

**Colorado Chemical Demilitarization Citizens' Advisory Commission Meeting**  
**Olde Towne Carriage House**  
**25 January 2017**

Approximately 40 individuals representing the Bechtel Pueblo Team (BPT); Chemical Stockpile Emergency Preparedness Program; Colorado Chemical Demilitarization Citizens' Advisory Commission (CAC); Colorado Department of Public Health and Environment (CDPHE); Federal Emergency Management Agency; Program Executive Office, Assembled Chemical Weapons Alternatives; Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP); Pueblo City-County Health Department; PuebloPlex and U.S. Army Pueblo Chemical Depot (PCD) attended this meeting held at the Olde Towne Carriage House in Pueblo, Colorado. Seven citizens were also in attendance.

Irene Kornelly, chair, CAC, called the meeting to order at 6:03 p.m.

Kornelly said legal counsel said four members of the CAC constitutes a quorum.

Kornelly asked for and received approval of the minutes from the Dec. 14, 2016, CAC meeting.

Col. Thomas Duncan, commander, PCD, provided a depot update. He said there has been some interest at the depot by media outlets. He said although the workforce reductions are PCAPP contactors, one local media outlet portrayed it as being depot furloughs. He said the federal hiring freeze does impact the depot, but believes a waiver process could be in effect for the depot. Col. Duncan cautioned the hiring freeze does not impact the depot's ability to safeguard the stockpile.

John Norton, member, CAC, asked about vacancies being filled. Col. Duncan said no vacancies were filled after Jan. 22, 2017.

Walton Levi, deputy site project manager, PCAPP, said the freeze does effect the government field office.

Kevin Mackey, unit leader, Hazardous Waste Permitting Unit, CDPHE, gave a permitting update. He said his team is considering transferring G-block igloo storage from depot authority to PCAPP. He said the PCAPP inspection plan is being reviewed to reduce the number of inspections being performed, especially in toxic areas. Mackey said temporary authorizations were issued for the removal of agitators from 30-Day Hydrolysate Storage Tanks and the public comment period for the associated permit modifications is in progress. He said plant staff is looking at recirculation, solids and how to clean the 30-day tanks. Plans are being made to replace the agitators on Brine Concentrator Feed Tanks (BCFT) with bubble air diffusers. The secondary containment coating system to be installed around the BCFTs is being reviewed. Mackey said his team, along with PCAPP staff, will review the Multi-Pathway Health Risk Assessment tomorrow as it related to air samples collected during pilot test demonstrations.

No questions were asked.

Rick Holmes, project manager, BPT, gave a plant update. Holmes discussed safety and pilot test demonstration status. He said 43 drums of greater than 1 VSL (vapor screening level) secondary waste has been shipped to Port Arthur, Texas. In order to make shipments more cost effective, plant staff desire to ship 80 drums of waste at a time and are looking for on-site storage possibilities.

Holmes said pilot testing resumed on Jan. 12. Since agitators were removed and replaced with blind flanges, he said the tanks are providing good containment. He said agitators were never used at the Aberdeen plant. Holmes said plans are being made to replace the agitators from Brine Concentrator Feed Tanks with bubble air diffusers. Holmes said the munitions have more pressure than anticipated, which have caused spills in the Agent Processing Building. Splash guards are being added to the Cavity Access Machines to contain spills. Plant staff are also questioning the need for the munitions to be rotated while they are being rinsed. He said the rotation requires a lot of additional equipment and maintenance. He said his staff has conducted a double rinse without rotation and will review the data with CDPHE on Jan. 26. Holmes said a temporary cover is being built over the BCFT to prepare for replacement coatings.

Holmes also discussed the PCAPP budget. He said a number of things are being done to reduce the amount of money being spent, including the elimination of overtime, travel reductions and cutting back on inventories of spare parts. He said the last thing being evaluated is the limited reduction in workforce, approximately 30 positions, through voluntary or involuntary layoffs. He said furloughs are being considered for the Labor Day and Fourth of July holidays, during which time staff will be asked to take a vacation day or leave without pay.

Norton asked if compensation could be sought from the vendors of the 30-day tank agitators or BCFT coatings. Holmes said he wouldn't rule it out.

Walton Levi, deputy site project manager, PCAPP, discussed contingency planning for the treatment of hydrolysate. He said the Army and PCAPP team are committed to using the plant's on-site biotreatment process to break down hydrolysate. Levi said the National Academies of Sciences, Engineering and Medicine made a recommendation to develop a backup plan should biotreatment not be successful; therefore, a loading dock/shipping terminal is being proposed for the potential off-site shipment and disposal of hydrolysate. A poster session was held prior to the CAC meeting to allow stakeholders to learn about the Record of Environmental Consideration (REC). Levi said the risks have been reviewed and are negligible. He encouraged public input, reviewing the ways to provide it. He said the comments would be reviewed before the REC was finalized.

Kornelly said a final public meeting regarding the REC will be held on Feb. 22 in conjunction with the Permitting Working Group (PWG) meeting.

Norton asked if the construction of the shipping terminal was in the budget. Holmes said there is money for design modifications. Norton inquired about the cost. Holmes said he'd have the answer at the next Biotreatment Utilization Group meeting. He said there is not a projected date for the terminal to be built.

Holmes said 10,124 munitions destroyed as of Jan. 20. He said the leaker encountered during Baseline Reconfiguration activities was not related to the leaker found at the depot. Col. Duncan said vapor was detected on Nov. 2. The leaker was identified during the first week of January and leaker operations have officially concluded. A press release will be issued on or before Jan. 27.

Holmes said Army Materiel Command will evaluate the plant on Jan. 26 in anticipation of Department of the Army Inspector General Surety Inspection.

John Riley, coordinator, Chemical Stockpile Emergency Preparedness Program (CSEPP) asked if PCAPP, as a federal facility, is required to provide Tier 2 reporting in the same way other hazardous waste facilities are required. Doug Knappe, program manager, Hazardous Waste Permitting Unit, CDPHE, said he wasn't sure but did not believe there is a federal exemption. Levi said the information is provided to PCD who does the reporting. David Kruetzer, attorney, Colorado Attorney General's Office, said the reporting requirements to which Riley spoke are part of the *Emergency Planning and Community Right to Know Act*, which is a federal environmental law not delegated to the states; therefore, the state has no role. Chris Pulskamp, environmental manager, PCD, said PCAPP provides the data, which is consolidated by the depot who then submits to an online reporting system which is also submitted to the local planning commission so CSEPP would have access.

Kornelly asked if CAC wanted to respond to the REC as a group or as individuals. Terry Hart, co-chair, CAC, said the CAC could respond collectively but also encouraged individual responses.

Kornelly said a PWG meeting was held earlier in the day. She said most of the items discussed at the meeting were covered by Mackey. She said the next PWG meeting will be held on Feb. 22, in conjunction with a public meeting.

The next CAC meeting will be held at 6 p.m. on Feb. 22 at the Olde Towne Carriage House in Pueblo.

The meeting adjourned at 6:54 p.m.

**Colorado Chemical Demilitarization Citizens' Advisory Commission Meeting**  
**Olde Towne Carriage House**  
**22 February 2017**

Approximately 37 individuals representing the Bechtel Pueblo Team (BPT); Chemical Stockpile Emergency Preparedness Program; Colorado Chemical Demilitarization Citizens' Advisory Commission (CAC); Colorado Department of Public Health and Environment (CDPHE); Program Executive Office, Assembled Chemical Weapons Alternatives; Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP); Pueblo City-County Health Department; Pueblo County Planning and Development; PuebloPlex; and U.S. Army Pueblo Chemical Depot (PCD) attended this meeting held at the Olde Towne Carriage House in Pueblo, Colorado. Seven citizens were also in attendance.

Irene Kornelly, chair, CAC, called the meeting to order at 6 p.m.

Kornelly asked for and received approval of the minutes from the Jan. 25 CAC meeting.

Kornelly said she had two project announcements. She said there will be a supplement to the Department of Defense budget sent to Congress on March 1 for funding needed in Pueblo and Blue Grass. She also read a letter penned by the CAC for Program Executive Officer Conrad Whyne regarding the Record of Environmental Consideration (REC) and their opposition to the off-site shipment of hydrolysate.

Col. Thomas Duncan, commander, PCD, said his staff has been focused on the upcoming inspection by the Department of the Army Inspector General (DAIG), scheduled for Feb. 27 through March 10. He said the DAIG will review records, including policies, and will observe a Chemical Accident or Incident Response and Assistance exercise, as well as shipping and receiving of munitions from G-block to the plant. Col. Duncan said the DAIG provides oversight of the program, to ensure standards for handling chemical surety material are being met. He said there is still a federal hiring freeze but is optimistic that the depot will receive a waiver.

