

Colorado Chemical Demilitarization Citizens' Advisory Commission Meeting
Olde Towne Carriage House
Jan. 29, 2020

Approximately 37 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); Program Executive Office, Assembled Chemical Weapons Alternatives (PEO ACWA); Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP); PuebloPlex and the U.S. Army Pueblo Chemical Depot (PCD) attended this meeting held at the Olde Towne Carriage House in Pueblo. Two citizens were among the total of 37 people in attendance.

Irene Kornelly, chair, CAC, called the meeting to order at 6:01 p.m. MST. With a quorum, she asked for and received approval of the Dec. 11, 2019, CAC meeting minutes.

Kornelly introduced Mr. Michael S. Abaie, program executive officer, ACWA, who participated by phone, reported that PCAPP is doing "extremely well" and said more than 70% of the 155mm munitions had been destroyed, representing the elimination of more than 46% of the total original amount of mustard agent. He extended an invitation to a celebration being planned for April 9-10 that will mark 50% of agent destruction.

Kevin Mackey, Hazardous Waste Permitting unit leader, CDPHE, reviewed permitting activities. He said the number of permit modifications the state has considered has dropped with the focus on the anticipated transition to the plant's final Resource Conservation and Recovery Act (RCRA) Part B permit and Static Detonation Chamber (SDC) authorizations. Mackey said the state had approved the Multiple-Pathway Health Risk Assessment and is reviewing the pilot testing report, leading to ongoing dialogue with the site about operating conditions that will factor into Permit Modification #286, which will be used to update and set processing rates for the plant. He said the state had also approved Temporary Authorizations (TA) for placement of SDC equipment to infrastructure and Off-gas Treatment System (OTS) piping as well as evaluating facility construction certification packages for IONEX filter foundations in the Agent Filtration Area and SDCs. Mackey said TA3B, under evaluation, would allow for heating of some equipment elements to make sure they can reach operating temperature according to facility specifications, but no waste would be burned.

Robert Jonardi, citizen member, CAC, asked if mod #286 was the cutoff for modifications before the Part B permit application; Mackey said it would be close to done after that modification, but there may be other mods tucked in before the application goes out for public comment – at which time there will be no more mods while the application is reviewed.

COL Michael Cobb, military commander, PCD, gave an update on munitions movements – 13,000 155mm rounds were transported to the plant in January without incident and 4,368 4.2-inch mortar rounds delivered to the plant and back for baseline reconfiguration. He highlighted the jobs available at the depot: toxic material handler, security guard and industrial equipment maintenance mechanic positions. He introduced Pueblo native Lisa Folsom, supervisory chemist, PCD, who described her education and experience in the depot's Chemical Operations division over the lab monitoring branch. She said PCD personnel were well trained to support operations and the future closure of the installation.

Kim Jackson, plant manager, BPT, introduced Marcus Hamatake, control room operator, PCAPP, who has 11 years of demilitarization experience including time at the U.S. Army's Tooele Chemical Agent Disposal Facility. Hamatake was involved in PCAPP startup and systemization and transitioned to operations, now monitoring utility and HVAC systems while operating the Munitions Washout System (MWS), Munitions Treatment Unit and Projectile/Mortar Disassembly (PMD) System. He described the MWS as the most challenging part of his job.

Ken Harrawood, project manager, BPT, PCAPP, gave an update on the plant's safety record, SDC progress, munitions washout improvements, 30-day hydrolysate storage tanks and bioreactor throughput. He also gave a summary of preparations for the changeover from 155mm to 105mm projectiles expected in the fall and the schedule for the main plant's final permit. Harrawood introduced Dan Williams, SDC manager, who will be taking over project management of the SDC from the departing Matt Crookshanks. Harrawood said the SDC and OTS equipment was placed on all three pads at the SDC assembly site, with enclosures rising around all three pads and generators, compressors and switch rooms set on all three pads and one of three chillers set.

Reviewing main plant operations, Harrawood said munitions in the Enhanced Reconfiguration Building were continuing to prove problematic with leakers occurring at a rate of about one a week, but this is a result of starting with the known cleaner munitions. He said 30-day hydrolysate storage tanks 101 and 201 are operating well but there is a small weep on one of the manway gaskets of Tank 301, so that tank is being drained and fed into the Immobilized Cell Bioreactors (ICB) for processing so the gaskets can be changed out for replacements made with a different material. Harrawood said the third ICB module was started and seeded Jan. 2 and is now in batch feed mode, but should have a continuous feed this Saturday to help maintain the plant's throughput capability.

Harrawood said the changeover from 155mm to 105mm projectiles was being tracked for early fall if production rates hold, and the plant is preparing for the transition and an operational readiness review. He also reviewed the path forward and schedule for submitting the RCRA Part B permit application to transition away from the current temporary Research, Development and Demonstration permit, with final pilot test conditions submitted and Mod #286 submission coming in February before the actual preparation and submittal of the Part B application.

Harrawood announced that the plant has about 10,000 rounds to go before hitting the 50% agent destruction milestone. He said Sept. 3 is the expected completion of 4.2-inch mortar reconfiguration. All problematic 155mm projectiles going to the SDCs, he said, will have to be overpacked, so the plant is trying to minimize the number of those.

John Norton, citizen member, CAC, asked how the plant is discovering its leakers; Harrawood replied by Miniature Continuous Air Monitoring System detection (MINICAMS) or visual evidence; Jackson added the leakers are found remotely in the PMD by operators such as Hamatake, with no danger to employees.

Norton asked whether there would be any layoffs during the expected 75-day changeover from 155mm to 105mm rounds; Jackson said no, because it was going to be a lot of hard work to get the new Cavity Access Machines for 105mm projectiles assembled and installed.

Ken Griffin, citizen member, CAC, asked about the nature of the problem with the manway gaskets in 30-day hydrolysate storage tank 301; Jackson said it was a drip due to a “facing” issue of metal bolts on metal, and Harrawood said new gaskets with more compression would be swapped in.

Griffin asked when the changeover would start; Jackson estimated it would start Oct. 3 with 105mm processing to begin 75 days later – on Dec. 24.

Dr. Velma Campbell, citizen member, CAC, asked if the increased rate of leakers corresponded to increased processing; Jackson replied it’s just a problem to be managed with multiple processing lines allowing normal production to continue. Jackson added the leakers are due to problem lots that were identified and moved to the end of the campaign to allow the team to become proficient before dealing with them. Campbell asked if the solid blockages in the Biotreatment Area were an engineering issue or were unforeseen, but Jackson said while solids were anticipated the amount of solids was not, and some improvements were implemented several years ago but it has become a normal maintenance issue for the plant.

Griffin asked whether the hydrolysate storage tank weep was an issue beyond Tank 301, and Jackson said no even though their manway gaskets were made of the same material, adding all three tanks were monitored every four hours for any emerging issues.

Jonardi asked if PCD monitoring levels can detect a single leaking munition in a storage igloo and whether any leaks occur when the munitions are transported; Folsom confirmed that a single leaker can be detected in a full igloo, and Cobb and Jackson said there had never been a leaker observed in transport. Jackson said in all projects, it’s only when the components are removed such as the miscellaneous parts removal stations and burster removal stations that vapor or liquid emerge. When asked how long it takes to recover from leakers, she said a vapor leaker could take one to two days and a liquid leaker could range from one to four weeks depending on the extent of the exposure. Norton asked whether PCD flags igloos where MINICAMS detects a munition “burping” instead of leaking in an igloo; Cobb and Folsom said they are reported to the Operations Center at PCAPP for their awareness.

