



Pueblo Chemical Agent-Destruction Pilot Plant

Monthly Status Briefing

May 2012



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



- Bechtel Pueblo Team non-manual: **549**
 - Pueblo: 539 (171 local hires)
 - Other locations: 10

- Construction Workers: **556**
 - Bechtel direct-hire craft workers: 399
 - Subcontractor personnel: 157

Employment Opportunities

Hotline

(719)549-4003

Website

<http://pueblo.bechtel.com>



As of April 30, 2012,
PCAPP Project staff accomplished:

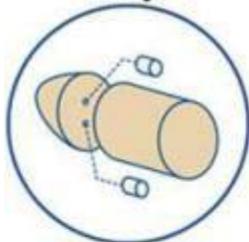
- 4 Safe Work Days
- 5,468 Safe Work Hours*



*A Lost-Time Incident occurred on April 26, 2012

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.

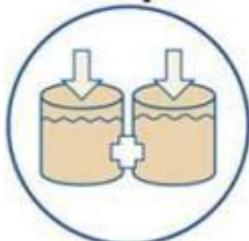
Step 2



REMOVAL OF MUSTARD AGENT

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

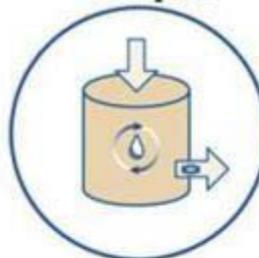
Step 3



NEUTRALIZATION OF MUSTARD AGENT

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

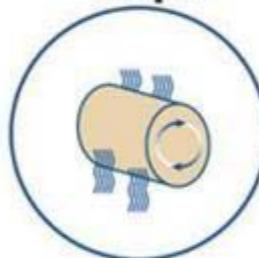
Step 4



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

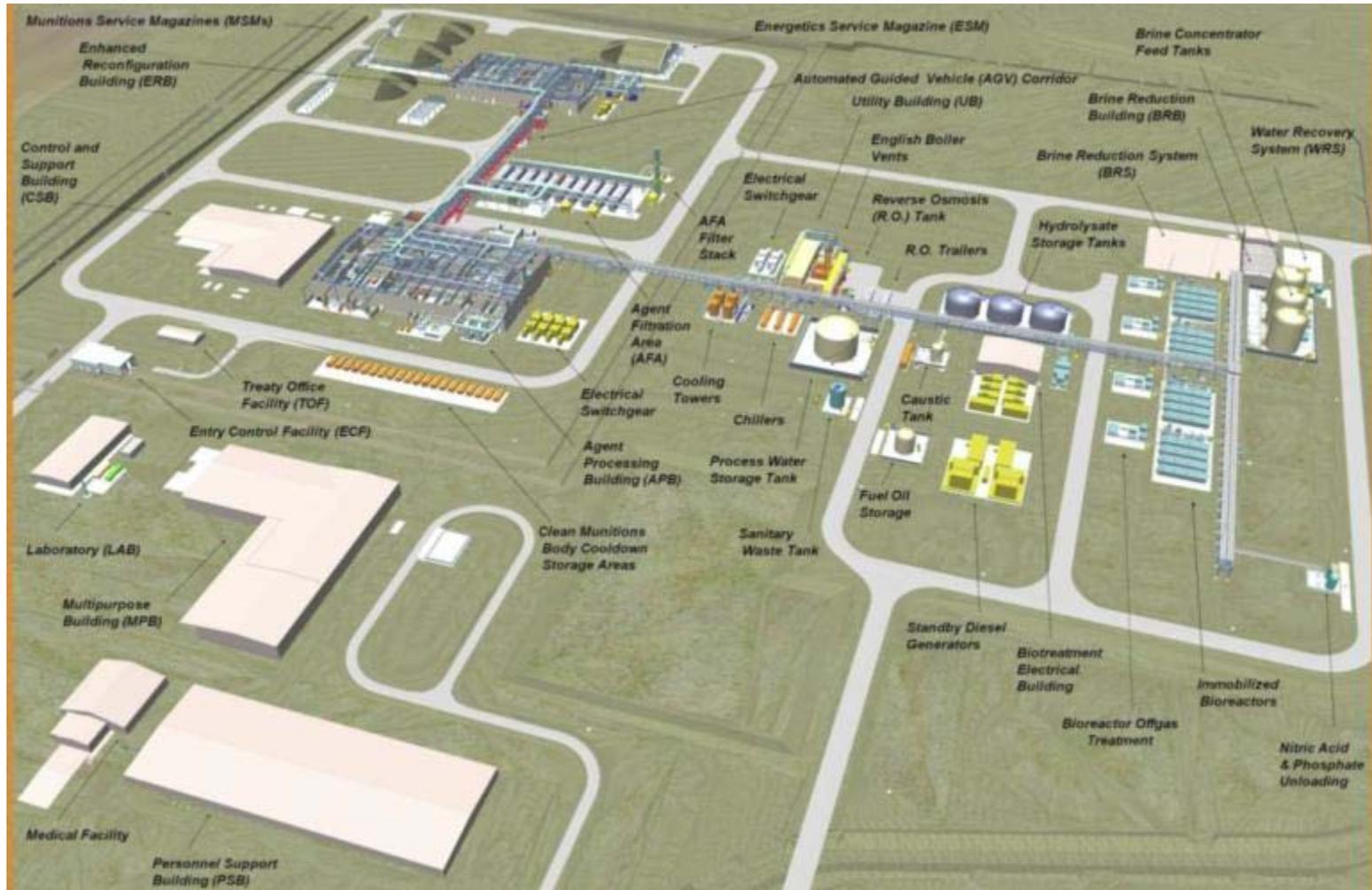


DISPOSAL OF METAL PARTS

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**—Load Center 12 has been successfully turned over and accepted by systemization. Projectile Mortar Disassembly Discharge equipment setting is complete. Facility turnover is scheduled for end of May.
- **Agent Processing Building**— electrical conduit, cable/wire pulling and terminations (80%); pipe testing (98%); and mechanical equipment is scheduled to complete in May.
- **Laboratory**—Facility turnover for Beneficial Occupancy* has been completed and accepted by systemization for care, custody and control.
- **Balance of Facilities**—Final site grading has started and the sanitary sewer system is scheduled for completion in May.
- **Biotreatment Area**—Construction completion has been achieved and system turnovers are scheduled for end of May. Poly Urea specialty coating application is scheduled to start in May.
- **Brine Reduction System**—Installation of vendor-supplied piping, supports and instrumentation at 85% complete and is scheduled for completion in May.
- **Medical Facility** —Decontamination room mechanical and electrical work is at 80% complete.
- **Filter Press Building**—facility turnover is scheduled for end of May.



*"Beneficial Occupancy" is that stage of construction of a facility, before final completion when it can be occupied for its intended purpose.

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
- APB essential motor control center power
- Agent Filtration Area (AFA) instrument air
- AFA plant air
- Biotreatment Area (BTA) Essential motor control center
- 13.2 kV Switchgear
- HVAC exhaust filter units 07 thru 16, common ductwork, and stack
- Agent Filtration Area