Kevin Mackey, unit leader, Hazardous Waste Permitting Unit, CDPHE, gave a permitting update. He said he reviewed Class 2 permit modifications including *Inspection Plan* updates; elimination of the 30-day recirculation process and the accumulation of solids and the frequency of tank clean out; replacement of Brine Concentrator Feed Tank (B14) agitators with air diffusers—it is very important to keep the brine solution aerated—the work was performed through a temporary authorization. Mackey also reviewed Class 1 permit modifications, including modifications to glove box sampling lines—to ensure representative samples are coming from the hydrolysate storage tanks as opposed to sampling old material within the lines, that have been plugged up. This will be addressed through design and operation changes. Mackey said two members of his team inspected the B14 secondary containment coating repair on Feb. 22 and had a favorable impression of the work. He said replacement of the B04 strainer baskets are being evaluated. He said the strainers were clogging last fall so the finer mesh is being replaced with bigger mesh. Mackey said future modifications include G-block igloo storage for secondary waste; the Research, Development, & Demonstration permit expires in

September so as pilot testing continues, the state health department wants to make sure the schedule can be met. The results, including operating parameters and temperatures, from pilot testing will go into the Part B application. Mackey said his team is looking at the Pilot Test Demonstration Plan, reviewing data from first few rounds of testing compared to Multi-Pathway Health Risk Assessment (MPHRA) levels and have determined them to be within acceptable risk, given intermittent operating conditions for pilot testing.

Terry Hart, vice-chair, CAC, had a correction to the minutes, asking the “Multi-Pathway Health Rick Assessment” be changed to MPHRA.

Rick Holmes, project manager, BPT, provided an update on the plant, including safety statistics. He said his team entered winter with a focus on winter safety due to slips and trips experienced in 2016. He said there were three recordable injuries last year compared to one recordable this year.

Holmes reviewed pilot testing status. He said heel testing was performed in the Munitions Treatment Unit, where unrinsed munitions were run through it to gather data. He said enough data was gathered on the first test that there is no need to go forward with two more tests. Holmes said staff continues to look at ways to optimize the Cavity Access Machines, including if rotation of the munition is necessary and lowering PSI for longevity of the nozzles. Holmes said as a result of the plant outage during the months of November, December and January, they are seeing better equipment performance. He said the plant is moving toward an integrated facility run when all systems will run simultaneously.

Holmes said the workforce is seeing degradation in boxed munitions. He said staff are in the process of reconfiguring 30,000 boxed munitions, whereby the process is to open up the box and monitor it; open fiber tube and monitor it; remove munition and repackage it for storage; and remove the extra components for shipment to Anniston, Alabama. He said when the Miniature Continuous Air Monitoring Systems detect agent present, those munitions are packed in Single Round Containers and placed in storage to await destruction by the Explosive Destruction System (EDS).

Col. Duncan said because the munitions have been in storage since the 1950s, degradation of the munitions is expected. He said the igloos are monitored for leakage weekly and the munitions are monitored again after transport to PCAPP.

Greg Mohrman, site project manager (SPM), PCAPP, provided statistics on destruction progress, reconfigured and reject rounds. He said more than 14,000 rounds have been destroyed as of Feb. 22. Eleven 155mm projectiles have been rejected during plant operations. He said 4,346 rounds have been reconfigured, with four rejects.

Mohrman said the DAIG will perform an inspection at PCAPP the week of March 6. He said the inspectors will be looking at operations, personnel records, medical response, safety and security. This will be the first visit by the DAIG to PCAPP.

Mike Strong, deputy SPM, gave an update on PCAPP EDS, saying the P2A is in Maryland and has completed testing. He said it will remain in Maryland for the development of standard operating procedures and quarterly maintenance. He said the P2R, which has remained on site, also receives quarterly maintenance. Strong said the P2A will be deployed in mid-2018 as more rejects are coming from reconfigured munitions than were anticipated.

Holmes said all six agitators have been removed from 30-day Hydrolysate Storage Tanks. He said solids and solid management inside the 30-day tanks is being reviewed. Holmes said an enclosure is being built around the B14, to protect the coatings, as well as a second permanent stairway. He said the coatings will be placed during the months of March and April. His staff is evaluating the need for a long-term enclosure in the 30-day tank area.

Walton Levi, deputy SPM, discussed the REC. He said the only comment the project is aware of is from the CAC. He said the REC comment period was extended to March 1 due to an error in an email address. He also provided other means to provide comments.

Mohrman announced the recent launch of the new PEO ACWA website.

Mohrman mentioned rubber skirts were added to the CAMs. He said the splash guards have eliminated splashes.

Hart spoke on behalf of the CAC, expressing their concern with the off-site transport of hydrolysate, even temporarily. He said the CAC believes off-site shipment should only occur as a last resort. He said draining the 30-day Hydrolysate Storage Tanks would buy time and because he just learned of the plans to temporarily ship hydrolysate off site, he feels the CAC will have more comments to make regarding the REC. He said he understood the proposal to build a shipping dock for the off-site shipment of hydrolysate was only in the event that microbes were unable to break down hydrolysate in the Biotreatment Area (BTA). Mechanical problems with the 30-day Hydrolysate Storage Tanks and B14 tanks were not anticipated.

Holmes said the plan is to get the BTA started; however, two of the storage tanks are currently full. Hart suggested the plant slow down or stop to reduce the rate of producing hydrolysate. Holmes said the workforce is safer when the plant is running.

Hart said he was concerned with the potential for continuous off-site shipment of hydrolysate. He said the CAC has consistently opposed the transportation of hydrolysate. He said although shipment may have to happen once, the CAC does not want to see it happen again. "We have a great deal of concern," he said.

Hart said if the shipping terminal was being built to bleed off hydrolysate, the CAC should strongly object it.

Holmes said unloading the tanks is the simplest approach. Hart suggested redundant storage could be built in order to store more hydrolysate until the BTA is ready. Holmes said volume and time is the problem, but the equation can be discussed.

Hart again suggested slowing down, or even turning off the facility. He said turning off the facility until the problems are fixed is the favorable option for him and his constituents.

Hart asked the anticipated cost of the shipment terminal. Holmes said it would take six weeks to build and would cost a couple million dollars, although the exact cost is unknown.

Hart gave a pitch to use local transportation companies to help mitigate some of the pain.

John Norton, chair, Biotreatment Utilization Group (BUG), asked if the cost of transportation is less than the cost of building redundant tanks. Holmes said the math has not been done.

Norton asked if the shipment terminal could be used to transport sediment. Holmes said it was unknown and at other baseline sites sediment was handled during closure.

Kornelly asked if the discussion would be sufficient for the REC or if it needed to be written up by the CAC. Mohrman said the commentary was sufficient, and acknowledged the letter she read at the start of the meeting.

Kornelly provided an overview of the Permitting Working Group meeting held earlier in the day. She said the next meeting will be held on March 29.

The next CAC meeting will be held at 6 p.m. on March 29 at the Olde Towne Carriage House in Pueblo. She said Mr. Whyne will be in attendance.

Norton said the BUG received good news during its meeting, in that the schedule calls for hydrolysate to be fed to the Immobilized Cell Bioreactors in April.

The meeting adjourned at 7:32 p.m.

**Colorado Chemical Demilitarization Citizens' Advisory Commission Meeting**  
**Olde Towne Carriage House**  
**29 March 2017**

Approximately 55 individuals representing the Bechtel Pueblo Team (BPT); Chemical Stockpile Emergency Preparedness Program (CSEPP); Colorado Chemical Demilitarization Citizens' Advisory Commission (CAC); Colorado Department of Public Health and Environment (CDPHE); Edgewood Chemical and Biological Center; Program Executive Office, Assembled Chemical Weapons Alternatives; Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP); Pueblo City-County Health Department; PuebloPlex; U.S. Army Pueblo Chemical Depot (PCD); and U.S. Sen. Michael Bennet's Pueblo office attended this meeting held at the Olde Towne Carriage House in Pueblo, Colorado. Eight citizens were also in attendance.

Irene Kornelly, chair, CAC, called the meeting to order at 6 p.m.

Kornelly asked for and received approval of the minutes from the Feb. 22 CAC meeting.

She had no project announcements, other than to say the Continuing Resolution provides funding through April 16.

Conrad Whyne, program executive officer (PEO), Assembled Chemical Weapons Alternatives (ACWA), addressed the CAC for the last time before his retirement in April. He said he first came to Pueblo in 1995 as a project engineer to renovate a building at the depot to reconfigure boxed ammunitions into palletized munitions. The renovation project was completed but never implemented. Then, beginning in 2001, while working for the U.S. Army Chemical Materials Agency, was part of public scoping meetings to decide between incineration and other technologies as treatment options for the Pueblo stockpile. In 2010, he became the acting ACWA program manager and in 2013 became ACWA's first PEO. Whyne said his replacement has not been determined, noting the job announcement closed on March 15. He assured the CAC that a qualified person will be selected, and if one is not selected upon his retirement, Joe Novad, deputy PEO, will fill in.

Whyne said the project has been a lot of fun and a lot of hard work. He said he doesn't think he'll miss the hard work, but will miss the people, calling out Kornelly; Terry Hart, vice chair, CAC; and Ross Vincent, member, CAC. Whyne said, "We could always agree to disagree, but it was all about getting the project done."

He thanked the CAC members for their dedication and service to the country and extended that appreciation to John Thatcher, former member, CAC, and John Klomp, former chair, CAC. He also thanked the public, the government workforce at PCAPP and the depot, the contractors and support contractors and staff of CSEPP for their time and energy to the project.

Whyne said the workforce should expect more surprises. "I challenge the team to continue to offer complete transparency and to continue to ask hard questions. Be honest and transparent," he said.

Kornelly thanked Whyne for his willingness to work with the CAC and for his transparency. She said the CAC members appreciated his ability and willingness to answer their questions. “We didn’t always agree, but worked together to come to a successful conclusion,” she said.

Hart said Whyne’s commitment to transparency was acknowledged and well received. He said Whyne was very helpful and appreciated his openness, lending an ear and meeting the CAC’s concerns.

