

Pueblo Chemical Agent-Destruction Pilot Plant

Monthly Status Briefing

June 2011



PCAPP
Pueblo Chemical
Agent-Destruction Pilot Plant

A PARTNERSHIP FOR SAFE CHEMICAL WEAPONS DESTRUCTION

Project Background

- The Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP) will safely destroy 2,611 tons of mustard agent in mortar rounds and artillery projectiles stored at the U.S. Army Pueblo Chemical Depot (PCD).
- Neutralization followed by biotreatment is the technology selected by the Department of Defense to destroy the Pueblo chemical weapons stockpile.
- The Program Manager, Assembled Chemical Weapons Alternatives (ACWA), headquartered at Aberdeen Proving Ground, Maryland, is responsible for managing all aspects of the safe and environmentally sound destruction of the chemical weapons stockpiles in Colorado and Kentucky.
- The Bechtel Pueblo Team (BPT) is a partnership of Bechtel National, Inc., URS, Parsons, and Battelle Memorial Institute. The BPT functions as the systems contractor selected to design, build, systemize, pilot test, operate, and close the PCAPP.



Bechtel Pueblo Team

Systems Contractor

- Project management
- Business services
- Safety and quality



- Design/engineering
- Procurement/subcontracting
- Construction

Teaming Subcontractors



- Systemization
- Pilot testing
- Operations
- Closure



- Process design
- Process equipment fabrication
- Support to systemization and operations



- Environmental permitting and compliance
- Laboratory management
- Pilot testing

Staffing

- Bechtel Pueblo Team non-manual: **536**
 - Pueblo: 528 (157 local hires)
 - Other locations: 8
- Construction Workers: **596**
 - Bechtel direct-hire craft workers: 486
 - Subcontractor personnel: 110



Employment Opportunities

Hotline

(719)549-4003

Website

<http://pueblo.bechtel.com>



As of May 31, 2011,
PCAPP Project staff accomplished:

- 82 Safe Work Days
- 442,002 Safe Work Hours



Subcontract Awards

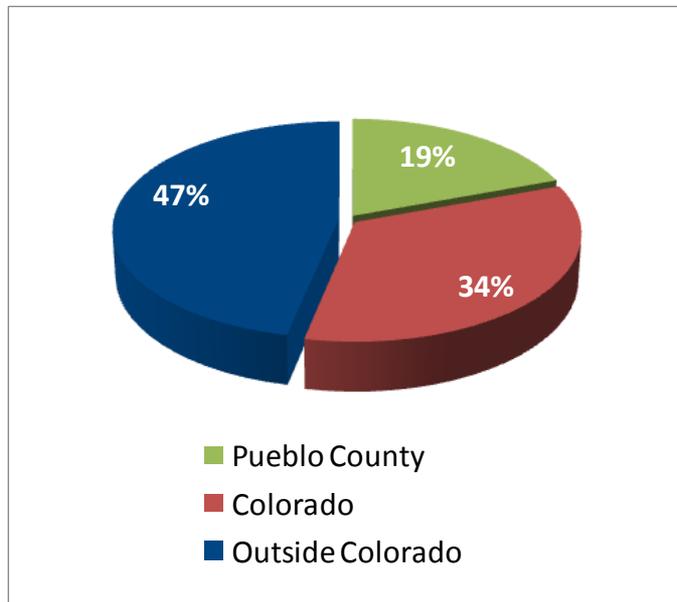
Inception to date, as of May 31

\$430.3 Million

\$83.9 Million to Pueblo County Businesses (19%)

\$148.3 Million to Colorado Businesses (Outside Pueblo County, 34%)

\$198.1 Million to Businesses Outside Colorado (47%)



Acquisition Awards Status

Upcoming Opportunities for Requests for Proposals (RFPs):

- The PCAPP Project is approximately 98% complete with procurements for the construction phase
- RFPs will be limited until the project is in the systemization phase

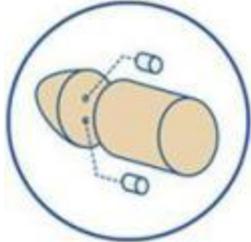
Remaining RFPs for Construction:

- Misc. construction and architectural materials
- Misc. Piping & Valves
- Lab Annex Facility
- Misc. Bulks & Consumables



Destruction Technology

Step 1



REMOVAL OF ENERGETICS

Robotic equipment removes energetics (explosives) from the weapon. The energetics will be disposed of at a permitted facility off site.

