brubaker stated the intent of the meeting was to discuss comments provided by the CAC/CDCAB during the public comment period. Brubaker recognized that other comments had been received from various stakeholders and those comments had been addressed as part of the final EA. He noted that the FONSI and response to all comments would be available Oct. 24, 2013, on the ACWA website (www.peoacwa.army.mil) and at local repositories. Brubaker reaffirmed that the ACWA program remains focused on safe and efficient destruction of the Blue Grass chemical weapons stockpile and openness with its stakeholders.

Robert Miller asked about the possibility of an overlap in operations. Brubaker said the intent was to begin and end the EDT project first, then transition to main plant operations. He said overlapping was not preferred, due to splitting manpower between the two projects, but could be done if necessary.

Craig Williams noted that other sites have experienced difficulties in processing their mustard munitions. For example, the Alabama project used an EDT. He said the EDTWG interacted closely with the National Research Council committee created specifically to look at EDT. Williams also asked about the order of the whole process: if the National Environmental Policy Act (NEPA) process of the response to comments, the issuance of the FONSI and then the Resource Conservation and Recovery Act (RCRA) application process was correct and Brubaker confirmed. Williams then asked about RCRA application process. Brubaker replied a period of detailed design work needs to be completed before the application can be submitted, and there is still some considerable site-specific design work necessary. He said BPBG is completing their process of soliciting EDT vendor proposals and will be doing a technical and business evaluation concurrently with the NEPA process. He believes a selection may be made by BPBG within the next couple weeks.

Williams clarified for the group that EDT has not only been used for chemical weapons in the U.S. but also in many other countries for recovered as well as stockpiled weapons. He emphasized EDT is not experimental or first-of-a-kind, and stated that it is very well understood and has been used for many years.

Response to Comments on EDT EA – Jon Ware, Environmental Scientist, ACWA

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

Ware introduced himself as the program's NEPA point of contact and began by providing a discussion of what NEPA is, why it was created and how it works with other environmental laws and decision-making processes. He noted ACWA tends to be "miles ahead" of NEPA. Ware said ACWA has a design-build contract, so details may not develop until near the end of the contract. He noted that in this case, BPBG is handling the procurement. Access to the hazards analyses applicable to Blue Grass is not available because those reports are very specific.

Williams asked if Ware had been able to use data from Anniston's SDC. Ware confirmed and said since it had been permitted before, they added a table showing specifically the handling of the permitting process.

Ware said information regarding design considerations for the proposed action is not yet available, but noted that ACWA had received and would incorporate some additional information from the vendors, but that was all they could do at this time. ACWA will share the information when it is developed. He then discussed "significance" – what it is

and what is meant by the term. He said to think of the line between “significant” and “non-significant,” as, “If you violate your permit, that’s significant.” Ware said ACWA uses the clean air and clean water standards as significant standards. He added that these standards are very commonly used in the public and in industry, but noted these are not the only standards ACWA uses. He emphasized Whyne’s commitment to continuous improvement.

Williams asked if it were safe to say that ACWA could be applying more stringent standards than the regulations, and Ware said yes. Williams then asked if points of significance could be discussed moving forward and Ware agreed.

Ware discussed the draft FONSI and said it is not a decision point for NEPA, that it is a statement reporting that the environmental impact of the proposed action and its alternatives are not significant.

Williams asked about the draft FONSI and EA process. Ware said most departments publish the FONSI with the EA. ACWA’s comment resolutions tend to be long. He said that the comment-resolution document will be appended to the original EA and will be published that way so it becomes part of the EA. The actual EA won’t change.

Miller asked what significance “above levels of concern” meant. Ware said there are standards for the emission of any chemical, and if any emissions are planned to be above that, the standard would be the level of concern. ACWA representative Jeffrey Kiley said exceeding a regulatory standard is above a level of concern. Ware noted the U.S. Environmental Protection Agency created a committee to determine “significant.” They disbanded with no clear answer. Williams said he doesn’t necessarily agree with where the line is set.

EDT Summary – Jeffrey Kiley, Risk Management Directorate, ACWA

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Kiley discussed the four technologies under consideration and gave specific details and process flow diagrams for each.