Vincent asked Mr. Whyne to consider moving to Pueblo and become a member of the CAC.

Dan Hancock, deputy commander, PCD, said at the end of February, the depot went through its biannual Department of the Army Inspector General (DAIG) inspection and it went well. The Army Materiel Command will visit the depot next year to make sure depot staff are performing their jobs correctly. He said the Secretary of Army has granted some exceptions to the depot’s hiring freeze. He said the depot plans to reinvigorate hiring and postings for security guards, firing fighters and toxic material handlers can be found at [usajobs.gov](http://usajobs.gov). Hancock said last week’s windstorm caused approximately \$160,000 to \$200,000 in damage to buildings, roofs and siding. He announced the depot’s 75<sup>th</sup> anniversary, scheduled for May 25. Hancock said the depot has transported 28,641 munitions to the plant.

No questions were asked of Hancock.

Kevin Mackey, unit leader, Hazardous Waste Permitting Unit, CDPHE, gave a permitting update. Mackey said several Class 1 permit modifications are being evaluated or have been approved, including permit modification 116, secondary containment coating repair of B14; the relocation of pH probes within the Immobilized Cell Bioreactors (ICB) tank farm; a modification for the use of moisture probes to locate potential leaks in the piping system; a modification to the ICB piping system—to change from PVC to carbon steel. Mackey said Class 2 modifications being reviewed include the Inspection Plan update, the public comment period ends this week; a modification to 30-Day tank recirculation, a temporary authorization (TA) was issued, and the comment period concludes at the end of April; modification 117, the hydrolysate truck loading station, a TA was issued to construct and operate that unit; and B04 system secondary containment for precipitation management.

No questions were asked of Mackey.

Greg Mohrman, site project manager (SPM), PCAPP, said the plant experienced its first DAIG inspection March 6-10. He said a large team reviewed all aspects of PCAPP operations. He said the purpose of the inspection was to evaluate PCAPP's ability and capability to carry out its chemical surety mission, including all aspects of mission operations, safety, security, surety management, emergency response, medical support, external support, demilitarization operations and cyber security. Mohrman said it was a difficult inspection. In the exit briefing, the DAIG team lead commented on the level of teamwork that was evident between PCD and PCAPP and the progress made since beginning of operations in September 2016.

Mohrman said some documentation and procedures need to be cleaned up; however, PCAPP received a positive note for cyber security.

Bret Griebenow, deputy project manager, BPT, provided safety statistics. He said the majority of pilot testing has been completed. Griebenow said plans are to bring the Biotreatment Area back on line in April. He said some pilot tests have been cancelled as a result of what has been learned through other tests.

Griebenow said as a pilot plant, staff have faced many challenges; however, the challenges have been addressed and resolved. He said one issue was with the strainers in the Munitions Washout System (MSW) which were becoming clogged after processing 25 to 30 rounds. A permit modification was submitted to CDPHE to remove the mesh screens. Before the screens were removed, plant staff determined there would be no downstream effects to allowing solids to pass through.

Waste handling was also a challenge. Griebenow said a lot of waste was being generated due to entries being made to clean out MWS strainers. He said waste management was not being handled efficiently in the beginning, but because the number of entries has been reduced, waste handling has become more efficient.

Another challenge was with over pressurized rounds spraying agent onto the machine and floor. Griebenow said a pinch point has been the availability of the Cavity Access Machines (CAMs), a complex machine.

Griebenow said the DAIG was concerned with potential burster exudate issue. He said because the bursters are not in pristine condition, there is concern that impure materials coming out of the energetics could cause issues. He said plant staff worked with experts from Picatinny Arsenal to determine it was not exudate and to determine some changes to operations procedures.

Secondary waste shipments continue. Griebenow said significant progress has been made in the Biotreatment Area (BTA) with the removal of agitators and preparing to place coatings next week, to be completed by mid-April. He said staff will initiate seeding the bioreactors in mid-April.

John Norton, chair, Biotreatment Utilization Group (BUG), asked if the Munition Treatment Unit (MTU) destroyed residual agent. Griebenow agreed the MTU serves as a safety mechanism.

Norton also asked if the “collars” placed on the CAMs are working to stop the “champagning.” Griebenow said the splashguards are working.

Ken Griffin, member, CAC, asked if champagning munitions can be identified by lot. Griebenow said staff are aware of lots of over pressurized rounds, but they cannot be identified by munition.

Walton Levi, deputy SPM, discussed the Record of Environmental Consideration (REC). He said due to the risk of the BTA not fully operation, it would be prudent to build a loading and transfer station for the off-site shipment of hydrolysate. A poster session was held before the January CAC regarding the REC public comment period. After the comment period closed and concerns were addressed, PCAPP received approval from the depot.

Griffin wanted to know what the risk to public land would be in the unlikely event of a spill. Levi said hydrolysate is a hazardous material, although not extremely toxic. He said spills were addressed in the Transportation Risk Assessment.

Norton asked who would be liable for a spill. Griebenow said PCAPP tracks the shipment through its complete destruction, but the trucking company would be responsible for any potential accidents.

Kornelly said since the hydrolysate would be shipped out of Colorado, she asked if PCAPP will work with other states along the transportation route. Griebenow said plant staff will work closely with the transportation contractor who wins the bid, through incineration.

Vincent said he has always been bothered by the ethical issues surrounding the transportation of hazardous waste. He said it is almost equivalent to dumping trash in your neighbor's yard. He said there is no compelling reason as to why hydrolysate cannot be treated in Pueblo. He said he questions how water can be burned.

Hart said the CAC's opposition to the off-site shipment of hydrolysate was demonstrated in their comments to the REC. He said, "We do not like transportation." He said Mr. Whyne assured us that transportation will only happen as a last resort.

Hart asked what the 30-Day Hydrolysate Storage Tanks are currently storing, the amount of hydrolysate versus the amount of surrogate. He asked if he was wrong to assume that the greatest portion of what will be shipped is surrogate. Griebenow said the tank contains 23 percent surrogate. It also contains wash water and hydrolysate.

Hart again expressed his opposition to off-site shipment, saying he hoped the shipment will be a unique situation and will not set a precedent.

Norton asked about the cost to run the plant that was shared during the Permitting Working Group (PWG) held earlier in the day. Griebenow said it costs approximately \$850,000 a day to run the plant.

Norton wanted to know how much hydrolysate would be shipped if it's shipped. Griebenow said 250,000 gallons, which is approximately 50 truckloads. Operating three trucks per day, it will take a total of 17 days to ship.

Mohrman said 19,655 155mm projectiles have been destroyed as of March 29. He said 14 155mm projectiles are rejects (not leakers) and five 105mm projectiles are rejects.

He reported on Baseline Reconfiguration progress, which is the process of unboxing munitions, palletizing them and returning to storage to await processing. To date, 5,126 munitions have been reconfigured.

Kornelly did not provide an overview of PWG meeting held earlier. She said the next meeting will be held on April 26 at District Attorney's Conference Room.

Norton did not provide a BUG update.

Norton asked Whyne to discuss PCAPP's progress compared to other facilities. Whyne said Johnston Atoll Chemical Agent Disposal System (JACADS), where baseline incineration was performed, was a pilot plant. He said Tooele, Utah, was a second generation plant, where lessons learned from JACADS were applied. He said Anniston, Pine Bluff and Umatilla were third generation plants. He said when Anniston was in its first 193 days, they processed more than 18,000 GB rockets; PCAPP has also processed more than 18,000 projectiles in the same amount of time. Whyne said the Pueblo team has done a great job in preparing for operations.

The next CAC meeting will be held at 6 p.m. on April 26 at McHarg Park Community Center, in Avondale.

The meeting adjourned at 7:16 p.m.

**Colorado Chemical Demilitarization Citizens' Advisory Commission Meeting**  
**Olde Towne Carriage House**  
**26 April 2017**

Approximately 33 individuals representing the Bechtel Pueblo Team (BPT); Chemical Stockpile Emergency Preparedness Program (CSEPP); Colorado Chemical Demilitarization Citizens' Advisory Commission (CAC); Colorado Department of Public Health and Environment (CDPHE); Federal Emergency Management Agency Region VIII; Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP); PuebloPlex; and U.S. Army Pueblo Chemical Depot (PCD) attended this meeting held at McHarg Park Community Center, in Avondale, Colorado. Seven citizens were also in attendance.

Irene Kornelly, chair, CAC, called the meeting to order at 6:03 p.m.

She asked for and received approval of the minutes from the March 29 CAC meeting.

Kornelly said she hoped the continuing resolution passes by Friday. She said she asked in an earlier meeting how it would impact PCAPP and was told it would have an impact on PCAPP only if the resolution does not pass by September; however, it would impact PCD in the short term.

Col. Thomas Duncan, commander, PCD, said he, and the Army Materiel Command, is pushing for predictable and consistent funding. He said the depot would face challenges in the event the continuing resolution does not pass, including the CSEPP Exercise scheduled for May 3. He said the on-post portion of the exercise would have to be cancelled. The depot commander spoke to munition support of PCAPP, saying the depot has facilitated delivery of 24,143 155mm munitions as of April 25; 7,240 boxed munitions have been delivered to PCAPP and depot staff have put 6,307 reconfigured munitions back into storage. He said the First Brigade 4<sup>th</sup> Infantry Division has been performing an exercise at Pinon Canyon, and as they have performed convey operations they have used the depot as a refueling point. Duncan said the depot is in the window for interaction with the Organisation for the Prohibition of Chemical Weapons. He said twice a year the depot performs systematic inspections to confirm accountability of munitions. Duncan also promoted the May 25<sup>th</sup> PCD open house to recognize the depot's 75<sup>th</sup> anniversary.

