In September, seven members of the Kentucky Department for Environmental Protection’s Blue Grass Army Depot (BGAD) team traveled to Pueblo, Colorado to visit the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP). PCAPP is the sister site to the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) in Richmond, Kentucky but is already operational. This provided an unique opportunity for the KDEP team to take a sneak peek into the future and witness a full scale chemical agent demilitarization program in progress.

The PCAPP facility finished the main phase of construction in 2012, with plant systemization completed in 2016. The first agent destruction operations began September 7, 2016 with destruction operations scheduled to be completed by 2023. At the time of the visit, PCAPP had just returned to operational status after a 10-month downtime. The visit allows the BGAD team the chance to learn from the opportunities discovered in PCAPP’s operational processes and how the details of permitting have been met with real-world complications of chemical agent destruction.

Once again fully operational, the PCAPP facility recently passed the 100,000 rounds milestone and has destroyed 585.8 US tons of mustard to date.

The exchange of best practices and lessons learned will provide valuable experience and knowledge for our BGAD team. KDEP would like to thank ACWA for the opportunity to visit the PCAPP site.

For more information about:
ACWA (Assembled Chemical Weapons Alternative)
https://www.peoacwa.army.mil/
PCAPP (Pueblo Chemical Agent-Destruction Pilot Plant)
https://www.peoacwa.army.mil/pcapp/
BGCAPP to destroy M60 rockets
(adapted from the Bluegrass Bulletin—BGCAPP)

In December, BGCAPP began destroying 44 M60 training rockets in preparation for plant operations. These rockets do not include agent.

“This is an excellent opportunity for BGCA and BGCAPP to validate our draft procedures,” said Terry Staggs, plant support specialist for the EDT. “It will also provide critical information on the settings of the demilitarization machines as they process the M60 rockets that are dimensionally identical to the M55 Chemical filled rockets.”

M60 training rockets were shipped from Aberdeen, Maryland, to the Blue Grass Chemical Activity Chemical Weapons Storage Facility in July 2007 and are to be used at BGCAPP to test the rocket cutting machine before operations. The M60 training rockets were delivered to BGCAPP in November and destruction began with draining the M60 rockets in December 2018.

“Munitions Handlers started training several months ago to prepare for this transport operation and all future operations,” said Barry Barker, shift plant manager. “They are dedicated individuals and have worked very hard to make the project a success.”

These training rockets are similar in construction and appearance to the M55 nerve agent rockets and will assist BGCAPP in defining the precise cut location needed to separate the warheads from their attached rocket motors using the Rocket Cutting Machine.

To achieve destruction, the shipping and firing tubes will be cut and each end cap drilled. The inert fill from the warheads will be drained, sampled and analyzed to confirm the inert fill, and shipped off-site for disposal. To meet Treaty destruction requirements, additional drill holes will also be made in the warhead and the motor sections in the coming weeks.

The M60 training rockets were loaded at the storage igloos into EONCs and delivered to the Munitions Demilitarization Building in two shipments, where they are being temporarily stored awaiting destruction. All activities were completed in close coordination with Kentucky Department of Environmental Protection’s Blue Grass Army Depot section.

Video of the 44 M60 training rockets being unloaded into the Unpack Area at BGCAPP is available at Rockets Delivered to Blue Grass Plant (courtesy of PEO ACWA).

“It will also provide critical information on the settings of the demilitarization machines as they process the M60 rockets that are dimensionally identical to the M55 Chemical filled rockets.”

Project personnel unload the M60 test rockets at BGCAPP, in November 2018. (BGCAPP)
Major Permitting Milestones

The Blue Grass Army Depot (BGAD) Section in the Hazardous Waste Branch accomplished the following major permitting milestones in 2018:

- Issued a Research Development & Demonstration (RD&D) permit “mega-revision” (called Rev. 6a) for the destruction of nerve agent munitions in the main plant (Blue Grass Chemical Agent-Destruction Pilot Plant or BGCAPP) at BGAD (March, 2018). This RD&D permit modification incorporated 12 years of major process changes for the destruction plant, and established the path forward to actual destruction operations.

- Issued a permit for open burning and open detonation (OB/OD) of conventional (non-chemical) munitions (November, 2018). This included holding a public meeting and hearing in August to take comments and answer questions. The OB/OD operations had been under “interim status” since 1988, awaiting issuance of a final permit. The actual sampling occurred in May, 2018.

- Issued a permit for sampling of GB munitions for use in precise laboratory testing (February, 2018). The BGAD Section continues to review and issue numerous permit modifications to incorporate changes and detailed implementation plans into the permit as the project nears the beginning of chemical agent destruction operations, currently projected to start in June, 2019 (EDT destruction of H mustard munitions) and October, 2019 (start of Main Plant destruction of GB nerve agent munitions).

CAC/CDCAB Meeting

The Kentucky Chemical Demilitarization Citizens’ Advisory Commission and Chemical Destruction Community Advisory Board held a meeting at Eastern Kentucky University in Richmond, Kentucky on December 12, 2018. To view the meeting in its entirety and to access a summary of major meeting highlights please visit https://www.youtube.com/watch?v=0fcwIXVp5s (PEO ACWA)
As the BGCAPP project ramps up into operation the BGAD team for KDEP has grown. We have welcomed 5 new faces:

- **Lee Minzenberger**—Clark County native, Lee earned a degree in Geology at Eastern Kentucky University. Lee previously worked for Full Circle Market in Winchester Kentucky, Eastern Kentucky University as a GIS assistant, and with Daniel Boone National Forest as a hydrological assistant.

- **Aaron Newton**—Aaron graduated from the University of Louisville with a Bachelor of Science and a Master of Engineering in Chemical Engineering. After 5 years in Air Quality he moved to the Division of Waste Management where he worked in the Permitting Section of the Hazardous Waste Branch before joining the Bluegrass Army Depot section in October. Aaron lives in Louisville with his wife, Anna, and their six year old son, Sam.

- **Leslie Riddell**—Leslie recently earned her Master’s in Environmental Health Science at Eastern Kentucky University. Her previous work experience includes Environment, Health, and Safety in manufacturing. She currently resides in Richmond, KY with her husband and four children.

- **Harold Sparks**—Harold has a Chemical Engineering degree from the University of Kentucky and over 30 years experience in Kentucky environmental regulation. He has worked in the Division of Air Quality, the Division of Water’s Facilities Branch and was most recently a permit writer for the Surface Water Permit Branch in the Municipal Permit Section. He lives with his wife in Lexington, while their daughter is away at school in Florida.

- **Brittany Woodward**—Brittany recently finished her Master’s degree in Aquaculture and Aquatic Sciences at Kentucky State University, and holds a Bachelor’s degree in Fish and Wildlife Conservation Biology from Colorado State University. Brittany previously worked with multiple universities, as well as state and federal agencies, where she conducted native fish population assessments all across the United States. She thoroughly enjoys being outdoors, and on her days off she can usually be found hiking and/or camping with her boyfriend and their dog.