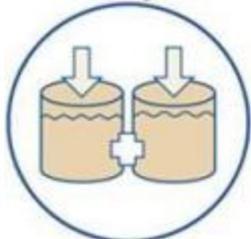
Step 2



REMOVAL OF MUSTARD AGENT

The inside of the weapon is remotely accessed, and mustard agent is washed out with high-pressure water.

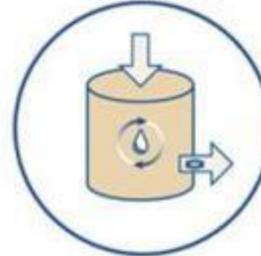
Step 3



NEUTRALIZATION OF MUSTARD AGENT

The mustard agent is neutralized with caustic solution and hot water. The byproduct is called hydrolysate.

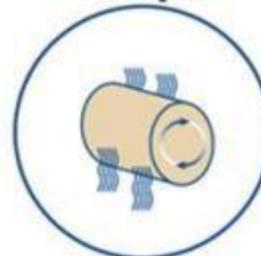
Step 4



BIOTREATMENT

The hydrolysate is treated with microbes that break down the solution into water and biosludge. Water is recycled in the plant, and biosludge is shipped for disposal at a permitted facility.

Step 5

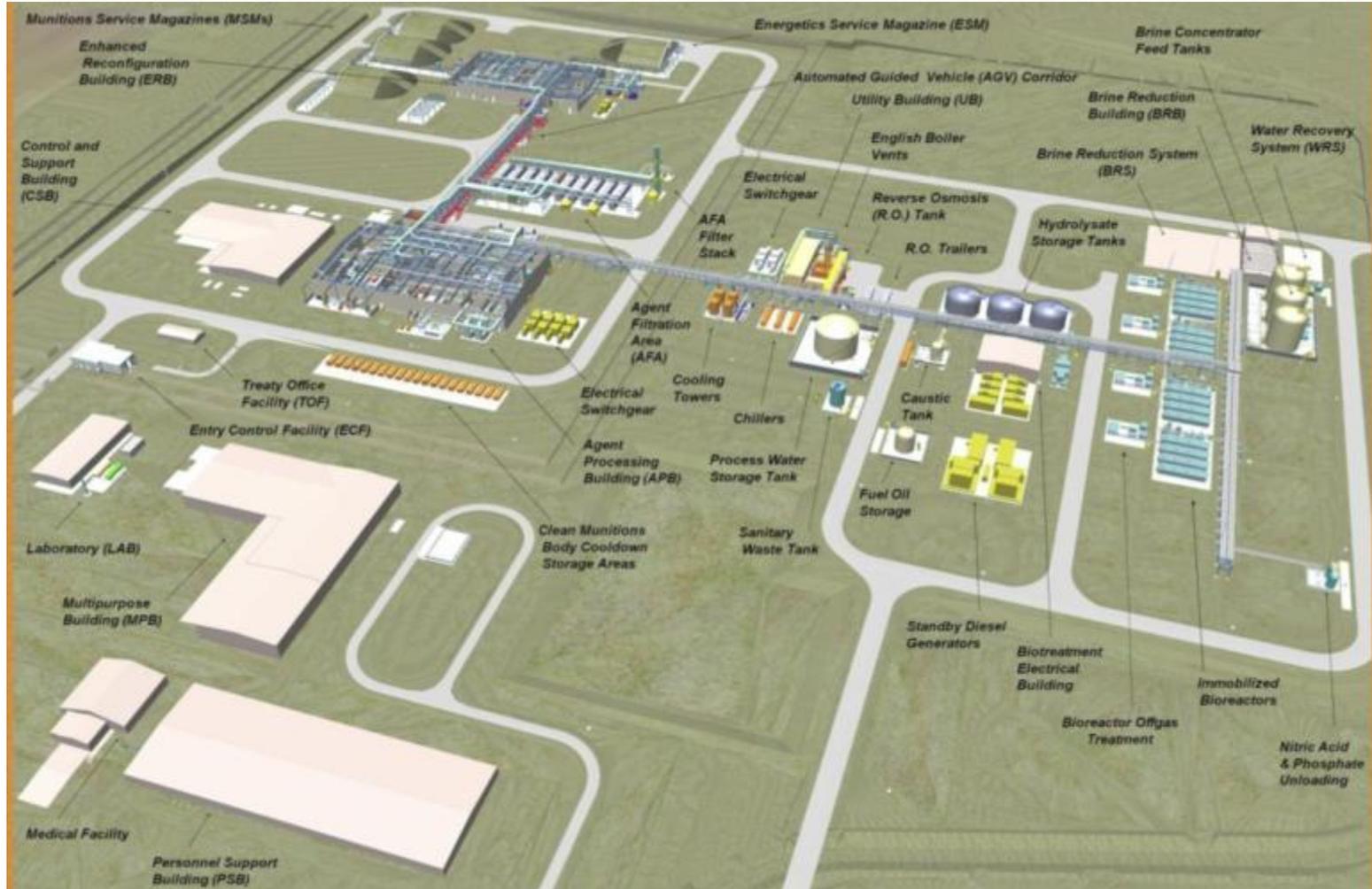


DISPOSAL OF METAL PARTS

Metal parts are heated to 1,000 degrees Fahrenheit for 15 minutes and can then be recycled.

Neutralization followed by biotreatment will be used to destroy the Colorado chemical weapons stockpile.

Pueblo Chemical Agent-Destruction Pilot Plant—Site Plan



PCAPP Site Overview



- | | | | |
|----------|--|----------|--|
| 1 | Enhanced Reconfiguration Building | 5 | Agent Filtration Area |
| 2 | Automated Guided Vehicle Corridor | 6 | Munitions Service Magazine |
| 3 | Agent Processing Building | 7 | Control and Support Building |
| 4 | Biotreatment Area | 8 | Munitions Service Magazine corridor |



Construction Status – In Progress

- **Enhanced Reconfiguration Building**– electrical tray/conduits & equipment set, process piping, mechanical equipment, reworking coatings on blast doors and gates
- **Agent Processing Building**–Misc. platform erection, HVAC, cable tray, process piping, electrical and mechanical equipment
- **Balance of Facilities**–cable tray, underground duct banks, pipe rack piping and supports, various mechanical equipment set, misc. concrete equipment foundations, site grading
- **Subcontractors**–HVAC, fire protection, coatings, architectural
- **Control and Support Building**–electrical systems/equipment
- **Biotreatment Electrical Building**–terminations for Facility Control System and uninterrupted Power Supply system
- **Brine Reduction System**–structural steel, tank/vessels setting, piping, electrical
- **Immobilized Cell Bioreactors**–grout and insulation placement, prep for setting equipment and tanks