No questions were asked of Duncan.

James Hindman, professional engineer, Hazardous Waste Permitting Unit, CDPHE, gave a permitting update. Hindman said the month of March was the busiest they've seen since the start of the project. He said the state team is working on at least a dozen permit modifications, mostly minor. He said there are several Class 2 permit modifications that are out for public comment, including the transfer of a container storage igloo from PCD to PCAPP; management of precipitation from the tank storage units; and the loadout facility for the hydrolysate from the 30-day tanks. He said construction certification packages are being worked on. He also said the state team is performing inspections to ensure the facility is in compliance with state requirements.

No questions were asked of Hindman.

Gayle Perez, public information officer, CSEPP, provided a CSEPP presentation. She provided an overview of the program's congressional mandate, mission and accomplishments. She said six successful Emergency Operation Center activations were achieved in 2016-2017, including the Motor City oil spill outside of Colorado Springs; a presidential candidate visit; Beulah Hill fire; Junkins fire and two severe weather events. Perez also addressed plans for the future, including the exercise scheduled for May 3.

John Norton, member, CAC, asked how the potential federal shutdown would impact the CSEPP Exercise. Cheryl Layman, CSEPP team lead, FEMA Region VIII, said if there was a government shutdown, they would follow the Army lead.

Bret Griebenow, deputy project manager, BPT, said the plant continues to perform well in the area of safety. He said staff are moving forward with the Pilot Test Demonstration Plan (PTDP), saying test results have been positive. He also said the plant achieved a big milestone on April 26 in that Immobilized Cell Bioreactor modules one and two were fed with hydrolysate, meaning the entire plant is now operating. The Integrated Facility Demonstration is scheduled for mid-July, during which the plant will run at full capacity and emissions will be monitored. Griebenow said the plant continues to ship waste streams off site, including 17,259 rounds, 20,741 bursters and 5,393 propellants.

Walton Levi, deputy site project manager, PCAPP, said more than 22,000 155mm munitions have been destroyed as of April 26. He said 19 155mm rejects have been encountered.

Griebenow spoke to the completion of the enclosure around the Brine Concentrator Feed Tank secondary containment system, as well as the completion of the associated liner. The Facility Construction Certification was sent to CDPHE and when it was approved, biotreatment activities began. He said the feeding of hydrolysate will be ramped up slowly so the bugs can become acclimated.

Griebenow reported on pot holing activities in preparation for the hydrolysate loading station to be built near the 30-day Hydrolysate Storage Tanks. He said it's highly probable that some hydrolysate will be shipped off site. He said the plant does not have the tank capacity which will allow the plant to run at full speed.

Kornelly said she received a letter from Conrad Whyne who said the contents, which is a mixture of surrogate and hydrolysate, of one 30-day Hydrolysate Storage Tank will be shipped off site. She said the contents will amount to approximately 50 truckloads. Kornelly said the shipping contract was awarded to Veolia in Port Arthur, Texas. She said that Whyne said hydrolysate will be handled primarily through biotreatment. The letter will be posted on the CDPHE website.

Carl Ballinger, former CSEPP coordinator, asked for information on the shipping routes for the trucks transferring hydrolysate from PCAPP to Texas. Griebenow said the team is in the process of finalizing the contract and the transportation routes are still unknown.

An Avondale resident said that she and family members are experiencing breathing problems and wanted to know how plant activities are impacting the Avondale community. She said her six-year-old grandson has been to the emergency room seven times in the last month. Griebenow said the purpose of the PTDP is to monitor emissions. He said emissions are being sampled to ensure there are no detrimental impact to workers, the community or environment. Hindman said the facility was designed and is operated with emission control equipment. Kornelly said the CAC has worked hard so that the communities surrounding the depot are protected.

Kornelly provided an overview of the Permitting Working Group meeting held earlier in the day. She said 15 permit modifications were discussed. The next meeting will be held on May 31, which will follow four public meetings regarding four different permit modifications.

Norton did not provide a Biotreatment Utilization Group meeting update.

The next CAC meeting will be held at 6 p.m. on May 31 at the Olde Towne Carriage House, in Pueblo.

The meeting adjourned at 6:44 p.m.

**Colorado Chemical Demilitarization Citizens' Advisory Commission Meeting**  
**Olde Towne Carriage House**  
**31 May 2017**

Approximately 30 individuals representing the Bechtel Pueblo Team (BPT); Chemical Stockpile Emergency Preparedness Program (CSEPP); Colorado Chemical Demilitarization Citizens' Advisory Commission (CAC); Colorado Department of Public Health and Environment (CDPHE); Federal Emergency Management Agency Region VIII; Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP); PuebloPlex; and U.S. Army Pueblo Chemical Depot (PCD) attended this meeting held at the Olde Towne Carriage House in Pueblo, Colorado. Three citizens were also in attendance.

Irene Kornelly, chair, CAC, called the meeting to order at 6:02 p.m.

Kornelly asked for and received approval of the minutes from the April 26 CAC meeting.

Col. Thomas Duncan, commander, PCD, said the depot had a great month. He said depot staff emptied a second storage igloo by delivering munitions to PCAPP for destruction. Col. Duncan said significant achievements were made during the month of May, including the CSEPP exercise and support provided to the 1<sup>st</sup> Brigade 4<sup>th</sup> Infantry Division, Fort Carson. He said a systematic inspection was performed by the Organisation for the Prohibition of Chemical Weapons (OPCW). Twice a year, OPCW inspectors count the number of munitions in storage and compare that number to records from previous inspections. The depot also celebrated its 75<sup>th</sup> anniversary with a public event on May 25. The commander participated in a Memorial Day event held at Gateway Park Veterans Bridge, in Pueblo. He said the community strongly supports our nation's veterans and he was proud to be a part of the ceremony.

Jeff Chostner, member, CAC, thanked Col. Duncan for his participation in the community. Col. Duncan said the depot's Change of Command ceremony is scheduled for June 29 when Col. Christopher Grice, a strategic planner currently stationed in Korea, will assume command of the depot.

No questions were asked of Duncan.

James Hindman, professional engineer, Hazardous Waste Permitting Unit, CDPHE, gave a permitting update. He said 10 permit modification requests have been approved, with 15 more, including class 2, being out for public comment. He said the PCAPP Research, Development and Demonstration hazardous waste permit will expire on Sept. 6, and the renewal will need to be submitted 90 days in advance of it expiring. Hindman said the PCAPP Truck Loading Station permit was approved with a few provisions.

No questions were asked of Hindman.

Renee Martinez, public outreach specialist, Pueblo Chemical Stockpile Outreach Office, provided an outreach overview presentation, detailing the avenues by which stakeholders were reached between Oct. 1, 2016 and March 31, 2017.

Kornelly acknowledged receipt of the new PCAPP brochure.

Rick Holmes, project manager, BPT, reported recent injuries, including a cut finger while an employee was exiting a Demilitarization Protective Ensemble. He said a second worker became overstressed while performing an entry. He said the event was an Occupational Safety and Health Administration recordable because the individual lost consciousness. Holmes said Pilot Test Demonstration activities continue with munitions being run through Cavity Access Machines (CAM) at a lower pressure rinse and without rotation. He said he believed the Biotreatment Area has been ramped up to 75 percent and emission testing is being performed. He said the current focus is on what the plant can do at steady state.

As of May 26, 26,130 projectiles from the 155mm campaign have been destroyed in the main plant. Holmes said a leaker was found in the monitoring enclosure, noting the enclosure performed as intended. He said this was the first time a leaker was found in the monitoring room, which allowed plant staff to gain experience reporting a leaker through government reporting chains.

Holmes said Integrated Facility Demonstrations will begin in July or August, during which time a minimum of three five-hour runs with stack sampling will occur. He said hydrolysate is being consumed by biomass and effluent from Immobilized Cell Bioreactors (ICB) is being sent to the Brine Reduction System. Holmes said the Truck Loading Station is nearing completion. The concrete pad has been placed and a stairway is being constructed. A Final Engineering Review by the OPCW is scheduled for June.

No questions were asked of Holmes.

Walton Levi, deputy site project manager, PCAPP, talked about Baseline Reconfiguration activities. He said 20 155mm and 13 105mm projectiles have been leakers.

No questions were asked of Levi.

Holmes said Col. Grice was provided with a PCAPP Training Facility tour. He said that the training facility is proving to be a good resource. University of Colorado, Colorado Springs senior research candidates conducted a research project on PCAPP CAMs. They suggested cameras be affixed to robots to allow workers to see inside the CAMs and other angles of the Munitions Washout System room, giving workers a better vantage point before they do entries. Holmes said workers entered the Brine Concentrator Feed Tanks to ensure the coatings still look good.

Kornelly provided an overview of the Permitting Working Group (PWG) meeting held earlier in the day. She said three public meetings were held in conjunction with the PWG, including permit modification 140, requesting the Munitions Treatment Unit discharge conveyor rotary valves be

removed; modification 83, regarding G-block igloo container storage area; and modification 141, requesting to increase inlet temperature limits for ICB off-gas carbon filters. The due date for public comments is June 23. The next PWG meeting will be held on June 28 at the District Attorney's conference room.

