Pueblo Chemical Agent-Destruction Pilot Plant

Monthly Status Briefing

March 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

BECHTEL

- 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

Staffing

- Bechtel Pueblo Team non-manual: **576**
  - Pueblo: 571 (170 local hires)
  - Other locations: 5
- Construction Workers: **742**
  - Bechtel direct-hire craft workers: 586
  - Subcontractor personnel: 156

Employment Opportunities

Hotline

(719)549-4003

Website

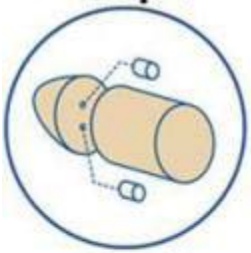
http://pueblo.bechtel.com

As of February 29, 2012,
PCAPP Project staff accomplished:

- 364 Safe Work Days
- 2,492,404 Safe Work Hours

Destruction Technology

Step 1



REMOVAL OF ENERGETICS

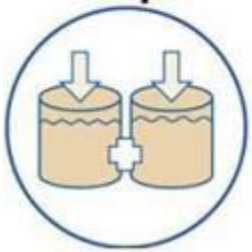
Robotic equipment removes energetics (explosives) from the weapon. The energetics will be disposed of at a permitted facility off site.

Step 2

REMOVAL OF MUSTARD AGENT

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

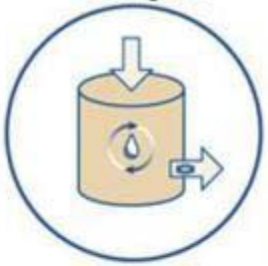
Step 3



NEUTRALIZATION OF MUSTARD AGENT

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

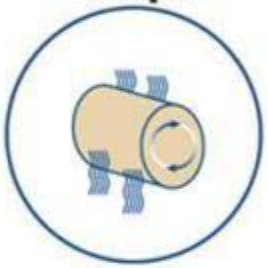
Step 4



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

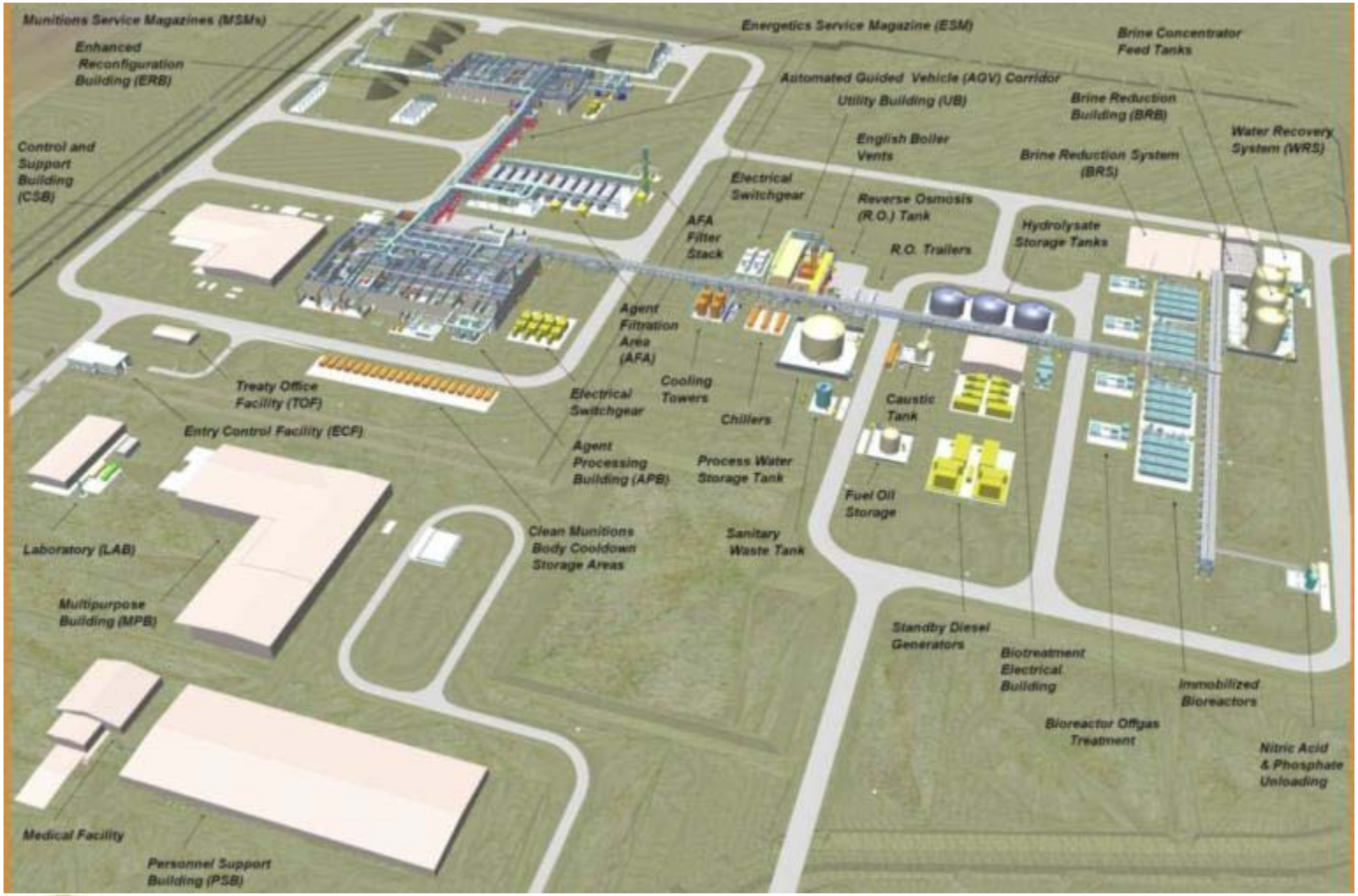


DISPOSAL OF METAL PARTS

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. Agent Filtration Area
6. Munitions Service Magazine
7. Control and Support Building (not shown)
8. Munitions Service Magazine corridor

Construction Status – In Progress

- **Enhanced Reconfiguration Building–** Facility turnover to systemization is planned for the end of March. Critical activities for energetics includes completion of Load Center 12 installation, Projectile Mortar Disassembly discharge system equipment setting and 26 minicams (including three monitoring houses).
- **Agent Processing Building–** electrical conduit, cable and wire pulling at 65% complete, piping, electrical and mechanical equipment setting at 95% complete.
- **Multi-Purpose Building** – Final facility turnover for Beneficial Occupancy* has been submitted to systemization for acceptance.
- **Balance of Facilities–**cable raceway, pipe rack piping and supports, various mechanical equipment setting at 96% complete.
- **Immobilized Cell Bioreactors**— Final piping pressure testing is 40% complete. Poly urea specialty coatings MOCK 2 is complete. Colorado Department of Public Health and Environment acceptance in process.