Kornelly provided a Permitting Working Group (PWG) meeting update from earlier in the day. She said there was extensive discussion of final permitting, including the SDC and main plant’s RCRA Part B final permit, and what the consequences would be if the permitting schedule wasn’t met. Norton provided a Biotreatment Utilization Group (BUG) meeting update. He said Patrick Sullivan, environmental manager, PCAPP, briefed the group on ongoing challenges of unexpected sludge buildup in pipes of the BTA and higher salt levels in the Brine Recovery System. Norton said the group was assured that the full 30-day hydrolysate storage tanks 101 and 202 and out-of-service 301 would not lead to off-site treatment of hydrolysate.

Kornelly said the next PWG and BUG subcommittee meetings would be 2 p.m. MST Feb. 26 at the Pueblo County District Attorney’s conference room, 701 Court St., followed by the next CAC meeting at 6 p.m. MST the same day at the Olde Towne Carriage House, 102 S. Victoria Ave., Pueblo.

The meeting adjourned at 6:55 p.m. MST.

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Colorado Chemical Demilitarization Citizens' Advisory Commission Meeting
Olde Towne Carriage House
Feb. 26, 2020

Approximately 38 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); Program Executive Office, Assembled Chemical Weapons Alternatives (PEO ACWA); Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP); and the U.S. Army Pueblo Chemical Depot (PCD) attended this meeting held at the Olde Towne Carriage House in Pueblo. Three citizens were among the total of 38 people in attendance.

Irene Kornelly, chair, CAC, called the meeting to order at 6 p.m. MST. With a quorum, she asked for and received approval of the Jan. 29, 2019, CAC meeting minutes.

Kornelly introduced Mr. Nicholas Stamatakis III, deputy program executive officer, ACWA, who said he was happy to be in Pueblo and he looks forward to bringing the PEO's openness and transparency to stakeholders.

Kevin Mackey, Hazardous Waste Permitting unit leader, CDPHE, reviewed permitting activities. He said recently approved permit modifications included changes to the corrosion monitoring plan and updates to waste analysis plan references and changes in the operations plan. The unit also approved a Class 1 permit modification to relocate the weigh station leading into the Munitions Treatment Unit, resulting in vertical placement of rounds and more accurate weighing.

Mackey said a lot of his team's attention was focused on Permit Modification #286, which includes many subjects and revises text for the transition to the plant's final Resource Conservation and Recovery Act (RCRA) Part B permit and Static Detonation Chamber (SDC) authorizations. He said CDPHE was reviewing SDC Class 3 permit modifications for any "fatal flaws." He said CDPHE was looking forward to seeing a surrogate test with SDCs to make sure destruction removal efficiencies for contaminants using nonhazardous, non-agent waste followed by conventional munitions then finally actual agent and munitions trial burns.

Mackey said the state had approved the Multiple-Pathway Health Risk Assessment and is reviewing the pilot testing report, leading to ongoing dialogue with the site about operating conditions that will factor into Permit Modification #286, which will be used to update and set processing rates for the plant.

Robert Jonardi, citizen member, CAC, asked if mod #286 would set the operational rate for the plant going forward; Mackey said it would inform that rate, also based on MPHRA data, and he is pretty comfortable with the plant's processing rate with emissions within standards.

COL Michael Cobb, commander, PCD, said his workers were still transferring thousands of rounds safely to PCAPP and said a new billboard was now posted along Highway 50 advertising depot hiring. He said toxic material handler jobs were being filled better but there were still openings in that capacity as well as for security guards. He introduced Don Anderson, equipment and facilities

manager, public works, who discussed his role at the depot managing work crews and maintaining buildings and equipment.

Ken Harrawood, project manager, BPT, gave an update on the plant's improving workplace safety record. He summarized SDC progress, with SDC and Off-Gas Treatment System (OTS) equipment in place and Sprung structures expected to be complete in early March with all three units expected to be finished in May.

Kim Jackson, plant manager, PCAPP, summarized recent Explosion Containment Room leaker recoveries, Munitions Washout System improvements, munition weigh station relocation and 30-day hydrolysate storage tank strategies for continued weeping on Tank 301, including encapsulating flanges with a commercial epoxy product; a permit modification covering this approach is in development for submission to CDPHE.

Jackson said the third Immobilized Cell Bioreactor module continued progress for startup, with a continuous feed now at 25% concentration and a ramp-up expected in the next week.

Then she addressed corrosion in Brine Reduction System (BRS) OTS piping, saying that the plant was evaluating shipping salt water (Brine) from Water Recovery System tanks off site to reduce salt concentration. She said resulting issues with the BRS crystallizer pump and the solids in the brine tank has led to downtime in the plant; typical losses were at one per quarter, but it is now a weekly occurrence. Jackson said Veolia in Port Arthur, Texas, was chosen for processing this waste because they had the ability and technology to handle the high salt concentration. She said the plant was planning to begin shipping salt water to Veolia in the next week, with roughly 50 trucks removing 200,000 gallons of brine. She added that as a commitment to the CAC, the plant was continuing to run the Biotreatment Area while working on improvements and design ideas to get the system healthy.

Dr. Velma Campbell, citizen member, CAC, reacted passionately, describing this as a chronic failing problem that should have been addressed through quality assurance but instead will result in shipping of waste to be incinerated by the same company – Veolia – that was involved with the design of the system. She recommended another look at alternatives such as storing the water on site. Jackson reiterated the commitment to solving the problem. Campbell said the real problem was not the underlying issue but rather the ongoing system issues that were not addressed leading up to the decision to ship salt water off site, and she said the concerns about shipping local problems elsewhere was being minimized.

Robert Jonardi, citizen member, CAC, said the root cause was an ongoing, slow degradation and lack of built-in pump redundancy, along with operator decisions made without involvement of engineers. He called for more creative solutions and flexibility such as temporary storage until the system is healthier. Jackson responded that storage was considered, but that would drive significant permit modifications and increase the workload of CDPHE when the agency was already working on the main plant's final Part B operating permit, SDC permit modifications and the demand of other applicants. Mackey called the requirements to store the material on site in trucks problematic, due in part to pad weight ratings and tank volumetric requirements.

Jonardi said the site has a history of painting itself into a corner then ship things away like hydrolysate and now hazardous salt water. Mackey said there are often unpredictable realities that come up in such a complicated plant.

Jonardi asked Stamatakis if PEO ACWA was taking the wishes and preferences of the CAC into account while focusing on treaty commitments; Stamatakis responded that legal and treaty mandates do not come before the safety of the workforce and complying with environmental permits. “We make sure everything that comes out of our facility is safe,” he said. Jonardi said the environmental risk of letting the process play out on site was lower than shipping to a hazardous waste incinerator in Texas. Stamatakis responded that contracts require any facility to be properly permitted.

Kornelly asked Stamatakis to tell Michael S. Abaie, program executive officer, ACWA, that the consensus of the CAC is opposition to shipment. She said there wasn’t time to prepare a letter before shipment began, but he could take their comments in the live webcast recording as an official statement. She reiterated that two of their main concerns going back to 1995 – shipment and incineration – were coming up again, and they were only accepting it because they have to, not because they want to. She said not planning well enough in advance has resulted in the shipments. “We are extremely disappointed, and we hope that planning will be done better,” she said. Stamatakis said he has heard her message and will relay it to Abaie and others on the East Coast. “If he needs to call me, I’m available,” she said.

Jackson said new CAMs were ready and moved into the plant to await completion of the 155mm projectile campaign and the beginning, after 75 days, of the 105mm projectile campaign. Ken Griffin, citizen member, CAC, asked if CAM improvements were incorporated in the new units; she said they were. John Norton, citizen member, CAC, asked if the 4.2-inch mortar round CAMs were still in warehouse storage; she said they were, but with their cutting blades were not a good combination with Demilitarization Protective Ensemble suits.

Walton Levi, site project manager, PCAPP, gave an update on chemical weapons destruction progress. He described it as steady, not making huge strides and even running below 32 rounds per hour on most days. He said close to 225,000 155mm rounds, the ones holding the most agent weight, had been destroyed. He said baseline reconfiguration of HD mustard rounds was “really close” to being done, and it would wrap up towards the end of summer and early fall. He said reject and problematic munitions were occurring more frequently because the plant was down to the weapons with the highest propensity for leakers or rejects.

