



Pueblo Chemical Agent-Destruction Pilot Plant

Monthly Status Briefing

November 2010



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



URS

- Systemization
- Pilot testing
- Operations
- Closure

PARSONS

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



Battelle

- Environmental permitting and compliance
- Laboratory management
- Pilot testing

- Bechtel Pueblo Team non-manual: **407**

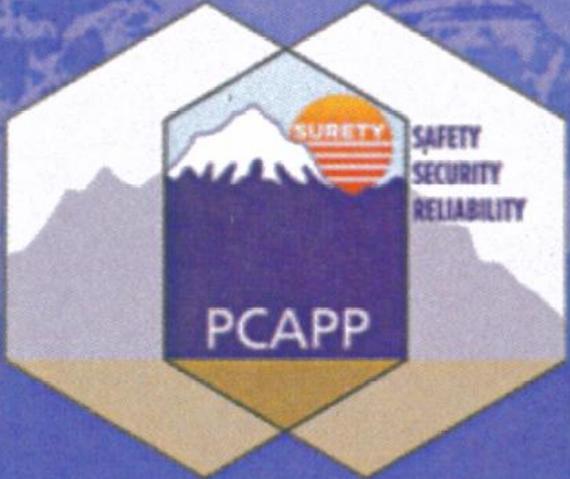
- Pueblo: 402
(127 local hires)
- Other locations: 5

- Construction Workers:

- Bechtel direct-hire craft workers: 354
- Subcontractor personnel: 104



Employment Opportunities



Pueblo Chemical Agent-Destruction Pilot Plant

Employment Opportunities

Hotline
(719) 549-4003

Website
<http://pueblo.bechtel.com>

Pueblo Chemical Agent
Destruction Pilot Plant

"A Partnership for Safe Chemical Weapons Destruction."



As of October 31, 2010,
PCAPP Project staff have accomplished:

- 739 Safe Work Days
- 2,784,154 Safe Work Hours



Subcontract Awards

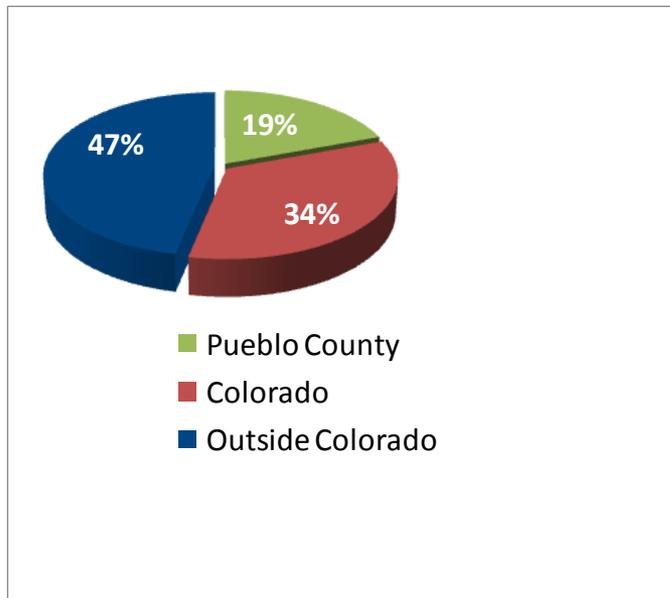
Inception to date, as of Oct. 31

\$406.7 Million

\$79 Million to Pueblo County Businesses (19%)

\$138 Million to Colorado Businesses (Outside Pueblo County, 34%)

\$189.7 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/operations phase

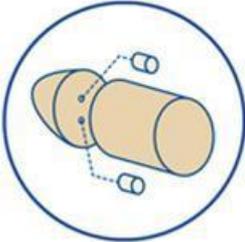
Remaining RFPs for Construction:

- Misc. construction and architectural materials
- Treaty Trailer Facilities



Destruction Technology

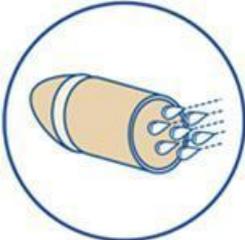
Step 1



REMOVAL OF ENERGETICS

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

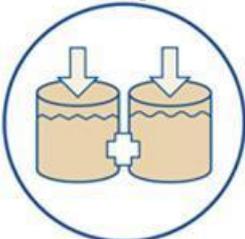
Step 2



REMOVAL OF MUSTARD AGENT

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

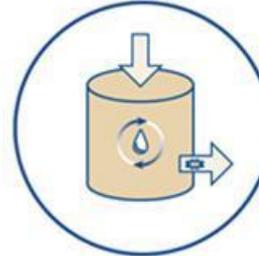
Step 3



NEUTRALIZATION OF MUSTARD AGENT

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

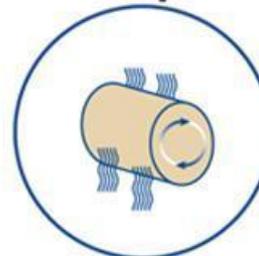
Step 4



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

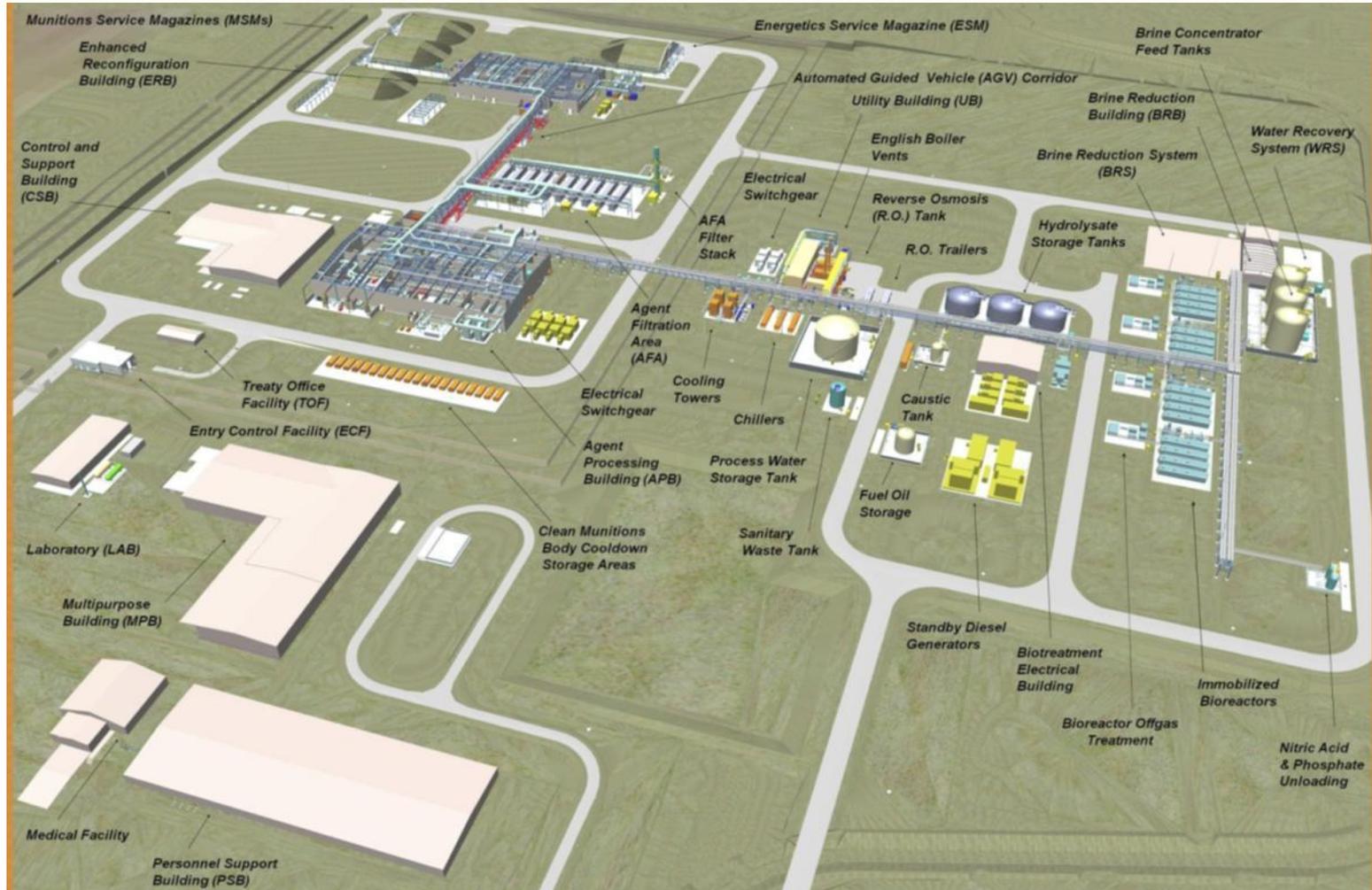


DISPOSAL OF METAL PARTS

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



Northwestern Corner - Observation Point

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



Construction Status – Complete

- Earth cover on Munitions Service Magazines
- Phase 1 of Chemical Limited Area fence installation & G-block fence/gates modification
- Entry Control Facility exterior concrete masonry unit walls and concrete roof
- Standby diesel generator assembly
- Immobilized Cell Bioreactor concrete foundation, pads and curbs
- Energetic & Munitions Service Magazines Corridors siding/roofing



Construction Status – In Progress

- **Enhanced Reconfiguration Building**– HVAC (interior and exterior), electrical tray/conduits & equipment set, process piping, mechanical equipment, setting of Projectile Mortar Disassembly system, exterior/interior doors
- **Agent Processing Building**–Misc. platform erection, HVAC, cable tray, process piping, electrical and mechanical equipment, composite walls, equipment, titanium pipe welding (toxic room), exterior/interior doors
- **Balance of Facilities**–cable tray and supports, pipe rack piping, various mechanical equipment set, misc. concrete equipment foundations, installation of high-mast lighting protection caissons
- **Agent Filtration Area** – fire detection, instrumentation, electrical
- **Subcontractors**–HVAC, fire protection, architectural



