

Monthly Status Briefing

November 2012



Pueblo Chemical Agent-Destruction Pilot Plant



Program Executive Office
Assembled Chemical Weapons Alternatives



PCAPP

Pueblo Chemical Agent-Destruction Pilot Plant

www.peoacwa.army.mil



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 Executive Officer, 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: **653**
 - Pueblo County local hires: 139
 - Colorado hires (outside Pueblo County): 37
 - Other locations: 3

- Construction Workers: **373**
 - Bechtel direct-hire craft workers: 102
 - Subcontractor personnel: 89

Employment Opportunities

Hotline

(719)549-4003

Website

<http://pueblo.bechtel.com>

As of October 31, 2012,
PCAPP Project staff accomplished:

- 188 Safe Work Days
- 1,058,213 Safe Work Hours



Step 1



Removal of Energetics

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

Step 2



Removal of Mustard Agent

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

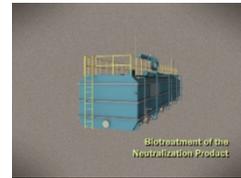
Step 3



Neutralization of Mustard Agent

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

Step 4



Biotreatment

Microbes treat the hydrolysate, breaking it down into brine. The brine is separated with water being recycled back to the plant and salt cakes shipped for disposal at a permitted facility.