Levi said a recent, off-year Department of the Army Inspector General chemical surety evaluation went very well.

Jackson shared that PCAPP on this very day, Feb. 26, celebrated a big achievement: the destruction of more than 50% of the total mustard agent in the stockpile in Colorado. She thanked the workforce, CDPHE, the CAC, PCD and ACWA leadership and the Pentagon for their support in reaching the milestone, and said it’s not an easy project but they will continue moving forward safely.

Kornelly said the Permitting Working Group (PWG) meeting earlier in the day was mostly concerned with issues already discussed at the CAC meeting. Norton said the subsequent Biotreatment Utilization Group (BUG) meeting included a detailed explanation from Patrick Sullivan, environmental manager, PCAPP, of what had caused some of the problems with the BRS and likewise involved a lot of the same discussion. Norton questioned the lack of a fourth 30-day hydrolysate storage tank and asked what was next, suggesting it was cheaper to ship the problem water away but “the checkbook is there” for front-end equipment like SDCs when what was needed was more storage capacity on the back end. He added that “the bugs” were still alive though not quite as hungry as they should be.

Stamatakis said in closing remarks that a celebration for PCAPP’s 50% agent destruction milestone will be April 4 at the Sangre de Cristo Arts and Conference Center.

Kornelly said the next PWG and BUG subcommittee meetings would be 2 p.m. MDT on March 18 at the Pueblo County District Attorney’s conference room, 701 Court St., as well as a public meeting on permit modification #286. The next CAC meeting will be at 6 p.m. MDT on April 29 at the McHarg Park Community Center, 405 Second Lane, Avondale, Colorado.

The meeting adjourned at 7:10 p.m. MST.

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Colorado Chemical Demilitarization Citizens' Advisory Commission (CAC) Meeting
Permitting Working Group (PWG)
Biotreatment Utilization Group (BUG)
April 29, 2020

Approximately 65 individuals representing the Bechtel Pueblo Team (BPT); Chemical Stockpile Emergency Preparedness Program (CSEPP); Federal Emergency Management Agency (FEMA); 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); and the U.S. Army Pueblo Chemical Depot (PCD) participated in this meeting held virtually using the Google Hangouts Meet online platform. Some citizens also participated in the meeting.

Irene Kornelly, chair, CAC, called the meeting to order at 2:05 p.m. MDT. With a quorum, she asked for and received approval of the Feb. 26, 2020, CAC meeting minutes. She introduced Mr. Michael S. Abaie, program executive officer, ACWA, who praised PCAPP for having a pandemic plan and avoiding any incidents of COVID-19 in the workforce while continuing to process munitions. He said the plant coordinated a site-specific plan with stakeholders and the Centers for Disease Control and Prevention (CDC) to allow operations to continue while incorporating CDC recommendations to ship hydrolysate off site to reduce waste. He said as states figure out how to reopen, ACWA will work with local, Department of Defense (DOD) and other guidance to ensure ramping up is done conservatively and safely.

COL Michael Cobb, commander, PCD, said depot security guards and toxic material handlers are tested daily to ensure they are healthy. He added the DOD has reported one symptom of COVID-19 may be the inability to smell apple cider vinegar, so that will be incorporated into shift change temperature screening. COL Cobb said the main south gate at PCD is closed, leaving only the north gate by PCAPP open, to reduce guards' potential exposure under health protection conditions issued by the Army. He said about 50% of depot personnel were home, either teleworking there or on leave, and a reintegration plan is in development for the eventual return to normal operations. COL Cobb said depot employees were performing with excellence and giving extra effort during a very stressful time.

John Norton, citizen member, CAC, asked if everyone at the depot passed the apple cider vinegar test. COL Cobb replied that he himself had, and the test was just starting to be deployed on post.

Ken Harrawood, project manager, BPT, credited Robert Jonardi, citizen member, CAC, with suggesting he ask Bechtel National for N95 face masks; the company provided 1,000 which were donated and split between Pueblo's Parkview Medical Center and St. Mary-Corwin Medical Center. Harrawood said PCAPP also has made 4,000 homemade cloth masks, and that the plant was working on masks ahead of DOD directives to use them so was prepared for the requirement. He said since dusting off the plant's pandemic plan seven weeks earlier, only minimal changes were needed; the plant has added handwashing and sanitizing stations throughout the site and has done a good job social distancing on site, closing off smaller conference rooms when possible and limiting attendance in larger conference rooms. With the mission continuing, new hires come on board every other week, so class sizes have been changed to ensure trainees are spread out and wear face coverings. Fortunately, there are no confirmed COVID-19 cases on site, Harrawood said, and

Pueblo County is on the lower end of the scale; he believes PCAPP's actions are helping. The plant, he said, is operating but at a reduced operational posture: single-line processing, limited demilitarization protective ensemble (DPE) entries, and a fair bit of deferred maintenance, in addition to actively working to minimize the amount of waste stored on site.

Harrawood said with approximately 1,800 employees, roughly 1,600 in BPT and 200 craftsmen at the Static Detonation Chamber (SDC) site, there are 1,200 essential, on-site workers; of the remaining 600, 200 are working from home full time, 200 working from home part of the time coming in one or two days a week, and about 200 on standby – mainly, operators and shift personnel whose job for the last six weeks has been to stay healthy in case they are needed to rotate in. At the SDC site, cloth face coverings and temperature screenings are in use, and some subcontractors have been moved the night shift. A temporary break trailer has been brought in to aid social distancing and prevent workers from eating lunch in their vehicles. In the eventual return to work, Harrawood said the standby workers will be first. As the weather gets warmer, he said, masks for SDC workers will be optional as long as they are able to maintain appropriate distance.

In a plant status update, Kim Jackson, plant manager, PCAPP, said vapor and liquid leakers have been frequent in April and the maintenance team has been doing a great job around the clock to make sure it doesn't impact downstream production. She said Agent Processing Building work was temporarily suspended due to corrosion issues in the spent decontamination system, and a temporary design modification to restore it would require some permitting actions. Bail servo modifications for the Munitions Washout System (MWS) have progressed but are now pending the return of the staff due to a reduction in DPE entries. Planning for the changeover from 155mm to 105mm projectiles is on track for September; a third of the 105mm Cavity Access Machine (CAM) units at the PCAPP Training Facility have been converted and are ready to go, with the rest soon to be modified. All should be retrofitted and crated up by June for moving to the plant, followed by the teardown of contaminated 155mm CAM stations in the changeover.

Jackson summarized three SDC temporary authorizations (TA) submitted to CDPHE and said main plant Permit Modification Request #286 is the culmination of pilot testing, awaiting final comments from the state, and that modification will be rolled into the Part B Research, Development & Demonstration Permit that will be out for public comment and approval in late summer. Another permit modification will address the spent decontamination system leaks. She said a temporary bypass would be put in place while a more robust permanent design solution to replace affected piping is developed in close consultation with CDPHE. SDC surrogate and agent trial burn test plans were submitted to the state for review and facility construction certification for pads is progressing.

Walton Levi, site project manager, PCAPP, gave an update on chemical weapons destruction progress, saying more than 55% of the mustard agent stockpile has been eliminated. Jonardi asked him to start a tracking slide for the percentage of hydrolysate generated by PCAPP that has been destroyed as opposed to that shipped off site.

Levi said 105mm projectile baseline reconfiguration had been complete, and reconfiguration of 4.2-inch mortar rounds containing HD mustard was completed earlier this year. Noting "tremendous" progress on 4.2-inch mortar rounds containing HT mustard, he said he expects their baseline reconfiguration to be complete around June.

Overall, Levi said, the numbers of reject and problematic munitions were within what was projected and expected.