Construction Status—In Progress (continued)

- **Control Support Building**—HVAC, electrical systems/equipment & fire protection
- **Entry Control Facility**—Bullet-resistant doors and windows
- **Medical & Lab Facilities**—underground utilities
- **Biotreatment Electrical Building**— electrical equipment/tray/conduit
- **Biotreatment Area**—Receiving equipment (Immobilized Cell Bioreactors, tank skids, carbon filters, pipe)
- **Brine Reduction System**—concrete foundations rebar/embeds/formwork (transformer pad, filter press, electrical switchgear house)



System Turnover

The construction group has turned over the following systems to the start-up group:

- Agent Filtration Area (AFA) potable water utility drops
- AFA essential motor control center power
- Control and Support Building essential motor control center power
- AFA instrument air
- AFA plant air



First-of-A-Kind Equipment



Components of the first Projectile Mortar Disassembly system, arrived at the PCAPP site Oct. 20-21. Ironworkers and Millwrights have begun assembling the system in the Explosion Containment Room.

First-Of-A-Kind Equipment



An array of Cavity Access Machines (CAMs) sit covered in the Agent Processing Building. The CAMs will crack a munitions' burster well, allowing the agent to gravity drain.

Standby Diesel Generator



The Standby Diesel Generator's (SDG) cooling tower (right) sits adjacent to the SDG. The Fuel Oil Tank is on the left, and in the foreground are pipes awaiting installation in the Balance of Facilities.

Agent Filtration Area



Miniature chemical agent monitors, known as Minicams, will be housed in these brown monitoring houses. Minicams will monitor the air going through the filters for agent contamination.

Control and Support Building



Frames await their explosion-resistant windows inside the Entry Control Facility (ECF). The ECF will be the first point of entry into the Chemical Limited Area.

Contact Information

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U.S. Army Element, Assembled
Chemical Weapons Alternatives