John Norton, chair, Biotreatment Utilization Group (BUG), provided a brief BUG meeting update. He said hydrolysate is being drawn down in the storage tanks. Holmes said hydrolysate is not accumulating and the system is working as designed.

The next CAC meeting will be held at 6 p.m. on June 28 at the Olde Towne Carriage House in Pueblo, Colorado.

The meeting adjourned at 6:40 p.m.

**Colorado Chemical Demilitarization Citizens' Advisory Commission Meeting**  
**Olde Towne Carriage House**  
**28 June 2017**

Approximately 42 individuals representing the Bechtel Pueblo Team (BPT); Chemical Stockpile Emergency Preparedness Program (CSEPP); Colorado Chemical Demilitarization Citizens' Advisory Commission (CAC); Colorado Department of Public Health and Environment (CDPHE); Federal Emergency Management Agency (FEMA) Region VIII; Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP); PuebloPlex; and U.S. Army Pueblo Chemical Depot (PCD) attended this meeting held at the Olde Towne Carriage House in Pueblo, Colorado. Three citizens were also in attendance.

Irene Kornelly, chair, CAC, called the meeting to order at 6 p.m.

She asked for and received approval of the minutes from the May 31 CAC meeting.

Kornelly asked for nominations for CAC chair. Kornelly was nominated and subsequently confirmed as chair of the commission for the next two years. Terry Hart was nominated as vice chair. With no other nominations, Hart will continue to serve as vice chair.

No program updates were provided.

Col. Thomas Duncan, commander, PCD, expressed his gratitude to the CAC, CDPHE and PCAPP partners for their support during the last two years. He also thanked employees of CSEPP, PuebloPlex and PCD. Col. Duncan said his key message was he is enormously proud to have been a part of the startup team for the initiation of plant operations at PCAPP.

Col. Duncan introduced Melanie Johnson, deputy to the commander, and Tomeka O'Neal, command sergeant general, Joint Munitions Command (JMC). He also introduced Col. Christopher Grice, incoming commander, saying Col. Grice is "the right guy at the right time." As the former commander of Blue Grass Chemical Activity, Col. Duncan said Col. Grice understands the management of chemical surety material and understands the commitment of safety to the workforce, community and environment. Johnson said she was representing Brig. Gen. Richard Dix, JMC, at the CAC meeting, as well as at the Change of Command ceremony, scheduled for June 29. She said this was her first visit to Pueblo and she was proud to be in the *Home of Heroes*. Frank Belcastro, acting director, U.S. Army Chemical Materials Activity, said he appreciates the opportunity to be at the meeting. Col. Grice said he is happy to be in Pueblo with his family and looks forward to continuing the effort his predecessors have made to build relationships and moving toward completing the mission safely and securely and working toward closure of the depot in a responsible manner. Col. Grice also said he appreciates the oversight provided by CDPHE. Col. Duncan presented a certificate of appreciation to each member of the CAC. He gave Doug Knappe a coin.

Kornelly spoke on behalf of the CAC, thanking Col. Duncan for his work and the excellent relationship with the commission during his tenure. Representing Program Executive Office, Assembled Chemical Weapons Alternatives (PEO ACWA), Greg St. Pierre thanked him for critical support during his time at the depot and presented Col. Duncan with a plaque. Greg Mohrman, site project manager, PCAPP, said he appreciates the relationship with Col. Duncan. Mohrman said it was a pleasure working with Col. Duncan and called him a trusted partner and friend.

Kornelly welcomed Col. Grice to Colorado and said the CAC looks forward to working with him.

Kevin Mackey, unit leader, Hazardous Waste Permitting Unit, CDPHE, gave a permitting update. Mackey said 15 permit modifications have been approved since the May 31 CAC meeting, pertaining to waste analysis and analytical assessment of the effectiveness of treatment in the Biotreatment Area (BTA), as well as the treatment of mustard agent and mustard components within the system. Mackey's team also reviewed modifications to operational permits, including the use of a moisture measurement to identify leaks in the B04 piping system. He said his team is reviewing 18 permit modifications, four of which are in the public comment period with temporary authorizations in effect.

No questions were asked of Mackey.

John Riley, coordinator, CSEPP, provided a debrief of the annual exercise held on May 3. Riley said some changes occurred at FEMA headquarters, focusing on core capabilities and emergency response. This year's CSEPP exercise included a complex scenario, a flood with limited warning. Riley said more than 30 response agencies participated, including regional emergency managers from neighboring communities. Riley said new federal mandates call for the sheltering of pets and animals. He said animal decontamination was practiced during this year's exercise. He said the Pueblo County Emergency Operations Center (EOC) is world class. Two hundred individuals staffed the EOC during the 2017 exercise, which was 70 more than the previous year. Riley said there was a finding, something not performed to standard, regarding decontamination at Parkview Medical Center Pueblo West emergency room. As a result, Parkview retrained its staff and were able to successfully mitigate a real world event.

No questions were asked of Riley.

Rick Holmes, project manager, BPT, said PCAPP staff have experienced half of the reportable injuries this year than last. Holmes said the workforce is invested in their own safety and are making conservative decisions. He said progress continues with pilot testing, and the next major test evolution is Integrated Facility Demonstrations, which will likely occur in September, after determining the sustainable processing rate for 155mm projectiles. He said the designed, sustained throughput rate is just over 4,000 munitions per week, with over 2,300 being processed two weeks ago and over 2,400 this week.

Holmes discussed optimization of the Munition Washout System (MWS), saying the goal is finding the lowest amount of time and rinsing before munitions are fed to the Munitions Treatment Unit (MTU). Plant staff is currently looking at lowering the pressure of the rinse, for more sustainable and maintainable operations, because it puts less pressure on the nozzles. Holmes said staff has found that the munitions do not need to rotate in the MWS to get an effective rinse. Different lots of munitions will be tested and data will be reviewed with CDPHE.

Holmes said the BTA is up and running. No additional biomass has been needed thus far. He said thiodiglycol (TDG) discharge concentration is substantially better than required by permit. Holmes said BTA operations are headed toward 100 percent of design feed in the near term. The first salt cake shipment occurred in early June, which represents the culmination of munitions processed from end to end. He said as of June 9 everything PCAPP needs for complete stockpile destruction is in service.

Holmes said the earliest, credible start date for the temporary off-site shipment of hydrolysate is July 17. He said the Facility Construction Certification for the Truck Loading Station is pending acceptance by CDPHE. It is anticipated that nine trucks will be involved in the shipment to Port Arthur, Texas, three trucks a day, with a four-day turnaround. On June 28, the Organisation for the Prohibition of Chemical Weapons completed their Final Engineering Review as to how the schedule 2 TDG in the hydrolysate will be treated.

No questions were asked of Holmes.

Mohrman said Suzanne Milchling began work as program executive officer for PEO ACWA on June 26. He said she is well qualified and spent significant time at Edgewood Chemical Biological Center (ECBC).

Mohrman said PCAPP staff are learning a lot about the plant and munitions. He said nearly 200 U.S. tons of agent have been destroyed. He said officially 33,433 155mm projectiles have been destroyed. Mohrman said staff are seeing the benefits of the investments made in improving equipment reliability, consistency and productivity. He said 26 rejected 155mm projectiles have come from plant operations and 18 rejected 105mm projectiles have come from Baseline Reconfiguration activities. Mohrman said the Explosive Destruction System will not run until near the end of the 155mm campaign. He said more than 11,200 rounds have been reconfigured.

Kornelly asked if the reason for staining on dunnage, as discussed at a previous CAC meeting, has been determined. Holmes said rodents in the storage yard have caused the stains to munition bodies and dunnage. He said staff are trained to treat any staining or observable liquid as agent until it is known otherwise. Holmes said black light will fluoresce rat urine and not will not fluoresce for mustard, which was determined by testing conducted by ECBC and at PCAPP. Duncan said he's observed black light operations and said when there are excessive or notable amounts of staining from rat urine, the PCD team informs the PCAPP team.

Kornelly provided an overview of the Permitting Working Group (PWG) meeting held earlier in the day. She said a public meeting regarding Permit Modification #85, treatment of hazardous waste in a container was held in conjunction with the PWG. The next meeting will be held on July 26, with three public meetings.

John Norton, chair, Biotreatment Utilization Group (BUG), said a BUG meeting will follow PWG meeting on July 26.

No questions were asked of Kornelly or Norton.

The next CAC meeting will be held at 6 p.m. on July 26 at the Olde Towne Carriage House in Pueblo, Colorado.

The meeting adjourned at 7:09 p.m.

**Colorado Chemical Demilitarization Citizens' Advisory Commission Meeting**  
**Olde Towne Carriage House**  
**26 July 2017**

Approximately 28 individuals representing the Bechtel Pueblo Team (BPT); Chemical Stockpile Emergency Preparedness Program (CSEPP); Colorado Chemical Demilitarization Citizens' Advisory Commission (CAC); Colorado Department of Public Health and Environment (CDPHE); Federal Emergency Management Agency Region VIII; Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP); Pueblo City-County Health Department; PuebloPlex; and U.S. Army Pueblo Chemical Depot (PCD) attended this meeting held at the Olde Towne Carriage House in Pueblo, Colorado. No citizens were in attendance.

Irene Kornelly, chair, CAC, called the meeting to order at 5:58 p.m.

No program updates were provided.