Levi said 45 tanker loads of hydrolysate had been shipped as of today since shipments started 2 ½ weeks ago, equaling about 200,000-210,000 gallons. He said the plant management looks at where the project stands at the end of each week – not near-term as much as at the end of the calendar year and startup of the 105mm campaign and preceding changeover and conclusion of the 155mm campaign before that – then decides how much hydrolysate needs to be shipped to meet CDC expectations and also ensure there is enough to keep the plant running through all its evolutions at the end of the year. Startups, he said, can be challenging and may not yield the quantities of hydrolysate seen now. He said he would keep CAC members informed when shipments reach the point they can conclude.

Harrawood said with 25 million Americans out of work in the pandemic, the team is pretty pleased it hasn't had to put anyone out of work. He said roughly 1,000 employees are from Colorado, with 700 from Pueblo County and the rest elsewhere in the state. Local payroll is about to hit \$2 billion, and that's no small number especially for a community the size of Pueblo. He said two-thirds of contracts are within Colorado, one-quarter in Pueblo County, with 40% awarded to businesses outside Pueblo. He said the Bechtel Foundation had donated \$3 million toward fighting the pandemic; \$2.25 million goes to international nonprofit Global Giving to support communities around the world, and \$760,000 will be distributed by Bechtel directly, with \$50,000 earmarked for Pueblo. He said BPT was working on a formal announcement of local donations in the coming weeks.

Jonardi asked if the contract awards Harrawood mentioned include SDC contracts, and Harrawood affirmed that they do. Dr. Velma Campbell, citizen member, CAC, asked how far ahead of the actual permit process do those contracts get awarded and what happens if there are problems. Harrawood said it varies, but it's not too far ahead – a few months out on the actual procurement process but maybe a few weeks before specific TA that allow work to proceed. He said most SDC associated contracts were already awarded and spent with not many costs remaining from construction, although there were still significant operational expenses.

Ken Griffin, citizen member, CAC, asked where the other 600 workers on the employment charts came from. Harrawood said the project was able to find most resources locally, but many workers came from other chemical weapons stockpile locations around the United States and bring specific necessary skills to the team. Griffin then asked what contractors are from outside Pueblo County and what is out of state. Harrawood said most contracting companies are local, with SDC infrastructure construction work going to the only successful bidder, which was based in Colorado Springs. The SDCs and off-gas treatment system units themselves are the biggest-ticket items from overseas, he said.

Kornelly ended the CAC meeting there and said the next meeting was expected to be another virtual session 2 p.m. May 27, though she said June might be an in-person meeting, if possible.

She then began the Permitting Working Group (PWG) meeting, introducing Kevin Mackey, Hazardous Waste Permitting unit leader, CDPHE. Mackey reviewed permitting activities, including

PM #286, which, at 1,500 pages, he said has taken a while but is getting a thorough vetting. He said there are a few compliance schedule items but mostly CDPHE made changes to permit language and it looks largely to be approved as modified; revised sections will be sent back to PCAPP in the next week, he said.

Mackey said CDPHE has issued its acceptance for TA H1102, igloo storage racks and ventilation addition (SDC), and is in the process of approving other SDC authorizations: TA 3B as well as TA 7, site acceptance testing.

He said other permit modifications CDPHE has looked at without approval include the monitoring plan for changes to the operations plan table and Agent Filtration Area compliance table. He said the agency has been dealing a lot lately with the corrosion issues in the secondary decontamination system, including a few piping failures, and workarounds to keep the system operational would need to be kept consistent with safe state practices. Jonardi asked whether the decontamination system components were part of the corrosion monitoring plan or whether they were new issues that should have been included; Mackey said they were in the plan, but the problem is the mechanism is pitting, possibly due to lower-pH materials passing through the pipes. He said his team is evaluating the best way to keep monitoring and determine how extensive the pitting is and where it is located.

Jonardi asked about the SDC operating permit, and Mackey said the application is in and his team is in the midst of it.

The PWG meeting ended and Norton chaired the subsequent Biotreatment Utilization Group (BUG) meeting, which included a presentation from Patrick Sullivan, environmental manager, PCAPP. He said 6.1 million gallons of hydrolysate had been produced total by the project to date, and about 10% of that had been shipped off site. He said the plant has processed about 81% with the remaining 9% in the inventory in storage tanks. He said some of the initial shipment was surrogate material, not all hydrolysate produced from munitions.

He said the plant was on track to process and destroy hydrolysate in the percentage of the low 90s, calling it an "A-." Jonardi replied that was like giving credit for not having to ever handle the bulk of the liquids in the old plant with the 105mm projectiles and 4.2-inch mortar rounds, and he wasn't sure that deserved an A-. Sullivan said the plant has been working according to its goal of the project all the way through to maintain about 50% fluid level in the 30-day hydrolysate storage tanks so there was some cushion in the biotreatment system if the front end of the plant goes down or storage if the back end goes down.

Sullivan said significant issues continue with the strainer clogging and cleaning of suspended solids in Tank 301 and all three Immobilized Cell Bioreactors (ICB) are online with continuous feeds but they continue to have different feeding than the rates he'd like to see, with lines clogging and requiring chemical or mechanical cleaning out to keep things flowing. He said most maintenance can be performed by taking the system offline for a short period of time and bringing it back online quickly. He said the agitator in the third module had been replaced with minimal feed interruption.

Jonardi asked if the reduction in throughput of modules 1 and 2 was due to a problem with solids and whether module 3 was solid-free; Sullivan said module 3 was not in service as long, so when the mechanism of this clogging is chemical deposition in the lines, the steel is cleaner, with crystals

on the inside seen more on modules 1 and 2, with feed material recrystallizing and clogging the lines again.

Jonardi thanked Abaie for bringing the third module online last year and said it looks like it will be a workhorse going forward.

Sullivan said it was helpful to ship some hydrolysate, providing a cushion as well as reasonable risk reduction. He said the tanks are now in a good place to keep pace with the plant.

Campbell reiterated she is very concerned about shipment of hydrolysate and is getting the impression that the plant can modulate how much is shipped to go along with what it needs rather than an order to dump hydrolysate based on precautionary measures advised by CDC. Sullivan said the goal all along has been balancing risk by having all three tanks half-full, and they're close to that now.

Levi said the plant was preparing to go into caretaker status if necessary, looking at the long-term project as a whole and not only the short term, and he believes both interests are being met by the precaution.

Campbell said one of the essential features of the main plant and its operations, not widely discussed, is that it's not as risky as high-pressure, high-temperature processes such as industrial incinerators, and it could be shut down relatively safely with the products themselves at low risk of doing anything unexpected if left on their own. She expressed aggravation that regardless where the instructions came from, one of the most important safety features of this particular process was being ignored.

Norton asked if the epoxy sealing the 30-day hydrolysate storage tank manways prevented access to muck out the tanks; Levi said that encapsulation is removable, and Sullivan said that design is part of the reason the epoxy was selected.

Norton asked if there was any indication the 105mm campaign will result in clogging of pipes, and be better or worse than the 155mm campaign for systems. Sullivan said there was no indication of the chemistry, but their agent mass is only about a third of the 155mm projectiles and the plant should be better able to keep up even if their makeup is the same and be a lot less problematic due to lower production demand.

Jonardi asked Mackey if using a power washer in the tanks would require a permitting back-and-forth; he replied the permit modification takes into consideration the ability to remove the epoxy seal and reconfigure the manway with a gasket again, but right now if they remove the seal it will have to be reapplied according to the process used in the past. He added the expectation is the seal won't be removed until the 105mm campaign changeover.

Sullivan said he was happy to report the B14 tanks were/was running much better although the seal failure issue hasn't been completely solved. He said the salt occurring in the tanks has been significantly reduced, although the COVID-19 pandemic and resulting reduced staffing has affected the ability to sample as often as desired. He said managers have been trained on how the system

needs to be operated, with good support from engineering, and there's a little more work to do, but it's in a far better state than it was two months ago at the last PWG meeting.

