

Monthly Status Briefing

April 2013



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: **652**
 - Pueblo: 649
 - Pueblo County local hires: 174
 - Colorado hires (outside Pueblo County): 34
 - Other locations: 3
- Construction Workers: **66**
 - Bechtel direct-hire craft workers: 62
 - Subcontractor personnel: 4

Employment Opportunities

Hotline

(719)549-4003

Website

<http://pueblo.bechtel.com>



As of March 30, 2013,
PCAPP Project staff accomplished:

- 339 Safe Work Days*
- 1,747,112 Safe Work Hours



* Last Lost Time occurred on April 26, 2012

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

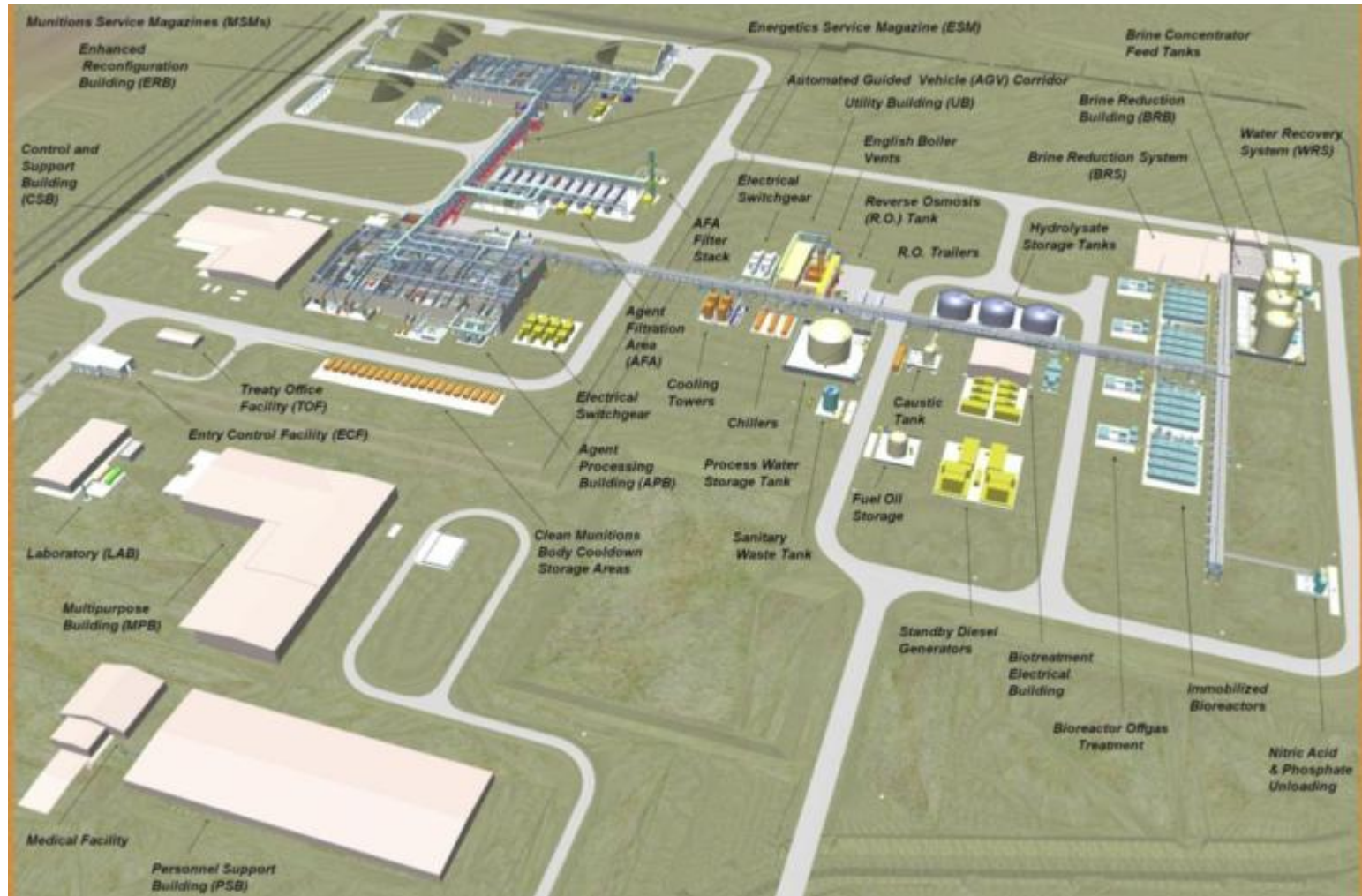


Thermal Treatment and Disposal of Metal Parts

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:

