

Pueblo Chemical Agent-Destruction Pilot Plant

Monthly Status Briefing

February 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



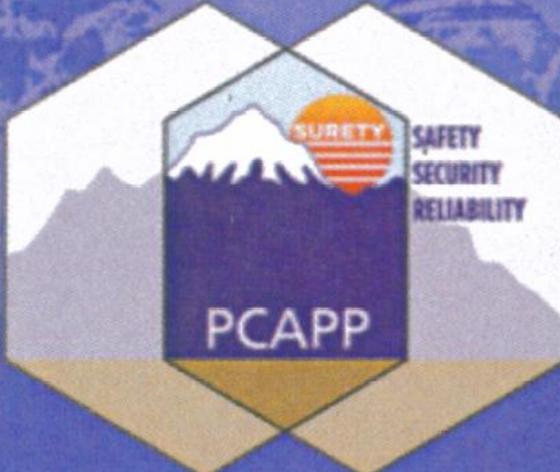
- Environmental permitting and compliance
- Laboratory management
- Pilot testing

Staffing

- Bechtel Pueblo Team non-manual: **445**
 - Pueblo: 440 (140 local hires)
 - Other locations: 5
- Construction Workers: **448**
 - Bechtel direct-hire craft workers: 374
 - Subcontractor personnel: 98



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 January 31, 2010,
PCAPP Project staff have accomplished:

- 831 Safe Work Days
- 3,229,515 Safe Work Hours



Subcontract Awards

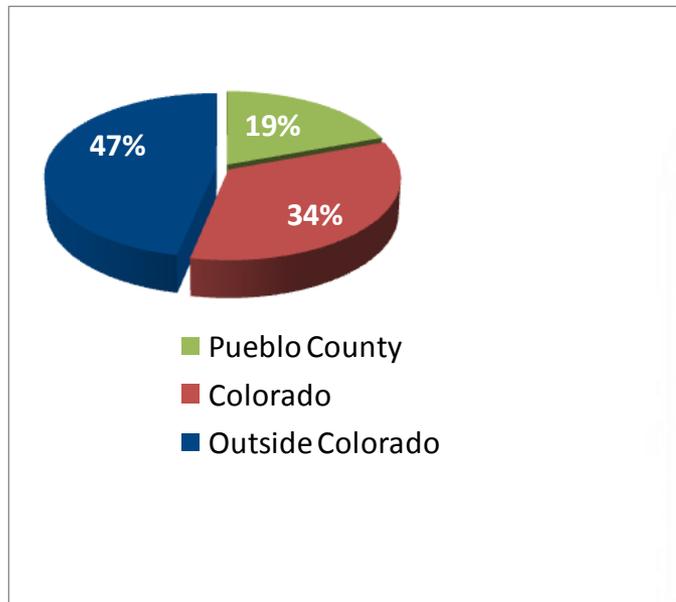
Inception to date, as of Jan. 31

\$413.7 Million

\$79.4 Million to Pueblo County Businesses (19%)

\$141.4 Million to Colorado Businesses (Outside Pueblo County, 34%)

\$192.9 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

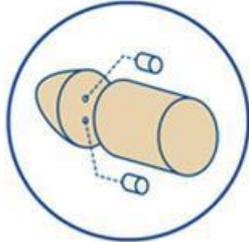
Remaining RFPs for Construction:

- Misc. construction and architectural materials
- Misc. Piping Items
- Treaty Facility
- Lab Annex Facility