Jonardi asked whether either a pump redesign or addition of a redundant pump were being taken off the table; Levi said no, both were being kept in reserve and one would be chosen while the other would likely be considered a fallback plan, maybe in addition to yet another option to be determined, to provide multiple possible solutions in the future.

Sullivan said that overall the B12 tank situation was greatly improved; the team is still experimenting with different materials and seal designs for the pump, but he said they're now able to make them last for "weeks and weeks" and keep the plant operational while keeping salt content lower. Campbell asked what the optimal range for salt was; Sullivan said it was designed to be in the 2-4% range, and 2% or more was coming out of the ICBs; he said it's currently in the 2-3% range – not quite there, but getting there. Campbell said it seems like good progress.

Kornelly said the next CAC meeting and PWG and BUG subcommittee meetings would be 2 p.m. MDT on May 27 virtually using Google Hangouts Meet.

The meetings adjourned at approximately 3:45 p.m. MDT.

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Public Meeting: Permit Modification #293
Colorado Chemical Demilitarization Citizens' Advisory Commission (CAC) Meeting
Permitting Working Group (PWG)
Biotreatment Utilization Group (BUG)
May 27, 2020

Approximately 59 individuals representing the Bechtel Pueblo Team (BPT); Chemical Stockpile Emergency Preparedness Program (CSEPP); Federal Emergency Management Agency (FEMA); 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); and the U.S. Army Pueblo Chemical Depot (PCD) participated in this combined meeting held virtually using the Google Meet online platform. Four citizens also participated in the meetings.

Permit Modification #293

At 2 p.m. MDT, Karen Downs, senior environmental permitting engineer, PCAPP, began with the virtual public meeting on Permit Modification No. 293, Spent Decontamination System (B05) – Recovery Strategy. Robert Jonardi, citizen member, CAC, asked to know the combined flows of all streams for normal operations in the B05 Spent Decontamination Solution (SDS) system compared with off-normal operations. Kim Jackson, plant manager, PCAPP, said it varied between 100-200 gallons per day normally, but that could reach up to 500 gallons if there were failures or spills requiring large amounts of liquid to clean. Jonardi then asked if the reason the plant is not currently processing munitions is because the SDS is a critical component. Jackson replied that munitions processing was shut down to minimize the risk of processing pressurized rounds and avoid agent spills that would require significant decontamination so as not to overwhelm the remaining tank until solutions were approved by CDPHE. She said the plant was cautiously managing entries and performing compliance-required inspections to manage until the back end was ready to support processing of fluids.

Downs noted that normally the public could visit repositories of program materials but with those locations closed due to the COVID-19 pandemic, she referred to the websites on the last slide of the presentation.

Jonardi asked what part of the corrosion monitoring system was tied into the B05 system, and if there was early warning or reporting over time. Jackson said there is no such Permasense monitoring on the B05 system, instead relying on visual inspections. She said when pinhole leaks were first noticed in late 2019, they were caught by Control Room operators and the affected pumps were taken out of service and replaced. She said staining indicated there had been pinhole leaks that sealed themselves, warning of emerging problems on the system. The back end of the system was taken out of service in April, then maintenance and engineering worked on a solution, which resulted in the permit modification. Jonardi said it sounds like the plant staff has the issue covered and asked whether the corrosion monitoring plan needs to be revisited. Jackson said there will be enhanced, more frequent inspections to catch anything like this earlier and avoid similar situations in the future.

CAC Meeting

At 2:25 p.m. MDT, Irene Kornelly, chair, CAC, called the CAC meeting to order. With a quorum, she asked for and received approval of the April 29, 2020, CAC meeting minutes. She introduced Mr. Michael S. Abaie, program executive officer, ACWA, who said PCAPP was keeping the plant viable and moving forward during the pandemic. He said the shipment of hydrolysate off site, as recommended to reduce waste by the Centers for Disease Control and Prevention (CDC), was complete with 350,000 gallons removed. He noted the plant was not processing munitions due to the SDS issues but was getting the three Static Detonation Chamber (SDC) units constructed and systemized and ready to be operational this calendar year.

Jonardi asked what Mr. Abaie's guidance to PCAPP was regarding how to process its inventory of hydrolysate through the Immobilized Cell Bioreactors (ICBs) now that the plant was not processing and generating new hydrolysate and asked whether all three ICB modules were operating or whether there was diminished throughput. Mr. Abaie said there was enough to keep all three ICBs working, but during campaign changeover the plant will probably take them down one at a time to clean them out and improve future throughput. He said the intent was to make sure all three ICBs are viable since the 155mm projectile campaign generates more hydrolysate than expected with the upcoming 105mm projectile campaign.

Lisa Shorter, CSEPP coordinator, Pueblo County Sheriff's Office, gave an update on local planning for the upcoming end of the program. She noted the recent retirement of Terry Hobbs, CSEPP chief, after 30 years of federal service. Shorter said the full-scale CSEPP exercise scheduled for May 6 didn't take place due to the pandemic, but CSEPP was exploring whether the Emergency Operations Center (EOC) activation will count towards CSEPP objectives. She said the preparedness plan will be reviewed in August as part of planned Chemical Accident/Incident Response and Assistance exercises. Shorter noted Pueblo's 261 COVID-19 cases and the testing of more than 4,500 people, saying a spike in cases was being watched closely. She said Colorado State Fairground drive-through testing will continue into June and testing was being conducted at long-term care facilities as well. Ken Griffin, citizen member, CAC, asked if appointments were required for tests; Shorter said no, and anyone with any coronavirus symptoms can be tested and get results in 72 hours. Dr. Velma Campbell, citizen member, CAC, asked if any categories of people such as high-risk groups could get tested without showing symptoms; Shorter said yes, and that group also includes health care workers, law enforcement officers, firefighters and anyone older than 55.

Shorter said the state awarded \$4.6 million in the 2020 budget for Pueblo County CSEPP to buy new personal protective equipment for law enforcement personnel with expiring hazard suits. She noted that before the chemical weapons risk leaves the community, it will receive vehicles and radios to replace equipment at the end of its life, providing capabilities the community would not be able to afford without CSEPP that will last long after the end of the program. She said other communities that once had CSEPP resources were being looked to for lessons learned, including rules about the disposition of equipment. She said Kirk Taylor, sheriff, Pueblo County, has asked for a refreshed sustainability report. She said a 2021 task force will identify community stakeholder concerns and determine what critical needs will remain and how they can be met and funded.

John Norton, citizen member, CAC, asked if a secondary operations center at PCD would be kept in place after the Army hands the property over to PuebloPlex; Shorter noted that on-post CSEPP was

a different program and she was not involved with it directly; and they may have more flexibility in what they do with their operations center. Shorter noted there was a partnership but there are currently no plans to move there. She said the FEMA-funded EOC in downtown Pueblo will still have to be maintained long after the munitions are destroyed, and there were discussions with communities about not being dependent on CSEPP funding in the future. Shorter noted a 2019 increase in 911 surcharges in anticipation of helping pay for 911 emergency operators when the CSEPP mission ends in Pueblo County, and said a new phone system completely funded through the program will be good for another seven to 10 years.

Terry Hart, vice chair, CAC, and Pueblo County commissioner for District 1, said he was pleased to hear about the sustainability study and asked to receive a copy as soon as possible. He said he was happy to work with the task force and wanted to get commissioners engaged with that conversation quickly.

COL Michael Cobb, commander, PCD, said there were no COVID-19 cases at the depot and credited safety precautions such as social distancing, wearing face masks and frequent hand washing. He said the depot was transferring munitions to PCAPP and meeting surety requirements for the safe and secure storage of the chemical weapons stockpile. He said Pueblo County and El Paso County infection rates were concerning and the outlook for changing the depot's Health Protection Condition and precautions anytime soon was not promising. He said the depot has more than 100 personnel teleworking from home or on leave; the first to come back would be those not at high risk of infection, and the depot could handle bringing back up to 30 people per day with required face-to-face medical reviews. Then teleworkers would return, followed later by high-risk personnel.