- 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, **Supply and Change Stations***
- Enhanced Reconfiguration Building (ERB) HVAC: Supply Air Handling Units/Control Room and Support Areas Ventilation System; ERB Cascade Ventilation System; Electrical Room Ventilation System
- Steam Supply—Fuel Oil Piping, Natural Gas Piping, Amine Feed Skid, Boilers A & B and Outside Rack Steam; Agent Processing Building (APB)/Biotreatment Area (BTA)/Brine Reduction System (BRS) Distribution
- ERB 480V Substation
- 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; Munitions/Parts Monitoring
- Chilled Water—Chillers, Distribution to various HVAC units, recirculation units, autoclave and Off-Gas Treatment scrubber
- Immobilized Cell Bioreactor (ICB) Feed, Biotreatment, ICB Blower and Off Gas Treatment—Modules 1/2/3/4
- Plant and Instrument Air; BTA, Agent Processing Building (APB) and ERB Distribution



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

*Newly added

Systemization (cont.)

- Potable Water—ERB, APB and BRS
- 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
- Brine Reduction System (BRS)—Brine Concentrator Feed (BCF) Tanks “A”, “B”, and “C” and BCF Tanks Off-Gas Treatment; **Brine Reduction Belt Feed System***
- APB Decon Storage (SDS) Holding Tanks and Feed Pumps; SDS “A” Sumps; SDS “B” pumps; SDS “C” Pumps
- APB—Munitions Washout System (MWS) Instrument Air Distribution; Process Water Distribution; Hydraulic Power Line 1 & 2; Hot Process Water Tank and Heating Coil; MWS High Pressure Water Supply and Distribution; MWS Drain, Wash and Collection Line 1 & 2; Off-Gas Treatment System; MWS Agent Wash Water Transfer
- Munitions Treatment Units #1 and #1; Munition Body Storage Building-Gravity Conveyors
- APB HVAC: Supply Air Handling Units, Battery Room Ventilation System; Cascade Ventilation System, Operator Work Station Ventilation System, Recirculation Units, Unit Heaters and Ventilators; Electrical Room Ventilation System; Entry Support Area Ventilation System; Electrical Room Ventilation System; Entry Support Area Ventilation System
- Agent Monitoring: Agent Filtration Area; Laboratory, APB
- Control Support Building; Medical Building; Laboratory; Utility Building
- APB Agent Collection and Neutralization System—Agent Collection; Agent Neutralization; Hydrolysate Collection System; Hydrolysate Sampling System
- **Site Security Diesel Generator***
- **Secondary Waste Treatment System***
- **Residue Handling System***
- **Site Grounding System***

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*Newly added

ATE Arrival at PCAPP



ATE (Assembled Chemical Weapons Alternatives Test Equipment) arrived at PCAPP on April 3. Their arrival is significant because it allows for the much anticipated commissioning of First-Of-A-Kind equipment.

ATE Testing



Neil Ward, instruments and controls technician, sends the first ATE munition (Assembled Chemical Weapons Alternatives Test Equipment) through the conveyor system in the Enhanced Reconfiguration Building on April 4, 2013.

Tour Season in Full Swing



Irene Kornelly, Kenneth Griffin and John Thatcher, members of the Citizens' Advisory Commission, listen to Dan Hall (third from left) describe a plant process. Pam DiFatta (right), executive assistant to Pueblo County Commissioner Buffie McFadyen, also participated in the tour of the plant on March 14.



Members of the National Research Council (NRC) get a tour of the PCAPP Medical Facility from Dan Bird, medical services coordinator, (right). The NRC visited the PCAPP site April 9-10 for two full days of meetings.

Agent Processing Building



PCAPP workers review system data sheets for pre-commissioning activities. The Munitions Treatment Unit, shown in the forefront, will heat munition bodies to 1,000 degrees Fahrenheit to remove residual agent once they have been drained.

Contact Information



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