



Pueblo Chemical Agent-Destruction Pilot Plant

Monthly Status Briefing

April 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



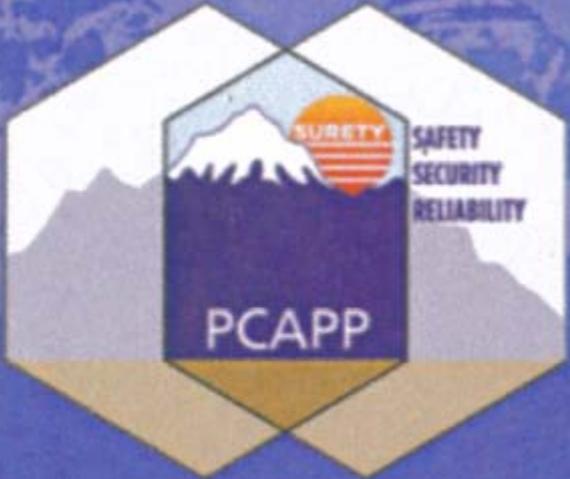
- Environmental permitting and compliance
- Laboratory management
- Pilot testing

Staffing

- Bechtel Pueblo Team non-manual: **477**
 - Pueblo: 471 (144 local hires)
 - Other locations: 6
- Construction Workers: **495**
 - Bechtel direct-hire craft workers: 388
 - Subcontractor personnel: 107



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 March 3, 2011,
PCAPP Project staff accomplished:

- 28 Safe Work Days
- 114,936 Safe Work Hours



*On March 2, the project experienced a lost-time incident.

Subcontract Awards

Inception to date, as of March 31

\$424.1 Million

\$82.2 Million to Pueblo County Businesses (19%)

\$146.2 Million to Colorado Businesses (Outside Pueblo County, 34%)

\$195.7 Million to Businesses Outside Colorado (47%)

Pueblo County
Colorado
Outside Colorado



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

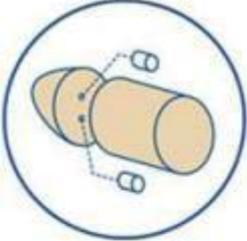
Remaining RFPs for Construction:

- Misc. construction and architectural materials
- Misc. Piping & Valves
- 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.