COL Cobb noted the depot's operations center was robust and it would be a shame if it were to go to waste once the PCD military mission is over and Pueblo County loses CSEPP funding. He recommended PuebloPlex consider that operations center when planning property transfers.

Jonardi asked whether the depot's firefighting capability had been diminished by the pandemic precautions. COL Cobb responded that both firehouses are still being maintained and are classified as mission essential with no changes to readiness.

Norton asked if Chris Pulskamp, environmental manager, PCD, had been replaced since his departure. COL Cobb said the position would be posted within a couple weeks on USAJobs.gov. Norton noted he worked with Pulskamp as co-chair of the Restoration Advisory Board.

Griffin asked when teleworking personnel could return to PCD. COL Cobb said there has to be fewer than 140 new infections in both El Paso and Pueblo counties over a 14-day period and a death rate under three for the same period, and the area was "pretty far away from meeting those requirements right now."

Mr. Abaie noted the beginning of planning for closure of the facility and said there will be a closure manager at each chemical agent destruction facility as well as a team involving the local community that will eventually walk the facility together and consider what part of PCAPP is not contaminated and might be retained instead of removed to take the most advantage of the taxpayer money that had been spent and give something back to the community. He said the operations center would be

looked at as well. Hart said he was excited about that conversation and looked forward to getting on the ground and working with PCD, PuebloPlex, the CAC and the local community.

Ron Eccher, outreach communications manager, Pueblo Chemical Stockpile Outreach Office (ORO), gave a midyear report on outreach activities, including pandemic precautions and social media and video campaign results. Although the ORO remains closed since March and in-person events are canceled or postponed, Eccher said staff are continuing to work from home and planning for a phased reopening in line with PCAPP plans. He said staff will be trained in new procedures and safely interacting with visitors and enforcing strict social distancing protocols. Hart asked Eccher whether there will be a glass screen at the reception desk. Eccher confirmed a Plexiglas barrier will be installed in addition to other barriers designed to define limited areas where visitors can enter the office, only two people at a time. Kornelny said Eccher's team had done a great job keeping everyone informed through the process.

Kevin Mackey, Hazardous Waste Permitting unit leader, CDPHE, noted the crucial B05 system issues. He said his team has been working hard on Permit Modification No. 286, preparing to issue an approval letter and response to comments, along with actively reviewing the Class 3 Permit Modification (PM) request's revised version for the SDC units. He said CDPHE had issued a compliance advisory failure to notify of B05 system repairs in late summer/early fall 2019 that were not in keeping with permit or regulatory requirements for tank systems. He said his staff was actively reviewing and had had a lot of dialog with the plant regarding repairs and compatibility of materials to see what parts can remain in service and what needs to be replaced. A Temporary Authorization (TA) for a supplemental "stopgap" system for the B05's downstream end, reviewed at the PM293 public meeting, just received Facility Construction Certification (FCC) and was being reviewed to ensure regulations compliance.

Mackey said a second compliance advisory is being issued for failure to leave adequate head space for Demilitarization Protective Ensemble (DPE) hydrolysate tank entries. He said operators had overridden interlocks that had been installed to prevent the issue and that was not acceptable.

Mackey said the PM286 draft approval letter is being reviewed, with some of the things proposed including adding operation limits, monitoring requirements based on lessons learned in pilot testing and determining plant operations and processing rates. He said CDPHE concurs with a lot of the proposed changes but there are some agency disputes, including deletion of a requirement for a new off-gas treatment system scrubber and heat exchanger. He said PCAPP's proposal to delete a condition requiring replacement of a B12 pre-heating feed system if it fails was met with a compromise that it instead be repaired if it could be done so effectively, and CDPHE did not feel comfortable with the idea of adding additional liquid waste storage to the dunnage area. He also noted important changes to the odor monitoring plan and updates to the corrosion monitoring plan, which had been focused mainly on metal components but needs to be updated to include nonmetallic components.

Jonardi asked Mackey if the compliance advisory situation stemming from the overridden interlocks would lead to an after-action report or review. Jonardi said if the environmental personnel were aware of the situation they would not have allowed it to happen. Mackey said it's spelled out in the permit, he just needs assurances it was never going to happen again and there are systems in place to make sure of that. Jackson said it was more of a misinterpretation of the requirement, and that

there was adequate head space in all cases and there were successful batch results to support clearing the interlock. She said there are additional controls now in place to ensure it doesn't happen again.

Mackey concluded with an overview of SDC permitting and Class 3 Permit Modification, saying the permit's first revision was in continuing review and TA3B includes startup for a lot of the systems there. He said his group was evaluating the comments it had received back on TA7 and that should be ready to issue within a week or so.

Ken Harrawood, project manager, Bechtel Pueblo Team, noted the heart-attack death of a 57-year-old male worker last week at the SDC site. He said the man wasn't seen for 45 minutes but once he was found the crew responded as required, including CPR, defibrillation and fast ambulance response. The man was taken to a local hospital and pronounced dead there.

Harrawood said Battelle had deployed a system to Colorado for sterilization of used N95 face masks. Returning teleworking staff were undergoing online training so they understand the precautions expected upon returning to PCAPP. He said a second phase of 200 shift workers were cycled back into their normal crews last week; a third phase, recently started, includes those working from home part time returning to the office for one or two days at a time. Others, he said, would continue to work from home if they can for three weeks, returning full time to the site on June 15. Those in Phase 4 haven't been to the office since March 18 and will not fully return for four weeks. Harrawood said the site would wait two full weeks before management considers bringing back the 12-15 employees considered at risk. Kornelly asked whether medical screenings are continuing; Harrawood said they are keeping all such controls in place. Walton Levi, site project manager, PCAPP, said the workforce was self-monitoring. Jonardi questioned whether four medical monitoring stations were adequate; Harrawood said with self-screening it was. He said although the use of masks may have developed into a hot-button issue in the community, PCAPP does not consider them optional – if you cannot maintain social distancing, a mask must be worn.

Harrawood said work had continued to minimize waste on site per CDC recommendations, with 380,000 gallons of hydrolysate processed and 350,000 gallons shipped off-site. He said SDC subcontractors had been moved to the night shift to reduce site congestion and aid in social distancing efforts. After six weeks of not conducting physicals on site, medical resumed performing them last week. Harrawood called April a rough month for recordable injuries. He also noted the discovery of travel-size liquor bottles in the Chemical Limited Area (CLA) and said the workforce was being completely and randomly screened, with stepped-up random checks at both the entry gate and CLA entry point and appropriate disciplinary actions taken.

Harrawood said SDC progress was moving forward, maybe not as fast as desired but progressing anyway – groundbreaking, he noted, was less than a year ago and completion was approaching rapidly. He said construction would be complete in July and the SDC units were on track to start operations before the end of the calendar year as Mr. Abaie noted.

Jackson said getting the SDS operational again was a priority as it led to the pause in munitions destruction. She said the plant had used numerous DPE entries to clean piping and ensure the front end of the system is ready when the back end comes online. Jonardi asked if there would be a throughput issue; Jackson said no.

Noting the hydrolysate shipments had concluded, Jackson turned to the Biotreatment Area (BTA), saying the ICB modules were doing well. She also noted the replacement of a blower unit. She said the team had focused on making sure the microbes stayed alive with intermittent starts, and it worked – Module 1 was back in service with no issues, she said.

Jackson said the Brine Reduction System's new diamond chip seal on the crystallizer pump was operating well, noting there are still long-term improvements coming this summer and later in the year to add capacity and additional operation ability for the crystallizer pump. She said the B14 Water Recovery System was actively working down content and doing great, noting the BTA has clearly turned a corner with great support from the on-site team to get it healthy again.