- Plant Air System—Enhanced Reconfiguration Building (ERB) Distribution
- Standby diesel generator 1A and 1B
- ERB 480V Substation
- Two ERB Critical Power Panels
- HVAC Hot Water Distribution to APB
- APB supply air handlers chilled water
- Potable Water—water utility drops
- Potable Water—bulk chemical storage area
- Medical Building



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

Systemization (cont.)

- Instrument Air—IA Compressor “A,” Dryer “A,” Main Air Receiver and Yard Distribution Piping
- Plant air compressors, dryers, main air receiver and yard distribution piping
- Control and Support Building (CSB)
- Process water—APB distribution*
- ERB control room equipment*
- CSB control room/electrical room ventilation systems*
- Projectile handling and projectile disassembly—reconfiguration rooms and related equipment—Line 1 and 2*
- Reverse Osmosis (R/O) Water—R/O units, storage tank and pumps, outside rack piping*
- Laboratory building*
- Brine Reduction System (BRS) 4160 and 480V substations*
- Steam Supply—boiler blowdown tank and pumps*
- Steam supply—deaerator, boiler feed pumps, sulfite and phosphate feed skids, outside rack condensate piping*
- Fuel oil—storage tank, pumps and piping*
- Breathing air—compressor “A/B”, purifier package “A/B”, receiver and chiller*
- Multipurpose Building*
- Process cooling water—APB distribution*



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

*Newly added

Agent Processing Building



Complex piping is visible from the second floor of the neutralization bay inside the Agent Processing Building.



Workers are busy getting the laboratory ready for occupancy. Here, equipment vendors install a Gas Chromatograph Flame Photometric Detector while lab personnel listen to an explanation of its function.

National Research Council Tour



Members of the National Research Council toured the Biotreatment Area of the PCAPP plant on May 1. At left, the three Brine Concentrator Feed Tanks appear in the background. Above, PCAPP Chief Scientist George LeCakes explains how the Filter Press Building will work.

Computer Skills Training



A basic computer skills training workshop was offered to Pueblo citizens and PCAPP personnel on April 13. The workshop was held at Colorado State University-Pueblo and was designed to help construction workers in their transition to non-manual jobs.

Contact Information



Pueblo Chemical Stockpile Outreach Office

104 West B Street
719-546-0400

Tom Schultz

PCAPP

Public Affairs Specialist

Bob Kennemer

Community Outreach
Manager

Sandy Romero

Bechtel Communications
Manager

U.S. Army Pueblo Chemical Depot

45825 Highway 96 East
719-549-4135

Chuck Sprague

Public Affairs Officer

Ken Roque

Deputy Public Affairs Officer



U.S. Army Element, Assembled
Chemical Weapons Alternatives