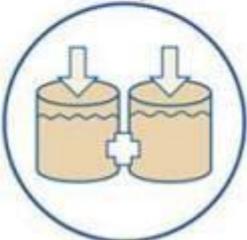
Step 2



REMOVAL OF MUSTARD AGENT

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

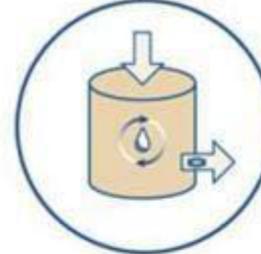
Step 3



NEUTRALIZATION OF MUSTARD AGENT

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

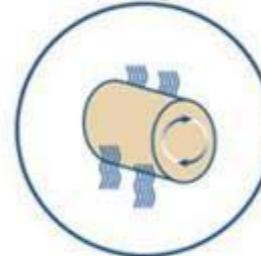
Step 4



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

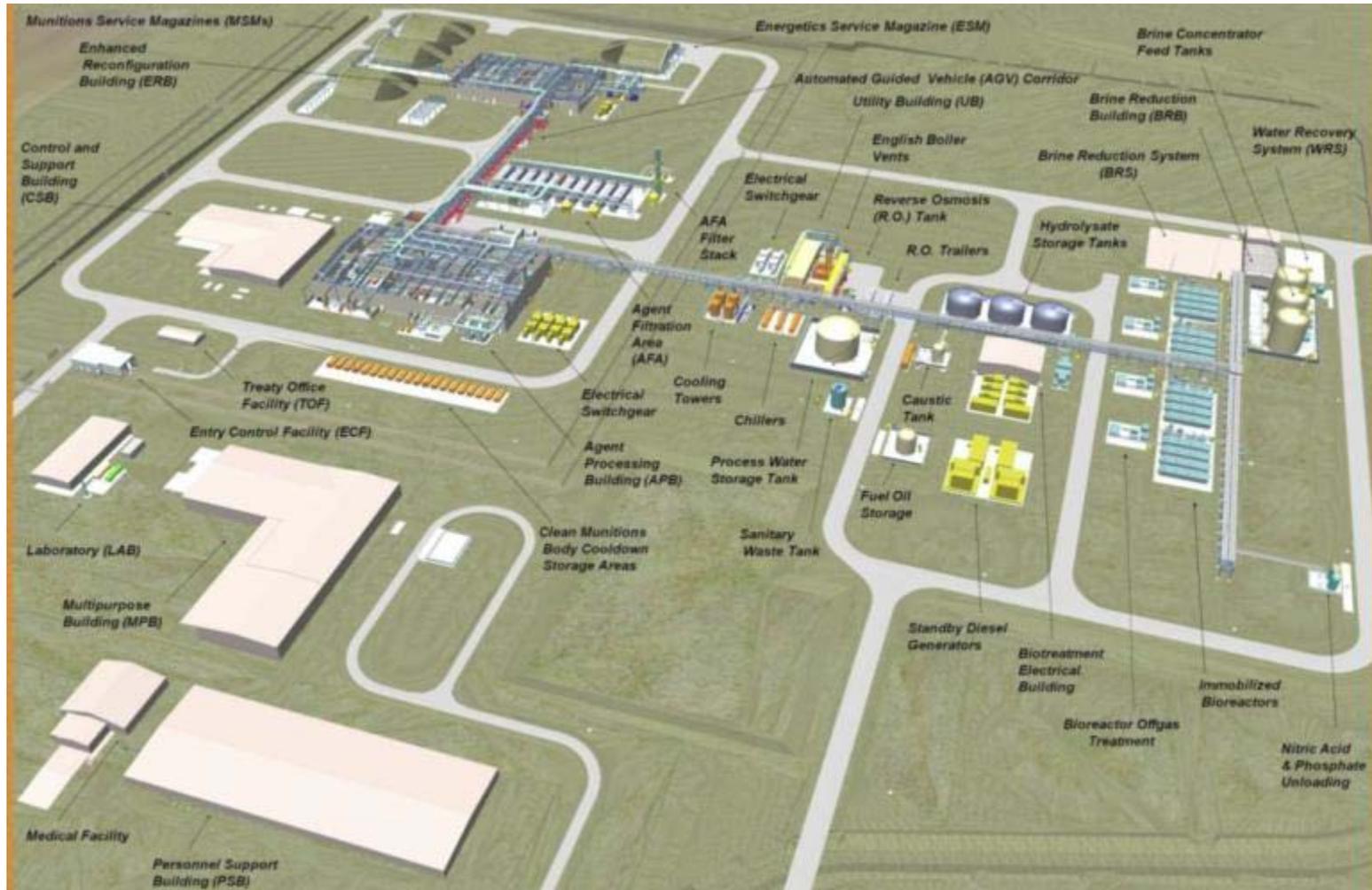


DISPOSAL OF METAL PARTS

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



Northwestern Corner - Observation Point

- | | | | |
|----------|--|----------|--|
| 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
- **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, site grading
- **Subcontractors**—HVAC, fire protection
- **Control and Support Building**—electrical systems/equipment
- **Biotreatment Electrical Building**—electrical equipment/tray/conduit
- **Brine Reduction System**—rebar, embeds, formwork
- **Biotreatment Area** – grout equipment pads, set Immobilized Cell Bioreactor equipment



Systemization

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



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
- Biotreatment Area (BTA) Non-Essential motor control center
- BTA Essential motor control center
- Agent Filtration Area critical power panels monitoring houses
- Control and Support Building Non-Essential power panels.
- 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

Enhanced Reconfiguration Building



Workers off-load Air Handling Units (AHU) for assembly in the Enhanced Reconfiguration Building. AHUs provide heating/air conditioning to site facilities.

Biotreatment Area



Workers repair coatings on the Immobilized Cell Bioreactor (ICB) pads. The ICBs will biotreat hydrolysate, the byproduct of the neutralization process.