Col. Christopher Grice, commander, PCD, provided an update on depot activities. He said the depot had an air quality inspection on July 26 that went well. There will be a Resource Conservation and Recovery Act inspection on July 27 and the week of July 31 he will be in Kentucky attending CSEPP meetings. Col. Grice said the depot is still hiring. He also said the Restoration Advisory Board held a tour of Solid Waste Management Units on July 24. He said the depot has received more money for environmental remediation from Base Realignment and Closure, and is applying for more funds for remediation. To date, the depot has transferred 42,292 155mm projectiles to PCAPP for enhanced reconfiguration and 12,403 105mm munitions for baseline reconfiguration. Col. Grice said Lt. Col. Eric Sayer will serve as his military deputy, effective Aug. 7. Col. Jay Reckerd will serve as director of the U.S. Army Chemical Materials Activity.

Kevin Mackey, unit leader, Hazardous Waste Permitting Unit, CDPHE, gave a permitting update. Mackey said 14 permit modifications have been approved since the last CAC meeting, with roughly half being related to revisions to the waste analysis plan. The state health department is looking at changes to inspection forms and changing some inspection protocols from physical to remote inspection, by camera. Mackey said his team has verified that camera coverage is sufficient. Nineteen other permit modifications are currently under review. He said a few Class 2 modifications are being discussed, one related to installing steel plates in the Automated Guided Vehicle (AGV) corridor because coatings are being run down by the AGVs. The second is related to changes to the contingency plan, and a third, is related to the removal of conductive mats from the Receiving and Traveling Area and munition monitoring areas in the Enhanced Reconfiguration Building.

No questions were asked of Mackey.

Rick Holmes, project manager, BPT, said there have been no recordable injuries since the last meeting. Current pilot testing activities are focused on the optimized set of conditions for the Munitions Washout System. Munition rotation, bladder inflations, pressure and rinse are being

reviewed. Holmes said it looks like some conditions can be reduced for less maintenance, while still meeting the goal for clean munitions. Holmes said reports are being finalized and then focus will turn to optimization of the Biotreatment Area (BTA). He said Integrated Facility Demonstrations are scheduled to begin after Labor Day.

Holmes also discussed waste shipment totals. He said the shredder in Denver is backed up so a shredder in Albuquerque, New Mexico, was considered. The Albuquerque shredder declined because the munitions are so hard. Holmes said most of the metal from the Denver shredder has come back to Pueblo.

Holmes discussed off-site shipment of hydrolysate. He said 230,000 gallons of hydrolysate are in tank #301. He presented the route from Pueblo to Port Arthur, Texas, and said initially, two trucks a day will be loaded and shipped, and later, three. The trucks will move only during daylight hours and good weather. Every truck will have two drivers who are trained in emergency response. Holmes said it's the same shipper that has been moving energetics to Anniston, Alabama, and the greater than 1 Vapor Screening Level waste to Veolia Environmental Services Hazardous Waste Incinerator, in Port Arthur, Texas. Holmes also reviewed the communications plan for the movement. He said everything is ready for the first shipment to leave on July 31. He said in total, 45 to 50 trucks containing 4,200 gallons per truck will be moved, with the last shipment being completed before Labor Day.

Kornelly asked if the same trucks that go to Texas, return. Holmes said Veolia and Tri-State Motor Transit have leased nine dedicated trucks for the effort. Kornelly also asked if the trucks are rinsed before they return to Pueblo. Holmes said they will be cleaned at the end of the mission.

Ken Griffin, member, CAC, asked if the drivers will have escorts. Holmes said the drivers serve as one another's escort and drive in a convoy. John Norton, member, CAC, asked if emergency responses contractors have been hired. Holmes said the drivers have coordinated with local authorities.

Holmes said the plant experienced its first leaking munitions on July 9. He said the leak occurred at the Nose Closure Removal System. At least two munitions physically leaked and were found in the Munitions Monitoring Enclosure, where agent alarms indicated the leak. No one was in the area when it happened and the leak was contained in the room. Holmes said most of the liquid stayed in the cavity, with little spilled on the floor, but enough agent spilled to cause a lot of cleanup. Processing activities were stopped and it took two weeks to sufficiently clean the room and place the munitions into Single Round Containers. A lot of staff and approximately 60 entries were needed for the cleanup. Additionally, baseline reconfiguration was suspended. Processing resumed on July 24.

Holmes said rust is being found in the munitions. He said the plan is to let the rust pass through the system and gather in the 30-Day Hydrolysate Storage tanks. Contractors will be hired to advise the team how to deal with the solids. Holmes said rust plugs the pipes, instruments and potentially the filter media in the Immobilized Cell Bioreactors.

Ross Vincent, member, CAC, asked about the variation from one munition to the next within one lot. Holmes said there is no good data, regarding rust, from baseline sites.

Greg Mohrman, site project manager, PCAPP, discussed destruction progress, saying 277.6 U.S. tons of agent, from 299,554 rounds, has been destroyed as of July 21. Mohrman also provided statistics on rejects, saying 41 155mm projectiles and 18 105mm projectiles are rejects. He said baseline reconfiguration activities resumed on July 24, and to date, 11,512 have been reconfigured. Mohrman said non-contaminated energetics are being shipped to Anniston, Alabama, for disposal in the Static Detonation Chamber (SDC). So far, 27,435 bursters from 155mm projectiles and 10,613 cartridges from 105mm projectiles have been treated by the SDC.

Mohrman talked about the plant visit by Suzanne Milchling, program executive officer, Assembled Chemical Weapons Alternatives, on July 19. Mohrman said Milchling was in Pueblo for four days and was able to meet several PCAPP and PCD staff members and local stakeholders.

Col. Grice said he enjoyed meeting Ms. Milchling. He said he stressed the importance of the relationship amongst PCD, PCAPP and the systems contractor, and how they collectively speak with one voice and transmit the same information.

Griffin asked when the Explosive Destruction System will be back in operation. Mohrman said it would not occur in 2018.

Doug Knappe, program manager, Hazardous Waste Permitting Unit, CDPHE, asked about the amount and disposition of the secondary waste generated during the 50 to 60 entries for the leaker clean up. Holmes said a report is being generated, but does not suspect that the wastes were highly contaminated.

Kornelly provided an overview of the Permitting Working Group (PWG) meeting held earlier in the day. She said three public meetings were held in conjunction with the PWG. She said the next meeting will be held on Sept. 27.

John Norton, chair, Biotreatment Utilization Group (BUG), said Dr. Jim Earley, chief scientist, PCAPP, reported that the BTA is doing better than target levels for hydrolysate removal. The next BUG meeting will follow PWG meeting on Sept. 27.

No questions were asked of Kornelly or Norton.

The next CAC meeting will be held at 6 p.m. on Sept. 27 at the Boone Community Center in Boone, Colorado.

The meeting adjourned at 6:43 p.m.

###

**Colorado Chemical Demilitarization Citizens' Advisory Commission Meeting**  
**Boone Community Center**  
**27 September 2017**

Approximately 43 individuals representing the Bechtel Pueblo Team (BPT); Chemical Stockpile Emergency Preparedness Program (CSEPP); Colorado Chemical Demilitarization Citizens' Advisory Commission (CAC); Colorado Department of Public Health and Environment (CDPHE); Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP); PuebloPlex and U.S. Army Pueblo Chemical Depot (PCD) attended this meeting held at the Boone Community Center in Boone, Colorado. Nine citizens were in attendance.

Irene Kornelly, chair, CAC, called the meeting to order at 6 p.m.

Kornelly motioned for approval of the minutes from the July 26 meeting. CAC members approved.

No program updates were provided.

Col. Christopher Grice, commander, PCD, provided an update on depot activities. Grice thanked the Boone community for hosting the meeting. He said he is excited to be part of Pueblo County and to see its patriotism. He said he and his family are enjoying participating in community events such as the state fair and Chile and Frijole Festival. Col. Grice introduced Lt. Col. Eric Sayer as his military deputy. This is the first time PCD has had a military deputy. Lt. Col. Sayer is a Colorado Springs native, who said he is excited to be a part of the project and to be back in Colorado. Col. Grice said the depot recently met inspection requirements by CDPHE. He also reported on the recent Chemical Accident Incident Response and Assistance exercise and thanked Vince Blunn, chief, Plans, Operations and Training Division, PCD, for executing the exercise. Col. Grice said he and members of his team traveled to Kentucky to support the Blue Grass CSEPP exercise. He said lessons learned in Kentucky will be applied to emergency response in Pueblo.

Kevin Mackey, unit leader, Hazardous Waste Permitting Unit, CDPHE, reviewed permitting activities from the last year. He said chemical weapons destruction at PCAPP will be completed under two different hazardous waste permits: construction, system and pilot testing under a Research, Development and Demonstration (RD&D) hazardous waste permit and full-scale operations under an operating hazardous waste permit. Both permits protect human health and environment and provide testing and operation information. RD&D permits allow for short-term testing of waste treatment processes. An RD&D permit is currently in effect at PCAPP. The goal is to evaluate how operations compare to the design, and it requires plant emission data to be collected and compared to health screening levels to establish processing rates and operations settings. Since Sept. 7, 2017, there have been 54 Class 1 permit modifications processed and several others in progress. CDPHE has agreed to extend the existing RD&D permit.