Destruction Technology

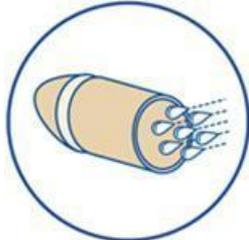
Step 1



REMOVAL OF ENERGETICS

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

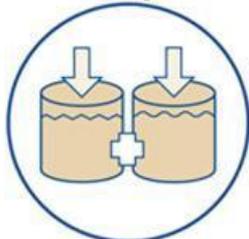
Step 2



REMOVAL OF MUSTARD AGENT

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

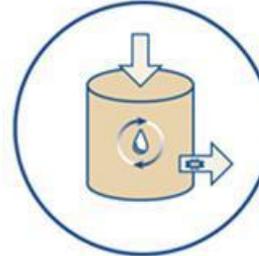
Step 3



NEUTRALIZATION OF MUSTARD AGENT

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

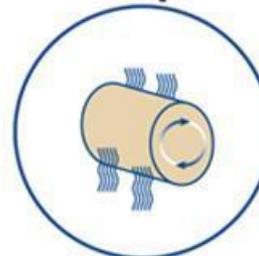
Step 4



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

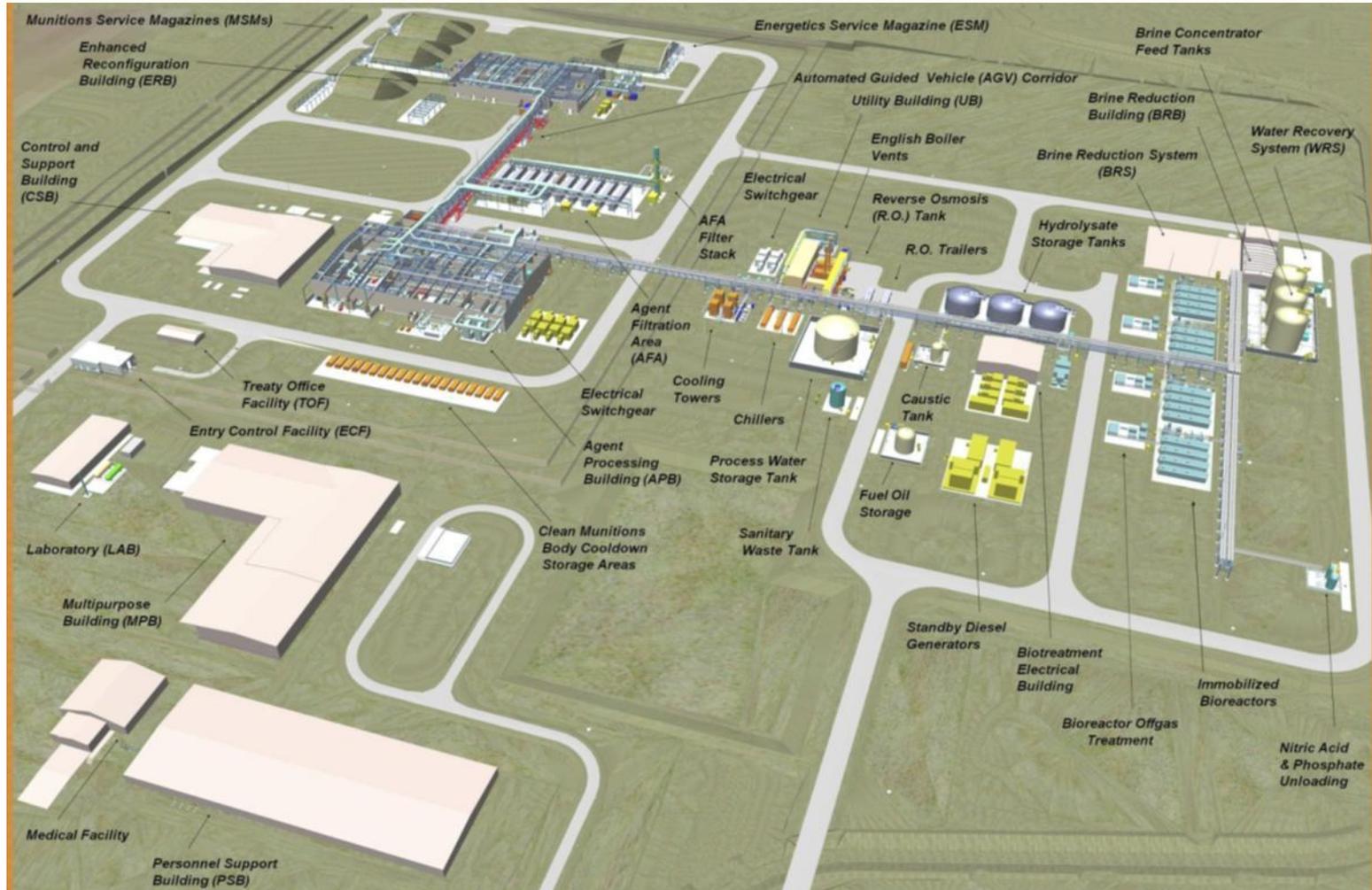


DISPOSAL OF METAL PARTS

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 – Complete

- Earth cover on Munitions Service Magazines
- Phase 1 of Chemical Limited Area fence installation & G-block fence/gates modification
- Agent Filtration Area filter houses/vestibules and duct work
- Standby diesel generator assembly
- Energetic & Munitions Service Magazines Corridors siding/roofing
- Modular sections for Medical and Lab facilities set and secured



Construction Status – In Progress

- **Enhanced Reconfiguration Building**— electrical tray/conduits & equipment set, process piping, mechanical equipment
- **Agent Processing Building**—Misc. platform erection, HVAC, cable tray, process piping, electrical and mechanical equipment and composite walls
- **Balance of Facilities**—cable tray, underground duct banks and supports, pipe rack piping, various mechanical equipment set, misc. concrete equipment foundations
- **Subcontractors**—HVAC, fire protection, architectural, coatings, insulation and membrane roofing
- **Control and Support Building**—electrical systems/equipment
- **Entry Control Facility**—architectural finishes
- **Medical & Lab Facilities**—underground utilities, grading and roadways
- **Biotreatment Electrical Building**—electrical equipment/tray/conduit
- **Biotreatment Area**—delivery of equipment
- **Brine Reduction System**—rebar, embeds, formwork, receipt of equipment



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
- Electrical power distribution system



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

Systemization (cont.)



- Utility Building non-essential motor control center power
- Utility Building essential motor control center power
- NETA (International Electrical Testing Association) testing for power calibration

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

Agent Processing Building



Plastic covers protect the sensitive components of the Cavity Access Machines during assembly of the Munitions Washout System.

Hi-Mast Lightning Protection



Surveyors work to site a hi-mast lightning pole caisson east of the Agent Processing Building.

Agent Processing Building



Inside the Agent Processing Building, workers review plans for the installation of piping and supports for the Munitions Washout System.

Substation



A newly installed redundant Million Volt Amps substation transformer is located at the Pueblo Chemical Agent-Destruction Pilot Plant 13.2 kV substation.

Bio-Treatment Area



The crystallizer tank is temporary staged near the Brine Concentrator Feed Tanks, awaiting placement on the Brine Reduction System foundation slab.

Contact Information

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U.S. Army Element, Assembled
Chemical Weapons Alternatives