Levi gave an update on destruction, noting there had only been a handful of days this month the plant was able to operate and the percentages haven't changed significantly since the last CAC meeting or at all in the last week. He said the part of the plant that has gone extremely well is the baseline reconfiguration of 4.2-inch mortar rounds. He noted the plant had finished HD mustard rounds and was now reconfiguring the remaining HT mustard rounds. Levi said he expects 4.2-inch baseline reconfiguration to be finished by mid-June.

Norton noted there was optimism before the pandemic that the project would be finished before the end of 2022, and asked if that has changed. Levi said the plant was targeting completion in September or October of 2022 before the B05 system issues, and if that can be resolved and the plant restarted there's still a good shot at hitting October-November 2022. Levi said there was still a reasonable chance of completing the changeover from 155mm projectiles to 105mm projectiles late this calendar year or in early 2021.

Jonardi asked whether PM293 has to work its way through the regulation system before the plant can become operational again. Jackson said the TA was already approved allowing installation of the SDS solution and the FCC package being reviewed at CDPHE would allow for restart. Another FCC package for front-end sumps was completed and being independently evaluated by third-party engineer HTS. Jonardi asked then whether mid-June sounded doable, or even within the next 10 days; Levi said he was hoping for even sooner.

At 3:59 p.m. MDT, Kornelly ended the CAC meeting and said the next CAC meeting and PWG and BUG subcommittee meetings were expected to be conducted virtually again at 2 p.m. June 24, but she didn't know for sure that it would be a virtual event.

PWG/BUG subcommittees

Kornelly then began the Permitting Working Group (PWG) meeting. She asked Mackey if approval of PM286, basically the permit for operations for PCAPP, will have a final permit application for the Resource Conservation and Recovery Act (RCRA) Part B operating permit going forward. Mackey said that's how CDPHE is looking at it, and is evaluating all the proposed changes and lessons learned during pilot testing and has revised the permit accordingly based on feedback and that will become the RCRA Part B permit application. She asked if PCAPP needs to have its final permit by Sept. 1, to which he replied yes, it does. Kornelly noted that means there's three months. Mackey said PM286 was the real heavy lift. Kornelly said she was concerned about timelines for public meetings, but Mackey said he thinks they're in good shape.

Mackey said most of the permitting issues had been covered in the CAC meeting. Jonardi asked how public hearings or comments in getting final permit approval by Sept. 1 would be conducted. Kornelly said virtually; Jeannine Natterman, public involvement coordinator, CDPHE, said the agency has already conducted virtual public meetings and it's the safest way to conduct public involvement during the pandemic and would work. Kornelly noted that Pueblo County would also be holding a public meeting of some sort, virtually or in person, and she didn't know when.

Norton noted Jonardi had already asked about hydrolysate levels and bioreactor activity. Jonardi asked Patrick Sullivan, physical scientist and environmental manager, PCAPP, to elaborate on Mr. Abaie's guidance for keeping all three ICB modules operating. Sullivan said all three were operating and had been "turned down halfway from where we were, conserving a little bit," and said if the B05 situation hadn't happened things could have gone completely in the other direction; he said by overcorrecting slightly the plant avoided a situation where it was unable to keep up with hydrolysate production.

Jonardi asked if the plant would still operate all three ICBs if they go from 250,000 gallons of hydrolysate to 125,000 gallons in 60 days. Sullivan said if the plant starts in a couple weeks it is likely to outstrip production of the BTA, but now that it's at half-speed if the plant comes online it will have to balance the tanks and adjust. Levi agreed, adding there is not a set BTA processing rate but it's a live plan based on current, short-term and long-term considerations. Jonardi concluded it sounds like all three ICBs will be operating for the near future, with no motivation to drop a unit and have to re-establish it later.

The meetings adjourned at 4:09 p.m. MDT.

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Colorado Chemical Demilitarization Citizens' Advisory Commission (CAC) Meeting
Permitting Working Group (PWG)
Biotreatment Utilization Group (BUG)
June 24, 2020

Approximately 40 individuals representing the Bechtel Pueblo Team (BPT); Centers for Disease Control and Prevention (CDC); 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; the U.S. Army Pueblo Chemical Depot (PCD); and the Pueblo mayor participated in this combined meeting held virtually using the Google Meet online platform. One citizen also participated in the meetings.

CAC Meeting

At 2 p.m. MDT, Irene Kornelly, chair, CAC, called the CAC meeting to order. Nicholas Stamatakis III, deputy program executive officer, ACWA, praised the PCAPP team for safely completing the baseline reconfiguration of 4.2-inch mortar rounds ahead of schedule during the COVID-19 pandemic. He said the facility is operational again after resolving Spent Decontamination System (SDS) issues since the last CAC meeting and is on track to complete the destruction of 155mm projectiles and transition to 105mm projectiles later in the year. Stamatakis said PCAPP's final Resource Conservation and Recovery Act (RCRA) Part B operating permit application would be submitted soon and he was looking forward to working with CDPHE and the public to get that application approved later this summer or in early fall. He said finishing 4.2-inch mortar round baseline reconfiguration was critical because those rounds will be destroyed in three Static Detonation Chamber (SDC) units that are about to be completed and systemized, and summer and fall would bring operating permitting activities for the SDCs, which were brought in mainly to handle the 4.2-inch mortars. Stamatakis also announced the ACWA program had just surpassed 50% destruction of the overall remaining chemical weapons stockpile and that achievement was a testament to the hard work at PCAPP as well as the Blue Grass Chemical Agent-Destruction Plant near Richmond, Kentucky. He stressed this means it's important to start planning for closure and the discussions for which buildings, facilities and capabilities the CAC and others would like to see left behind and said a tour will be arranged in the near future for CAC and other officials to see the Pueblo plant. Kornelly said she is eager to begin closure discussions and suggested a video teleconference be held soon. Stamatakis indicated a teleconference could be held as early as next week after an introduction meeting with Walton Levi, site project manager, PCAPP.

Bob Jonardi, citizen member, CAC, asked if the SDC units were primarily for the 4.2-inch rounds and whether the 105mm projectiles would be primarily processed in the main plant. Stamatakis said that was still the plan, and ACWA was working with CDPHE and Bechtel to make sure there is adequate capability to destroy the stockpile in the safest, most environmentally friendly way possible.

Velma Campbell, citizen member, CAC, asked if Solid Waste Management Units (SWMU) were part of what could be left behind after closure. Stamatakis said those were owned by the U.S. Army and were not part of the ACWA mission and those discussions would have to include Army Material Command and the governor of Colorado.

COL Michael Cobb, commander, PCD, said the completion of 4.2-inch baseline reconfiguration coincided with an increase in pay incentives for toxic material handlers, boosting morale. He noted a nationwide shortage of security guards at military installations and pay grade increases to help retain those employees. COL Cobb said the south, main gate of the depot was still closed due to Health Protection Condition (HPCON) Charlie in response to the COVID-19 pandemic, although Fort Carson and Peterson Air Force Base had reduced to HPCON Bravo and reverted back to trusted traveler entry conditions. He said the depot's south gate was likely to remain closed for another month but could reopen in August barring local COVID numbers taking a turn for the worse. He said he would be granted an exception to lockdown on leave conditions to finish moving from Virginia to Colorado, leaving Ms. Sheila Johnson, deputy commander, PCD, in charge from July 1 through approximately July 24.

Kevin Mackey, Hazardous Waste Permitting unit leader, CDPHE, reviewed permitting activities, noting since the last CAC meeting Permit Modification (PM) 286 had been approved as well as PM287 and 292, both of which included design change summaries to drawings in the permit. He said his responses to comments for PM286 had been delayed in his email outbox, but consisted of the fact that changing the operation process in the permit to increase plant viability and reduce maintenance are not really something CDPHE can regulate as that pertains to plant sustainability, not public health. Additional modifications under review include PM211, revision to operation plans' compliance table, and PM290 repair of manways on 30-day hydrolysate storage tank 301. He asked for additional information in the form of a drawing that depicts the Belzona addition in relation to the tanks.