Mackey also discussed the potential storage and treatment of recovered lewisite, an arsenic-based blister agent, weapons at PCD. He said Pine Bluff Arsenal reported to have sent 3,120 rounds to PCD on Nov. 19, 1943. PCD has no record of lewisite being stored on site, but former employees recount it being destroyed in the East Chemical Burial Ground. Mackey said lewisite was produced at the Rocky Mountain Arsenal and other locations. If found and recovered, the lewisite will be treated by the PCAPP Explosive Destruction System.

Ross Vincent, member, CAC, asked when Integrated Facility Demonstrations will be performed. Rick Holmes, project manager, BPT, said the demonstrations will likely be performed and completed during the next calendar year.

Vincent said he doesn't remember lewisite being in the original permit. Mackey said there may not be enough chemical found that would impact the risk assessment; however, a permit modification would be initiated once an amount is determined.

John Norton, member, CAC, asked how the public could comment on permit modifications. Jeannine Natterman, administrator, CAC, said comments can be made on the CDPHE website and all permitting actions are publicized in *The Pueblo Chieftain*.

Walton Levi, deputy project manager, PCAPP, said the plant has two compliance advisories: one occurred when plant staff failed to operate the Brine Reduction Distillate Carbon Filter System in accordance with configurations specified in the permit; the second occurred when spent distillate carbon was incorrectly identified on waste characterization documentation.

John Norton asked how CDPHE became aware of the deviations from compliance. Levi said plant staff self-reported.

Mohrman said 253 U.S. tons of agent, or 42,897 munitions, have been destroyed since Sept. 7, 2016. He said staff are continuing to see rejected munitions. As of Sept. 22, 2017, 46 rejects have come from 155mm rounds and 26 from 105mm rounds. Mohrman said Baseline Reconfiguration activities continue, with almost 16,000 munitions, or 56 percent of the total, now unboxed and palletized.

Col. Grice shared a slide and discussed several depot departments, including the fire department, health clinic, public works and emergency operations center. He discussed the protection of the stockpile by guards and how the igloos are monitored once a week by use of a Real Time Analytical Platform. He said the depot has received millions of dollars in grant monies from Base Realignment and Closure to clean up contamination.

Holmes discussed munition variability. He said munitions are safe while in storage, but become vulnerable while being disassembled. Holmes showed photographs of rusted and stained munitions, and said stains are considered to be mustard agent until proven otherwise. He also said solids and rust is being found inside the munitions. He said the current response to solids is to allow them to pass through the piping into the 30-day Hydrolysate Storage Tanks.

Holmes said isolators were added to protect the pumps, but the plant is experiencing failure of isolators, which come out of alignment and burst. He said the isolators are also becoming chewed up, so staff are trying to determine the correct type of isolator to be used and how frequently they should be cleaned out.

Holmes said the compliance advisories caused him to put the plant on pause in early September. He said currently all permits and safety requirements are being reviewed. He said during the pause in operations, maintenance work is being performed and Baseline Reconfiguration continues. Holmes said the plant will restart when ready. He said this is an opportunity to check all areas of the plant and perform maintenance to potentially deter future shut downs.

Holmes also discussed waste shipments saying the contents of tank 301 were successfully shipped to Veolia in Port Arthur, Texas.

Norton asked if the workforce will expand when the plant is performing full-scale operations. Holmes said the workforce is not likely to expand and currently the project employs approximately 1,400 individuals.

Ken Griffin, member, CAC, asked about attrition. Holmes said the workforce is stable.

Terry Hart, vice chair, CAC, asked if the solids were coming from the munitions or from equipment during processing. Holmes said it starts with rust in the munitions. He said there is not a lot of data on solids because the baseline facilities didn't drain munitions. Holmes said process equipment is not degrading. Hart asked if the solids could fuse in the bottom of the tank. Holmes said that is unknown. He said iron has been found on the bottom of 30-day Hydrolysate Storage Tanks, and the solids are currently being characterized by a Battelle Memorial Institute in Columbus, Ohio.

Kornelly provided an overview of the Permitting Working Group and Biotreatment Utilization Groups meetings held earlier in the day. She said Dr. Jim Earley, chief scientist, PCAPP, said successful runs were performed in the Immobilized Cell Bioreactors. The microbes are working. Kornelly said the next meetings will be held on Oct. 25 at 2 p.m.

The next CAC meeting will be held at 6 p.m. on Oct. 25 at the Olde Towne Carriage House in Pueblo, Colorado.

The meeting adjourned at 7:30 p.m.

###

**Colorado Chemical Demilitarization Citizens' Advisory Commission Meeting**  
**Olde Towne Carriage House**  
**25 October 2017**

Approximately 35 individuals representing the Bechtel Pueblo Team (BPT), Chemical Stockpile Emergency Preparedness Program, Colorado Chemical Demilitarization Citizens' Advisory Commission (CAC), Colorado Department of Public Health and Environment (CDPHE), Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP), PuebloPlex, U.S. Army Pueblo Chemical Depot (PCD) and U.S. Sen. Michael Bennet's Pueblo office attended this meeting held at the Olde Town Carriage House in Pueblo, Colorado. Six citizens were in attendance.

Irene Kornelly, chair, CAC, called the meeting to order at 6 p.m.

Kornelly motioned for approval of the minutes from the Sept. 27 meeting. CAC members approved.

No program updates were provided.

Col. Christopher Grice, commander, PCD, provided an update on depot activities. He said he participated in the veterans' event in Avondale and appreciates the support of veterans by the community. He said he is looking forward to participating in the Veterans Day event in Pueblo. Col. Grice said the depot is continuing to hire and asked Lt. Col. Sayer, acting chief of staff, PCD, to elaborate. Lt. Col. Sayer said the depot is in need of security guards and toxic material handlers. He said both positions require background checks and toxic material handlers require a security clearance. He said flyers are available, which provide more details.

Ross Vincent, member, CAC, asked for the number of individuals currently employed by the depot. Col. Grice said 380 individuals are currently employed, and he has authorization for 420 positions. He said PCD competes for employees with military installations in Colorado Springs.

John Norton, member, CAC, asked if additional employees were hired to remediate Solid Waste Management Unit 13. Col. Grice said the depot is working with independent contractors for that work.

Kevin Mackey, unit leader, Hazardous Waste Permitting Unit, CDPHE, reviewed permitting activities. He said he and his team are processing and evaluating a number of permit modification requests, mostly Class 1, including the waste analysis plan, drain munition weight system values, and changes to the operations plan. Mackey said his team is also reviewing 11 additional permit modifications, including the management of secondary containment precipitation and the operating parameters of agent batches as the result of vibration of piping in the Agent Processing Building. The plant is looking to move from steam to hot water due to steam hammer and cavitation.

Rick Holmes, project manager, Bechtel Pueblo Team, said he has attended more than 40 CAC meetings and the Oct. 25 meeting was his last. He said he is pleased by citizen engagement with the project. Terry Hart, vice chair, CAC, thanked Holmes for his work on the project and said he was sorry to see him leave.

Holmes said the workforce has had fewer accidents and incidents this year than last, and he attributed the improvement, in part, to the ELITE (Employees Leading Improvement Teamwork and Excellence) team. He said no progress has been made on Pilot Test Demonstrations since the last meeting.

Holmes discussed where the plant is headed after he exerted stop work authority in early September, due, in part, to equipment being plugged with solids drained from munitions. He said stop work is a very formal process, in which a plan must be written and executed. He said 14 criteria were determined, for which the plant will be evaluated. Holmes said conditions have been met to restart the plant next week, with a steady-state ramp up through the remainder of the year. As a result of maintenance performed during the pause in enhanced reconfiguration activities, Holmes said the plant will be in a better position to sustain operations.

Holmes said isolators were installed in the Agent Neutralization Reactor (ANR) recirculation pumps due to failure in three areas: mechanical, chemical and mechanical abrasion. He said the pumps were not failing predictably. He estimated 80 percent of the blockages in the piping system is the result of rust, and the other 20 percent is dithiane and oxathane.

Holmes said a Root Cause Team was formed to analyze the ANR issues and recommended solutions for long-term sustainability.

Norton asked if there are ways to predict leakers. Holmes said one solution might be to X-ray munitions to identify those more susceptible to leaks. He said historical data can help to point out which munitions to X-ray.

Holmes provided waste shipment totals, to which Vincent inquired about munition disposal. Holmes said the project continues to use a shredder from Denver for the disposition of munition bodies. He said the shredder in Albuquerque did not work out.

Hart asked if rust is consistent throughout the munitions. Holmes said it's too early to tell, the plugging of reactors is a new phenomenon, and weaponized munitions are harder to treat than bulk agent. He said the baseline programs did not drain munitions.

Greg Mohrman, site project manager, PCAPP, said a major test exercise was performed on Oct. 25, in partnership with PCD. The Chemical Accident or Incident Response and Assistance exercise enables staff to practice emergency response.

Mohrman reported progress as of Oct. 20, saying 26 105mm and 46 155mm projectiles are identified as rejects. He said Baseline Reconfiguration operations are 66 percent complete, with approximately 150 rounds being completed per day.

Mohrman said Program Executive Officer Suzanne Milchling, Assembled Chemical Weapons Alternatives, challenged the workforce to collect and review options in order to meet the treaty limit of December 2023. He said his team is looking at incremental improvements, such as near real time monitoring in the Explosive Containment Rooms to prevent contamination from migrating into downstream rooms, the elimination of steam from the ANRs and better recovery of leakers.