Brine Reduction System

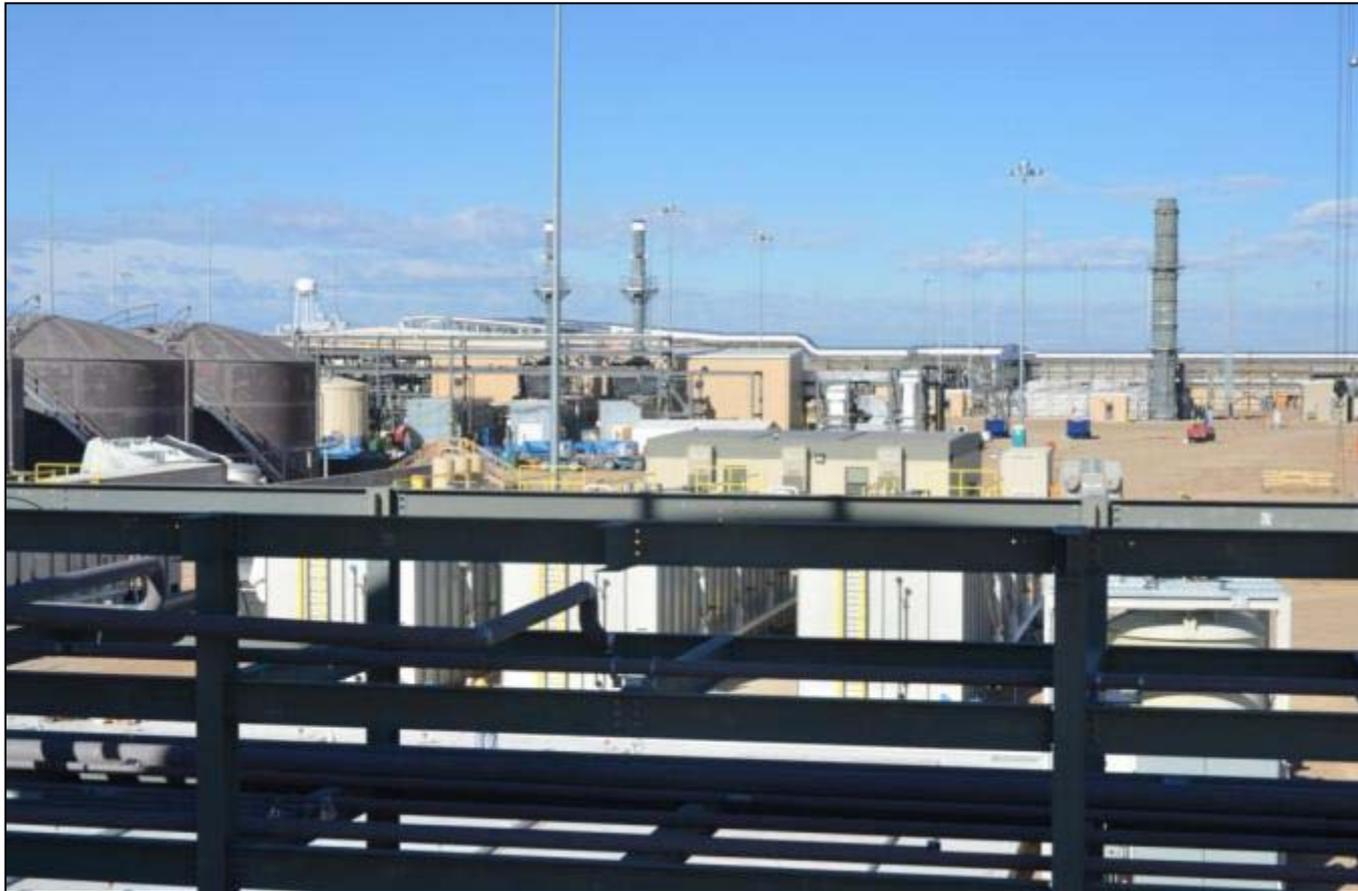


Placement of 1,000 cubic yards of concrete for the Brine Reduction System foundation slab makes it the single largest concrete placement to date.



This control panel and chemical feed tank are part of the chemical feed unit for the process water cooling towers. This unit will feed dispersant, a chemical used to reduce scale formation in the cooling towers.

Site View



This photo shows the PCAPP site looking west from the Pipe Rack in the Biotreatment Area. Two of the three hydrolysate storage tanks are visible on the left.

Contact Information



Pueblo Chemical Stockpile Outreach Office

104 West B Street
719-546-0400

U.S. Army Pueblo Chemical Depot

45825 Highway 96 East
719-549-4135

Tom Schultz

PCAPP

Public Affairs Specialist

Chuck Sprague

Public Affairs Officer

Bob Kennemer

Community Outreach
Manager

Ken Roque

Deputy Public Affairs Officer

Sandy Romero

Bechtel Communications
Manager



U.S. Army Element, Assembled
Chemical Weapons Alternatives