Mackey said the B05 system recovery strategy under review is well on the way to agreement for next steps forward, and he's looking forward to receiving the RCRA Part B application later this week and issuing a draft for public comment next week.

As far as SDC permitting, Mackey said CDPHE had been notified to expect multiple Facility Construction Certification (FCC) packages, so he's anticipating those and getting the team ready to review them.

Jonardi asked if unrealistic processing rates fill up the hydrolysate storage tanks and lead to dumping wastewater in a ditch, would that be considered allowable under the Multiple Pathway Health Risk Assessment (MPHRA). Mackey said that would be not be allowed and in fact would be a criminal violation. Jonardi extended the hypothetical to disposing of hydrolysate at permitted Veolia incinerators in Port Arthur, Texas; Mackey responded that Texas is responsible for permitting that facility, and the MPHRA here was specific to PCAPP. Campbell added it was important to note for the record the human health risks associated with plant operations.

Kim Jackson, plant manager, PCAPP, said the hypothetical rates aren't realistic due to factors such as shift turnover, safety meetings and briefings, saying it was her team's responsibility to balance the back end of the Biotreatment Area (BTA) with the front end, and the few occasions that balance was upset and hydrolysate was shipped off site was not the preferred alternative – using the plant as designed was preferred. Kornelly noted Mr. Michael S. Abaie, program executive officer, ACWA, had given the CAC a verbal agreement that shipping hydrolysate is at the bottom of the list of preferred alternatives and was something he hopes to avoid in the future. Levi said there was no

anticipated need to ship again, noting the shipment of brine off site this year was done to accommodate a recommendation from the CDC to limit waste on site in response to the COVID pandemic.

Ken Harrawood, project manager, BPT, said the Request for Proposal (RFP) for preclosure had been issued and Bechtel has brought in a senior manager, Gordon Dover, in the last month. He said the team was putting together the proposal to respond to the RFP and send it to PCAPP around the end of July. He said preclosure would include disposition of certain facilities as Stamatakis described. Jonardi asked if the RFP would be competitive; Harrawood said the activity was already on contract for BPT to do closure, but this RFP would define the scope associated with it.

Harrawood said Phase 3 of return to work from pandemic precautions was complete and Phase 4 would be complete soon; those working from home two out of four days a week would be back on site four days a week as of June 29, except for 10-12 at-risk employees expected to return July 13. Campbell asked about compensation; Harrawood said everyone was working while at home, and Levi said all stayed gainfully employed and a few actually picked up extra hours. Harrawood stressed handwashing and sanitizer stations, social distancing, masks, self-monitoring and smaller meeting sizes and virtual meetings were still the “new normal” for the foreseeable future. PCAPP has no confirmed cases of COVID-19 although one case was confirmed at the Anniston, Alabama, field office, but that person recovered and was back at work.

Harrawood pointed to a continuing downward trend in recordable injuries at PCAPP, with none in May, but noted an October 2019 injury involving a rolled ankle has since resulted in lost time due to a subsequent surgical operation.

Harrawood said SDC progress was moving forward, with two units energized and a third expected to be powered next week. He said 96% Sprung structure completions reflected bits and pieces that needed finishing, such as duct seals and door locks.

Jackson said June was a great month for the main plant, with the 155mm projectile destruction campaign surpassing 85% and completion expected around September. She said the first significant activities of changeover to the 105mm campaign will include decontamination of the munitions washout room, then converting 10 Cavity Access Machines (CAM) and mechanical conversion of the Projectile/Mortar Disassembly units. Halfway through the 75-day period of changeover the Munitions Treatment Unit and Off-gas Treatment System (OTS) would be ramped down to replace the heat exchanger. She said after simulated rounds are brought in for exercises, final confirmation the people are ready to restart for the 105mm campaign should come in late November or early December.

John Norton, citizen member, CAC, asked if 105mm CAM units had been built yet at the PCAPP Training Facility; Jackson said all 10 were built and getting prepared for boxing to be sent to the plant ready for conversion, with maintenance engineers practicing stripping them down and building them back up.

Jackson said the Part B permit application planned submission to CDPHE this week was really just an administrative change rolling up CDPHE modifications, and there would be no surprises when it

goes out for public comment. Kornelly asked for slides breaking down elements of the destruction campaign changeover for the July CAC meeting.

Campbell and Jonardi reiterated their desire for statistics breaking down percentages of BTA materials shipped off site. Levi reminded the CAC that the first shipments of hydrolysate were not all generated by munitions but also surrogate needed for plant systemization, and statistics wouldn't show a direct correlation to the number of rounds processed by the plant.

Levi gave an update on destruction, noting that since the plant restarted destruction operations after B05 system issues it had destroyed around 10,000 rounds. He said the 155mm campaign was close to 256,000 destroyed. Despite the B05 "hiccup," he said, the plant was still reducing the risk of agent to workers, the depot and the local community at a steady pace. He said when the 155mm campaign is complete, around 66% of the agent will be gone. He noted reject and problematic munitions had not increased in the last month, but there was a 4.2-inch mortar round containing HD mustard identified as a leaker at some point through vapor readings; it was overpacked and will soon be safely stored at the depot for destruction in an SDC. He noted the 4.2-inch mortar baseline reconfiguration campaign was concluded a week ahead of schedule with no issues.

Jackson noted the 4.2-inch campaign had been a long one, and the plant's Conduct of Operations (CONOPS) principles, borne out of the nuclear industry, stressed frequent training and independent field assessments to avoid complacency and lead to a high standard of agent and equipment awareness. She called the dealing of the recent leaker a textbook case handled well years after the campaign started. Kornelly asked if the baseline reconfiguration team would remain employed now that the campaign had ended, and Jackson affirmed that they were expected to support the 155mm campaign until its completion and then help with SDC startup.

Ron Eccher, outreach communications manager, Pueblo Chemical Stockpile Outreach Office (ORO), outlined ORO reopening procedures, with a planned July 6 reopening to the public by appointment only and precautions such as signage, barriers and face mask and social distancing requirements.

At 3:17 p.m. MDT, Kornelly ended the CAC meeting and said the next CAC meeting and PWG and BUG subcommittee meetings were expected to be conducted virtually again at 2 p.m. July 29, but she didn't know for sure that it would be a virtual event.

Permitting Working Group (PWG)/ Biotreatment Utilization Group (BUG) subcommittees

Kornelly then began the June 24 PWG meeting. Mackey said there wasn't much for CDPHE to add. Irene asked if there were more TAs expected, but Mackey said they were done. He said there will be a lot of construction certification packages for the SDC site as there was a lot of construction completed very quickly. Jonardi asked how large a team Dynasafe was sending for SDC control systems shakedown; Harrawood said it was about six total from overseas. Kornelly noted the different types of permitting activities were winding down.

Norton asked Patrick Sullivan, environmental manager, PCAPP, if he had anything to add. He said BTA operation since the last CAC meeting had included intermittent feeding into Immobilized Cell Bioreactor (ICB) Module 2 with the failure of the OTS, so there was a slight loss of productivity in

one chamber; he said the microbes remained oxygenated just enough to keep them alive during the repairs, minimizing emission during that outage. He noted one tank was drawn all the way down and transferred to another. He said the plant had good control of residue in the tanks. Jonardi asked if the three modules were performing similarly in their rate of reaction, and Sullivan confirmed they were comparable. Sullivan stressed that as the plant produced more hydrolysate the team will continue to fine-tune the system to balance that inventory.

The meetings adjourned at 3:26 p.m. MDT.

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