- **Brine Reduction System**—Installation of vendor-supplied piping, supports and instrumentation at 57% complete.
- **Medical Facility**—Decontamination room mechanical and electrical work, 60% complete.
- **Filter Press Building**— electrical and piping commodities at 85% complete.

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

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
- 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.)

- APB Uninterruptible Power Supply
- Instrument Air—IA Compressor "A," Dryer "A," Main Air Receiver and Yard Distribution Piping
- Instrument Air—IA Compressor "B" and Dryer "B"
- Biotreatment Electrical Building Utilities Redundant Facility Control System (FCS) Controller
- ERB Redundant FCS Controller
- Plant Air Compressors, Dryers, Main Air Receiver and Yard Distribution Piping
- Utility Building Redundant FCS Controller
- APB Redundant FCS Controller
- Control and Support Building (CSB) Control Room Equipment and CSB Redundant FCS Controller
- AFA Redundant FCS Controller
- Potable water – BTA distribution*
- Four APB critical power panels*
- Instrument Air ERB distribution*
- Two BTA essential motor control centers*
- Control and Support Building*
- Maintenance Building (maintenance area of CSB)*
- ERB material handling (cranes and hoists)*
- HVAC hot water- ERB distribution*
- HVAC chilled water – ERB 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

Air Handling Units were recently installed outside the Agent Processing Building. The pictured units supply conditioned air to the APB and similar units provide conditioned air to other buildings.

Enhanced Reconfiguration Building

Munitions Monitoring Equipment in the Enhanced Reconfiguration Building will check for agent leaks after munitions leave the Explosion Containment Rooms.

Control and Support Building

In the Control and Support Building, an HVAC system provides positive pressure to preclude agent vapor contamination from entering the building in the event of a release. Pictured here is recently installed air handling equipment.

SCOUT Team Receives High Honors

The Safety Culture Observation Union Team, or, SCOUTs, recently were awarded an Excellence in Leadership Award by Bechtel Corporation for having the best People-Based Safety program. The SCOUT program is made up of mainly of craft workers who promote safe work habits among their peers on the PCAPP project.

Contact Information

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