Williams asked if the Transportable Detonation Chamber (TDC) had been withdrawn from consideration and Kiley said he had no knowledge of that. Williams said it had been withdrawn.

Kiley said the fact that all of the technologies had been successfully permitted and operated is important. He then said not all BGCAPP processes meet “hold, test and release” (HTR) criteria, explaining those are processes that allow the end result to be held, tested and reprocessed if necessary. The liquid neutralent and energetic hydrolysate processes do meet HTR criteria, but the agent vapors emitted by accessing

the munitions do not. ACWA designed the filtration system for that purpose, which is why the Munitions Demilitarization Building is under engineering controls. He noted the Explosive Destruction System is the one technology of the four that fully meets HTR criteria.

Williams asked about placement of the out-of-chamber monitors on the SDC. Kiley showed him their placement on the SDC flow chart diagram.

Hindman asked what "pyrolized" meant. Kiley replied it meant the agent would be destroyed through thermal heat without oxygen and that the chemical bonds would be disassociated through heat.

Williams asked if the expansion tank on the TDC was similar to the buffer tanks on the SDC. Kiley affirmed.

Kiley noted the Detonation of Ammunition in a Vacuum-Integrated Chamber (DAVINCH) technology was permitted for use at Tooele, but the Tooele project and the then-U.S. Army Chemical Materials Agency found a way to successfully process their problematic munitions through their plant before the DAVINCH completed systemization.

Williams asked if Kiley's understanding was that the SDC destroyed the agent with pyrolysis through heat only and the DAVINCH destroyed agent through shockwave and fireball, that the donor charge in the DAVINCH was identified as the destruction mechanism and a donor charge would not be the destruction mechanism in the SDC. Kiley said that was his understanding and that pressures of the shockwave and fireball achieve agent destruction.

Williams queried if the SDC had a "dud" round, what would happen – would it just melt? Kiley said it would not melt, that the 1,000-degree temperature would cause the agent to pyrolyze within the shell, but wasn't sure about what would happen to the shell. Kiley said he would get an answer for Williams on that.

Kiley discussed the HTR chart in the presentation. He said there was a possibility for hooking hot air up to the TDC for further decontamination and noted this had been done before when the U.S. Army released a TDC unit back to the manufacturer.

Williams asked if the DAVINCH chamber would be opened after each process cycle and if the waste would accumulate in it similar to the SDC. Kiley said yes, that it would need to be opened and cleaned out before the next process cycle, but no, the waste would not accumulate. He noted for start-up scrap is placed into the SDC to provide a substantial residual heat load for the chamber. The other three technologies are all one-shot, open and reload processes. Kiley said each technology was good for specific things and when all four were considered in the NEPA process, ACWA did not provide an agency-preferred alternative.

Leslie Kaylor asked if any system was better proven for higher-level production. Kiley said he didn't know, but that topic was in the NRC reports and readily available. Brubaker said in order to meet the criteria, each technology had to be able to process the munitions within the 38-week project time frame. This could include adding more units or building larger units to handle more throughput.

Miller asked if the site location was a major consideration. Brubaker said in the EA document, all of the EDTs were assessed on what would be necessary to destroy the projectiles in the 38 weeks. The EDS would need a larger footprint, up to ten acres, as it would require seven units to process the munitions in the specified time frame. Ware said the time frame requirement would call for one SDC, two each TDC or DAVINCH units and seven EDS units, noting the TDC, DAVINCH and SDC could fit on the planned 2.5-acre site.

A member of the public said she thought the project had decided to use neutralization and asked if money had been spent on this process before determining it would not work. Brubaker explained the BGCAPP process and said the two nerve agents would still be destroyed using the neutralization process.

Another member of the public asked if any other technology would be more cost-effective. Brubaker replied BPBG is required to consider cost as part of the federal acquisitions regulations. Williams asked if that would be the deciding factor. Brubaker said there are a number of factors that are used to determine best value in the BPBG selection process.

Next CAC and CDCAB Meeting

The next regular meeting is scheduled for Wednesday, Dec. 11, 2013, at 1:30 p.m. at the Eastern Kentucky University's Carl D. Perkins Building, Rooms A and B.

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