Step 5

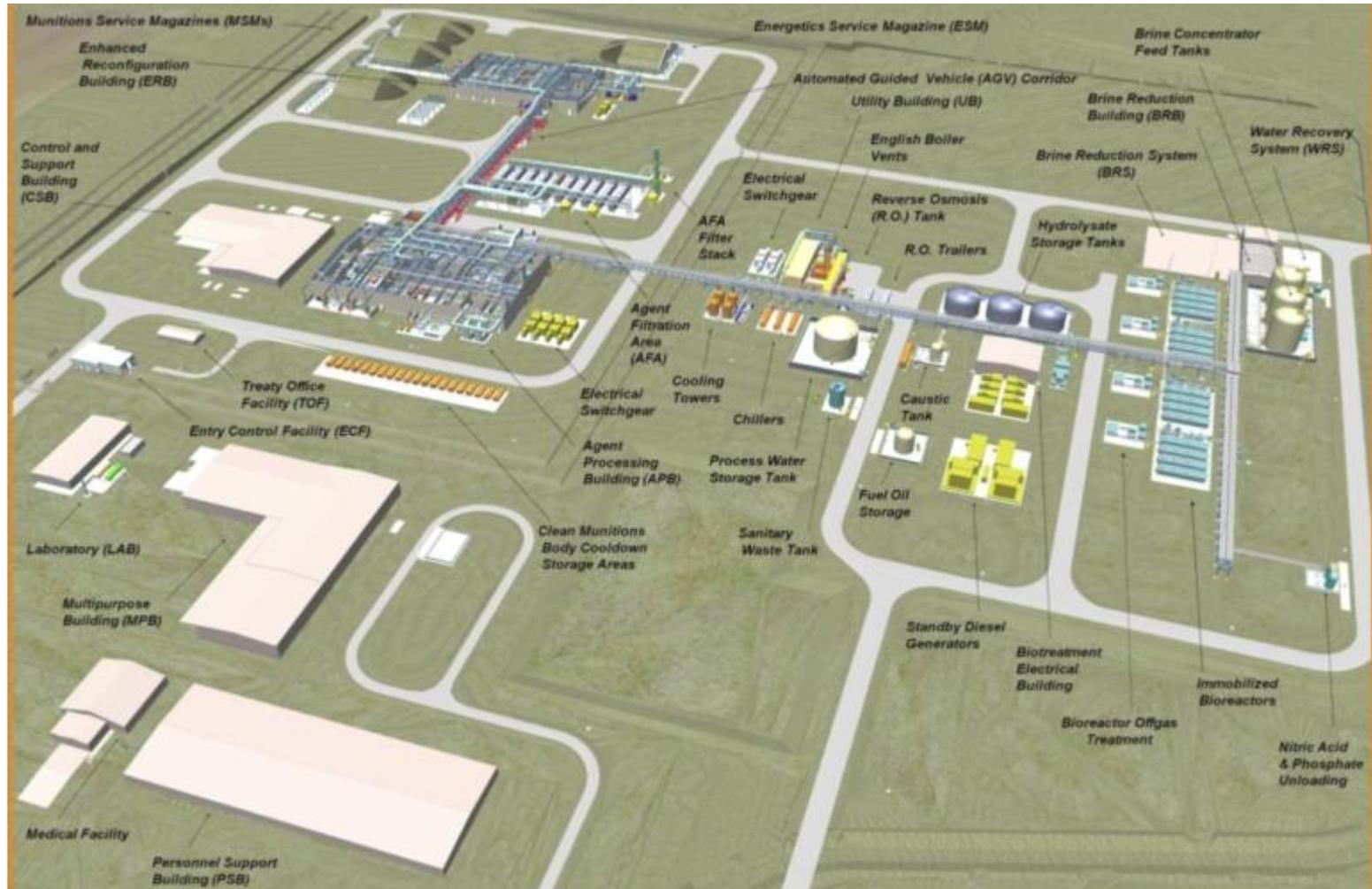


Thermal Treatment and Disposal of Metal Parts

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 |

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:

- Plant & Instrument Air
- Hot Process Water—Agent Processing Building (APB) Hot Process Water Tank and Heating Coil.
- Agent Collection and Neutralization System—Hydrolysate Collection and Storage—Yard
- HVAC Hot Water—Pumps and related tanks, Heat Exchangers and Outside Rack Piping
- Breathing Air—A & B Compressor/Purifier Packages, Receiver and Chiller, Bottle Filling Station
- Enhanced Reconfiguration Building (ERB) Supply Air Handling Units/Control Room and Support Areas Ventilation System
- Steam Supply—Fuel Oil Piping, Natural Gas Piping, Amine Feed Skid, Boilers A & B" and Outside Rack Steam
- ERB 480V Substation
- Steam and Condensate—APB/Biotreatment Area (BTA)/Brine Reduction System (BRS) Distribution
- Bulk Chemical Storage and Distribution—DAP, UREA and 25% caustic
- Projectile Handling and Projectile Disassembly—Projectile Mortar Disassembly systems and Related Equipment—Lines 1, 2, and 3



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

Systemization (cont.)

- Brine Reduction Belt Feed System
- Chilled Water—Chillers, Distribution to various HVAC units, recirculation units, autoclave and Off-Gas Treatment scrubber
- Decon Solution Storage and Distribution—APB
- Immobilized Cell Bioreactor (ICB) Feed, Biotreatment, ICB Blower and Off Gas Treatment—Modules 1/2/3/4
- Plant Air—BTA, APB and ERB Distribution
- Process Cooling Water—BRS Distribution
- Potable Water—ERB, APB and BRS
- ERB Electrical Room Ventilation System
- Munitions/Parts Monitoring-ERB
- Process Cooling Water—PCW Pumps, Tanks, Chemical Feed Skids, Cooling Towers, BRS Distribution
- Main Sanitary Waste—Lift Stations, Waste Tank and Pumps
- Non-Essential Power Panel-Entry Control Facility (ECF)
- Critical Power Panels—ERB
- Essential Power Panel—ECF
- Water Recovery—Brine Concentrator Feed Tanks “A”, “B”, and “C” and BC Feed Tanks Off-Gas Treatment
- Munitions Washout System-Instrument Air Distribution, Process Water Distribution, Hydraulic Power Line 1 & 2
- **Munitions Treatment Unit***



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*Newly added

Treaty Building



Formerly the general foreman's trailer, the treaty trailer now sits in its permanent location on the PCAPP site. The trailer was moved in three sections in early November.

Agent Processing Building



This lift assist will be used to place munitions on the feed conveyors to the Projectile Mortar Disassembly machines and the Munitions Washout Station feed conveyors.

Agent Processing Building



The Munitions Treatment Unit awaits testing in the APB. Agent residue left in the munition bodies will be thermally treated to 1,000 degrees Fahrenheit.



Bechtel President and Chief Operating Officer Bill Dudley (third from left) visited PCAPP earlier this month, accompanied by Executive Assistant Carlos Ruiz (left) and General Manager of Defense and Security Greg Frank (right). Project Manager Doug Omichinski (second from right) and Construction Manager Ryan Atwell (yellow hat), lead the tour.

Contact Information



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