As the project transitions from construction to systemization, the following systems have been turned over to the start-up group to begin the systemization process:

- Utility Building 480V Substation
- Agent Processing Building (APB) 480V substation
- Site Water—Underground Loop and Above Ground Feeds
- Natural Gas—Underground Header and Above Ground Feeds
- Fire Protection—Underground Loop and Hydrants
- APB Non-Essential motor control center power
- APB essential motor control center power
- Control and Support Building essential motor control center power
- Agent Filtration Area (AFA) instrument air
- AFA plant air
- Utility Building non-essential control center power
- Utility Building essential motor control center power
- Biotreatment Area (BTA) Non-Essential motor control center
- BTA Essential motor control center
- Agent Filtration Area critical power panels monitoring houses



To learn more about Systemization, watch the video at http://www.pmacwa.army.mil/info/video/systemization_yt.html



Systemization (cont.)



- Control and Support Building (CSB) Non-Essential power panels.
- NETA (International Electrical Testing Association) testing for power calibration
- 13.2 kV Switchgear
- Utility Building Critical power panels
- Biotreatment Area Critical power panels
- CSB Critical power panels
- Agent Processing Building Critical power panels

To learn more about Systemization, watch the video at http://www.pmacwa.army.mil/info/video/systemization_yt.html



Biotreatment Area



The brine concentrator evaporator now in place, is surrounded by platforms. The foreground shows the horizontally-set crystallizer heater.

Emergency Preparedness



PCAPP employees practice on-site emergency preparedness by evacuating and assembling in one place. The drill was a part of the Chemical Stockpile Emergency Preparedness Program's annual exercise that helps prepare emergency services personnel for a real life emergency.



Agent Processing Building



One of three Brine Reduction System distillate carbon filters is being staged on site to await permanent placement.

Ft. Carson Career Fair



PCAPP human resources personnel assisted more than 500 people with job inquiries at the Fort Carson Career Fair, held June 2.



Contact Information



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