Mohrman said he attended a sticker application ceremony on Oct. 24 for the new Escape Breathing Apparatus pack. He said the process of changing to the new pack has been a great partnership with the government and Dave Wheatley Enterprises. He said PCAPP took the lead in the changeover, and the Blue Grass project will greatly benefit.

Before introducing Bret Griebenow as the new BPT project manager, Mohrman talked of his experience in working with Holmes. He spoke of Holmes' energy, his level of detail, experience and drive which contributed to the start of operations at PCAPP. Mohrman said he enjoyed working with Holmes and learned a lot from him. Ken Griffin, member, CAC, also thanked Holmes for his contributions to the project. Kornelly thanked Holmes for his devotion to the project and to the City of Pueblo.

Mohrman said the transition to Griebenow will be seamless due to an already established relationship.

Kornelly said she reviewed the minutes from the last CAC meeting and asked if Aberdeen experienced similar problems. Holmes said there are two major differences between PCAPP and the Aberdeen project, citing the agent was manufactured in Edgewood, and they processed bulk agent, as opposed to weaponized agent produced at Rocky Flats.

Kornelly asked if the anticipated changes to procedures will require new permits and training. Holmes said the changes will require permit modifications and updates to Standard Operating Procedures, and staff will be trained on these updates.

Kornelly said Mackey covered topics discussed at the Permitting Working Group held earlier in the day, and said the next meeting will be held on Dec. 13 at 2 p.m. She said the next CAC meeting is also scheduled for Dec. 13, 6 p.m. at the Olde Towne Carriage House in Pueblo.

The meeting adjourned at 7:01 p.m.

###

**Colorado Chemical Demilitarization Citizens' Advisory Commission Meeting**  
**Olde Towne Carriage House**  
**13 December 2017**

Approximately 53 individuals representing the Bechtel Pueblo Team (BPT); Chemical Stockpile Emergency Preparedness Program; Colorado Chemical Demilitarization Citizens' Advisory Commission (CAC); Colorado Department of Public Health and Environment (CDPHE); Program Executive Office, Assembled Chemical Weapons Alternatives (PEO ACWA); Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP); PuebloPlex; U.S. Army Chemical Materials Activity (CMA) and U.S. Army Pueblo Chemical Depot (PCD) attended this meeting held at the Olde Town Carriage House in Pueblo, Colorado. Five citizens were in attendance.

Irene Kornelly, chair, CAC, called the meeting to order at 6 p.m.

She motioned for approval of the minutes from the Oct. 25 meeting. CAC members approved.

Kornelly said she represented U.S. non-government entities at the Organisation for the Prohibition of Chemical Weapons (OPCW) annual meeting in The Hague earlier this month. She shared a video highlighting the 20<sup>th</sup> Anniversary of the Chemical Weapons Convention. In it, Thomas Markram, secretary of the Preparatory Committee, United Nations Office for Disarmament Affairs, said the last two decades have seen much work accomplished in the pursuit of the elimination of chemical weapons, with 96 percent of the world's declared stockpiles of chemical agent destroyed. Kornelly encouraged participants to visit the OPCW YouTube page for more videos.

Col. Christopher Grice, commander, PCD, introduced Col. James Reckard, director, CMA, who said he appreciates CAC public meetings and his ability to attend. Col. Grice said the Department of the Inspector General (DAIG) made an unannounced inspection between Nov. 27 and Dec. 1. PCD received a good report. Col. Grice said the depot continues to conduct remediation activities and offer opportunities from employment. He introduced MaryAnna Clemmons as the new depot public affairs officer.

Kevin Mackey, unit leader, Hazardous Waste Permitting Unit, CDPHE, reviewed permitting activities. He said his team has not recently seen the number of permits they normally review as a result of the pause at the plant. He said his team is evaluating corrosion to the Off-gas Treatment System (OTS), which has led to the shutdown of that system and processing. He said the entire OTS is being evaluated to make sure other elements are not compromised. Mackey said, in concert with plant staff, his team is looking to revise the corrosion monitoring plan. He said carbon steel is more susceptible to corrosion and an option is for it to be replaced with stainless steel. He said a secondary issue is the Agent Neutralization Reactor (ANR) pump isolators failing in the Agent Processing Building. Solutions being considered for the ANR are replacing the isolators and to use hot water treatment, rather than steam.

No questions were asked of Mackey.

Program Executive Officer Suzanne Milchling shared the video, *ACWA's Program Executive Officer Outlines Program Initiative*. In it, she recognized the challenges being experienced with throughput at the Pueblo plant. She said more than 400 suggestions were received regarding ways to improve program efficiency. The suggestions came from the workforce and contractors and were categorized into three areas: Explosive Destruction Technology (EDT), Contracts and Management and Hydrolysate. Milchling said she agrees that EDT be considered to augment the main plant because throughput in the main plant is not what was expected due to challenges with the variability of the munitions. She said the throughput of the Explosive Destruction System (EDS) is minimal so multiple EDS units or the Static Detonation Chamber (SDC) should be considered for use at PCAPP. Milchling said she discussed strategic efforts and initiatives with senior management. In regard to hydrolysate, Milchling said she is exploring options for problems should they occur. She said she is committed to transparency and community involvement.

Terry Hart, vice chair, CAC, said talk of EDTs raises flags for the CAC and asked for continued transparency as decisions are being made in that regard. Milchling said it's a balancing act when it comes to cost and schedule.

John Norton, member, CAC, asked what campaign is being considered for an EDT. Milchling said it is the campaign of 4.2-inch mortar rounds and added the SDC has a higher throughput than the EDS. Norton asked how many 4.2s are in the stockpile and how long will it take to run those through an SDC. Greg Mohrman, site project manager, PCAPP, said there are more than 97,000 mortar rounds in the PCD stockpile. Milchling did not provide an estimate on the duration of time to process those rounds. She stated no decision has been made and is waiting for an analysis by the contractor regarding the potential use of an EDT.

Thelma Campbell, occupational and environmental physician, said she's been following the program for 20 years and it makes her nervous to hear about delays. She said the vast majority of delays in the process have been due to abrupt changes to designs, which has cost the project months, if not years. She said, you are talking about introducing another technology just as you are beginning to use main plant equipment; glitches are to be expected. Milchling responded that big challenges have been discovered after a year of operations and because the 4.2-inch mortar rounds are significantly different than the 105mm and 155mm projectiles, they have the ability to produce more challenges.

Kornelly asked if the PCAPP EDS could be started up to begin processing problematic 105mm rounds. Mohrman said the use of EDS is being evaluated and all resources must be considered.

Ken Griffin, member, CAC, asked what is the possibility of using contractors, rather than a government team, to run the EDS. Mohrman said the EDS is government owned and requires skilled workers that have operated the system for many years.

Walton Levi, deputy site project manager, PCAPP, discussed the DAIG unannounced inspection. He said the focus of the inspection was on agent/munition accountability and the Chemical Personnel Reliability Program (CPRP). He said minor issues with tracking forms were found but there were no issues with CPRP records. Levi said the project had one observation concerning

credentialing review of the medical clinic privileging process, which will be resolved with ACWA headquarters staff. He said the DAIG continues to be pleased with interaction and cooperation between PCD and PCAPP. Col. Grice concurred and acknowledged the cooperation by PuebloPlex and CDPHE.

Bret Griebenow, project manager, BPT, provided an overview of current plant status. A Root Cause Analysis, a thorough inspection of what caused recent issues with a scrubber cooler, is complete and will be delivered to CDPHE by the end of the week. He said the issues were evaluated by interviewing the workforce and corrective actions have been put into place.

Griebenow showed some pictures of the impact solids are having on the 30-day Hydrolysate Storage Tanks and ANR system isolator. He said the pumps have failed as a result of solids because the plant was not designed for the amount of solids being seen. He said the PCAPP team is working to devise the best solution for the isolators and is considering moving from steam to hot water batch processing. A testing plan is being developed.

Kornelly asked how much more water will be used. Griebenow said no more water will be used, and by adding it up front, it may aid in the flushing out of solids.

Mohrman said we can't lose site of the fact that PCAPP is a pilot plant and will restart when ready. He said a few more rejects have resulted from Baseline Reconfiguration activities for the 105mm rounds and technicians are reconfiguring 180 rounds per day. He also noted 80 percent of the boxed 105mm munitions have been reconfigured.

Kornelly asked if the 4.2s will have to be reconfigured if a decision to implement an EDT is made. Griebenow said the boxes and fiber tubes will slow the throughput so reconfiguration is necessary. Kornelly asked for outreach office staff to bring a model of a 4.2-inch mortar round to the January CAC meeting.

Griebenow shared a slide of a vacuum trailer, purchased by the project to remove spent carbon. He said this eliminates potential contamination of equipment used by contractors.

Mohrman said Col. Heidi Hoyle, commander, Joint Munitions Command, toured the PCAPP Training Facility the week of Dec. 4 and members of the Senate Armed Service Committee toured Dec. 13. The outreach office-produced *Colorado Chemical Weapons Destruction: 2017 Year in Review* video was shared.

Kornelly said Mackey covered topics discussed at the Permitting Working Group held earlier in the day, and said the next meeting will be held on Jan. 31 at 2 p.m. She said the next CAC meeting is also scheduled for Jan. 31, 6 p.m. at the Olde Towne Carriage House in Pueblo. Kornelly shared the CAC meeting schedule for 2018.

The meeting adjourned at 7:18 p.m.

###